

Beneath the Seamark: 6,000 years of an Island's History

Archaeological Investigations
at 'Thanet Earth', Kent 2007–2012

Russell Henshaw, James Holman, Robert
Masefield, Jon Rady and Jake Weekes



Canterbury Archaeological Trust Technical Report 2
Volume 1: Chronological Narrative



CANTERBURY
ARCHAEOLOGICAL
TRUST LTD

92a Broad Street · Canterbury · Kent · CT1 2LU
t: 01227 462062 e: admin@canterburytrust.co.uk
canterburytrust.co.uk

Beneath the Seamark: 6,000 years of an Island's History. Archaeological Investigations at 'Thanet Earth', Kent 2007-2012

Russell Henshaw, James Holman, Robert
Masefield, Jon Rady and Jake Weekes

With contributions by Enid Allison, Luke Barber, Lynne
Bevan, Chris Butler, John Carrott, Wendy J. Carruthers,
Peter Couldrey, John Crowther, Iain Ferris, Alison Foster,
Sarah Gearey, Brian Gilmour, Louise Harrison,
John Hunter, Rob Ixer, Mandy Jay, Susan Jones,
Alison Locker, Malcolm Lyne, Richard Macphail, Barbara
McNee, Janet Montgomery, Olaf Nehlich,
Maura Pellegrini, Beccy Scott, Peter Searey and Sheila
Sweetinburgh

Volume 1: Chronological Narrative

Canterbury Archaeological Trust Technical Report 2
Canterbury 2019

Contents: Volume 1

Chapter 1: Introduction.....	1
Chapter 2: Early prehistory	16
Chapter 3: Middle to late Bronze Age.....	95
Chapter 4: Early to Middle Iron Age.....	156
Chapter 5: Late Iron Age and Romano-British	242
Chapter 6: Anglo-Saxon	286
Chapter 7: The medieval period	306
Chapter 8: Post-medieval and modern	519

Contents: Volume 2

Chapter 9: Coins	529
Chapter 10: Registered Finds	535
Chapter 11: Ironworking and other possible industrial residues	600
Chapter 12: The Flintwork.....	607
Chapter 13: Lithology	621
Chapter 14: Earlier Prehistoric Pottery.....	644
Chapter 15: Later Prehistoric Pottery	682
Chapter 16: Roman Pottery	791
Chapter 17: Post-Roman Pottery	802
Chapter 18: Ceramic Building Material.....	845
Chapter 19: Human Remains	850
Chapter 20: Animal bone.....	922
Chapter 21: Bird bones and eggshell.....	1022
Chapter 22: Insect remains from medieval wells on Plateaus 1 and 2.....	1031
Chapter 23: Fish Bones	1043
Chapter 24: Mollusc remains.....	1047
Chapter 25: Charred, Waterlogged and Mineralised Plant Remains.....	1087
Chapter 26: Soil Micromorphology, Chemistry and Magnetic Susceptibility	1136
Chapter 27: Documentary sources during the medieval period.....	1141
Chapter 28: Monkton Mill and the Monkton seamark	1154

List of Figures

Figure 1	Site Location
Figure 2	Site location & excavated areas (1:8000)
Figure 3	Route of pipeline (the wastewater pumping main) showing location of sites 1 to 5 & cropmarks (Deegan in RPS 2009)
Figure 4	Geology & topography (1:8000)
Figure 5	Cropmarks sites (1:16,000)
Figure 6	Plan of mapped & excavated features (all phases) & nearby cropmarks (1:8000)
Figure 7	Distribution of significant flint assemblages (1:8000)
Figure 8	The Neolithic & early Bronze Age features (1:8000)
Figure 9	The early Neolithic pits on Plateau 8 (1:500)
Figure 10	Early Neolithic features S12304, S12309 & S3941 (1:20)
Figure 11	Early Neolithic features S3456, S10454 & S3205 (1:20)
Figure 12	Structure 35 on Plateau 6 (1:100)
Figure 13	Prehistoric features of pre-Iron Age date (1:8000)
Figure 14	Barrow 1 on Plateau 6 (1:200)
Figure 15	Barrow 1 sections (1:50)
Figure 16	Central burial of Barrow 1 (1:25)
Figure 17	Barrow 2 on Plateau 7 (1:200)
Figure 18	Barrow 2 sections (1:50)
Figure 19	Detail of burials S7151, S7143 & S7573 (1:25)
Figure 20	Detail of burial S7157 (1:25)
Figure 21	Barrow 3 on Plateau 7 (1:200)
Figure 22	Barrow 3 sections (1:50)
Figure 23	Barrow 3 burial (1:25)
Figure 24	Barrow 4 on Plateau 6 (1:200)
Figure 25	Barrow 4 sections (1:50)
Figure 26	Barrow 4 central burial (1:25)
Figure 27	Barrow 5 on Plateau 3 (1:200 & 1:50)

Figure 28	Barrow 5 burials (1:25)
Figure 29	Barrow 6 showing later features in the immediate area (1:200)
Figure 30	Barrow 6 sections (1:50)
Figure 31	Enclosure 3 plan (1:200)
Figure 32	Enclosure 3 sections (1:50)
Figure 33	Beaker burial G2000 (1:25)
Figure 34	Beaker burial G3004 (1:25)
Figure 35	Beaker burial G4043 (1:25)
Figure 36	Beaker burial G10003 (1:25)
Figure 37	Grave S10824 on Plateau 1 (1:25)
Figure 38	Beaker grave group G10002, S10834 & S10838 (1:25)
Figure 39	Beaker burial G10002, S10833 (1:25)
Figure 40	Pond barrow plan & section (1:312.5)
Figure 41	Evidence for naked tetraploid wheat in Europe (Kirleis & Fischer 2014)
Figure 42	The late Neolithic/early Bronze Age barrows (1:400)
Figure 43	Barrow ditches compared, showing symmetry of Barrow 1 ditches (1:50)
Figure 44	Detail of Enclosure 3 & its associated burials (1:125)
Figure 45	Thanet Earth flat-graves compared (1:25)
Figure 46	Pond barrows comparisons (1:312.5)
Figure 47	Mid to late Bronze Age features & finds (1:8000)
Figure 48	Enclosures 1 & 2 on Plateau 5 (1:1000)
Figure 49	Enclosure 1 on Plateau 5 (Phase 1 – agricultural features) (1:250)
Figure 50	Droeways & field system in the southern part of the site (1:4000)
Figure 51	Droeways & field system in the northern part of the site (1:4000)
Figure 52	Inhumation burials G1173 on Plateau 1 (1:25)
Figure 53	Droeways & field system on Plateau 8 (1:1600)
Figure 54	Enclosure 1 on Plateau 5 (Phase 2 – occupation) (1:250)
Figure 55	Barrow 8 on Plateau 2 (1:200)
Figure 56	Barrow 7 on Plateau 2 (1:200)
Figure 57	Structure of the Bronze Age field system (1:8000)
Figure 58	Bronze Age field systems in Kent (1:500,000)

Figure 59	MBA Enclosures at Thanet Earth & Gravesend (1:125)
Figure 60	Iron Age features across Thanet Earth site (1:3125)
Figure 61	Plan of Plateau 8 showing Iron Age features & sub-phasing (1:1250)
Figure 62	Detail from Plateau * showing feature clusters (1:1000)
Figure 63	Details of pit clusters on Plateau 8 (1:500)
Figure 64	Detail from Plateau 8 showing features identified as storage pits (1:1000)
Figure 65	Plan of pit S8722 (1:25)
Figure 66	Section through pit S8722 (1:25)
Figure 67	Profile through base of pit S8722 showing step & undercut (1:25)
Figure 68	Section through Iron Age pit S8670 (1:25)
Figure 69	Section through Iron Age pit S8642 (1:25)
Figure 70	Pit S8189 (1:25)
Figure 71	Pit S8264 (1:25)
Figure 72	Section through Iron Age pit S8799 (1:25)
Figure 73	Section through Iron Age pits S3596, S3668 & S3602 (1:25)
Figure 74	Pit S8733 (1:25)
Figure 75	Pit S3584 (1:25)
Figure 76	Iron Age pit 14240 (1:25)
Figure 77	Iron Age pit S8308 (1:25)
Figure 78	Schematic pit typology
Figure 79	Graph B1
Figure 80	Graph B2
Figure 81	Graph B3
Figure 82	Graph B4
Figure 83	Graph B5
Figure 84	Detail from Plateau 8 showing features containing complete & fragmented loomweights (1:1000)
Figure 85	Detail from Plateau 8 showing features containing quern stones (1:1000)
Figure 86	Detail from Plateau 8 showing features containing spindle whorls (1:1000)
Figure 87	Detail from Plateau 8 showing potential round-houses (1:1000)
Figure 88	Distribution of post-hole structures on Plateau 8 (1:2000)
Figure 89	Plateau 8: Structures 5–14 (1:100)

- Figure 90 Plateau 8: Structures 15–22 (1:100)
- Figure 91 Plateau 8: Structures 29, 31 & 26 (1:100)
- Figure 92 Plateau 8: Structures 6, 27, 28, 30 & 32–34 (1:100)
- Figure 93 Detail from Plateau 8 showing Ring Ditches 1–3 (1:1000)
- Figure 94 Plateau 8: Ring Ditches 1–3 & Structure 5 (1:100)
- Figure 95 Detail from Plateau 8 showing ditch group G8309 (1:1000)
- Figure 96 Ditch burial S8896 (1:25)
- Figure 97 Ditch burial S8912 (1:25)
- Figure 98 Detail from Plateau 8 showing features containing deliberately placed pottery (1:1000)
- Figure 99 Iron Age pit 8211 (1:25)
- Figure 100 Iron Age pit 12646 (1:25)
- Figure 101 Iron Age pit 14276 (1:25)
- Figure 102 Detail from Plateau 8 showing Iron Age features containing sheep & goat bone (1:1000)
- Figure 103 Detail from Plateau 8 showing early & middle Iron Age features containing pig bone (1:1000)
- Figure 104 Detail from Plateau 8 showing early & middle Iron Age features containing cattle bone (1:1000)
- Figure 105 Detail from Plateau 8 showing early & middle Iron Age features containing horse bone (1:1000)
- Figure 106 Detail from Plateau 8 showing early & middle Iron Age features containing articulated & disarticulated dog bone (1:1000)
- Figure 107 Detail from Plateau 8 showing early & middle Iron Age features containing hare & deer bone (1:1000)
- Figure 108 Detail from Plateau 8 showing features containing articulated & disarticulated human bone within pits/post-holes (1:1000)
- Figure 109 Pit burial S8934 (1:25)
- Figure 110 Detail from Plateau 8 showing location of pit S8885 (1:1000)
- Figure 111 Iron Age pit 8885 (1:25)
- Figure 112 Plateau 8: Structures 32 & 33 (1:100)
- Figure 113 Late Iron Age cemetery on Plateau 8 (1:200)
- Figure 114 Graves G8084 in Mid-Late Iron Age cemetery (1:25)
- Figure 115 Graves G8279 in Mid-Late Iron Age cemetery (1:25)

Figure 116	Graves G8278 in Mid-Late Iron Age cemetery (1:25)
Figure 117	Barrow 10 on Plateau 8 (1:200)
Figure 118	Double burial S14031 (1:25)
Figure 119	Burial S12969 of female with neonate (1:25)
Figure 120	Iron Age ditch plan & sections (1:3125 & 1:50)
Figure 121	Plan of Plateau 8 showing features in sub-phase 1 (1:1250)
Figure 122	Plan of Plateau 8 showing Iron Age features in sub-phase 2 (1:1250)
Figure 123	Plan of Plateau 8 showing Iron Age features in sub-phase 3 (1:1250)
Figure 124	Iron Age sites in East Kent discussed in the text (1:500,000)
Figure 125	English & European parallel sites (excluding Kent & Thanet)
Figure 126	Northern part of Thanet Earth showing late Iron Age to Roman features (1:5000)
Figure 127	Northern part of Thanet Earth showing late Iron Age fields & enclosures (1:3125)
Figure 128	Burial G20008 on Plateau 1 (1:25)
Figure 129	Roman cremation burial 10688 (1:10)
Figure 130	Graves G8040 & G8041 on Plateau 8 (1:200)
Figure 131	Grave S12312 on Plateau 8 (1:25)
Figure 132	Grave S12337 on Plateau 8 (1:25)
Figure 133	Grave 12386 on Plateau 8 (1:25)
Figure 134	Northern part of Thanet Earth showing Roman features (1:3125)
Figure 135	Plateau 8 details (1:800)
Figure 136	Cremation burial 12749 (1:10)
Figure 137	Cremation burial 12813 (1:10)
Figure 138	Burials G8263 associated with Enclosure 5 on Plateau 8 (1:200)
Figure 139	Burials 3469 & 8930 (1:25)
Figure 140	Burial 3513 (1:25)
Figure 141	Burial 12161 (1:25)
Figure 142	Burial S12011 (1:25)
Figure 143	Sunken floored building 1, plan (1:100)
Figure 144	Sunken floored building 1, section (1:50)
Figure 145	Roman features in Plateaux 3–6 (1:4000)

Figure 146	Late Roman cremations on Plateau 3 (1:1250)
Figure 147	Anglo-Saxon features on Plateaux 3 & 8 (1:800)
Figure 148	Sunken floored building, SFB 2 (1:100 & 1:25)
Figure 149	Sunken floored building, SFB 3 (1:100)
Figure 150	Sunken floored building, SFB 4 (1:100)
Figure 151	Sunken floored building, SFB 5 (1:100)
Figure 152	Medieval features (1:8000)
Figure 153	Medieval features in the northern part of the site (1:5000)
Figure 154	Medieval features in the southern part of the site (1:5000)
Figure 155	Detail of Trackway 30 on Plateau 7 (1:500)
Figure 156	Medieval Phase 1 trackways & fields in the northern part of the site (1:5000)
Figure 157	Phase plan of Site 1 (1:625)
Figure 158	Sunken floored buildings 76 & 77 (1:100 & 1:50)
Figure 159	Sunken floored building 78 (1:100 & 1:50)
Figure 160	Sunken floored buildings 75 & 79 (1:100)
Figure 161	Phase plan of Site 2 (1:1600)
Figure 162	Phase plan of Site 2 (detail) enclosures & features in Field M2 (1:500)
Figure 163	Sunken floored building 10 (1:100 & 1:50)
Figure 164	Sunken floored building 8 (1:100)
Figure 165	Sunken floored building 24 (1:100 & 1:50)
Figure 166	Sunken floored building 7 (1:100 & 1:50)
Figure 167	Sunken floored building 23 (1:100 & 1:50)
Figure 168	Sunken floored building 12 (1:100 & 1:50)
Figure 169	Structure 47 (1:100)
Figure 170	Sunken floored building 6 (1:100 & 1:50)
Figure 171	Sunken floored building 21 (1:100 & 1:50)
Figure 172	Sunken floored buildings 9 & 11 (1:100 & 1:50)
Figure 173	Phase plan of Sites 3, 4 & 5 (1:1000)
Figure 174	Phase plan of Site 4 (1:320)
Figure 175	Phase plan of Site 5 (1:320)
Figure 176	Sunken floored building 34 (1:100 & 1:50)

Figure 177	Sunken floored building 32 (1:100 & 1:50)
Figure 178	Sunken floored building 26 (1:100)
Figure 179	Sunken floored building 29 (1:100)
Figure 180	Sunken floored buildings 30 & 31 (1:100 & 1:50)
Figure 181	Detail of Site 4 underground chambers G2040, G2061 & G2055 with some comparative cropmarks (1:250)
Figure 182	Sunken floored buildings 25 & 27 (1:100 & 1:50)
Figure 183	Sunken floored building 36 (1:100 & 1:50)
Figure 184	Sunken floored buildings 37, 38 & 39 (1:100 & 1:50)
Figure 185	Structures 51 & 52 on Plateau 2 (1:100)
Figure 186	Phase plan of Sites 6 to 9 (1:800)
Figure 187	Sunken floored building 22 (1:100 & 1:50)
Figure 188	Sunken floored building 15 (1:100)
Figure 189	Structure 50 on Plateau 1 (1:100 & 1:50)
Figure 190	Sunken floored buildings 13 & 14 (1:100)
Figure 191	Sunken floored building 13 showing proportions of the building (1:100)
Figure 192	Sunken floored building 40 (1:100)
Figure 193	Phase plan of Site 11 (1:1000)
Figure 194	Sunken floored building 47 (1:100 & 1:50)
Figure 195	Sunken floored building 46 (1:100 & 1:50)
Figure 196	Structure 53 on Plateau 4 (1:100)
Figure 197	Sunken floored building 45 (1:100 & 1:50)
Figure 198	Sunken floored building 44 (1:100 & 1:50)
Figure 199	Sunken floored building 43 (1:100 & 1:50)
Figure 200	Phase plan of Site 12 (1:1000)
Figure 201	Sunken floored building 41 (1:100 & 1:50)
Figure 202	Sunken floored building 42 (1:100 & 1:50)
Figure 203	Phase plan of Sites 13 & 14 (1:1000)
Figure 204	Sunken floored building 48 (1:100 & 1:50)
Figure 205	Sunken floored building 59 (1:100)
Figure 206	Section through SFB 59 & neighbouring pit G5122 with section through Cess pit G5078 (1:50)

Figure 207	Sunken floored building 55 (1:100 & 1:50)
Figure 208	Sunken floored building 54 (1:100)
Figure 209	Sunken floored building 53 (1:100)
Figure 210	Sunken floored building 53 showing proportions of the building (1:100)
Figure 211	Sunken floored buildings 49 & 50 (1:100)
Figure 212	Phase plan of Sites 15 & 16 (1:1000)
Figure 213	Enclosure development in Sites 15 & 16 (1:1000)
Figure 214	Sunken floored building 58 (1:100)
Figure 215	Sunken floored building 51 (1:100 & 1:50)
Figure 216	Sunken Floored building 52 (1:100 & 1:50)
Figure 217	Sunken floored buildings 56, 57 & 63 (1:100 & 1:50)
Figure 218	Phase plan of Site 17 (1:1000)
Figure 219	Structure 55 on Plateau 6 (1:100)
Figure 220	Structure 55 section (1:50)
Figure 221	Sunken floored buildings 64 & 67 (1:100 & 1:50)
Figure 222	Sunken floored building 68 (1:100 & 1:50)
Figure 223	Sunken floored building 69 (1:100 & 1:50)
Figure 224	Sunken floored building 62 (1:100)
Figure 225	Phase plan of Site 20 (1:1000)
Figure 226	Sunken floored buildings 65 & 66 (1:100 & 1:50)
Figure 227	Sunken floored building 74 (1:100 & 1:50)
Figure 228	Phase plan of Site 22 (1:1250)
Figure 229	Phase plan of Site 23 (1:1250)
Figure 230	Sunken floored building 81 (Structure GP46) (1:50)
Figure 231	Medieval site phasing & distribution, type & date of medieval SFB's (1:8000)
Figure 232	Landscape organisation in the medieval period (1:8000)
Figure 233	Location of medieval sunken-featured buildings in Kent (1:500,000)
Figure 234	Type 1 sunken floored buildings (1:100)
Figure 235	Cross section through a medieval sunken floored building (based on SFB 41)
Figure 236	Type 4 sunken floored buildings (1:100)

Figure 237	The medieval settlements (1:1000)
Figure 238	The post-medieval features (1:5000)
Figure 239	Post-medieval features on Plateau 6 (1:250)
Figure 240	Structures 57, 58 & 59 on Plateau 6 (1:100)
Figure 241	Plan of windmill foundation & seamarks (1:500)
Figure 242	Sunken floored building 80 (1:100 & 1:50)
Figure 243	Sunken floored building 80, sections (1:50)
Figure 244	Copper and copper alloy. Prehistoric finds. Scale 1:2
Figure 245	Copper and copper alloy. Iron Age to Early Roman finds. Scale 1:1
Figure 246	Copper and copper alloy. Roman to Anglo-Saxon finds. Scale 1:1
Figure 247	Copper and copper alloy. Medieval finds. Scale 1:1
Figure 248	Copper and copper alloy. Post-medieval finds. Scale 1:1
Figure 249	Iron. Iron Age find. Scale 1:2
Figure 250	Iron. Roman find. Scale 1:2
Figure 251	Iron. Anglo-Saxon find. Scale 1:1
Figure 252	Iron. Medieval finds. Scale 1:2
Figure 253	Iron. Post-medieval find. Scale 1:2
Figure 254	Lead. Lead objects. Scale 1:2
Figure 255	Ceramic / fired clay objects. Scale 1:2
Figure 256	Glass objects. Scale 2:1
Figure 257	Worked bone and antler objects. Scale 1:1 and 1:2
Figure 258	Amber beads. Scale 1:1
Figure 259	Prehistoric bracer and chalk objects. Scale 1:2
Figure 260	Spindle whorls. Scale 1:2
Figure 261	Flints. Cat. Nos. 1-16
Figure 262	Earlier Prehistoric pottery: Neolithic and beaker vessels. Scale 1:2
Figure 263	Earlier Prehistoric pottery: Neolithic and beaker vessels. Scale 1:2
Figure 264	Earlier Prehistoric pottery: Neolithic and beaker vessels. Scale 1:2
Figure 265	Earlier Prehistoric pottery. Scale 1:2
Figure 266	Earlier Prehistoric pottery. Scale 1:2
Figure 267	Earlier Prehistoric pottery. Scale 1:2

- Figure 268 Earlier Prehistoric pottery. Scale 1:2
- Figure 269 Earlier Prehistoric pottery. Scale 1:2
- Figure 270 Roman pottery: Plateau 1 cremations. Scale 1:4, stamps 1:2
- Figure 271 Roman pottery: Plateau 2 cremations. Scale 1:4
- Figure 272 Roman pottery: Plateau 5 cremations. Scale 1:4
- Figure 273 Roman pottery: Plateau 8 cremations. Scale 1:4
- Figure 274 Roman pottery: Plateau 2 miscellaneous. Scale 1:4
- Figure 275 Later Roman pottery: Plateau 3 cremations. Scale 1:4
- Figure 276 Post Roman pottery. Scale 1:4
- Figure 277 Early Medieval pottery. Scale 1:4
- Figure 278 Early Medieval pottery. Scale 1:4
- Figure 279 Early Medieval pottery. Scale 1:4
- Figure 280 Early Medieval pottery. Scale 1:4
- Figure 281 High Medieval pottery. Scale 1:4
- Figure 282 High Medieval pottery. Scale 1:4
- Figure 283 High Medieval pottery. Scale 1:4
- Figure 284 Element distribution for cattle in the Iron Age phases 6–8
- Figure 285 The proportion of expected elements present for cattle in the phase 10 deposit
- Figure 286 The proportion of the expected number of cattle elements present for a minimum number of 5 cattle in phase 12
- Figure 287 The proportion of expected remains present for cattle in the medieval period Phases 13–16
- Figure 288 The proportion of expected remains present for sheep/goat in the Iron Age: Phases 6–8
- Figure 289 The proportion of the expected number present in the sheep/goat assemblage for phase 12 based upon a minimum number of 8 animals
- Figure 290 The proportion of expected elements present for sheep/goat in the Medieval Assemblage
- Figure 291 The proportion of expected pig elements present in the Iron Age Assemblage
- Figure 292 The proportion of expected pig elements present in the Phase 12 Assemblage

- Figure 293 The proportion of expected pig elements present in the Medieval Assemblage
- Figure 294 The proportion of expected horse elements present in the Phase 8 Assemblage
- Figure 295 The proportion of expected remains present in the phase 16 Horse Assemblage
- Figure 296 The proportion of expected dog elements present in the Iron Age Assemblage
- Figure 297 Toothwear patterns in the Cattle assemblage following Grant 1982 for the Iron Age
- Figure 298 Chart to show toothwear patterns in the sheep/goat assemblage following Grant 1982 for the Iron Age
- Figure 299 Chart to show toothwear patterns in the sheep/goat assemblage following Grant 1982 for the Medieval Period
- Figure 300 Plateaux 1 & 2 showing location of wells sampled for insect remains (1:2000)
- Figure 301 Proportion of different ecological groups in the insect assemblages
- Figure 302 Plateau 4, large boundary ditch (G4006/G5047) – ecological indicator mollusc taxa and groups
- Figure 303 Plateau 4, large boundary ditch (G4006/G5047) – ecological indicator groups
- Figure 304 Plateau 6, inner ring ditch of late Neolithic/early Bronze Age Barrow 1 (G6005) – ecological indicator mollusc taxa and groups
- Figure 305 Plateau 6, inner ring ditch of late Neolithic/early Bronze Age Barrow 1 (G6005) – ecological indicator groups
- Figure 306 Plateau 6, outer ring ditch of late Neolithic/early Bronze Age Barrow 1 (G6006) – ecological indicator mollusc taxa and groups
- Figure 307 Plateau 6, outer ring ditch of late Neolithic/early Bronze Age Barrow 1 (G6006) – ecological indicator groups
- Figure 308 Plateau 6, ring ditch of late Neolithic/early Bronze Age Barrow 4 (G6008) – ecological indicator mollusc taxa and groups
- Figure 309 Plateau 6, ring ditch of late Neolithic/early Bronze Age Barrow 4 (G6008) – ecological indicator groups
- Figure 310 Plateau 6, ring ditch of late Neolithic/early Bronze Age Barrow 4 (G6008) – ecological indicator mollusc taxa and groups

- Figure 311 Plateau 6, ring ditch of late Neolithic/early Bronze Age Barrow 4 (G6008)
– ecological indicator groups
- Figure 312 Plateau 7, ring ditch of late Neolithic/early Bronze Age Barrow 2 (G7002)
– ecological indicator mollusc taxa and groups
- Figure 313 Plateau 7, ring ditch of late Neolithic/early Bronze Age Barrow 2 (G7002)
– ecological indicator groups
- Figure 314 Plateau 7, ring ditch of late Neolithic/early Bronze Age Barrow 3 (G7008)
– ecological indicator mollusc taxa and groups
- Figure 315 Plateau 7, ring ditch of late Neolithic/early Bronze Age Barrow 3 (G7008)
– ecological indicator groups
- Figure 316 Plateau 8, ring ditch of late Neolithic/early Bronze Age Barrow 6 (G8005)
– ecological indicator mollusc taxa and groups
- Figure 317 Plateau 8, ring ditch of late Neolithic/early Bronze Age Barrow 6 (G8005)
– ecological indicator groups
- Figure 318 Plateau 8, ring ditch of late Neolithic/early Bronze Age Barrow 6 (G8005)
– ecological indicator mollusc taxa and groups
- Figure 319 Plateau 8, ring ditch of late Neolithic/early Bronze Age Barrow 6 (G8005)
– ecological indicator groups

List of Plates

- | | |
|----------|--|
| Plate 1 | Aerial view of site looking south |
| Plate 2 | Aerial view of site looking south-east |
| Plate 3 | Topsoil strip of Plateaus 2 and 4 looking east |
| Plate 4 | Topsoil strip of Plateaus 2 and 4 looking south-east |
| Plate 5 | Topsoil strip - Plateau 4 |
| Plate 6 | Topsoil strip - Plateau 4 |
| Plate 7 | Aerial view of site looking west, some time into the excavation program (Jan 2008) |
| Plate 8 | Preliminary metal detecting |
| Plate 9 | Topsoil stripping |
| Plate 10 | Topsoil stripping |
| Plate 11 | Surveying with GPS |
| Plate 12 | Forming the level plateaus after archaeological investigation |
| Plate 13 | Excavating the pipeline trench just north of Monkton Road Farm |
| Plate 14 | Downland landscape traversed by the pipeline trench. North of Little Brooksend, looking south towards Thanet Earth |
| Plate 15 | The plateau south of Birchington traversed by the pipeline trench. Looking north-east towards Birchington |
| Plate 16 | Photographing the Plateau 7 barrows with a boom lift or 'cherry picker' |
| Plate 17 | The 2012 Plateau 1 extention area under excavation looking west |
| Plate 18 | Early Neolithic pit S10454 , looking north Scale 0.5m |
| Plate 19 | Early Neolithic pit S12304 , looking east Scale 0.5m |
| Plate 20 | Early Neolithic pit S3941 , looking south; Scale 0.5m |

- Plate 21 Barrow 1 before excavation looking north-west, scale 2m
- Plate 22 Barrow 1 before excavation looking south, scale 2m
- Plate 23 Barrow 1 during excavation looking south
- Plate 24 Barrow 1 excavated looking south, scales 2m
- Plate 25 Barrow 1 from the air, south to top
- Plate 26 Barrow 1. Section of inner ring ditch G6005
- Plate 27 Barrow 1. Section of inner ring ditch G6005 v2
- Plate 28 Barrow 1. Section of outer ring ditch G6006
- Plate 29 Barrow 1. Section of outer ring ditch G6006 v2
- Plate 30 Barrow 1. The inner and outer ditches
- Plate 31 Barrow 1. Burial G6004; excavated looking south-east, scale 0.2m
- Plate 32 Barrow 1. Burial G6004; Skeleton S6.1 being excavated looking south, scale 0.2m
- Plate 33 Barrow 1. Burial G6004; detail of crushed beaker (FN 6.9000)
- Plate 34 Barrow 1. Burial G6004; Skeleton S6.1 disposition of grave goods, scale 0.2m
- Plate 35 Barrow 1. Burial G6004; the grave goods, scale 0.2m
- Plate 36 Barrow 2 under excavation, looking south
- Plate 37 Barrow 2. Section (showing medieval hollow way to right/left); looking north-east; scale 2m
- Plate 38 Barrow 2 under excavation, looking south
- Plate 39 Barrows 2 and 3 from the air; north to top
- Plate 40 Barrow 2. Section showing carbon rich layer G7004; scale 1m
- Plate 41 Burials S7143 and S7151 within the Barrow 2 ring-ditch. Looking north-east, scale 0.2m
- Plate 42 Burial S7143 within the Barrow 2 ring-ditch. Detail of skeleton looking south-east, scale 0.1m

- Plate 43 Burial S7573 within the Barrow 2 ring-ditch. Looking north-east, scale 0.2m
- Plate 44 Burial S7157 within the Barrow 2 ring-ditch. Detail of skeleton looking north-east, scale 0.5m
- Plate 45 Barrow 3 before excavation, looking south-east
- Plate 46 Barrow 3, selected section, scale 1m. Shows disturbed levels at base of ditch and dark 'midden fill' (G7010)
- Plate 47 Barrow 3 excavated with Barrow 2 in background, looking south-east; scales 2m
- Plate 48 Barrow 4 excavated, looking north-west; scales 2m
- Plate 49 Barrow 4 excavated, from the air; south-west to top. Post-medieval windmill and Seamark foundations visible to lower right [Chapter 8]
- Plate 50 Barrow 4; central grave G6007, looking north; scales 0.5m and 1m
- Plate 51 Barrow 5 excavated, looking east. Scales 1m
- Plate 52 Barrow 5. Grave S3264, looking north-west; scale 0.5m
- Plate 53 Barrow 5. Grave S3267, looking north-west; scale 0.5m
- Plate 54 Barrow 6 under excavation looking west
- Plate 55 Excavation of features (Roman cremation burials) in vicinity of Barrow 6, looking south-west
- Plate 56 Enclosure 3 looking north-west
- Plate 57 Enclosure 3 - ditch section; terminal
- Plate 58 Beaker burial G2000, looking north-west; scale 0.5m
- Plate 59 Beaker burial G3004, looking south-west; scale 0.2m
- Plate 60 Beaker burial G4043, looking south-west; scale 1m. Detail of beaker inset
- Plate 61 Beaker burial G10003, looking north-west; scale 0.2m
- Plate 62 Beaker burial S10824, looking north-east; scale 0.2m
- Plate 63 Beaker burial S10843, looking SW; scale 0.2m

- Plate 64 Beaker burial S10843, looking SE; scale 0.2m
- Plate 65 Beaker burial S10843, detail of beaker pot (10845); scale 0.1m
- Plate 66 Beaker burial S10838, looking north-east; scale 0.2m
- Plate 67 Beaker burial S10838, looking north-east; detail of skeleton; scale 0.2m
- Plate 68 Excavation of the 'Pond Barrow' G2003, looking north
- Plate 69 Excavation of the 'Pond Barrow' G2003, looking west (after removal of metalling)
- Plate 70 Pond Barrow' G2003, Feature S2475
- Plate 71 Pond Barrow' G2003, Feature S2475
- Plate 72 Pond Barrow' G2003, The Palstave as found
- Plate 73 Pond Barrow' G2003, The Palstave
- Plate 74 Inhumation burials G1173; General view of the burials and ditches under excavation, looking south-east. The shallow nature of burial S1597 (foreground) in particular can be seen
- Plate 75 Inhumation burials G1173; detail of burial S1567
- Plate 76 Inhumation burials G1173; detail of burial S1597
- Plate 77 Excavation in area of Enclosure 2 (Plateau 5) looking N
- Plate 78 Enclosure 1 - mid to late Bronze Age pits S5281 and S5260 looking south-west. Scale 1m.
- Plate 79 Barrow 8. Overall view excavated, looking north, scales 2m
- Plate 80 Barrow 7. Overall view excavated, looking south
- Plate 81 Barrow 7. Aerial view, north to top
- Plate 82 Barrow 10 (Pipeline). Overall view excavated
- Plate 83 Aerial photograph showing the Plateau 8 Iron Age settlement, looking south-west
- Plate 84 Pit 8722 under excavation, looking north
- Plate 85 Pit 8722 showing sequence of fills, looking west (scale 1m)

- Plate 86 Pit 8722 showing alcove cut into in base, looking west (scale 1m)
- Plate 87 Pit 8722 post-excavation, looking north-west (scales 1m and 0.5m)
- Plate 88 Pit 8670, looking south (scale 1m)
- Plate 89 Pit 8642, looking east (scale 1m)
- Plate 90 Pit 8189, looking south-west (scale 1m)
- Plate 91 Pit 8762, looking west (scale 1m)
- Plate 92 Pit 8799, looking west (scale 1m)
- Plate 93 Pits S3596, S3602 and S3668, looking north-west (scale 1m)
- Plate 94 Pit S8733 looking east (scale 1m)
- Plate 95 Pit S3584 looking east (scale 0.5)
- Plate 96 Pit S14240 looking north (scale 1m)
- Plate 97 Pit S8308 looking south-east (scale 1m)
- Plate 98 Pit S3500 showing stakeholes in base, looking west (scale 1m)
- Plate 99 Pit S8222 and post-hole S8223, looking south-west (scales 1m and 0.2m)
- Plate 100 Consolidation deposit formed largely by burnt flint in the top of pit 8722, looking north (scale 1m)
- Plate 101 Consolidation deposit formed largely by burnt flint in the top of pit 8901, looking east (scale 1m)
- Plate 102 Loomweight in pit S3644, scale 0.2m
- Plate 103 Sub-circular enclosure 1 after excavation, looking north (scale 1m)
- Plate 104 Sub-circular enclosure 2 after excavation, looking south (scale 1m)
- Plate 105 Sub-circular enclosure 3 pre-excavation, looking north-west (scales 1m)
- Plate 106 Sub-rectangular pit S12388 in G8202 showing compacted fill of burnt flint, looking east (scale 1m)

- Plate 107 Grave S8896 and skeleton SK8.3 showing deliberately placed jar, looking south (scale 0.1m)
- Plate 108 Grave S8912 and skeleton SK8.1, looking west (scale 0.5m)
- Plate 109 Northern end of ditch G8083 being cut by grave S12987, looking south-west (scale 1m)
- Plate 110 Structures 21 and 22, looking north-west (scales 2m)
- Plate 111 The eastern quarry complex with the uppermost deposit filling a depression created as the lower deposits settled, looking north-west (scale 1m)
- Plate 112 Grave S12931, looking south-west (scale 1m)
- Plate 113 Grave S14018, looking south-west (scale 0.5m)
- Plate 114 Post-excavation shot of Barrow 9, with quarry fills extant top right, looking north--east (scale 1m)
- Plate 115 Position of grave S14031 containing double burial within barrow 9, looking south-east (scale 1m)
- Plate 116 Double burial within barrow 9 - close up, looking south-east, (scale 0.5m)
- Plate 117 Satellite burial S12969, showing skeletons SK 8.11 and SK 8.12
- Plate 118 Burial S12969: detail of skeleton SK 8.11 showing neonate SK 8.12
- Plate 119 Substantial boundary G4006/5047, looking west (scale 2m)
- Plate 120 Pottery sherds deposited on the base of pit S8211 (scale 0.20m)
- Plate 121 Placed pottery sherds within pit S14276 (scale 0.1m)
- Plate 122 Pottery sherds from plain tall jar at the base of pit S12646, looking north-east (scale 0.5m)
- Plate 123 Complete carinated bowl with flaring rim recovered from upper fills of pit S12646 (scale 0.1m)
- Plate 124 Sheep bones within pit S3956, looking east (scale 0.20m)
- Plate 125 Bones from the lower jaw of a cow recovered from pit S3674 (scale 0.2m)

- Plate 126 Cow skull recovered from pit S14396 (scale 0.2m)
- Plate 127 Dog skeleton recovered from pit S8799 (scale 0.1m)
- Plate 128 Dog skeleton recovered from pit S3767 (scale 0.2m)
- Plate 129 Skeleton SK 8.4 in pit S8934, looking west (scale 0.5m)
- Plate 130 Skeleton SK 8.6 under excavation in pit S8833
- Plate 131 Skeleton SK 8.6 in pit S8833, looking north-east (scale 0.5m)
- Plate 132 Metalled track-way 25 on Plateau 2 showing pronounced wheel-ruts, looking north-east (scale 1m)
- Plate 133 Metalled track-way 25 on Plateau 3 showing hollow-way and trackside ditch, looking north-east (scale 1m)
- Plate 134 Grave S2008 containing skeleton SK 1.26), scale 0.5m (looking south-east)
- Plate 135 Skeleton SK1.26 showing skull in non-anatomically correct position
- Plate 136 Lower portion of burial S10688, looking north-west (scale 0.1m)
- Plate 137 Brooches contained within cremation burial S10688
- Plate 138 Upper portion of burial S10688, looking north-west (scale 0.1m)
- Plate 139 Cremation burial S12315, looking south (scale 0.2m)
- Plate 140 Cremation burial S12355, looking south (scale 0.2m)
- Plate 141 Grave S12312 showing inhumation SK 8.9, looking north (scale 0.2m)
- Plate 142 Grave S12386 showing inhumation SK 8.7, looking west (scale 0.1m)
- Plate 143 Grave S12337 showing inhumation SK 8.10, looking west (scale 0.2m)
- Plate 144 Cremation burial S3614, looking west (scale 0.2m)
- Plate 145 Cremation burial S12749, looking west (scale 0.2m)
- Plate 146 Cremation burial S12813, looking west (scale 0.2m)
- Plate 147 Samian vessels and conical beaker within cremation burial S12813, looking south (scale 0.1m)

- Plate 148 Truncated flagon, jar, hobnail boot and iron tool (FN 8.260) within cremation burial S12813, looking west (scale 0.1m)
- Plate 149 Grave S3469 containing skeleton SK 8.2, looking south (scale 0.5m)
- Plate 150 Grave S3513 containing skeleton SK 8.17, looking east (scale 0.2m)
- Plate 151 Grave S8930 containing skeleton SK 8.8, looking south (scale 0.1m)
- Plate 152 Grave S12161 containing skeleton SK 8.5, looking south (scale 1m)
- Plate 153 Grave S12009 containing skeleton SK 8.13, looking north (scale 0.5m)
- Plate 154 SFB 1 post-excavation, looking west (scale 1m + 2m)
- Plate 155 Cremation burial S2014, looking west (scale 0.2m)
- Plate 156 Cremation burial S2018, looking east (scale 0.2m)
- Plate 157 Cremation burial S2022, looking west (scale 0.2m)
- Plate 158 Cremation burial S2027, looking north-east (scale 0.2m)
- Plate 159 Cremation burial S2122 under excavation looking east (scale 0.2m)
- Plate 160 Cremation burial S2173, looking north (scale 0.2m)
- Plate 161 Cremation burial S2196, looking south-east (scale 0.5m)
- Plate 162 Cremation burial S2365, looking south-east (scale 0.2m)
- Plate 163 Cremation burial S5824, looking north-east (scale 0.2m)
- Plate 164 Cremation burial S5848, looking north (scale 0.2m)
- Plate 165 Cremation burial S5821, looking north (scale 0.5m)
- Plate 166 Cremation burial S3037, looking north-east (scale 0.2m)
- Plate 167 Cremation burial S3094, looking south (scale 0.5m)
- Plate 168 Cremation burial S3102, looking north (scale 0.5m)
- Plate 169 Working shot of SFB 2, looking south
- Plate 170 Fragment of iron chain FN 3.9003
- Plate 171 Fragment of buckelurne

- Plate 172 SFB 3, looking south (scale 1m)
- Plate 173 SFB 4, looking north showing potentially wall line toward the front of the image
- Plate 174 Post-excavation shot of SFB 5, looking north (scale 1m)
- Plate 175 SFB 5, showing metallised surfaces S14226, looking north (scale 1m)
- Plate 176 Anglo-Saxon sceat
- Plate 177 Looking north along Trackway 28 (Plateau 1), with SFB 8 (unexcavated) in foreground
- Plate 178 Trackway 30 with Monkton church in background (Plateau 7)
- Plate 179 Section through Trackway 30 (Plateau 7)
- Plate 180 SFB 77 - G10081 excavated view with half-sectioned 'external' oven (G10116), looking east, scales 1m, 0.5m
- Plate 181 SFB 77 - G10081 excavated view with half-sectioned 'external' oven (G10116), looking north-west, scales 1m, 0.5m
- Plate 182 SFB 78 - G10082 overall view excavated
- Plate 183 SFB 78 - G10082 overall view excavated
- Plate 184 SFB 78 - G10082 showing half-sectioned oven, ditch G10071 in foreground
- Plate 185 SFB 78 - G10082 - detail of oven G10085
- Plate 186 SFB 78 - G10082 - detail of side hearth S10471 showing upright quern stones. Looking west, scale 0.5m
- Plate 187 SFB 75 - G10079 looking west, scales 1m
- Plate 188 SFB 75 - G10079 looking east, scales 1m
- Plate 189 SFB 75 - G10079 - Detail of carved chalk 'cup' (FN 1.131) placed on quern fragment as found. Scale 0.2m
- Plate 190 Site 2 (Plateau 1) Working view showing SFB 23 in foreground, and line of trackway 28 to the rear. Looking north, scale 1m

- Plate 191 SFB 8 - G1085 - partly excavated showing ovens (G1086, G1087) and collapsed 'clunch' in backfill - looking N, scales 1m
- Plate 192 SFB 8 - G1085 - partly excavated showing detail of collapsed 'clunch' in backfill -looking W, scale 0.5m
- Plate 193 SFB 8 - G1085 - partly excavated showing ovens (G1086, G1087) and collapsed 'clunch' in backfill -looking south, scales 1m
- Plate 194 SFB 8 - Detail of oven G1086. Looking north, scale 0.5m
- Plate 195 SFB 8 - Detail of oven G1086 half-sectioned. Looking north, scale 0.5m
- Plate 196 SFB 8 - Detail of oven or side-hearth G1087. Looking north, scale 0.5m
- Plate 197 SFB 8 - G1085 - fully excavated showing ovens (G1086, G1087). Looking west, scales 1m, 0.5m. Note lower working floor in front of oven G1086
- Plate 198 SFB 24 (G1261) fully excavated. Looking west. Scales 0.5m and 0.2m
- Plate 199 SFB 24 (G1261) detail of bisected dog burial. Looking east. Scale 1m
- Plate 200 SFB 7 - G1075. Pre-excavation view. Looking north, scales 1m
- Plate 201 SFB 7 - G1075.- Fully excavated, looking north. Scale 0.5m
- Plate 202 SFB 23 - G1251 - Detail of primary oven S586, showing stake-holes, looking south, scale 0.2m
- Plate 203 SFB 23 - G1251 - excavated, showing rammed chalk floors, secondary oven G1252 top right. Looking west, scale 1m
- Plate 204 SFB 23 - G1251 - detail of secondary oven G1252 cross-sectioned. Looking north-west, scale 0.2m
- Plate 205 Site 2 enclosure ditches under excavation looking south, scale 0.5m. Ditch of Enclosure 15 (G1020) in foreground
- Plate 206 Enclosure 13 and associated features under excavation. Looking north-north-east. Structure 47 in foreground
- Plate 207 Enclosure 13 and associated features under excavation. Looking south. Structure 47 in foreground
- Plate 208 SFB 12 - G1164 fully excavated. Looking east, scale 1m

- Plate 209 SFB 12 - G1164 fully excavated. Looking north, scale 1m
- Plate 210 Enclosure 13, excavation of Structure 47 looking east. One of the ponds has been excavated to the rear
- Plate 211 Structure 47 - G1140. Looking west, scales 1m
- Plate 212 SFB 6 - G1070 during excavation. Looking north. Access ramp in foreground.
- Plate 213 SFB 6 - G1070. Looking south. Scales 1m
- Plate 214 SFB 21 - G1232 and clunch structure S1396, working view looking east
- Plate 215 SFB 21 - G1232 and clunch structure S1396 looking south, scales 1m, 0.5m. Enclosure ditches G1078 in foreground
- Plate 216 SFB 21 - G1232 and clunch structure S1396 looking west scales 1m, 0.5m.
- Plate 217 SFB 21 - G1232 detail of clunch structure S1396 looking west, scales 1m, 0.5m
- Plate 218 SFB 21 - G1232 detail of clunch structure S1396 looking down scales 1m, 0.5m
- Plate 219 SFB 21 - G1232 detail of clunch structure S1396 looking west showing rear slot, scales 0.5m, 0.2m
- Plate 220 SFB 9/11 - G 1298, G 1153 Looking east, showing 'clunch' rubble at southern end. Scales 1m, 0.5m
- Plate 221 Sites 3, 4 and 5 (Plateau 2) under excavation from the air looking west. Site 3 on right, Site 4 bottom left and Site 5 top left. Some of the enclosure ditches are just visible
- Plate 222 SFB 34 - G2073 including oven (S9349). Looking south, scales 1m, 0.5m
- Plate 223 SFB 34 - G2073 detail of oven (S9349). Looking south, scales 1m, 0.5m. Possible wattle impressions evident on interior wall of oven S9349
- Plate 224 Sites 4 and 5 - aerial view of area under excavation. Site 3 is top left, Site 4 top right and Site 5 is bottom.
- Plate 225 Site 4 - excavation under way, SFB 32 in foreground. Looking south

- Plate 226 SFB 32 - G2065 - Detail of oven S2909 looking west towards the stoke-hole. Scales 0.5m, 0.2m. Ditch G2022 of Enclosure 36 cuts across at the base of the photo.
- Plate 227 SFB 32 - G2065 - Detail of clunch 'lumps' S9233. Looking north, scales 1m, 0.5m
- Plate 228 SFB 32 - G2065. Detail of flint spread and quern (S9050). Looking east, scales 1m. 0.5m
- Plate 229 SFB 32 - G2065 excavated, looking east, scale 1m
- Plate 230 SFB 29 - G2058. Partly excavated looking south. Plinth S9093 is under the 1m scale.
- Plate 231 SFB 29 - G2058. Section through remains of possible oven deposits (S9546) on the plinth. Looking east, scale 0.5m
- Plate 232 SFB 31 - G2062 fully excavated looking north. Scale 1.0m
- Plate 233 SFB 31 - G2062 fully excavated looking south. Scales 0.5m, 1.0m. Oven (S9553) has been cross-sectioned
- Plate 234 SFB 31 - G2062 detail of steps in south-east corner, looking south, scale 0.5m. Note slight recess adjacent which could have held a post
- Plate 235 SFB 31 - G2062 detail of steps in south-west corner, looking south, scale 0.5m.
- Plate 236 SFB 31 - G2062 detail of oven S9553
- Plate 237 SFB 31 - G2062 detail of oven S9553 and side 'heath'. Another view
- Plate 238 Excavation of underground chambers G2055
- Plate 239 Excavation of underground chambers G2055
- Plate 240 View of one of the underground chambers G2055. Scales 0.5m
- Plate 241 Excavation of underground chambers (G2040, G2161), showing one of the underground chambers half-sectioned. Looking north-east
- Plate 242 One of the underground chambers (G2055), scales 0.5m
- Plate 243 SFB 36 - G2136. Fully excavated, looking west. Scales 1m, 2m

- Plate 244 SFB 36 - G2136 detail of oven (S2833) with basal flint foundation S2833. Looking west, scale 0.5m
- Plate 245 SFB 38 - G2142 excavated, showing rammed chalk floor (2752). Looking east, scale 2m
- Plate 246 SFB 38 - G2142 excavated, showing rammed chalk floor (2752). Looking west, scale 2m
- Plate 247 SFB 38 - G2142 section through rammed chalk floor (2752). Looking east scale 0.5m
- Plate 248 Well G2135 looking N, scale 0.5m
- Plate 249 View of Site 7 (Plateau 1) under excavation. Site 6 is to the rear left. Looking north-east
- Plate 250 View of Site 7 (Plateau 1) under excavation. Looking south-east
- Plate 251 View of Site 7 (Plateau 1) ditches and other features under excavation. Looking south-west
- Plate 252 Site 7 - excavation of the underground chambers (G1221, G1219, G1228) and other features, looking south
- Plate 253 Structure 50 - G1216, looking west, scale 1m
- Plate 254 Buried pottery vessel G1230, looking west. Scale 0.1m
- Plate 255 Buried pottery vessels G1230 under excavation, looking north-west
- Plate 256 Area between Sites 8 and 9 showing two large sub-circular pits of a possible structure (G1119). Looking east
- Plate 257 Site 9 -View of Site 9 showing Enclosure 16 ditches and erosion hollow G1161. Looking north
- Plate 258 SFB 13 (G1174) - looking west-north west, scales 1m, 0.5m
- Plate 259 SFB 13 (G1174) - detail of eastern chamber looking east, scales 1m, 0.5m
- Plate 260 Well G1143 looking south. Scales 1m
- Plate 261 SFB 40 -G3040 - Site 10. View, near fully excavated looking west, scales 1m, 0.5m

- Plate 262 Recording ditch of Enclosure 45, looking north-west
- Plate 263 SFB 47 - G4109 - fully excavated looking east, scale 1m
- Plate 264 SFB 46 - G4063 - fully excavated looking south, scales 2m, 1m
- Plate 265 SFB 46 - G4063 - Detail of oven G4066 looking SW - scale 0.5m
- Plate 266 SFB 46 - G4063 - Detail of oven G4066 showing flint pad under floor. Looking SW - scale 0.5m
- Plate 267 SFB 45 - G4059, excavated looking N, scales 1m. Prior to excavation of the oven (G4060)
- Plate 268 SFB 45 - G4059, excavated looking N, scales 1m. After excavation of the oven (G4060). Note Iron Age ditch G4006 to left.
- Plate 269 SFB 45 - G4059, excavated looking SW, scales 1m. Note Iron Age ditch G4006 to right
- Plate 270 SFB 45 - G4059 - detail of oven G4060 looking north, scale 1m
- Plate 271 SFB 45 - G4059 - detail of oven G4060 looking north, scales 1m
- Plate 272 SFB 45 - G4059 - detail of oven G4060 construction, scale 0.2m with collapsed wall or oven superstructure deposits to the left
- Plate 273 SFB 44 - G4056 - partly excavated view showing collapsed 'clunch' material. Looking west, scales 1m, 0.5m
- Plate 274 SFB 44 - G4056 - partly excavated view showing collapsed 'clunch' material. Looking east, scales 1m, 0.5m
- Plate 275 SFB 44 - G4056 - fully excavated, entrance on left. Looking west, scales 1m, 0.5m. Note Iron Age ditch G4006 under the floor
- Plate 276 SFB 44 - G4056 - fully excavated, entrance on right Looking east, scales 1m, 0.5m. Note Iron Age ditch G4006 under the floor
- Plate 277 SFB 44 - G4056 - fully excavated, stepped entrance in foregroundt Looking north scales 1m, 0.5m. Note clunch bench (S4848) on north side
- Plate 278 Detail of access steps, looking south. Scales 1m, 0.5m
- Plate 279 SFB 44 - G4056 - detail of bench and part of floor. Looking north, scales 1m, 0.5m

- Plate 280 SFB 44 - G4056 - Working shot of person on stairway Looking south
- Plate 281 SFB 43 - G4053 - View looking west, scales 1m
- Plate 282 SFB 43 - G4053 - View looking east, scales 1m
- Plate 283 Site 12 (Plateau 4) - Aerial view of Enclosures 42 and 43. Looking south-west
- Plate 284 SFB 41; G4046 - fully excavated looking north, scale 1m, 2m
- Plate 285 SFB 41; G4046 - fully excavated looking south scale 1m, 2m. Note access steps lower right and ditch of Enclosure 42 (G4004) at top
- Plate 286 SFB 41; G4046 - fully excavated looking west scale 1m, 2m. Note access way S4535 (top right), ditch of Enclosure 42 (G4004) left, bench (top centre) and clunch wall G4049 to right of steps
- Plate 287 SFB 41; G4046 - detail of bench looking west, scale 1m
- Plate 288 SFB 41; G4046 - detail of 'clunch' walls (G4049) forming a compartment in the north-west corner. Looking west, scale 0.2m
- Plate 289 SFB 42 - G4051 - View of quadranted feature looking west, scale 1m
- Plate 290 SFB 59 - G5119 excavated, looking south. Scales 1m, 0.5m. Access ramp in lower right corner
- Plate 291 SFB 59 - G5119 excavated, looking south. Scales 1m, 0.5m. Access ramp in lower right corner
- Plate 292 SFB 59 - Buried pottery vessel S15132 (G5079); west to top, scale 0.1m
- Plate 293 SFB 59 - Buried pottery vessel S15148 (G5079); north-west to top, scale 0.1m
- Plate 294 Cellar G5121 looking west showing roughly stepped access ramp. Scales 1m, 0.5m. SFB 59 directly to the right
- Plate 295 Cess pit G5078 with remains of horse skeleton. Looking south-east, scale 1m, 0.5m
- Plate 296 SFB 53 - G5091 under excavation, looking south-west
- Plate 297 SFB 53 - G5091 excavated, looking south-west

- Plate 298 Enclosure 52 ditch - G5084. The southern terminal, looking north-east, scale 1m
- Plate 299 SFB 49 - G5081 excavated looking south-east. Scales 1m
- Plate 300 SFB 50 - G5082 - The Type 3 structure as excavated looking south-west, scale 1m
- Plate 301 Site 15 - Ditch terminal of Enclosure 69 (G5080) looking south, scale 1m
- Plate 302 SFB 58 - G5100 - oven G5170 prior to excavation looking NE; scale 1m. The stoke/entrance for the oven is clearly visible bottom left.
- Plate 303 SFB 58 - G5100 excavated looking NNW; scales 1m. The ditch of Enclosure 48 (G5069) to the rear
- Plate 304 SFB 58 - G5100 excavated looking SSE; scales 1m. The ditch of Enclosure 48 (G5069) to the foreground
- Plate 305 SFB 58 - G5100 excavated looking north-west; scales 1m
- Plate 306 SFB 58 - G5100; detail of oven G5171
- Plate 307 SFB 58 - G5100 fully excavated (with oven removed) looking NNW; scale 1m. The ditch of Enclosure 48 (G5069) to the rear
- Plate 308 Site 16 -Excavation of features at the northern end of Site 16, looking south-west. Possible SFBs 56, 57 and 63 in foreground
- Plate 309 Site 17 - Aerial view after the topsoil strip showing most features including a water main trench. Looking north-west
- Plate 310 Structure 55: Underground cellar G6048 under excavation. looking north
- Plate 311 Structure 55: Underground cellar G6048. Main access chamber (S6204) excavated showing arch of eastern chamber (S6221), looking south-east, scales 1m, 0.5m. Note earlier (prehistoric) ditch
- Plate 312 Structure 55: Underground cellar G6048. Main access chamber (S6204) excavated, looking south-west, scales 1m, 0.5m
- Plate 313 Structure 55: Underground cellar G6048. Main access chamber (S6204) excavated, looking north-east showing arch of western chamber (S6236), scales 1m, 0.5m

- Plate 314 Structure 55: Underground cellar G6048. Detail of eastern chamber (S6221) looking south-east scale 1m. Note blocking wall on floor at entrance
- Plate 315 Structure 55: Underground cellar G6048. Detail of western (S6236) chamber looking north showing half-excavated fill. Scale 0.5m. Note blocking wall on floor at entrance
- Plate 316 Structure 55: Underground cellar G6048 fully excavated. Looking north-east. Scales 1m, 2m
- Plate 317 SFB 64/67 - main feature G6060 fully excavated. Looking south-east , scales 1m, 2m. Note prehistoric ditch in foreground
- Plate 318 SFB 64/67 - main feature G6060 and fully excavated 'cellar' G6054. Looking south-east , scales 1m, 2m. Note prehistoric ditch in foreground
- Plate 319 SFB 64/67 - main feature G6060 and fully excavated 'cellar' G6054. Looking north, scales 1m, 2m.
- Plate 320 SFB 64/67 - detail of mortar set into north edge. Looking south-east, scale 0.5m
- Plate 321 SFB 68 - G6063 under excavation, looking west, scales 2m. The ditch of Enclosure 58 (G6069) is to the rear
- Plate 322 SFB 68 - G6063 fully excavated, looking south-east, scales 2m. A later ditch of Enclosure 58 (G6069) is to the right
- Plate 323 Site 18 - SFB 69 (G6067). Excavated view looking south, scale 2m
- Plate 324 Site 19 - SFB 62 - (G5142) on Plateau 5, looking south. Scales 1m. Note linear depression (S15551) on east (left) side
- Plate 325 Site 19 - Pit G5143 containing sheep burial. Scales 1m, 0.2m
- Plate 326 SFB 65 (G6103, G6055, G6104) - overview with plant and greenhouse (looking north)
- Plate 327 SFB 65 (G6103, G6055, G6104) - excavated view showing hearth G6104 and platform G6055. Looking NE, scales 1m, 2m. Quarry edge (G6056) is visible across bottom of picture
- Plate 328 SFB 65 (G6103, G6055, G6104) - detail of hearth G6104 looking south-east. Scale 1m

- Plate 329 SFB 65 (G6103, G6055, G6104) - overview fully excavated. Looking NE, scales 2m. Vertical 0.5m scale is on edge of quarry (G6065)
- Plate 330 Site 21 - view of hollow way (Trackway 32 (G7028) with edge of Barrow 2 ditch under. Looking south-west, scale 2m
- Plate 331 Site 21 - view of hollow ways (Trackways 31 and 32 (G7028) with Barrow 2 ditch under. Looking north-east, scale 1m
- Plate 332 SFB 74 - G7031 excavated, looking south-west, scales 1m, 2m
- Plate 333 SFB 81 - GP46 excavated showing oven SP158. Looking north-east, scale 1m
- Plate 334 SFB 81 - GP46. Detail of oven SP158 under excavation showing stoke-hole and beam slot SP146. Looking south-west
- Plate 335 SFB 83 - Horse burial looking north-west, scale 1m
- Plate 336 SFB 80 - G6077 fully excavated looking north-east, scales 1m. Entrance to front.
- Plate 337 SFB 80 - G6077 fully excavated looking south-west, scales 1m. Entrance to rear.
- Plate 338 Structure 59 - The brick Seamark - G6081 under excavation looking north-east towards the Thames Estuary
- Plate 339 Structure 59 - The brick Seamark - G6082 with windmill (Structure 58) cross-trestle foundation (G6079) to rear. Looking south, scales 1m
- Plate 340 Structure 59 - The brick Seamark - G6082 on left with windmill (Structure 58) cross-trestle foundation (G6079) to right. Looking east, scales 1m
- Plate 341 Structure 59 - The brick Seamark - G6082. One of the Seamark scaffold post-holes (S16141) showing post ghost. Looking east, scale 0.5m
- Plate 342 Coin of James I from windmill foundation (G6079)
- Plate 343 Second World War Structure 61 - G4096 looking south-west
- Plate 344 Second World War Structure 61 - G4096 detail of Room 1 and access steps looking south. Scales 1m, 2m

- Plate 345 Second World War Structure 61 - G4096 detail of Room 2 looking east, showing scars on concrete floor
- Plate 346 A nearly complete lump of smithing hearth base
- Plate 347 Micro-structure of a section cut from part of the same plano-convex lump shown in Plate 346
- Plate 348 A smaller, more irregularly shaped piece of apparent smithing hearth waste
- Plate 349 Photomicrograph of part of a section from the apparent smithing hearth waste shown in Plate 348
- Plate 350 Part of the same small lump of smithing hearth waste (Plate 348) showing an 'island' of low carbon bloom iron
- Plate 351 Another irregularly shaped piece of apparent smithing hearth waste
- Plate 352 Photomicrograph of part of a section through the waste lump shown in Plate 351
- Plate 353 Holdfast – found with many fragments of iron-smithing waste (as in Plates 348 and 351)
- Plate 354 Small stud-like piece of iron
- Plate 355 Photomicrograph of the stud-like piece of iron shown in Plate 354
- Plate 356 Very lightweight, generally pale grey, porous, non-magnetic slaggy material
- Plate 357 Close up view of one of the same pieces of lightweight slaggy material (shown in Plate 346)
- Plate 358 Same lightweight slag-like pieces minus adhering sandy loam
- Plate 359 Photomicrograph of a section through one of these pieces of lightweight, pale 'Iron Age grey' fragments of slag-like material
- Plate 360 Fragment of part vitrified lightweight material interpreted here as heavily burnt daub (see Plate 358)
- Plate 361 Photomicrograph of a section through the fragment of lightweight, heavily burnt/part-vitrified suspected daub

- Plate 362 Three free-threshing wheat (s.l.) grains (*Triticum durum/turgidum/aestivum* s.l.) from pit 10454, Plateau 1; ventral, dorsal and side views. (Photographed by James Turner, National Museum of Wales)
- Plate 363 Free-threshing tetraploid wheat rachis fragments from pit 10454, Plateau 1 (*Triticum durum/turgidum*); 2a. Thanet Earth pit 10454; (Photographed by Ruth Pelling, Historic England) 2b. comparing rachis fragments from Greifensee, Switzerland (left) to rachis from Thanet Earth pit 10454, Plateau 1 (right) (Photographed by Stefanie Jacomet, University of Basel)
- Plate 364 Scan of M434, with chalk and humic soil layered Context 6032 overlying chalky layer Context 6033. Note chalk soil contains greyish yellow calcareous silt subsoil material; arrow indicates anomalous presence of organic fragments, etc. Frame width is ~50mm.
- Plate 365 Scan of M434, with layered 'humic' 6030, compact and cemented mixed topsoil and subsoil material in Context 6031 (arrows), and mixed humic and subsoil Context 6032. Frame width is ~50mm.
- Plate 366 Scan of M432, showing layers of loose humic crumbs (Context 6030) overlain by crumbs and fine subangular structures of chalky subsoil. Frame width is ~50mm.
- Plate 367 Scan of M431, which is mainly composed of chalky subsoil and chalk clasts, between two humic soil layers (Contexts 6028 and 6030). Frame width is ~50mm
- Plate 368 Photomicrograph of M434 (Context 6032); humic soil (Ah1 horizon, turf); soil characterised by chalk (Ch), biogenic calcite (BCa) and post-depositional formation of needle calcite (NCa). Plane polarised light (PPL), frame width is ~4.62mm.
- Plate 369 As Plate 368, under crossed polarised light (XPL).
- Plate 370 Detail of Plate 368, showing humic content of turf soil. PPL, frame width is ~0.90mm.
- Plate 371 As Plate 370, under oblique incident light (OIL).
- Plate 372 Photomicrograph of M434 (Context 6032); calcareous silt containing anomalous amounts of humifying and humified plant material (arrows). PPL, frame width is ~2.38mm.
- Plate 373 As Plate 372, under OIL

- Plate 374 Photomicrograph of M433 (Context 6031); note three cemented layers, 3: calcareous silt (loessic drift origin), 2: chalky subsoil, 1: humic turf soil. PPL, frame height is ~4.62mm.
- Plate 375 As Plate 374, under XPL. Note needle calcite within relict root channels (Layer 2) and decalcified humic turf soil.
- Plate 376 As Plate 374, under OIL. Note inclusion of turf fragments in top of Layer 2.
- Plate 377 Photomicrograph of M432 (Context 6030); humic soil fragments (crumbs and fine subangular blocky); note biogenic calcite pseudomorphs of root (?) trace (arrow). PPL, frame width is ~4.62mm.
- Plate 378 As Plate 377, under XPL
- Plate 379 Detail of Andrews, Dury, and Herbert's map of 1769
- Plate 380 Detail of a navigational chart at SCTL, dated 1786. Note that the chart is incorrect in still showing the beacon at Monkton as a Mill, several years after its removal
- Plate 381 Fold-out engraving of illustrations of sights awaiting holidaymakers travelling down the Thames Estuary, from GA Cooke's Topographical and Statistical Description of the County of Kent (New Edition), 1840 (SCTL)
- Plate 382 Detail of the Monkton Sea-mark from GA Cooke's Topographical and Statistical Description of the County of Kent (New Edition), 1840 (SCTL)
- Plate 383 View of the Monkton Beacon from Igglesden (1932, 77)
- Plate 384 Photograph of the beacon, possibly on the eve of its demolition in 1922
- Plate 385 The North Down Beacon, soon after its reconstruction in 1818; J. Shury after G. Varlo, published May 1820

List of Tables

Table 1	Thanet Beaker Burials
Table 2	Romano-British Cremation Burials
Table 3	The prime ceramic dating evidence from each site (all date ranges AD)
Table 4	Locations and numbers of medieval sunken-featured buildings in Kent
Table 5	Concordance of Chapter Numbers and Analysis Phase
Table 6	Radiocarbon dates. Calibration data set: IntCal 04.14c (Reimer <i>et al</i> 2004)
Table 7	Total Numbers of Registered Small Finds by Material and Plateau
Table 8	Quantification of the Iron Objects and Nails by Plateau/Site
Table 9	Total Numbers of Iron Knives and Blades by Plateau/Site
Table 10	Iron working or similar residues
Table 11	The non-core Debitage
Table 12	The Core Debitage
Table 13	Implements
Table 14	Length-Breadth Analysis
Table 15	Summary of pottery by sherd count and weight
Table 16	Plateau 1 summary of pottery by context
Table 17	Plateau 2; summary of pottery by context
Table 18	Plateau 3; summary of pottery by context
Table 19	Plateau 4; summary of pottery by context
Table 20	Plateau 5; summary of pottery by context
Table 21	Plateau 6; summary of pottery by context
Table 22	Plateau 7; summary of pottery by context
Table 23	Plateau 8; summary of pottery by context
Table 24	Summary of sherd condition by count and weight
Table 25	Summary of sherd condition by ceramic phase (by sherd count and weight)
Table 26	Sherd count and weight according to fabric type
Table 27	Correlation of fabrics to ceramic phases by sherd count
Table 28	Summary of surface treatments by sherd count

Table 29	Summary of ceramic phases by plateau (sherd count)
Table 30	Summary of pottery by sherd count and weight
Table 31	Summary of pottery by context
Table 32	Decoration and its Position
Table 33	Association of forms and decoration
Table 34	Surface Treatment
Table 35	Association of Forms and Surface Treatment
Table 36	Association of Forms and Fabrics within Ceramic Phase
Table 37	Chronological Distribution of Forms in Features
Table 38	Continental Chronologies
Table 39	Decoration motifs number and percentage in Ceramic Phase
Table 40	Decoration Technique in Ceramic Phase
Table 41	Sherds repaired with adhesive
Table 42	Deposition of pottery for all features in Ceramic Phase
Table 43	Deposition of Pottery for Feature Type in Ceramic Phase
Table 44	Percentage weight of pottery in Ring Ditches and Linear Ditches
Table 45	Percentage of vessels by weight and average wear associated with human bone
Table 46	Pots within Posthole Groups
Table 47	No of pits by sherd frequency
Table 48	Plateau 1. Excavated assemblages
Table 49	Plateau 1. From environmental samples
Table 50	Plateau 2. Excavated assemblages
Table 51	Plateau 2. From environmental samples
Table 52	Plateau 3. Excavated assemblages
Table 53	Plateau 3. From environmental samples
Table 54	Plateau 4. Excavated assemblages
Table 55	Plateau 5. Excavated assemblages
Table 56	Plateau 5. From environmental samples
Table 57	Plateau 6. Excavated assemblages
Table 58	Plateau 6. From environmental samples
Table 59	Plateau 7. Excavated assemblages
Table 60	Plateau 8. Excavated assemblages

Table 61	Plateau 8. From environmental samples
Table 62	Quantification of post-Roman pottery assemblage (all periods) by plateau
Table 63	Characterisation of pottery assemblage for the whole site.
Table 64	Breakdown of Early-Middle Saxon assemblage by fabric
Table 65	Assemblage from SFB 2 (G3035; contexts 11071, 11072, 11079)
Table 66	Breakdown of Middle-Late Saxon assemblage by fabric
Table 67	Breakdown of Early Medieval assemblage by fabric
Table 68	Quantification of pottery assemblage from Track 28 (G1223, G2017, G10103 and G10091)
Table 69	Pottery assemblages from Enclosures 63 and 64 and related features
Table 70	Pottery assemblages from Enclosure 60 and related features
Table 71	Pottery assemblages from features around Enclosures 60, 63 and 64
Table 72	Pottery assemblages from Enclosures 13, 14, 19, 20, 21 and related features
Table 73	Pottery assemblages from Enclosures 45, 46, 47 and related features
Table 74	Pottery assemblages from Enclosure 16 and related features
Table 75	Pottery assemblages from Enclosures 33 and 36
Table 76	Pottery assemblages from select features within Enclosure 36
Table 77	Pottery assemblages from selected groups related to Enclosures 34, 37 and 38
Table 78	Pottery assemblages from selected groups on Plateau 5 (c. 1150–1225/1250)
Table 79	Changing proportions of EM1 and EM3 between plateaus
Table 80	Breakdown of High Medieval assemblage by fabric
Table 81	Pottery assemblages from Enclosure 25 and related features
Table 82	Pottery assemblages from Enclosure 55 and related features
Table 83	Pottery assemblages from Enclosure 52 and related features
Table 84	Pottery assemblages from Enclosure 53 and related features
Table 85	Pottery assemblages from Enclosure 58 and related features
Table 86	Pottery assemblages from Tracks 31–32
Table 87	Breakdown of Late Medieval assemblage by fabric

Table 88	Breakdown of Early Post-medieval assemblage by fabric
Table 89	Total quantities of all ceramic forms
Table 90	The daub from Plateau 1 with recordable features
Table 91	The daub from Plateau 2 with recordable features
Table 92	The daub from Plateau 3 with recordable features
Table 93	The daub from Plateau 5 with recordable features
Table 94	The daub from Plateau 6 with recordable features
Table 95	The daub from Plateau 8 with recordable features
Table 96	Human Burials by Skeleton Number
Table 97	Human Burials by Period
Table 98	Age categories and the ranges
Table 99	Categories for sex assessment
Table 100	Skeletal Preservation and Completeness by Phases
Table 101	Total Weight of Cremation Deposits and Sieved Weight in grams for Phases
Table 102	Total Weight of Cremation Deposits and Sieved Weight in grams for Phases
Table 103	Total Number of Individuals Examined, Age-at-Death Distribution by Phase
Table 104	Skeletal elements employed in computing stature, alongside age category and biological sex for phases
Table 105	Average Platymetric and Platycnemic Indices
Table 106	Crude Prevalence Rates
Table 107	Neolithic Cremation Deposits
Table 108	Latest Neolithic/ Early Bronze Age Cremation Deposits
Table 109	Crude Prevalence Rate of Pathologies for Late Neolithic to Early Bronze Age Phase
Table 110	Mid- to Late Bronze Age to Early Iron Age Cremation Deposits
Table 111	Iron Age Cremation Deposits
Table 112	Crude Prevalence Rate of Pathologies for Iron Age Phase
Table 113	Crude Prevalence Rate of Pathologies for Iron Age Cemetery Phase
Table 114	Late Iron Age – Roman Cremation Deposits
Table 115	Crude Prevalence Rate of Pathologies for Late Iron Age to Roman Phases

Table 116	Cremation Deposit from c. 11 th –14 th Centuries
Table 117	Individuals for which isotope ratio analysis was undertaken
Table 118	Isotope ratio data
Table 119	Distribution of fragments across plateau sites for all phases
Table 120	Table showing the total number of fragments relative to species for each phase.
Table 121	Distribution of gnawed bone across the phases and plateau sites.
Table 122	Minimum numbers of animals represented in overall deposit
Table 123	Distribution of bone fragments relative to feature type for phases 6–8 in the Iron Age Period.
Table 124	Distribution of fragments across features in phase 9.
Table 125	Fragment distribution across features and plateaus for phase 10
Table 126	Fragment distribution across features and plateaus for phase 11.
Table 127	Distribution of fragments across features and plateaus for phase 12
Table 128	Distribution of fragments across features and plateaus for phase 14
Table 129	Distribution of fragments over features and plateaus for phase 15
Table 130	Distribution of fragments across features and plateaus in phase 16.
Table 131	Distribution of cattle fragments across features in phases 6–8
Table 132	Distribution of Cattle fragments over features for the medieval phases 13–16.
Table 133	Distribution of Sheep/goat fragments across features in phases 6–8
Table 134	Distribution of Sheep/goat fragments across features in phases 13–16
Table 135	Distribution of pig fragments across features in phases 6–8
Table 136	Distribution of Pig fragments across features in the medieval period
Table 137	Distribution of dog bone across features in the Iron Age
Table 138	Distribution of dog bone relative to feature type in the medieval period.
Table 139	Distribution of horse fragments across features in phases 6–8
Table 140	Distribution of horse fragments relative to feature in the Medieval Phase.

Table 141	Relative proportions of cattle, sheep/ goat (inclusive of sheep and goat) and pig for each of the Iron Age phases 6–8.
Table 142	Element representation for Cattle during the Iron Age Phases 6–8.
Table 143	Number of cattle elements present in phases 9–12
Table 144	Element distribution for Cattle in the Medieval Period: Phases 13–16
Table 145	Element representation for Sheep/Goat during the Iron Age Phases 6–8.
Table 146	Distribution of Sheep goat fragments from Phases 9–12
Table 147	Element representation for Pig during the Iron Age Phases 6–8.
Table 148	Distribution of pig elements in phases 9–12
Table 149	Distribution of Pig elements for phases 13–17
Table 150	Element representation for Horse during the Iron Age Phases 6–8.
Table 151	Element representation for Horse during Phases 11–16.
Table 152	Overall distribution of dog elements in the Iron Age Phases 6–8
Table 153	Metrical data for all phases.
Table 154	Estimated withers heights taken from Iron Age Sheep/ goat remains (phases 6–9)
Table 155	Estimated withers heights for Sheep/ goat phases 9–16
Table 156	Estimated withers heights from cattle bones.
Table 157	Estimated withers heights for cattle phases 9–16
Table 158	Estimated withers heights from horse remains.
Table 159	Estimated withers heights for horses in the medieval period
Table 160	Estimated shoulder heights for dogs from the Iron Age Phases 6–8 following methods by Clark (1995) for metapodials and Harcourt (1974) for limb bones.
Table 161	Estimated shoulder heights for dogs from the Iron Age Phases 9–16 following methods by Clarke (1995) for metapodials and Harcourt (1974) for limb bones.
Table 162	Fusion data for all periods based upon fusion times for cattle bones from Silver (1969)
Table 163	Fusion data for all periods based upon fusion times for sheep/ goat bones from Silver (1969)
Table 164	Fusion data for all periods based upon fusion times for pig bones from Silver (1969)
Table 165	Distribution of neonatal remains across the site during the Iron Age Period.

Table 166	Crown height metrics and estimated ages for mandibular and maxillary teeth following Levine (1982).
Table 167	Expressed levels of toothwear on cattle mandibles from phases 6–8 following Grant (1982)
Table 168	Stages of mandibular wear following Grant (1982) across Iron Age phases 6–9 for sheep/goat
Table 169	Mandibular toothwear stages of Pig. (Grant 1982)
Table 170	Toothwear data from sheep/goat mandibles phase 9–17
Table 171	Toothwear data from cattle mandibles phase 9–17
Table 172	Table to show articulated burials in phase 17
Table 173	Distribution of fragments across phases from the bulk samples
Table 174	Distribution of fragments from the bulk samples relative to species for each phase
Table 175	Distribution of identified large mammal bone from bulk sieved samples following (O'Connor 2003)
Table 176	Summary of bone counts per context and phase
Table 177	Metrical data taken from the articulated horse found in context 178
Table 178	Summary of species and fragment counts for the samples
Table 179	Full list of birds recorded
Table 180	Distribution of bird bones across the plateaus
Table 181	Bird bones identified from each phase
Table 182	Bird remains from the Anglo-Saxon SFBs
Table 183	Occurrence of eggshell by analysis phase
Table 184	Records of avian eggshell from bulk samples
Table 185	Ecological groups used in analysis following Kenward et al. (1986) and Kenward (1997)
Table 186	Habitat and food preferences of strongly plant-associated beetles and bugs; information from Cox 2007, Morris (1990; 1997; 2002; 2008; 2012), Southwood and Leston (1959)
Table 187	Insects and other invertebrates recorded from the samples. Ecological codes are shown in square brackets, see Table 185. Nomenclature follows Duff 2012 for beetles (Coleoptera), and the British Bugs Website (2012) for bugs (Hemiptera: Heteroptera). Abundance of invertebrates other than adult beetles and bugs has been estimated on a three-point scale as: + present, ++ common, +++ abundant. Sample volumes marked with an asterix (*) have

been adjusted because only part of flots were examined for insect remains

- Table 188 Fish bone: Phase 2. Late Neolithic/Early Bronze Age
- Table 189 Fish bone: Phase 8. General Iron Age
- Table 190 Fish bone: Phase 12. Anglo-Saxon
- Table 191 Fish bone: Phase 14. Medieval C12th-C13th
- Table 192 Fish bone: Phase 14. Medieval C13th-C14th
- Table 193 Fish bone: Phase 16. General Medieval
- Table 194 Fish bone: Phase 20. Uncertain
- Table 195 Fish bone: TEP EX10
- Table 196 Checklist of terrestrial mollusc taxa recorded and partial identification levels with their allocated ecological coding. Nomenclature and taxonomic order of presentation follows Kerney (1999). Ecological codes (ecode) are as follows: ap – anthropobic; b – burrowing; c – catholic; mh – marsh; od – open, dry habitats (including short-turf grassland); r – rocks/scree; s – synanthropic; sdc – shade/disturbance/clearance; wl – woodland indicators; ws – shade-loving (woodland/scrub/leaf litter/wet grassland).
- Table 197 Plateau 4, large boundary ditch (G4006/G5047) – mollusc remains from washovers. Key: Figures are counts of minimum numbers of individuals recorded (for *P. elegans* the first figure shown is the number of shells and the second the number of opercula); for remains recorded semi-quantitatively the scale employed was: ‘+’ – few/rare, up to 3 individuals/items; ‘++’ – some/present; 4 to 20, ‘+++’ – many/common; 21 to 50, ‘++++’ – very many/abundant; 51 to 200; and ‘+++++’ – super-abundant, over 200 individuals/items.
- Table 198 Plateau 4, large boundary ditch (G4006/G5047) – mollusc remains from residues. Key: Figures are counts of minimum numbers of individuals recorded (for *P. elegans* the first figure shown is the number of shells and the second the number of opercula); for remains recorded semi-quantitatively the scale employed was: ‘+’ – few/rare, up to 3 individuals/items; ‘++’ – some/present; 4 to 20, ‘+++’ – many/common; 21 to 50, ‘++++’ – very many/abundant; 51 to 200; and ‘+++++’ – super-abundant, over 200 individuals/items.
- Table 199 Plateau 6, inner ring ditch of late Neolithic/early Bronze Age Barrow 1 (G6005) – mollusc remains from washovers. Key: Figures are counts of minimum numbers of individuals recorded (for *P. elegans* the first figure shown is the number of shells and

the second the number of opercula); for remains recorded semi-quantitatively the scale employed was: '+' – few/rare, up to 3 individuals/items; '++' – some/present; 4 to 20, '+++ – many/common; 21 to 50, '++++' – very many/abundant; 51 to 200; and '+++++' – super-abundant, over 200 individuals/items.

- Table 200 Plateau 6, inner ring ditch of late Neolithic/early Bronze Age Barrow 1 (G6005) – mollusc remains from residues. Key: Figures are counts of minimum numbers of individuals recorded (for *P. elegans* the first figure shown is the number of shells and the second the number of opercula); for remains recorded semi-quantitatively the scale employed was: '+' – few/rare, up to 3 individuals/items; '++' – some/present; 4 to 20, '+++ – many/common; 21 to 50, '++++' – very many/abundant; 51 to 200; and '+++++' – super-abundant, over 200 individuals/items.
- Table 201 Plateau 6, outer ring ditch of late Neolithic/early Bronze Age Barrow 1 (G6006) – mollusc remains from washovers. Key: Figures are counts of minimum numbers of individuals recorded (for *P. elegans* the first figure shown is the number of shells and the second the number of opercula); for remains recorded semi-quantitatively the scale employed was: '+' – few/rare, up to 3 individuals/items; '++' – some/present; 4 to 20, '+++ – many/common; 21 to 50, '++++' – very many/abundant; 51 to 200; and '+++++' – super-abundant, over 200 individuals/items.
- Table 202 Plateau 6, outer ring ditch of late Neolithic/early Bronze Age Barrow 1 (G6006) – mollusc remains from residues. Key: Figures are counts of minimum numbers of individuals recorded (for *P. elegans* the first figure shown is the number of shells and the second the number of opercula); for remains recorded semi-quantitatively the scale employed was: '+' – few/rare, up to 3 individuals/items; '++' – some/present; 4 to 20, '+++ – many/common; 21 to 50, '++++' – very many/abundant; 51 to 200; and '+++++' – super-abundant, over 200 individuals/items.
- Table 203 Plateau 6, ring ditch of late Neolithic/early Bronze Age Barrow 4 (G6008) – mollusc remains from washovers. Key: Figures are counts of minimum numbers of individuals recorded; for remains recorded semi-quantitatively the scale employed was: '+' – few/rare, up to 3 individuals/items; '++' – some/present; 4 to 20, '+++ – many/common; 21 to 50, '++++' – very many/abundant; 51 to 200; and '+++++' – super-abundant, over 200 individuals/items.
- Table 204 Plateau 6, ring ditch of late Neolithic/early Bronze Age Barrow 4 (G6008) – mollusc remains from residues. Key: Figures are counts of minimum numbers of individuals recorded; for remains recorded semi-quantitatively the scale employed was: '+' –

few/rare, up to 3 individuals/items; ‘++’ – some/present; 4 to 20, ‘+++’ – many/common; 21 to 50, ‘++++’ – very many/abundant; 51 to 200; and ‘+++++’ – super-abundant, over 200 individuals/items.

- Table 205 Plateau 6, ring ditch of late Neolithic/early Bronze Age Barrow 4 (G6008) – mollusc remains from washovers. Key: Figures are counts of minimum numbers of individuals recorded (for *P. elegans* the figure shown is the number of shells); for remains recorded semi-quantitatively the scale employed was: ‘+’ – few/rare, up to 3 individuals/items; ‘++’ – some/present; 4 to 20, ‘+++’ – many/common; 21 to 50, ‘++++’ – very many/abundant; 51 to 200; and ‘+++++’ – super-abundant, over 200 individuals/items.
- Table 206 Plateau 6, ring ditch of late Neolithic/early Bronze Age Barrow 4 (G6008) – mollusc remains from residues. Key: Figures are counts of minimum numbers of individuals recorded; for remains recorded semi-quantitatively the scale employed was: ‘+’ – few/rare, up to 3 individuals/items; ‘++’ – some/present; 4 to 20, ‘+++’ – many/common; 21 to 50, ‘++++’ – very many/abundant; 51 to 200; and ‘+++++’ – super-abundant, over 200 individuals/items.
- Table 207 Plateau 7, ring ditch of late Neolithic/early Bronze Age Barrow 2 (G7002) – mollusc remains from washovers. Key: Figures are counts of minimum numbers of individuals recorded (for *P. elegans* the first figure shown is the number of shells and the second the number of opercula); for remains recorded semi-quantitatively the scale employed was: ‘+’ – few/rare, up to 3 individuals/items; ‘++’ – some/present; 4 to 20, ‘+++’ – many/common; 21 to 50, ‘++++’ – very many/abundant; 51 to 200; and ‘+++++’ – super-abundant, over 200 individuals/items.
- Table 208 Plateau 7, ring ditch of late Neolithic/early Bronze Age Barrow 2 (G7002) – mollusc remains from residues. Key: Figures are counts of minimum numbers of individuals recorded (for *P. elegans* the first figure shown is the number of shells and the second the number of opercula); for remains recorded semi-quantitatively the scale employed was: ‘+’ – few/rare, up to 3 individuals/items; ‘++’ – some/present; 4 to 20, ‘+++’ – many/common; 21 to 50, ‘++++’ – very many/abundant; 51 to 200; and ‘+++++’ – super-abundant, over 200 individuals/items.
- Table 209 Plateau 7, ring ditch of late Neolithic/early Bronze Age Barrow 3 (G7008), all bar final fill (see Table 16) – mollusc remains from washovers. Key: Figures are counts of minimum numbers of individuals recorded (for *P. elegans* the first figure shown is the number of shells and the second the number of opercula); for

remains recorded semi-quantitatively the scale employed was: '+' – few/rare, up to 3 individuals/items; '++' – some/present; 4 to 20, '+++ – many/common; 21 to 50, '++++' – very many/abundant; 51 to 200; and '+++++' – super-abundant, over 200 individuals/items.

- Table 210 Plateau 7, ring ditch of late Neolithic/early Bronze Age Barrow 3 (G7008), all bar final fill (see Table 17) – mollusc remains from residues. Key: Figures are counts of minimum numbers of individuals recorded (for *P. elegans* the first figure shown is the number of shells and the second the number of opercula); for remains recorded semi-quantitatively the scale employed was: '+' – few/rare, up to 3 individuals/items; '++' – some/present; 4 to 20, '+++ – many/common; 21 to 50, '++++' – very many/abundant; 51 to 200; and '+++++' – super-abundant, over 200 individuals/items.
- Table 211 Plateau 7, ring ditch of late Neolithic/early Bronze Age Barrow 3 (G7008), final fill only – mollusc remains from washovers. Key: Figures are counts of minimum numbers of individuals recorded (for *P. elegans* the first figure shown is the number of shells and the second the number of opercula); for remains recorded semi-quantitatively the scale employed was: '+' – few/rare, up to 3 individuals/items; '++' – some/present; 4 to 20, '+++ – many/common; 21 to 50, '++++' – very many/abundant; 51 to 200; and '+++++' – super-abundant, over 200 individuals/items.
- Table 212 Plateau 7, ring ditch of late Neolithic/early Bronze Age Barrow 3 (G7008), final fill only – mollusc remains from residues. Key: Figures are counts of minimum numbers of individuals recorded (for *P. elegans* the first figure shown is the number of shells and the second the number of opercula); for remains recorded semi-quantitatively the scale employed was: '+' – few/rare, up to 3 individuals/items; '++' – some/present; 4 to 20, '+++ – many/common; 21 to 50, '++++' – very many/abundant; 51 to 200; and '+++++' – super-abundant, over 200 individuals/items.
- Table 213 Plateau 8, ring ditch of late Neolithic/early Bronze Age Barrow 6 (G8005) – mollusc remains from washovers. Key: Figures are counts of minimum numbers of individuals recorded (for *P. elegans* the first figure shown is the number of shells and the second the number of opercula); for remains recorded semi-quantitatively the scale employed was: '+' – few/rare, up to 3 individuals/items; '++' – some/present; 4 to 20, '+++ – many/common; 21 to 50, '++++' – very many/abundant; 51 to 200; and '+++++' – super-abundant, over 200 individuals/items.
- Table 214 Plateau 8, ring ditch of late Neolithic/early Bronze Age Barrow 6 (G8005) – mollusc remains from residues. Key: Figures are counts

of minimum numbers of individuals recorded (for *P. elegans* the first figure shown is the number of shells and the second the number of opercula); for remains recorded semi-quantitatively the scale employed was: '+' – few/rare, up to 3 individuals/items; '++' – some/present; 4 to 20, '+++' – many/common; 21 to 50, '++++' – very many/abundant; 51 to 200; and '+++++' – super-abundant, over 200 individuals/items.

- Table 215 Plateau 8, ring ditch of late Neolithic/early Bronze Age Barrow 6 (G8005) – mollusc remains from washovers. Key: Figures are counts of minimum numbers of individuals recorded; for remains recorded semi-quantitatively the scale employed was: '+' – few/rare, up to 3 individuals/items; '++' – some/present; 4 to 20, '+++' – many/common; 21 to 50, '++++' – very many/abundant; 51 to 200; and '+++++' – super-abundant, over 200 individuals/items.
- Table 216 Plateau 8, ring ditch of late Neolithic/early Bronze Age Barrow 6 (G8005) – mollusc remains from residues. Key: Figures are counts of minimum numbers of individuals recorded; for remains recorded semi-quantitatively the scale employed was: '+' – few/rare, up to 3 individuals/items; '++' – some/present; 4 to 20, '+++' – many/common; 21 to 50, '++++' – very many/abundant; 51 to 200; and '+++++' – super-abundant, over 200 individuals/items.
- Table 217 Plateau 1: charred and mineralised plant remains listed, sample by sample
- Table 218 Plateau 2: charred and mineralised plant remains listed, sample by sample
- Table 219 Plateau 3: charred and mineralised plant remains listed, sample by sample
- Table 220 Plateau 4: charred and mineralised plant remains listed, sample by sample
- Table 221 Plateau 5: charred and mineralised plant remains listed, sample by sample
- Table 222 Plateau 6: charred and mineralised plant remains listed, sample by sample
- Table 223 Plateau 7: charred and mineralised plant remains listed, sample by sample
- Table 224 Plateau 8: charred and mineralised plant remains listed, sample by sample
- Table 225 Waterlogged plant remains from four samples from plateaux 1 and 2.

- Table 226 Summary of data for seventeen sunken featured buildings (SFBs) dating from the Late Iron Age/Roman period (Phase 11) to the medieval period (Phase 16). KEY: + = trace, <1%; ++=several; L=layer; H=hearth; PH=post hole; O=oven; cult. = cultivated
- Table 227 Summary of data from fifteen of the most productive Iron Age (Phase 8) pits on Plateau 8. sto=storage pit; '+=occasional; +++=frequent; cf. = uncertain identification. Weeds in capitals = frequent
- Table 228 Summary of data from eleven Phase 9 to Phase 16 heath pits, hearths, ovens and oven rake-out deposits from five different plateaux. KEY: HP=hearth pit; H=hearth; O=oven; RO= rake out; hw=hulled wheat; ftw=free-threshing wheat; () = trace
- Table 229 Pipeline Site cess pits
- Table 230 Summary of main cultivated and gathered plants through the phases, using an approximated frequency scale that has been averaged across the samples.
- Table 231 List of processed samples
- Table 232 Barrow 1, Plateau 6, Monkton, Kent; Chemical and magnetic susceptibility data
- Table 233 Barrow 1, Plateau 6, Monkton, Kent; soil samples and micromorphology counts
- Table 234 Soil Micromorphology (Descriptions and preliminary interpretations)
- Table 235 Distribution of pottery of the first millennium BC on Plateau 1
- Table 236 Distribution of pottery of the first millennium BC on Plateau 2
- Table 237 Distribution of pottery of the first millennium BC on Plateau 3
- Table 238 Distribution of pottery of the first millennium BC on Plateau 4
- Table 239 Distribution of pottery of the first millennium BC on Plateau 5
- Table 240 Distribution of pottery of the first millennium BC on Plateau 6
- Table 241 Distribution of pottery of the first millennium BC on Plateau 7

Chapter 1: Introduction

Jon Rady

This volume describes the circumstances and results of the archaeological investigation of a large, 90 hectare (c. 222 acres) development site, known as Thanet Earth, between Birchington (near Margate) and Monkton on the Isle of Thanet, Kent (TR 289 667 centred; Fig. 1; Plates 1 and 2). The site, previously open agricultural land, lies on locally higher ground (between 16 and 37m OD) on the western side of Thanet. It is situated to the west of Seamark Road, from the Monkton roundabout to the south (at the junction of the A253 and A299), north to Monkton Road Farm on the east and the A28 dual carriageway, just west of Coney Close near Brooksend, to the west. The site straddles two parishes, Monkton to the south and east and St Nicholas-at Wade to the north-west, the parish boundary being doglegged across the site.

Project background

The landholders and farmers of the land at Monkton Road Farm, Robert Montgomery Ltd, in alliance with a Dutch firm, originally envisaged the development of a large scale greenhouse complex on the site. The site was suitable for such an enterprise for a number of reasons, partly the temperate climate, relatively good transport links and the lack of any overriding physical constraints. The development, which was to consist of the phased erection of seven extensive, industrial scale greenhouses (51 hectares under glass to grow salad produce), a packhouse, a research and education centre and the construction of associated roads, drainage and other infrastructure, was taken forward by Fresca Group Ltd, in alliance with a consortia of three Dutch growers.

A planning application (ref. TH/05/0237) for the proposed development was submitted to Thanet District Council (the Local Planning Authority) in February 2005 by Robert Montgomery Ltd. Due to the high archaeological potential of the site and the likely impacts of the proposed development, the Kent County (KCC) Archaeologist advised the District Council that provision should be made for the preservation *in situ* of known important archaeological remains and for mitigation through archaeological investigation where this was not feasible.

After lengthy consideration and discussions between KCC Heritage and Fresca, the District Council decided to grant planning permission in May 2007, subject to a legal agreement being drawn up between the landowner and the Council under Section 106 of the Town and Country Planning Act (as amended), and the imposition of suitable safeguarding conditions. The subsequent Section 106 agreement of September 2007 contained numerous detailed obligations with which the owner and developer of the land were bound to comply. One section of the agreement covered archaeological matters, mostly the broader requirements, with more detailed

methodologies set out in a specification then produced by KCC Heritage. The application was subsequently granted permission on 25 September 2007.

Once the development had been designed in detail and approved by the relevant authorities, the construction was put out to tender, the contract being won by Fitzpatrick Contractors Ltd. In September 2007, Canterbury Archaeological Trust (CAT) was commissioned by Fitzpatrick on behalf of Fresca Group Ltd to undertake the large scale archaeological investigations that were a requirement for the development to proceed (although some relatively minor archaeological investigative works had already taken place before this). Fresca employed RPS Planning and Development as archaeological consultants to manage delivery of the complex archaeological works within the intensive development programme.

Nature of the development and potential impacts

The development involved the formation of eight extensive plateaus, seven for the greenhouses and one for the packhouse (Plateaus 1 to 8; Fig. 2), each about 80,000 square metres in area (although Plateau 8 was slightly smaller). These required considerable re-modelling of the landscape through cut and fill works, with the higher parts of each area excavated to formation level, and the resultant spoil placed on the lower areas to form a consistent level platform across each site, upon which the greenhouses could then be built (using a foundation of small diameter, shallow piles). Levels of each plateau were calculated both to ensure that no excess material would need to be removed off-site and that the visual impact of the proposed structures was minimised (Plates 3 and 4). Thus, the lower parts of each plateau were to remain mostly undisturbed and sealed beneath fill (with the original topsoil left *in situ* as a buffer layer over the archaeological horizon), while the higher areas were to be excavated to the agreed formation level, providing the fill for the lower areas. This would result in the near total destruction of any archaeological resource in the areas of cut, which would therefore all require archaeological examination (see Plate 12).

Further areas involved were seven large ponds (for the collection and re-use of the rainwater from each greenhouse; Fig. 2), three overflow ponds and a new access road along the eastern side of the site. All of these areas, particularly the ponds (which were to be at least 10m deep), required considerable reductions of ground level, which in most cases would have caused the complete removal of any archaeological features. Finally, the easements for a number of rerouted services and proposed drainage for the new facilities would also have potential detrimental impacts to any archaeological remains that they happened to traverse. In total, these impact zones comprised about 47 hectares.

Two further phases of related works were also carried out after the main excavation. An archaeological strip, map and sample excavation (commissioned by Volker-Fitzpatrick in consultation with RPS Planning and Development on behalf of Thanet Earth Ltd) was undertaken along the route of a proposed 2.57km long wastewater

pumping main linking the newly constructed Thanet Earth complex to existing infrastructure at Minnis Road, Birchington (NGR 62963 16930 to NGR 62908 16723; Fig. 3). The archaeological programme was undertaken between Monday 19 July and Friday 20 August 2010 in response to condition 4 of the relevant planning consent (ref. F/TH/10/0016). Finally, in August 2012, additional excavation at Plateau 1 was undertaken in response to an enlargement of the proposed greenhouse (NGR 628780 167390 centred). The work, funded by Thanet Growers One Ltd, was carried out with similar procedures to the 2007–2008 excavations, within three relatively small areas not previously cleared.

Scope of the works

Prior to the main work, a preliminary desktop study of the whole site and its environs (Hunn 2005) and a programme of metal detection survey using volunteers were carried out (Plate 8). In addition, a geophysical survey (ASWYAS 2006) and archaeological evaluation were implemented, but both were limited to a relatively small area (subsequently Plateau 3) near a suspected Anglo-Saxon cemetery, in order to confirm (or not) its presence and extent (see below). Unusually, the site generally was not archaeologically evaluated by any intrusive works prior to development; this was partly due to the limited timescale for the completion of the first phase of the development, but also conformed to a ‘longstanding approach’ used in Kent from the 1990’s (Mason 2015). There was thus little indication of the quantity, density or type of archaeological resource that might be revealed or the resources needed to deal with it, at least during the earlier phases (crop marks did not provide reliable information; see Fig. 5).

The main phase of works commenced with the topsoil strip on 15 October 2007 (Plates 5, 6, 9 and 10), which became more intermittent as time progressed and so was not finally completed until September 2008; all excavation works (Plates 11 and 16) were finally complete virtually a year, to the day, after the first machine started to strip the soil. All areas destined for ground reduction, or to be disturbed by new or rerouted service easements were examined archaeologically by a process of strip, map and sample excavation such as is commonly employed in Kent, and to the specification supplied by KCC Heritage. The earthworks eventually involved the stripping, storage and replacement of 142,000 cubic metres of topsoil and the excavation, re-deposition and compaction of about 740,000 cubic metres of chalk subsoil (approximately a million tonnes in total). In the event, about 47 hectares (nearly half a million square metres) were examined archaeologically, this being one of the largest open area excavations ever conducted in Kent (Plate 7). The extension to Plot 1 (the Plateau 1 greenhouse; see Plate 17), was excavated using similar procedures and involved three small areas (total extent c. 1580 m²).

For the wastewater pumping main, due to the relatively small diameter of the proposed pipe and the methodology to be employed in its laying (using a trench cutting/pipelaying machine) no topsoil stripped easement was required. The archaeological mitigation proposed was therefore proportionate to the likely impact

of the engineering works and involved only a narrow width of intervention (designated as 600mm) down the precise course of the proposed pipeline (Plates 13, 14 and 15). At a number of points along the route a slightly wider intervention was necessary to enable the engineering works. The route of the pipeline (Fig. 3) was designed to avoid the majority of the known cropmarks (including two areas designated Scheduled Monuments – Kent 259 and 270), based on a new study by Alison Deegan (Deegan in RPS 2009).

Excavation methodology

While the strip and map phase was still in progress, formal excavation on a substantive scale did not start till Monday 26 November 2007, on Plateau 4, all excavation being finally completed (Plateau 7) on Tuesday 14 October 2008. The main objectives of this phase (and the preceding strip and map) were set out in the specification. The principal aim following the initial strip and map was to understand the general pattern of settlement dynamics and how key elements of the archaeological landscape (sites, activities, deposits and finds) related to each other spatially, functionally and chronologically and thus to establish a broad phased plan of the archaeology revealed. Further excavation would then aim to provide a refined chronology of the archaeological phasing and to investigate the function of structural remains and the activities taking place within and close to the site. Finally, the results were, if possible, to be understood in relationship to the wider settlement pattern, landscape, economy and environment. Generally, prior to any excavation taking place on the exposed remains in any area (considered as entire plateaus), a sample excavation strategy based on the strip and map plan, had to be formulated and submitted to KCC for approval – an exception was made for known burials or potential burials which had to be exhumed as quickly as possible after exposure, usually within 24 hours.

The excavation strategies defined were based on the requirements outlined in the specification. So, a framework of excavation to provide an understanding of the spatial distribution of past activities across the investigation area including any 'special' deposits and any patterning in artefact distribution was required in addition to the more basic need to obtain a chronology and phasing of the archaeological features. This was to be achieved by investigating virtually all the anomalies recorded during the strip and map phase (and any other features that subsequently came to light), to a sufficient sampling level. Structural remains and other areas of significant and specific activity (domestic, industrial, religious, hearths, 'special' / patterned deposits etc.) were to be fully excavated and recorded. Non-structural linear cut features would be sample excavated and recorded with a sufficient number of sections to establish the feature's character, date and morphology and to provide information on activities taking place in close proximity to the feature. This was set at an approximate sample rate of 10 per cent, or a 2m long excavated slot every 20m, and to include all intersections, terminal ends and significant bends or changes of direction (such as the corners of ditched enclosures). Non-structural features, such as pits were generally to be half-sectioned unless there

were specific reasons for adopting another approach; this could include complexes of intercutting features, recut features, or features containing special deposits. Alternative strategies might comprise excavation by quadrants, single context recording of fills and complete excavation rather than half-sectioning.

All burial deposits and associated remains were fully excavated and recorded in accordance with an agreed methodology. A Ministry of Justice licence for the removal of human remains (under Section 25 of the Burial act of 1857) was procured for the duration of the project. Certain features which eventually came to light, such as the ring-ditches, or discrete features of significant interest were sampled more intensively, others such as the large quarries, of which nearly twenty were finally located, less so. The location of significant finds (such as burials within ditches) generally prompted more intensive sampling and other strategies. Excavation and recording of features in the field was carried out in tandem with a detailed environmental sampling strategy, with over 20 tonnes of soil from hundreds of features eventually being processed. Proposed interventions were produced on a CAD drawing and set out in the field using GPS then resurveyed once excavation was complete (Plate 11). A grid was provided, tied to OS coordinates, in more complex areas. All plateaus were allocated their own batches of context numbers to avoid duplication.

The works were directed by Jon Rady, with the various site areas supervised (sometimes in tandem) by Damian Boden, Adrian Gollop, James Holman, Ross Lane, Andy Macintosh, Phil Mayne and Laura O'Shea, with assistance from Kirsty Bone and Chris O'Brien. Fitzpatrick supplied plant and facilities where required in most instances. Rob Masefield of RPS, who acted as archaeological consultant for the project on behalf of Fresca/Thanet Earth Ltd, from February 2008 to the end of fieldwork and beyond, had a considerable input into the strategies employed on site.

The works were regularly monitored by Lis Dyson (the County Archaeological Officer (CAO)) and Adam Single of Kent County Council Heritage Conservation Group. Due to the nature of the tight programme of archaeological works in relation to plateau levelling by the main contractor and the large scale the of the main strip, map and sample excavations, weekly sign-off meetings were held between RPS, CAT and the CAO (Lys Dyson) to agree detailed procedures for freshly stripped areas and the sign off of completed areas. This was achieved expediently and to the required standards, despite high levels of previously unknown and significant archaeology. During the course of the works, 76 separate areas were eventually cleared in this manner. For the subsequent works enlarging Plateau 1, James Holman supervised the excavations and all staff had worked on the earlier investigations. Plant was supplied by the main contractor on site (Breheny Civil Engineering). RPS again acted as the contact between the archaeological contractor (CAT) and the County Archaeological Officer, in this case Wendy Rogers. A similar team was involved with the pipeline works, with Robert Masefield (RPS) continuing as consultant and Adam Single overseeing the works on behalf of KCC.

Post-excavation

Post-excavation assessment, which involved a comprehensive analysis of the site records and stratigraphic data was completed within two years of the end of the fieldwork (Rady *et al* 2010a). The excavation produced a total of 13,526 contexts which have been sorted into hierarchical levels comprising 4,843 sets and 1,480 groups spanning 9 main phases (below). In addition, objects have been defined as major structural or topographic units, some spanning more than one Plateau, and comprise nine barrows or burial mounds, 72 enclosures, four ring ditches of uncertain function, 74 sunken-featured buildings, 65 other structural units and 33 trackways (257 objects in total; see Fig. 6). A detailed stratigraphic report (Rady *et al* 2010b) and updated project design were also produced during this phase. Subsequent more detailed analysis of the stratigraphic, artefactual, environmental and documentary material commenced virtually immediately. This report forms part of the Canterbury Archaeological Trust's Technical Report series. It aims to present the detailed results of stratigraphic, artefactual and ecofactual analysis of the discoveries to a wider audience, more particularly to a specialist and professional readership. The programme of analysis was predicated on an initial chronological division into eighteen phases. There were later subsumed into seven broader phases in the chronological narrative (Volume 1, Chapters 2–8), but the original phasing structure is retained in the specialist reports (Volume 2, Chapters 9–28). A concordance between the analysis phasing structure and that of the chronological narrative is presented as Table 5.

Geology, hydrology and topography (Fig. 4)

The solid geology of the Isle of Thanet consists of a broad anticline of the Margate Chalk Member (formerly known as Upper Chalk) capped in places by the Thanet Formation (formerly Thanet Beds; Shephard-Thorn 1988, 26). The Chalk, which consists of a pure white Cretaceous limestone composed mainly of coccoliths and *Inoceramus* shell debris (*ibid*, 17) is shown as outcropping across virtually all of the site on the Geological Survey (Sheet 274). Intermittent spreads of sedimentary Eocene deposits, the Thanet Formation, survive over the Chalk where they have not been eroded away by later glacial episodes but none is recorded as present in the vicinity of the present site. The site works did however, show that over much of the area, particularly on its central and western parts, the chalk was capped with extensive but often intermittent spreads of flinty yellowish brown clays and silty clays that probably represent fragmented or redeposited sheets of heavily eroded Thanet Formation. The Chalk, where it was exposed, was also much disturbed by periglacial activity, where cracks caused by alternating cycles of freeze and thaw became filled with fine clays and silts, probably during the Greenland Interstadial 2a (Moody 2008, 27). These disruptions, generally of parallel linear aspect and here often trending north-west/south-east are common on the Chalk in Thanet.

Drift deposits of Pleistocene and more recent ages formed during and after the last glaciation (Shephard-Thorn 1988, 33), consist almost entirely of Head (formerly

known as Head Brickearth) in Thanet. In places, such as the Pegwell Bay exposures, they have been considered as loessic in origin, but are normally probably considerably re-worked and redeposited, or mixed with displaced Thanet Formation deposits. The material, generally a relatively stone free silty, clayey loam is of two types, the Head 2 (Older) lying as sheets on the higher ground or plateaus and often associated with outcrops of Thanet Formation, with Head 1 (Younger) mostly aggraded onto north or south facing slopes, often at the base of dry valleys where the material has probably been deposited, at least in part, by solifluction (Shephard-Thorn 1988, 34).

Head 2 is recorded beyond the eastern limit of the site, whilst Head 1 is shown most prominently to the north, where it occupies the base of shallow dry valleys in two north-south aligned strips which originate towards the site centre (Fig. 4); the Head in these valleys, was shown during the excavations to be mostly colluvial in origin (or at least its uppermost formation), whilst the valleys themselves undoubtedly represent ancient stream courses. However, no extant watercourses exist on the site today and are virtually non-existent on Thanet as a whole. A smaller tongue of Head 1 is shown originating on the southern extent of the site, trending north-east/south-west. The dry valleys were still evident in the topography of the site prior to the construction works, though apart from the one just west of Monkton Road Farm, were barely recognisable on the ground. From the south (at about 21m OD) the land rises quite steeply to a high relatively flat zone, roughly covering the central part of the site (34–37m OD), then more gradually falls away to the north, to its lowest point at about 16m OD.

The route of the wastewater pumping main, situated almost entirely within agricultural land under arable cultivation, traversed similar geology although a more expansive sheet of drift, in the form of Head 1, lies on the higher ground to the north-east of Brooksend Farm (Plates 13, 14 and 15). The landscape here, to the north-east of the main site, consists of a flat to gently rolling downland landscape. The route commenced in the Plateau 8 area of the Thanet Earth site crossing Seamark Road and trending north to cross Crispe Road and the A28 Canterbury Road to the east of Little Brooksend Farm. This section of the route generally slopes down from the northern end of the Thanet Earth complex at around 20m OD along the western flank of a shallow dry valley to a low point of approximately 4m OD at the base of a slightly more substantial east-west aligned dry valley between Crispe Road and Canterbury Road. The route then ascends the valley side, again mostly on a northerly alignment to a height of approximately 20m OD at the top of the plateau on which Birchington is situated. From this high point it then descends to approximately 11m OD, crossing another shallow dry valley in the area of the northern terminus of the pipeline just east of Gore End Farm.

Thanet was formerly an island separated from mainland Kent by the Wantsum Channel, which began to silt up probably from the late prehistoric period by natural processes (Perkins 2007, 255). This already complex development was accelerated by 'inning' during the medieval period and culminated in the complete disappearance

of the channel apart from what is little more than a drainage ditch now known as the River Wantsum. By 1485 a bridge had to be built to replace the ferry at Sarre as the channel was so silted and by the end of the medieval period, the Wantsum had 'become an alluvial flood plain cut by the Stour' as it made its way to the sea (*ibid*, 258).

Archaeological and historical background

Jon Rady and Robert Masefield

Thanet is extremely rich in archaeological remains, with many sites known from aerial photography. Numerous cropmarks have been recorded in the immediate area (Figs. 5; 6), but the date of many of these remains uncertain (the more extensive complexes are undoubtedly multi-period), apart perhaps for the ring ditch crop marks, which in most cases can be more confidently assigned to the later Neolithic/early Bronze Age period. Apart from evidence for ring ditches in the southern part of the site (see below), cropmarks across its northern area are generally sparse, although there is a concentration around Monkton Road Farm (Kent HER TR 26 NE 53), which indicates enclosures, lines of possible trackways and a possible Anglo-Saxon cemetery surrounding another ring ditch, undoubtedly a prehistoric barrow (Fig. 6). Further enclosures are represented by cropmarks extending both east and west of the centre of the site along the line of the Monkton/ St Nicholas-at-Wade parish boundary and along parts of Seamark Road. The present works have established that many, if not all of these are likely to be medieval in date. Towards Minnis Bay, there is an almost unbroken chain of cropmark complexes north of the main site, with similar concentrations nearer Birchington and Acol to the east, some with Scheduled Monument status (KE 270 and KE 259).

Little trace of earlier prehistoric activity is known from Thanet since most of the geological deposits where such evidence might be found have been removed by periglacial processes, or where potentially surviving, rarely investigated (Moody 2008, 53). Only a few Palaeolithic flint artefacts, all hand-axes, have been located in the vicinity of Ramsgate, at Westwood or along the northern coast at St Mildred's Bay, but residually in later contexts (*ibid*, 53–54). No finds of the period have been found near the present site. Further, it is notable that the HER for the area of the new East Kent Access (EKA) road scheme showed similarly sparse indications of Palaeolithic activity, comprising a single unstratified handaxe on the Chalk geology at Telegraph Hill (HER TR 36 NW 55). This scarcity was confirmed during the subsequent excavations, although it can be noted that the only Palaeolithic find came from the same area (Andrews *et al* 2015a, 23).

Mesolithic material such as axes or flint spreads is more common, but rarely directly associated with settlement evidence (Moody 2008, 57–61). Flints have been found at Quex Park, about 2km to the north-east, in a loess deposit in the base of a long dry valley and are probably the nearest finds of the period to the Thanet Earth site (TR 36 NW 194; Moody 2008, 60). Further afield, two worked flint scatters near Ramsgate

may relate to campsites or settlements (Wessex Archaeology 1998 Appendix 1: nos 1096 and 1186), while on the EKA road excavations, Mesolithic finds with a larger group of early Neolithic material were concentrated on the Ebbsfleet peninsula, mostly residual in later contexts, suggesting a preference for lower lying or coastal regions (Andrews *et al* 2015a, 23).

With the development-led flourish of archaeological fieldwork in the last two decades, Neolithic activity is becoming increasingly apparent on Thanet, with recent radiocarbon dates intimating that the area was amongst the first to adopt the characteristics of Neolithic culture, early in the fourth millennium BC (Whittle *et al* 2011, 383–385). A pit discovered at Westwood Cross (6.5km to the east) contained charred grain which has been dated to 3500–3130 cal BC (at 95 per cent probability; Whittle *et al* 2011, table 7.6), while the construction of the causewayed enclosure at Chalk Hill (*c.* 7km to the south-east) seems to have commenced about 3780–3680 cal BC (at 95 per cent probability; Whittle *et al* 2011, 375). Direct evidence for settlement sites remains minimal however (Moody 2008, 68), although the recent excavations on the EKA road scheme located early Neolithic activity, consisting mainly of groups of pits suggestive of transient settlement, on the Ebbsfleet peninsula and higher ground to the northeast towards Chalk Hill (Andrews *et al* 2015a, 23–29). Two isolated middle Neolithic (3350–2850 BC) pits were also recorded, as well as a single inhumation burial (*ibid*, 29–30). Elsewhere on the island, most earlier Neolithic remains consist of still rare single burials (Bennett *et al* 2008, 88–9, Moody 2008, 69–70) or more commonly, small pits containing cultural material (Moody 2008, 68–69). Examples of both types of feature were found less than 1km to the south-east of the present site (during the Monkton-Mount Pleasant excavations prior to the dualling of the A253 in 1994; Bennett *et al* 2008).

From the later Neolithic into the early Bronze Age, settlement evidence is still sparse on Thanet, scattered and stray cultural material often being the only indicators of human presence (Moody 2008, 97; Andrews *et al* 2015a, 30), although there is a wealth of funerary and other monuments, often in the form of crop marks of ring ditches known to represent ploughed out barrows or in some cases what have been considered hengiform monuments (Moody 2008, 72). Thanet in particular and East Kent in general has a very dense concentration of barrows often containing relatively rich burials, perhaps due to its coastal advantages and proximity to the continent. The Thanet density is more typical of the Wessex concentration around Stonehenge than anywhere else in south-east England (Bradley 2007).

Somewhere between 8 and about 15 crop mark defined ring ditches are discernible within the Thanet Earth site boundary, mostly in the area of southern greenhouse Plateaus 6 and 7. Other ring ditches, generally in a less concentrated spread, but with some in quite dense and complex groups, are also known to the north, north-east and north-west (such as Kent HER TQ 26 NE 176). These include at least 49 crop-mark ring-ditches within 500m of the pipe-line route, the majority of which are likely to be of Bronze Age date. These barrow cemeteries extend well beyond the Thanet Earth site area, mainly to the east towards and beyond Manston Airport. Ten of

these features were examined (by CAT in 1994–1995), either in whole or in part, prior to the dualling of the Monkton to Mount Pleasant section of the A253, just to the south-east of the present site (Clark and Rady 2008). A further ten early Bronze Age ring-ditches were examined on the EKA road scheme, most of these spread along the higher ground of the ridge just south of Manston airport (Andrews *et al* 2015a, 31).

Beaker burials, both in barrows or isolated in so called ‘flat graves’ (see Clark and Rady 2008, 92–93) are increasingly known from Thanet, with a dozen or so of the latter having been excavated (Moody 2008, 81). Remarkably, prior to the Thanet Earth and Monkton to Mount Pleasant Road projects there were less than 40 Beaker burials known for the whole of Kent (Oxford Archaeology 2003). These inhumations are invariably crouched but are otherwise quite varied, although common traits are a near north-south alignment with head to the north and usually, but not always, a recurrent but not inclusive set of grave goods, such as a beaker, flint implements or weapons, jet beads, copper alloy bracelets and stone wristguards (Champion 2007a, 92–93). The nearest such burials to Thanet Earth were less than 1km to the south-east, where six were located on the Monkton-Mount Pleasant road scheme (Clark and Rady 2008). Surprisingly, although burials associated with barrows were found on the EKA road scheme, isolated graves were virtually absent, although at least some of a group of six may be of this period and a number of early Bronze Age cremation burials were also located (Andrews *et al* 2015a, 65).

In the mid to later Bronze Age more direct occupation becomes evident with a scatter of agricultural settlements often set within an organized landscape of fields and drove roads (Moody 2008, 98–99; Champion 2007a, 100–101), although evidence for an earlier origin of at least some, potentially co-axial field systems in the area has more recently been revealed (at Minster; Martin *et al* 2012). Field systems are difficult to discern in smaller interventions, and prior to the Thanet Earth investigations were not particularly evident on Thanet (Champion 2007a, 101). Evidence for such systems of co-axial form has more recently been found on the EKA road scheme, where they tended to be evident on lower lying ground south of Cottingham Hill, and near Sevenscore and the Cliffs End spur (though not on the Ebbsfleet peninsular; Andrews *et al* 2015a, 105). Settlement sites of the later Bronze Age have been located north of Monkton Court Farm, to the south-west of Thanet Earth, with slightly later settlement evidence also known further east, just to the south of the site. Other evidence for mid to later Bronze Age occupation comes from the north, near Birchington and St Nicholas-at-Wade (Perkins *et al* 1994, 309–311) and, slightly further afield, close to the Ebbsfleet peninsular (Andrews *et al* 2015a, 107–109). Even on the large scale EKA road scheme works however, direct settlement evidence was ‘ephemeral, typically being inferred from domestic debris in pits or in ditches’ (Andrews *et al* 2015a, 107).

These settlements seem to be predominantly disposed along the coastal zone, although they are known from the interior, for example the post built structures, including one or more possible round houses found within an enclosure at Tothill

Street near Minster (TR 35 NW 500; Birchenough 2010). Their nature, however, is still little understood as most have only been very partially investigated and often they remain difficult to characterize (Champion 2007a, 103–107). Many seem to be quite different to Brück's general description of Bronze Age settlements of this period in southern England (1999, 145), and by the late Bronze Age, occupation sites appear quite varied (Champion 2007a, 105). Of note in Thanet is the prevalence of metalwork hoards, mostly found in coastal locations (Moody 2008, fig. 54; Andrews *et al* 2015a, 115–120).

There is evidence from some sites of a transitional period from the later Bronze Age, before 'the emergence of a distinctive Iron Age around the sixth century BC' (Moody 2008, 117). Until recently however, only a few Iron Age settlements of any significant size were known from Thanet (Moody 2008, 118–124) with those of the mid Iron Age being rare, as in Kent generally (Champion 2007a, 118–120). The EKA road excavations have altered this picture and revealed extensive Iron Age settlement zones and activity areas, indicating more permanent occupation and land organisation with new field arrangements, enclosures and droveways (Andrews *et al* 2015a, 172–184). These droveways, often in the form of hollow ways, sometimes metalled in the latter part of the period, perhaps formed a network of trade and communication serving a rural and predominantly agricultural society (Moody 2008, 118–122). On the EKA scheme, the Iron Age fields were found to be 'individually smaller' than those of the Bronze Age period, but collectively more extensive (Andrews *et al* 2015a, 173). In addition, three major settlements were found, with parts of a number of others more partially revealed, as well as a cemetery and individual burials within the settlements themselves (Andrews *et al* 2015a, 173).

Little earliest Iron Age activity was found during the EKA road scheme, but during the early to middle part of the period settlement became fairly widespread and in some cases long-lived, as at an extensive occupation site between the Ebbsfleet peninsular and Cottington Hill (Zones 6 and 7) which originated in the sixth to fourth century BC, and which remained occupied into the early Roman period (Andrews *et al* 2015a, 174; 234). Another major settlement and associated fields, trackways and enclosures was located just north of Cliffsend (Zones 12–13). Towards the east (Zone 13) an early to middle Iron Age Trapezoidal enclosure contained a large square sunken-featured building with numerous pits to the enclosures west (Andrews *et al* 2015a, 175).

No distinct settlement sites of this period are known near Thanet Earth, but several undated crop-mark enclosures and enclosure clusters identified via aerial photographs to the north and east may in part date to this period or later; these include sites near Gore End (TR 26 NE 42), within the Scheduled Monument area (KE 270) 360m north-west of Great Brooksend Farm), and both east of Seamark Road and near College Farm (TR 36 NW 46). However, some evidence for early Iron Age settlement is known in the area, primarily near Sarre and St Nicholas-at-Wade (Perkins *et al* 1994, 310, table 7), but there are few known mid to later Iron Age settlements in the vicinity. In addition, several sites along the northern coast between

Margate and Birchington have provided evidence for occupation of later in the period, with some occupation of the mid Iron Age also indicated from the coastal zone, notably at North Foreland, Margate (Moody 2008, 131). A late Iron Age gold quarter stater coin of *Cunobeline* was also found near Birchington, and 600 Iron Age coins (apparently potins) were discovered at Quex to the east in the nineteenth century (Barrett 1893, 2).

Many late Iron Age settlements, 'characterised by small enclosed farmsteads with regular rectangular plans surrounded by productive fields and woodland' (Moody 2008, 137), probably continued in existence much as before, into the Roman period (*ibid*, 145). There is considerable evidence for the new 'Romanised' way of life on Thanet, now suggesting a fairly 'populous island landscape liberally sprinkled with villas and farming settlements' (Perkins 2001, 43). Near Thanet Earth a possible Romano-British villa or farm is suspected about 700m to the north of Plateau 1 (Perkins 2001, 53; TR 26 NE 71), with various rectilinear cropmark enclosures to the west (such as TR 26 NE 51 and 1043) or the complex to the east under Monkton Road Farm-probably of a similar period. A number of masonry structures are known from the island, but are undoubtedly only part of a much wider settlement pattern mostly suggested by cropmarks or smaller scale excavations.

Although no typical Roman roads, complete with metalled agger have been identified on Thanet, several route alignments have been inferred by the distribution of Roman settlements and shrines. A major road from the walled Roman town at Canterbury leads toward Thanet (Margary 1955, 34: Route 11; Canterbury to Upstreet). The route continued to the east of the Wantsum with less formalised trackways including one in the form of a hollow way just north of the line of the A253 where two shrines and a 'village' were excavated ahead of a new road scheme (see below). The current A28 Canterbury road's course north of Thanet Earth (towards Margate) is perhaps another credible alignment. Both these routes, although in use during the Roman period, are almost certainly more ancient, probably deriving from the Iron Age period, or even earlier.

One significant site of the period nearby was partially examined on the Monkton to Mount Pleasant site (Hicks 2008). This settlement comprised a group of 23 sunken-floored buildings and other features forming a Roman village dated between the first and third centuries, found about 1.7 km to the south-east. Such structures are extremely rare in Roman Britain, although occasional examples have been recorded (*ibid*, 276). The village was served by a substantial and long-lived hollow way stretching east-west across the central ridge of the island (later known as *Dunstrete*, or 'the road over the Downs' and shown on a fifteenth century map by Thomas Elmham; Davis 1934) which became the focus for a number of settlements, some industrial in nature (Moody 2008, 151, Birchenough 2010). More recently, significant Roman settlements with sunken-featured buildings have been located near Cliffsend and the Ebbsfleet peninsula (Zones 13 and 6; Andrews *et al* 2015a, 234–252 and 277–280). Another site at Zone 20, south of Manston Airport, was again adjacent to the course of 'Dunstrete' (Andrews *et al* 2015a, 316–327), and seemingly part of a string

of settlements utilizing this form of structure, such as one near Tothill Street, Minster (Birchenough 2010). Most of these sites were associated with burials and cemeteries.

Other finds of this period in the area of the Thanet Earth site are mostly known in and around Birchington to the north-east and include Romano-British cremation burials both at Gore End (TR 26 NE 7) and further east, while inhumations to the east of the station (TR 36 NW 1) formed part of a wider cemetery. A gold ring (TR 36 NW 4) may also have derived from a burial. All of these discoveries were made in the nineteenth century. Various cropmarks of rectilinear enclosures (such as TR 26 NE 119) in the area may also be of Roman date. Two other Romano-British sites are probably indicated in or near the southern area of Thanet Earth. Immediately to the south of the Monkton roundabout, features and finds of this period were recorded in a gas pipe trench (Perkins 1984, 86), whilst a single large pit containing oysters and first-second century pottery, was found in a water main easement in the unexcavated Plateau 7 area of the site (roughly NGR 628600 166000). Perkins (1989, 274) suggests that this was related to a cropmark enclosure about 50m to the west.

Although Thanet is well known for its rich Anglo-Saxon cemeteries, settlement sites are still rare, as in Kent generally. Structural evidence is scattered and, apart from a possible nucleated settlement at Manston Road near Ramsgate, only represented by apparently isolated sunken-featured buildings of early to mid-Anglo-Saxon date, mostly of the two-post type (Moody 2008, 170). Even extensive recent excavations have little altered this picture, four Anglo-Saxon sunken-featured buildings of two-post form having been located during the EKA road scheme, a dispersed group of three north of Sevenscore (Zone 11) perhaps representing 'a single, short-lived settlement' (Andrews *et al* 2015a, 435–436). As is often the case, there were few other features that could be directly associated. A number of cemeteries recorded during this project were at some distance, but might well be associated. However, although there was no clear structural evidence, settlement is almost certainly indicated by two groups of eighth century middle Anglo-Saxon pits, one group associated with a cemetery. The site was situated on the slightly higher ground north-east of Cliffsend (Zone 14; Andrews *et al* 2015a, 444–449).

Apart from the cropmark evidence for a possible cemetery, clustering around a barrow just to the south of Monkton Road Farm (TR 26 NE 53), a Scheduled Monument (No. 31409) comprising an Anglo-Saxon cemetery and other features is located about 230m to the south-west of the Thanet Earth site. Other finds in the area include four *sceatta* coins recovered from Birchington (TR 36 NW 6) whilst references to Anglo-Saxon inhumation burials to the west and north-west of Birchington railway station may be elements of single extensive cemetery (TR 26 NE 21). Most of the cemeteries date from the early Anglo-Saxon period, but there is little that can be specifically related to the later parts of the period in the area, or indeed for Thanet, and perhaps more generally in Kent as a whole (see for example Andrews *et al* 2015a, 451).

The earliest specific reference to Monkton is *Muncctun* – ‘Monks’ farmstead’ in a charter dated 961. The name derives from ownership by St Augustine’s Canterbury (Christ Church). Birchington is mentioned in the Domesday Book as a portion of Monkton which then, (with the exception of St Nicholas attached to Reculver) comprised the western area of Thanet (Barrett 1893). Birchington was therefore also affiliated with the church. It is clear that by the end of the Anglo-Saxon period the island was very heavily exploited for farming since there are very few references to woodland in the Domesday Book (Darby and Campbell 1962).

Prior to the present works there was little to suggest that the entire area was anything but open and otherwise unoccupied agricultural land (mostly held by one or other of the three main ecclesiastical institutions in Kent) from the medieval period until the present day. In this context it is interesting to note that the 1086 Domesday survey’s inventory demonstrates the dominance of arable in this area with only sufficient woodland for 10 pigs. Few significant medieval remains have been found in the vicinity, apart from a complex of features originally located in 1987 and subsequently partially re-examined on the Plateau 6 area of the site adjacent to Seamark Road (Perkins 1989, 274; Site M; TR 26 NE 128). To the north, the only two medieval entries on the HER comprise a possible deserted medieval village site at Gore End (TR26 NE 109, although this is unproven) and a Grade II listed threshing barn, also at Gore End, although this probably originated in the sixteenth century. However, at least some of the enclosure cropmarks in this area may date from the medieval period.

Outside the villages, the evidence suggests that settlement was largely represented by scattered farmsteads, such as the enclosed site located at the western end of the Monkton-Mount Pleasant road scheme, some 500m south-east of Thanet Earth (Bennett *et al* 2008, 307–340). Further east, complexes of enclosures and ditched field arrangements recorded during the EKA road scheme, primarily on the Ebbsfleet peninsula, but also near Cliffsend and north-east of Minster, probably relate to medieval farmsteads of eleventh to fourteenth century date, but there was virtually no associated structural evidence (Andrews *et al* 2015a, 465–482). It is suggested that areas of cobbling and one shallow sunken feature, as well as some scattered postholes might represent buildings, but that the main centres of occupation were just outside the examined zone (*ibid*, 479).

The post-medieval period is characterised by continuity of arable farming and by the gradual growth of Birchington from a cross roads settlement to a large village via infilling of arable fields around the historic core, a process accelerated following the construction of the railway and railway station in 1863. The HER includes reference to a number of different types of domestic, agricultural and industrial structures common for the period including a former brickworks at Epple, Birchington, a Maltings in use in 1860, a Grade II listed early nineteenth century stable affiliated to Quex Park, a Grade II listed detached house of late nineteenth century at Birchington and Upper Gore End Farmhouse with original elements from 1733 (RPS 2009). The nineteenth century map evidence demonstrates an open landscape of large fields

crossed by trackways, not greatly different to the layout today and documentary evidence suggests that much of the farming regime was arable. Features of note close to the pipe-line route include the former location of a windmill north of Canterbury Road (on Mill Road, Birchington).

The name Seamark Road appears to date from the post-medieval period due to the location of a navigational beacon to the west of the route (shown on maps of the period and probably superseding a former windmill; see Chapter 8). Thanet was important strategically during both World Wars, particularly in regard to the location of Manston Aerodrome a few kilometres to the east. Thus probable First World War castellated training trenches are visible as crop-marks in two locations near Birchington (RPS 2009). Second World War slit trenches are also identified via crop-marks within scheduled monument KE 270 whilst possible wartime instillations consisting of two rows of small circular crop-marks, including a curvilinear feature and six small ring-ditches, are located just to the north of the Canterbury Road. The route of a former branch line from the Margate-London railway to Manston airport also crossed the line of the wastewater main.

Chapter 2: Early prehistory

Jon Rady

Mesolithic

Apart from one or two heavily patinated long blades in the flint assemblage, which could be Upper Palaeolithic, the earliest material recovered was of Mesolithic date. These finds were all residual in later contexts and mostly consisted of debitage in the form of flakes, blades and bladelets. A single microlith, four microburins and numerous bladelet fragments were also recovered while tranchet adze re-sharpening flakes, and some other debitage pieces suggest that tranchet adzes were being manufactured or used.

The distribution of the Mesolithic material is shown in Figure 7.

The material in the northern part of the site (Plateaus 1 and 2) came either from colluvial deposits or was derived from features cutting the colluvium, and was probably transported by colluvial action from higher ground to the south. The early flintwork on Plateaus 5 and 6 however must have derived from nearby, as the ground here is relatively flat, suggesting little transport by natural processes.

Neolithic

Overview

Neolithic activity was represented by a scatter of pits, a possible structure and residual pottery and flintwork in colluvial deposits and later features.

Nine early Neolithic pits (c. 4000–3500 cal BC) were found in the northern half of the site on plateaus 1 and 8, with a further nine pits lying to the south in plateaus 3, 5 and 6. A small cluster of early Neolithic postholes, potentially representing a structure, also lay to the south in plateau 6. Three late Neolithic pits (c. 2900–2300 cal BC) were recorded in Plateaus 2 and 3, with a possible fourth lying further south on Plateau 5 (Fig. 8).

Residual Neolithic flint-work primarily derived from Plateau 1 colluvium and the higher ground to the south of Plateau 2 (Fig. 7).

Early Neolithic (c. 4000–3500 cal BC)

Plateau 8

Eight early Neolithic pits were recorded on Plateau 8, probably encapsulated within the upper levels of a colluvial deposit that mantled the slope of the valley on the

eastern side of the main area and spatially formed two groups no more than 65m apart (Fig. 9).

Pit S12304 (Plate 19) was near circular, 1.12m wide, 1.36m long and just under 0.4m deep from the stripped surface (Fig. 10). The feature appeared to have been sealed under a layer of colluvium approximately 0.20m deep, and was recorded with an undercut profile. It is probable that the upper edges of the cut were not clearly defined, as its upper portion was filled by a very similar material (12323).

The lower fill (12303) was 0.03m thick, consisting of dark black brown sandy, ashy silt containing worked and burnt flint, degraded daub and a small amount of charred plant remains and shellfish. The flintwork mostly comprised flakes, although six cores were also present, suggesting the deposit incorporated knapping waste. Plant remains from this level have been radiocarbon dated to 3796–3653 cal BC (at 95 per cent probability; Table 6, UBA-22209). A subsequent fill (12301), 0.05m thick at maximum, was concentrated round the edges of the cut as though ‘raked back’ from the centre and consisted almost entirely of crushed shell. The majority of this shell was of mussel, but cockles and edible periwinkles were common, along with small quantities of oyster, Peppery Furrow and Baltic Tellin shell. Lava spire snails (*Hydrobia ulvae*) were also recovered, these found in brackish to fully marine waters. These snails are most likely to have been collected with shellfish, but alternatively may have been present in waste water tipped into the pit (Allison 2014). Plant remains included low concentrations of cereal, nut and fruit remains, particularly parts of the crab apple (*Malus sylvestris*), and a few common weeds of cultivated or disturbed ground such as black bindweed (*Fallopia convolvulus*), cleavers (*Galium aparine*) and woody nightshade (*Solanum dulcamara*), all of which are climbers or scramblers.

A recorded interface [12302], cutting into the dead centre of S12304 may be the result of some intrusive activity within the pit. It was sealed by a deposit of ash and charcoal (12300) 0.06m thick, with a mixture of worked and unworked flint mostly concentrated in a discrete deposit towards the base of the fill. A small worked flint assemblage consisted of blades and flakes of possible early Neolithic date. This was overlain by mostly sterile redeposited colluvium (12372 and 12323).

Pit S12309 was 1.15m in diameter and 0.27m deep (Figs. 8, 10). The primary fill (12308) consisted of sterile re-deposited natural, probably eroded from the sides of the open pit. This was sealed by a 0.13m thick layer of very dark, near black charcoal-rich silty clay (12307) that contained 23 sherds of early Neolithic pottery, probably Carinated Bowl and a large quantity of burnt flint and burnt worked flints, as well as two sandstone quern fragments (SF 8.158 and SF 8.159). Plant remains from this deposit were dated to 3926–3659 cal BC (at 95 per cent probability; Table 6, UBA-22210).

Pit S3941 (Plate 20) was sub-circular, 1.5m wide, 1.76m long and 0.56m deep (Figs. 8, 10). The primary fills (3940 and 3939) were sterile light greyish brown silty clays,

probably representing redeposited colluvium. These sterile basal deposits suggests that the pit was open for some time before backfilling began. They were sealed by the first of a sequence of banded charcoal and burnt-clay rich layers, the earliest of which (3840) was a very dark grey to black silty clay 0.04m thick. This deposit produced six sherds of early Neolithic pottery, a few struck flint flakes, less than a gram of possibly human cremated bone (SK 8.65) and a substantial amount of well-preserved charred plant remains; shellfish was largely absent, with only a trace of mussel shell recovered.

The plant remains primarily consisted of emmer-type grains and glumes bases suggesting that complete spikelets as well as clean grain may have been burnt. A smaller amount of club-type wheat was also present, as well as a trace of barley. Hazelnut shell was not common but several crab apples were recovered, 'perhaps having been cut in half first, as two near-complete halves with cut surfaces were recovered', along with apple pips, flesh and core. The weed assemblage included black bindweed, cleavers and bittersweet. An emmer grain from this assemblage was radiocarbon dated to 3912–3652 BC (at 95 per cent probability; Table 6, UBA-22211).

Subsequent fills (3838–3839) consisted of light grey brown silty clay with a large quantity of burnt clay in the matrix. Context 3839 yielded 19 early Neolithic potsherds and one worked flint. The pottery comprised an incomplete but fine early Neolithic Carinated Bowl in good condition (from fills 3840 and 3839), which suggests it was buried soon after it went out of use. The relatively high sherd weight may suggest deliberate 'structured' deposition, perhaps also indicated by the incompleteness of the vessel.

This primary episode of deposition was capped by a substantial level of relatively uniform and sterile silty clay (3837) 0.27m thick, which is likely to represent a hiatus in the backfill sequence. The deposit was perhaps composed of redeposited colluvium that accumulated naturally rather than a deliberate deposit, though there was no evidence for banding. It was capped by a much darker level of silty clay (3798) which contained a large number of crushed and unidentifiable pot fragments which included at least one early to mid-Neolithic sherd, along with large quantities of small fragments of burnt flint and some early Neolithic worked flint. No significant ecofactual evidence was recovered. The abraded or crushed fragments of burnt flint and pottery may indicate that it derived from material intended for use in the tempering of pottery fabric, although grog itself does not appear to have been much used in early Neolithic fabrics.

The upper levels of the pit (3797 and 3796) were relatively sterile silty clays and filled over half the pit's depth at its centre. The primary deposit of this final phase may have been deliberately dumped as it was fairly varied in composition with apparent lumps of separate clays evident in the matrix. This layer was completely sterile. The final infill (3796) was more uniform and possibly derived from natural

erosion of the surrounding colluvium, suggested by the presence of a few intrusive pieces of Mesolithic flintwork.

These three features (S3941, S12304 and S12309) provided very similar assemblages of plant remains which included poorly preserved examples of a tetraploid free-threshing ('naked') wheat (*Triticum turgidum* group). Although known on the continent during this period, particularly Central Europe, it has also been found on sites located close to the France-Belgium border, not far from the coast (e.g. at Spiere (West Vlaanderen, Belgium; Vanmontfort *et al* 2001/2002, 60–62, table 14) and Courrières (Pas-de-Calais, France; Bostyn *et al* 2012, 558, table 2)). This form of grain has now been recognised for the first time in this country.

A cluster of five pits (S3456, S3452, S3453, S3543 and S3610) lay less than 20m to the south (Fig. 9).

Pit S3456 was 0.60m in diameter and 0.28m deep, with steeply sloping sides and a concave base (Fig. 9). It was filled with greyish-brown sandy silt containing 46 sherds of early Neolithic pottery and 23 worked flint flakes, also of probable early Neolithic date.

Pit S3452 was 0.6m long, 0.5m wide and 0.2m deep, with steeply sloping sides and a concave base (Fig. 9). It was filled with a grey brown sandy silt that produced 19 early to mid-Neolithic potsherds, traces of charred grain and hazel nut shell and 30 pieces of Mesolithic or early Neolithic flintwork, including twelve flakes, six blades or bladelets, and two flake cores.

Pits S3453, S3543 and S3610 were all generally comparable to the pits described above, and though their fills were completely sterile they have been grouped together because of their morphological similarity and spatial association (Fig. 9)

Plateau 1

Pit S10454 (Plate 18) was sub-oval or kidney-shaped in plan and just over 2m long and c. 1.2m wide, with its long axis aligned near north-south (Figs. 8, 11). In profile it was c. 0.7m deep, with steep, near vertical sides curving to a near flat base that sloped slightly down to the east. Its primary fill (10453/10452/10498) was a mixed and colourful deposit of dark brown and black silty clay with a red patching of burnt clay, and a grey ashy clay with white yellow chalky clay silt patches. Inclusions consisted of abundant carbon, with burnt clay and flint, along with fragments of chalk and a small quantity of cremated human bone (SK 1.19). It produced 180 sherds of early Neolithic pottery placed on or near the base, along with large amounts of grain, hazelnut and some seashell, though hardly any flint artefacts or debitage were recovered.

The primary fill was sealed by a layer of white, yellow and mid red/orange to brown orange burnt silty clay with common carbon and chalk inclusions but few significant finds (10451/10497).

This was overlain by a dark brown grey and black silty sandy clay (10450/10496), with abundant shellfish, common burnt flint and a few potsherds, suggestive of a deliberate episode of backfilling with midden material. Abundant mussel shell fragments were recovered along with lesser amounts of oyster and cockle shell. Lava spire snails (*Hydrobia ulvae*), were common and a single edible periwinkle and a fragment of a small queen scallop were also recorded. Some of the more complete oyster valves had notches in the ventral edges showing where they had been opened.

Overlying this was a dark brown grey and black silty clay with large quantities of carbon and burnt flint (10449). It produced nearly 100 early Neolithic potsherds, along with small amounts of mussel shell and traces of oyster, cockle and peppery furrow shell, a few scraps of animal bone and fragments of a human radius and ulna shaft (SK 1.9).

The uppermost fill (10448) was a mid-brown grey silty clay with common carbon and burnt flint plus traces of eggshell and hazelnut. Over 54 sherds of early Neolithic pottery were recovered from this deposit.

The Neolithic pottery from the feature consisted of an almost complete bowl and part of a large Carinated Bowl from lower fill 10453. The remainder of the latter vessel was dispersed throughout the middle and upper deposits, thus indicating fairly rapid infilling. Both vessels were in a reasonable condition, although fragmented suggesting that the small bowl was fairly complete when deposited, potentially indicative of ritual deposition. The Carinated Bowl (similar to the one from pit S3941 on Plateau 8; above) was covered in sooty residues suggesting that it derived from a domestic context and was not subjected to a great deal of wear or exposure prior to deposition; it is possible that it may 'have been deliberately broken and deposited soon after breakage, or carefully curated before final deposition' (McNee 2014). Both vessels have been dated to around 3900–3750 BC. A tetraploid wheat grain from lower fill 10452 was radiocarbon dated to 3994–3668 cal BC (at 95 per cent probability; Table 6, UBA-22207).

Unusually large concentrations of cereal remains were recovered, including club wheat (*Triticum cf. compactum*), as well as significant amounts of tetraploid free-threshing wheat. Hulled barley and possible naked barley grains were also present, along with a few grains of emmer-type wheat.

Potential contamination is however indicated by the presence (albeit in small amounts) of seeds from the weed stinking chamomile (*Anthemis cotula*) and a possible capsule valve from corn cockle (*Agrostemma githago*) both of which are not usually found prior to the middle Bronze Age. Although these did come from lower

deposits which it is difficult to envisage as significantly contaminated, the presence of intrusive plant remains from Neolithic and later samples has been increasingly recognised and as part of much wider study (Pelling *et al* 2015). Nine seeds of *Anthemis cotula* were dated to AD 1010–1170 (948 ± 38 BP; UBA-25299) confirming that they were not contemporary with the Neolithic material (*ibid*, 8). This however, is not considered to affect the veracity of the grain assemblage here, which was directly dated to the early Neolithic. Other weed taxa recovered from pit S10454, woody nightshade seeds (*Solanum dulcamara*) and cleavers (*Galium aparine*) are more typical of Neolithic assemblages.

Pit S1371 was 0.52m wide, 0.66m long and 0.16m deep with a U-shaped profile (Fig. 51). It was filled with a charcoal-rich black silty loam (1370) that contained an early Neolithic polished flint axe fragment and two axe thinning fragments (SF 1.4) along with other debitage, and twenty-four undiagnostic prehistoric pot sherds and traces of unidentified calcined bone (SK 1.21).

Plateau 3

Pit S3205 was 0.73m in diameter and 0.22m deep had a slightly double-dished profile. It was filled with a dark grey brown silty clay (C3204) with fragments of charcoal, flint and burnt flint (Fig. 11). About 40 sherds of undiagnostic pottery were recovered from the fill, along with 30 pieces of early Neolithic worked flint, including 15 complete flakes or blades and the butt end of a polished flint axe. Some of these artefacts appeared to have been deliberately placed at the base and around the sides of the pit; the polished axe fragment lay at the edge of the feature on the western side. Environmental remains were sparse, although some hazelnut fragments were present. A carbon sample from the pit was radiocarbon dated to 3696–3540 cal BC (at 95 per cent probability; Table 6, UBA-12608).

Plateau 5

Pit S5216 was 0.9m in diameter and 0.2m deep with a slightly double U-shaped profile, containing a uniform charcoal flecked fill (C5215) containing 28 early Neolithic potsherds, a few worked flint pieces of possible Mesolithic origin, but with little in the way of plant or other remains present apart from a charred fragment of a nutshell.

Pit G5058 was 0.68m wide, 0.85m long and 0.3m deep with a steep sided 'U'-shaped profile; (Fig. 50). It was filled with dark charcoal-rich silty clay (C5637) which produced fifteen Mesolithic or early Neolithic flint flakes or blades and a relatively large assemblage of undiagnostic prehistoric pottery, potentially part of a deliberately deposited vessel.

Plateau 6

Pit S6364 was 1.4m in diameter and 0.42m deep with a U-shaped profile and slightly uneven base. It was filled with a reddish brown silty clay with common carbon inclusions (C6366) which produced 862 pieces of worked flint, mostly of early Neolithic date with some residual Mesolithic material. Apart from flakes and blades, there were five end scrapers. A number of relatively small and undiagnostic potsherds, possibly all from the same vessel were also recovered as well as some unidentifiable fragmentary animal bone. Charred seed or nutshell was also recovered; this were radiocarbon dated to AD 782-984 (at 95 per cent probability; Table 6, UBA-22212), but this date should be considered unsound, a product of contamination from later agricultural activity or bioturbation.

Pit S16083 was 0.6m wide and 0.22m deep, lay just 3m to the north-west of pit S6364; it may be contemporary but contained only a few pieces of flintwork.

Pit S16020 was 1.4m in diameter and 0.42m deep with a U-shaped profile and slightly uneven base. It was filled with a reddish brown silty clay with common carbon inclusions (C16019) which produced a few very small early Neolithic potsherds and seven flint flakes and blades of Mesolithic/early Neolithic date.

Pit S16014 was again 1.4m in diameter and 0.4m deep, with steep sided edges and a flatter but uneven base. It was filled with a reddish brown silty clay with common carbon inclusions (C16013) which produced 182 pieces of worked flint, the majority of early Neolithic in date with a small number of residual Mesolithic pieces. At least three of the flakes and blades had been burnt while a single flake core on Bullhead flint had two platforms at 90° to one another, typically early Neolithic, although it did not have any platform preparation. In addition were four end scrapers, two of which could be classified as 'horseshoe scrapers' and a knife, manufactured on a soft hammer-struck flake. An unfinished laurel leaf or roughout for a laurel leaf was also found. Six blades had evidence for having been used, or in one case having denticulation. A large number of undiagnostic potsherds were also recovered from this feature, probably from the same vessel. Other finds included some heavily eroded cattle and pig teeth and burnt bone of uncertain derivation but there was no significant ecofactual material.

Pit S5186 was 1.2m wide, 1.5m long and 0.18m deep, filled by grey brown clay silt (C5185) with occasional re-deposited carbon, fragmented undiagnostic pottery and some early Neolithic worked flint.

Pit S5205 was 0.21m wide, 0.64m long and 0.21m deep (Fig. 49). Its fill of dark brown clay silt (C5204) produced 84 pieces of early Neolithic worked flint, a few fragments of hazelnut shell and a relatively large assemblage of undiagnostic prehistoric pottery

Structure 35 (G6025; Fig. 12) comprised six sub-circular post-holes in the extreme north-west corner of Plateau 6, four clustered together (S6011, S6009, S6013, S6015), with a further two located 3m to the south-west and 1.3m apart (S6007, S6005). All

the features were of a similar shape and size in plan, between 0.4 and 0.56m in diameter and from 0.14 to 0.27m deep with the majority having 'U'-shaped profiles. They contained similar fills some with inclusions of charcoal, burnt flint, grain, hazel nut shell and snails. One posthole provided a small assemblage of undiagnostic prehistoric sherds, while two others produced a small group of Mesolithic/early Neolithic flintwork, mostly flakes. Though presumably structural, no unequivocal interpretation could be determined.

Late Neolithic (c. 2900–2300 BC) features

Eight pits of later Neolithic date were located on Plateaus 2 and 3, with another lying further south on Plateau 5 (Fig. 8).

Pit S2175 on Plateau 2 (not illustrated) was an isolated small sub-circular cut with steep sides and a concave profile, 0.66m long, 0.62m wide and 0.20m deep. It contained a single fill of pale brown, friable slightly clayey silt with charcoal flecking and small rounded burnt flint fragments which yielded a few sherds of Durrington Walls style Grooved Ware pottery (Botfield 2012, 47–56). The pit also contained an assemblage of 39 pieces of worked flint of late Neolithic/early Bronze Age derivation in fresh condition, including two end scrapers, a fabricator and a microdenticulate. Few plant remains were retrieved apart from a few fragments of hazelnut shell.

Pit S3139 (not illustrated) lay about 250m to the east of pit S2175 on Plateau 3. It was 0.9m in diameter and 0.21m deep with a fill of uniform black/brown clay silt with charcoal flecks which produced a large quantity of burnt flint and a few sherds of later Neolithic pottery.

Pit S3068 (not illustrated) lay about 250m to the east of pit S3139 on Plateau 3. It was a sub-circular cut 0.8m in diameter and 0.3m deep, filled with a uniform deposit of mid brown silty clay that contained some animal bone, cremated human bone (SK 3.11), flint nodules, burnt flint, chalk flecks and four sherds of late Neolithic, or possibly early Bronze Age pottery. Radiocarbon dating of hazelnut fragments from the pit suggests a date of 2851–2484 cal BC (at 95 per cent probability; Table 6, UBA-22208).

Four other pits of potentially later Neolithic date were located in Plateau 3. Three were clustered in the immediate vicinity of Pit S3139 (group G3000, comprising pits S3113, S3121 and S3137) and one further to the east (group 3001, pit S3231). These features were all generally sub-circular, less than 1m in diameter, with slightly irregular bowl shaped profiles and most contained identical charcoal-rich fills with flint, some burnt. Only pit S3137 produced any finds, ten worked flakes and chips.

Pit S5383 lay to the south in Plateau 5. It was an irregular feature 0.45m wide, 1.11m long and 0.17m deep, which yielded a small number of prehistoric potsherds

tentatively identified as late Neolithic. Its irregular nature may suggest it was the basal remnant of a tree throw.

Late Neolithic/early Bronze Age

Features dating to the late Neolithic or Early Bronze Age included six ring ditches representing the ploughed-out remains of burial mounds or barrows (Barrows 1–6; Figs. 8, 13). All but one (Barrow 6) were associated with one or more burials within the ditch circuit.

At the north-east corner of Plateau 1 was the western part of a ditched enclosure (Enclosure 3) with an entrance on its western side. Four inhumation burials lay within the enclosure close to the entrance.

Four other isolated burials of this period were located in the northern part of the site, seemingly unassociated with any encircling ring ditch, along with four other features that may originally have been graves. Redeposited human remains were found in the ditch fills of Barrows 2 and 3.

There was no definite evidence for settlement or associated field systems of this date, though the possibility that the later middle Bronze Age field system had its origins during this period is discussed in Chapter 3.

Ring-ditches and associated features

Six ring-ditches were mostly fully excavated (apart from baulks that were occasionally left *in situ*) representing six burial mounds or barrows, forming part of a much larger spread of such features (evident from cropmarks), that extends across the unexcavated parts of Plateau 7 and to the east and south-east across the high east-west spine of the Thanet upland (Fig. 13).

Barrow 1

Barrow 1 was situated on the south-west facing slope of the eastern side of a shallow dry valley in Plateau 6 at an elevation of 31.5m OD (Plates 21–25). It survived as two concentric ring ditches (G6005 and G6006) roughly 17m and 22m in diameter respectively, separated by a berm approximately 1m wide (Fig. 14). An inhumation grave (G6004) lay roughly at the centre of the barrow within the circuit of the inner ditch.

Inner Ring Ditch G6005

The inner ditch (G6005) had an average width of 1.7m at the top and 0.7m at the base, with a mean depth of 0.9m (Fig. 15). The sides of the cut were moderately sloping, steepening slightly towards the bottom turning abruptly into a flat base. Four phases of infilling were identified with the uppermost deposits having been

disturbed by ploughing (Plates 26, 27 and 30).

The primary fill (G6125) was a thin layer of fine grey brown clay silt evenly deposited around the base. Sampling revealed the presence of mussel shell and charcoal traces perhaps suggesting the deposit did not completely originate through natural processes. Land snail assemblages comprised a mix of dry, open ground taxa suggesting short-turf grassland with areas of bare ground or where the underlying chalk was exposed, and those indicative of damper, shaded conditions such as woodland, hedgerow or scrub. The presence of a small number of *Pomatias elegans* could perhaps indicate some disturbance of the ground surface and/or vegetation clearance.

A sterile layer (G6100) of loosely compacted chalk rubble interspersed with discoloured orange and brown clay silt lenses sealed the basal fill, probably formed through the erosion of the barrow ditch and perhaps material from a central mound. There were few or no land snail remains from this deposit, suggesting fairly rapid infilling.

Above this was a sequence of brown silty clays (G6011) containing varying concentrations of chalk accumulated through natural infilling. These deposits were devoid of finds aside from one example of worked flint. Land snails retrieved from these deposits were of a mixed nature, with elements representing dry open ground, damper more shaded habitats and possible disturbance present throughout.

The uppermost fills were comprised of relatively homogeneous dark brown clay silt with occasional chalk lenses and inclusions (G6022). This deposit is likely to have resulted primarily from colluvial influx and levelling of the barrow mound through agricultural action. Finds included both worked and burnt flint, animal bone, oyster shell and daub while mussel shell and grains were also present, along with the largest proportion of land snails, probably reflecting arable farming in the vicinity.

Outer ring-ditch G6006

The outer ditch (G6006) had an average width of 2.2m at the top and 0.8m at the base, with a mean depth of 0.9m (Fig. 15). The sides of the cut were moderately sloping becoming steeper towards the bottom with a flat base. Three main phases of infilling were identified (Plates 28–30).

The primary fills (G6126) were comprised of chalk rubble interspersed evenly with laminated clay silts. No finds were recovered apart from a single worked flint, along with fragments of oyster shell and carbon and a very small amount of cremated human bone (SK 6.12). Land snails were suggestive of open ground at the time of the creation of the ditch and are also consistent with the primarily chalk rubble nature of the fill which suggests rapid episodic formation via erosion and collapse from the sides punctuated by less dramatic deposition of the clay silt laminations.

The second phase of infilling (G6012) consisted of brown silt clays with varying concentrations of fragmented chalk. A few finds of animal bone and worked flint were retrieved, along with a modest land snail assemblage dominated by open ground/ dry grassland taxa, suggestive of disturbed ground and possible clearance activity.

Pits cutting the outer ring-ditch

Four pits (G6043) cut the second phase of infilling of the outer ring-ditch (Fig. 14). Two distinct pairs of cuts were evident. The first pair (S6044 and S6108) were sub-oval pits of similar shape and size in plan, 1.2m and 1.6m wide and 0.9m to 1.2m deep respectively, with slightly undercut U-shaped profiles and flat bases. These were located 15m apart in the southern half of the barrow. The second pair (S6087 and S6091) were sub-circular and located adjacent to one another along the eastern side of ditch, measuring 2.9m in diameter, and 0.8m and 0.9m deep, with steep sided U-shaped profiles and flat bases. All contained similar laminated fills of orange brown silt clay and a high concentration of redeposited chalk, devoid of artefactual material. The presence of redeposited chalk within the fill suggests that these features were partially backfilled deliberately, although the bulk of the fills were representative of gradual backfilling through weathering. Associated with the later phases of barrow, the pits could relate to some remodelling of the barrow but none can be dated.

Along with the ring-ditches the pits were sealed by a layer of colluvial material (G6087) composed of more uniform brown clay silts similar to those within the inner ditch. A small assemblage of prehistoric pottery, dated to 2300–1600 BC and 1300–1000 BC, was recovered along with worked flint and animal bone, along with other marine shells including oyster and winkle and some grain and a small amount of disarticulated adult human bone (SK 6.5). The land mollusc assemblages indicate continued tillage, with the relatively large numbers of individuals present suggesting that the fills formed slowly via colluvial processes rather than deliberate backfilling

Grave G6004

Lying roughly (but not precisely) in the centre of the barrow was sub-rectangular grave with rounded corners (S6022), aligned close to four degrees anticlockwise from north-south along its longitudinal axis (Fig. 16). At maximum it was 2.57m long and 1.64m wide, 0.84m deep with near vertical sides and a flat base (Plate 31). Another, possibly separate cut (S6026) was situated on the west side of S6022, centred just south of its lateral axis, and which consisted of a shallow flat-based bulge, just over a metre long and 0.14m deep, which extended 0.42m at most from the main cut of the grave.

At the base of the grave was the articulated skeleton of an adult male (SK 6.1) approximately 1.77–1.87m in height, aged around 30–44 years at death (Plate 32).

The body was laid in the grave on the hard chalk base of the cut in a crouched position, with the head at the north end facing east. The skeleton was radiocarbon dated to 2193–1981 cal BC (at 95 per cent probability; Table 6, UBA-12610). Isotope analysis of the skeleton suggests that he grew up locally, or at least in a chalk landscape. A fine East Anglian style Beaker pot (6027; SF 6.9000), had been placed at the feet of the skeleton. This was complete though badly crushed and had been laid, or ended up on its side laterally to the grave (Plate 33). Other grave goods included a copper tanged dagger (SF 6.33; 99 per cent copper) positioned under the right scapula and a wrist guard or bracer of non-local stone (SF 6.34), under the left radius and ulna and perhaps bound to the wrist before burial (Plates 34 and 35). The bracer belongs to the amphibolite stone-type group and although the precise source has not been identified, it seems likely to have geological origins on the continent, perhaps in Spain or the Alpine region (Woodward and Hunter 2011, 116–118). A large gap between the skeleton and the southern edge of the grave may indicate further, possibly organic grave goods were once present but have since decayed away. Stable isotope analysis of the skeleton suggests that he was of local origin (Jay *et al* 2009).

Flanking the skeleton, and abutting the east and west sides of the grave (but not the north and south) was a 0.46m deep sequence of seven near sterile peripheral fills (S6022) alternating in not quite horizontal layers of chalk and a dark grey brown silty clay which included fragments of daub, mussel shell, charcoal, with a trace of seeds and hazelnut. These extended out from the edge of the cut by about 0.35m on the west and 0.25m on the east, becoming slightly wider towards the base but thinning slightly at both ends of the cut. The inner faces of the sequence was near vertical towards the top, sloping steeply towards the centre of the grave. Together with the northern and southern ends of the grave, this sequence of deposits described a roughly rectangular space about 1m wide and 2.3m long with skeleton SK 6.1 at its base.

Although the sequence of deposits seemed to be consistent around the cut, individually they varied in thickness. Thus the primary, chalky deposit (6033) was 0.2m deep on the east, but thinned to 0.1m on the west. A small quantity of the fragmentary remains of a probable adult (SK 6.10) was recovered from this deposit. It was capped with a thinner level of dark silty clay (6032). This alternating sequence of chalk layers and darker silty clays was repeated with deposits 6031, 6030, 6029, 6028 and 6021, the chalky layers generally much thicker. The uppermost chalk capping (6021) was thicker on the west side of the cut, and slightly more mixed. Micromorphological analysis of the deposits suggested they represented an alternating sequence of humic turf and chalky subsoil which may have been re-used from earlier construction related activity (such as the cutting of the ring-ditch or grave itself). Phosphate concentrations were low while a higher than expected magnetic susceptibility could reflect burning which would be consistent with the fine charcoal observed throughout the deposits.

Sealing skeleton SK 6.1 and filling the space created by the primary fill sequence S6033, the upper part of the grave and western feature S6026 was a homogeneous

very dark brown loosely compacted clay silt (S6024) containing daub, burnt flint, a couple of flint flakes, mussel and barnacle shell and fragments of possible human or animal bone.

In the upper part of fill S6024, and stratigraphically later than it, was a very loose and uncompacted silty clay with abundant chalk fragments (S6023). This formed a 'pocket' about 0.6m broad and extending down about 0.5m into the underlying fill (Fig. 16). This did not appear to be a deliberate backfill, nor a separate cut into the grave fill, but rather an unconsolidated slumping into a pre-existing void in the underlying deposits. Lying at the very top of this deposit were the disarticulated skeletal remains of a young child between 4–6 years old (SK 6.3). The bones were heavily disturbed, with only fragments of skull, dentition and upper torso surviving.

Barrow 2

Barrow 2, 240m north-west of Barrow 1 on the opposite side of the dry valley (NGR 628525 166151) was situated at the north-west end of plateau 7 on a fairly gentle south facing slope and at about the same elevation as Barrow 1 (31.5m OD). It consisted of a single ditch (G7002) approximately half of which was exposed (Fig. 17). It was about 26m in diameter making it the largest of the ring-ditches at Thanet Earth (Plates 36–39).

The ditch had an average width of 2.4m at the top and 1m at the base, with a mean depth of 1.2m (Fig. 17). The sides of the cut were moderately sloping, steepening towards the bottom turning abruptly into a flat base (Fig. 18).

The primary infilling of the ditch consisted of a sequence of naturally accumulated chalk rubble and yellow, grey, orange and brown discoloured silt (G7003). Few finds were retrieved from these deposits apart from animal bone, a few early Bronze Age pottery sherds dated to 2300–1600 BC and some worked flint. A small group of fresh and unabraded Early Bronze Age flintwork from one of the basal fills probably represent knapping debris from the reduction of two or three flint nodules in the vicinity soon after the construction of the ditch.

The complexity of this primary sequence (Plate 40) suggests that these deposits accumulated over a relatively long period of time, probably through processes of erosion. Very few land snails were recovered from the primary deposits but they were largely indicative of short turf calcareous grassland and the presence of *Pomatias elegans* and *Vallonia costata* in the assemblage perhaps marking the onset of arable farming adjacent to the ring ditch.

Sealing this initial sequence was a deposit of black and brown ashy clay silt (G7004), mainly concentrated in the south-west side of the ditch (Plate 40). It produced a relatively large assemblage of material including worked and burnt flint, over 40 sherds of prehistoric pottery dated to 1300–1100 BC, animal bone and daub. The animal bone was mostly of cattle and predominantly from skulls. Environmental

sampling revealed the presence of a range of marine shells including oyster, mussel, cockle, winkle and *scrobicularia* (a bivalve marine mollusc). Small concentrations of charred grains were also identified, the composition of which was consistent with Bronze Age cereals. The nature of the deposit and the density of finds strongly suggest a dumped deposit of midden or refuse derived from elsewhere. The relatively large land snail assemblage suggests a slow rate of deposit formation, but whether this relates to the formation of this ditch fill or the source of the material cannot be ascertained.

Overlying this, and filling the upper part of the ditch was a sequence of homogenous orange and grey brown clay silts (G7005). These contained a large and varied assemblage of artefacts, including burnt and worked flint, oyster shell, an unidentified iron object (SF 7.50) and pottery dated to AD 170–200. A fragment of human skull (SK 7.3) was also recovered from the uppermost part of the sequence. The deposits likely derived from a mixture of colluvial infilling and levelling of a central mound, the latter perhaps resulting from agricultural activity.

Barrow 2 Graves

Five graves were located within the central area of the ring ditch (G7001: S7143, S7151, S7157, S7573, S7646; Fig. 17). Aligned in a linear distribution running north-east to south-west from the centre, all were in a poor state of preservation.

Two of the central-most of these graves were inter-cutting.

Grave S7151 (Fig. 19) was aligned north-north-west to south-south-east (about 22 degrees anticlockwise from north) and about 0.8m south of the projected centre of the barrow, was oval in plan, just under 1m long, 0.69m wide and 0.4m deep with near vertical sides and a flat base (Plate 41). Other than a few fragments of human bone from a child no older than 2.5 years (SK 7.9), little of the interment remained although a stain-like substance observed as a basal deposit may have been decomposed bone or wood. The grave was backfilled with deposits of grey brown clay silts with chalk and carbon inclusions.

Grave S7143 (Fig. 19) cut into the north-eastern half of Grave S7151. It was sub-rectangular with its longitudinal axis orientated north-east to south-west (about 33 degrees from east-west). Measuring just over 1m wide, 1.4m long and 0.12m deep, its sides were shallow with a concave base (Plates 41 and 42). It contained a crouched, inhumation (SK 7.4) representing a young adult aged 15–26 years, facing south-east with the head at the south-western end. Very poorly preserved, the skull and neck were slumped into the earlier grave suggesting that the secondary burial was interred not long after the first or alternatively that the earlier burial had not long before been exhumed and backfilled. The grave itself contained a deposit of clay silt with common chalk, flint and carbon inclusions. No grave goods were present in either burial.

Three other interments lay to the south-west.

Grave S7573 (Fig. 19) was oval, orientated roughly north-west to south-east along its longitudinal axis (c. 26 degrees from east-west) and was 0.91m wide, 1.14m long and 0.11m deep with very shallow angled sides and a wide, flat base (Plate 43). The grave contained a single, inhumation (SK 7.2) mostly fragmented and badly preserved with only skull fragments and a few unidentifiable long-bones present, but probably of adult age (>15 years). It was probably crouched with the head at the south-east end, facing west. No grave goods were present although a few sherds of prehistoric pottery, including a Beaker sherd (2300–1600 BC) were recovered from the backfill of grey yellow brown silt clay.

Grave S7646 (Fig. 20) was heavily truncated; what remained was oval, 0.5m wide, 0.6m long and 0.09m deep. A small patch of fragmentary bone represented the remains of a badly decayed skeleton (SK 7.7). The grave was backfilled with a sterile deposit of grey orange brown silt clay with occasional chalk inclusions.

Grave S7157 (Fig. 20) consisted of a subrectangular cut, 1.48m wide, 1.78m long and 0.38m deep with near vertical sides and a flat base, orientated with its longitudinal axis just 4 degrees off north-west to south-east, thus aligned with the adjacent ditch edge (Plate 44). It contained single poorly preserved crouched inhumation of a male over 18 years of age (SK 7.5), lying on its right side with the head at the north-west, facing south-west. No grave goods were present. The grave was backfilled with deposits of red brown and brown silt clay containing rare inclusions of carbon and oyster shell.

Barrow 2 internal features

Also lying within the central area of the ring ditch were five cut features that produced no datable material.

Five heavily truncated pits (S7140, S7582, S7584, S7612, and S7648) lay to the north of the burials described above. They were filled with orange and grey-brown silt and varied between 0.05m and 0.2m deep.

Barrow 3

Barrow 3 lay 14m south of Barrow 2 at the north-west end of Plateau 7 at the same elevation (31.5m OD). It consisted of a single circular ring ditch (G7008) (Plates 45 and 47) about 19m in diameter (Fig. 21). The ditch had an average width of 2.2m at the top and 0.9m at the base, with a mean depth of 1.5m (Plate 46) though the ditch was notably deeper on the eastern side (1.77m maximum), with initially steeply sloping sides that became near vertical before turning abruptly into a flat base (Fig. 22). The base of the ditch sloped by just over 0.5m from north to south, presumably reflecting the ground levels contemporary with the barrow.

The primary fills (G7040) comprised a complex sequence of banded chalk rubble deposits interspersed with layers of grey and orange brown clays and silts (Fig. 22). The chalk deposits were generally thicker and coarser on the interior side and more finely grained on the exterior side of the ditch, suggesting perhaps that from the outset material from a central chalk mound was eroding into the ditch. Large lumps of very clayey material were also present, maybe representing fragments of turf. Reaching up to 1.43m in depth, these lower deposits represented a considerable accumulation of material and the distinct banding indicates a patterned repetition of deposition processes. This may be due to seasonal variations; during periods of freeze and thaw, more frost fractured chalk from the upper ditch edges might be expected to accumulate, while the more clayey lenses could be the result of topsoil or colluvial influxes during warmer wet weather, or even partially derived from humic accumulations.

Aside from small amounts of animal bone and undiagnostic worked flints, these lower fills contained few finds. One notable exception was the disarticulated remains of a human skeleton (SK 7.1) retrieved from the top of the primary deposits on the south side of the barrow (Fig. 21). Sitting at the interface between two phases of infilling, the remains consisted of a human skull, pelvis, and long bone fragments from an adult male. Their presence and incompleteness may indicate a burial redeposited from a central mound as the barrow ditch was backfilled.

Most of the fills produced very few mollusc remains, but, taken as a whole, the assemblages suggest that the ground into which the barrow ditch was cut was only lightly vegetated, most likely including areas of bare soil and rock, and remained so throughout the period represented by these deposits.

The secondary phase of infilling (G7009) was comprised of brown clay silts with varying concentrations of flint and chalk inclusions, the chalk in considerably less amount than in the lower sequence. While in some areas the deposits appeared relatively uniform in others distinct laminations were evident perhaps suggesting a more erratic and mixed process of deposition, possibly derived mainly from colluvial processes and partial ongoing erosion of a barrow mound. The deposits produced a small assemblage of very fragmented unidentifiable pottery sherds, some worked flint (most residual) with shellfish and animal bone.

Overlying the secondary phase of infilling (G7009) was a deposit of charcoal rich black, grey and brown ashy clay silt (G7010). Up to 0.4m thick, the layer was restricted to the southern part of the ditch for a length of approximately 7m (Fig. 22, Section 7/105). A relatively large assemblage of prehistoric pottery with animal bone, burnt flint, burnt clay and seashell, were retrieved from the deposit. Charred plant remains similar to those in Barrow 2 were also present. The deposit contained common to abundant fragments of marine mussel (*Mytilus edulis* L.) shell and the presence of fragments of barnacle and indeterminate limpet.

Overlying the midden-like deposit G7010, the final period of infilling (G7011) was formed of deposits of varying shades of brown silty clay with occasional bands of flint and chalk. It seems likely that the majority of these deposits derived from a mixture of colluvial influx and a levelling phase of the barrow mound, the latter resulting from agricultural activities such as ploughing during the medieval/post-medieval period. Inclusions of shellfish, animal bone, along with worked and burnt flint were present in the fills. A few sherds of prehistoric pottery were also recovered but post-medieval ceramics dated to AD 1800–1900 suggest the earlier material was residual

Grave G7007

A single grave (G7007) was located just to the south-east of the centre of the ring-ditch (Fig. 23). It was sub-rectangular, 1.76m long by 0.96m wide and was aligned north-west to south-east on its longitudinal axis (about 32 degrees from east-west). The sides of the cut were steeply sloping, 0.16m deep, with an uneven base. The grave contained the badly decayed skeletal remains of an adult inhumation (SK 7.6) lying flexed on its base. Only the legs survived but from this it is postulated that the head would have been located at the north-western end. The skeletal remains were radiocarbon dated to 1873–1687 cal BC (at 95 per cent probability; Table 6, UBA-12627). No finds were associated with the skeleton and following interment the grave had been backfilled with a single sterile fill of light orange brown silty clay.

Cremation group

Three un-urned cremations (G7012) formed satellite burials to Barrow 3. Two of the cremations (S7088, S7089) were located on the north-western side, just external to the ditch, whilst the third (S7090) was situated on the eastern side, cutting its outer edge. Its relation with the ditch fills was however indeterminate. Of similar shape and size in plan all were broadly circular, on average 0.43m in diameter and 0.2m deep. Profiles were also similar with almost vertical sides and irregular, uneven bases. The fills were virtually identical consisting of orange brown silty clay with dense carbon inclusions. Two of the features (S7089 and S7090) yielded cremated human bone, SK 7.10 and SK 7.11, respectively; the former was of an adult and weighed 209g, the latter only provided 30g of cremated material. No pottery sherds were recovered from any of the fills.

Barrow 4

Barrow 4 was located at a more elevated position (34m OD) than any of the other barrows, about 160m to the north-east of Barrow 3 (Plateau 6; Fig. 8) on a very slight south-west facing slope, in effect on a pronounced westward jutting spur with lines of sight to the north, west and south (Plates 48 and 49). It consisted of a single, circular ring-ditch around 15m in diameter (Fig. 24). The ditch itself (G6008) measured an average of 1.77m wide at its top and 0.52m at its base with a mean depth of 0.76m and moderately sloping sides steepening slightly mid-way before

turning sharply at the bottom to form a flat base (Fig. 25).

Three phases of infilling were identified. The primary fills (G6127) were composed of a combination of chalk rubble and discoloured grey and orange brown clay silts and were sterile (Fig. 25). These lower deposits likely formed from the erosion of the ditch sides and a central mound. Overlying the primary infilling was a sequence of tipped grey and brown silts with varying concentrations of chalk inclusions (G6013). Little artefactual material was recovered from these fills other than a few sherds of unidentified prehistoric pottery, worked and burnt flint and animal bone. These deposits seemed to have resulted from the natural erosion. Unlike the primary deposits, the origin of these fills was clearly skewed towards the interior. The third and final phase of infilling (G6088) was of uniform brown silt clays with occasional lenses of chalk. In general these fills were sterile apart from a few sherds of pottery, one dated to 2300–1600 BC and two others dated to AD 1050–1200 (probably derived from medieval activity in the area or from the purposeful backfilling of the ditch). The uppermost deposits were indicative of gradual backfilling of the ditch derived perhaps from agricultural activity in the area during the medieval or post-medieval period.

Grave G6007

A single grave (G6007) was located just off-centre of the ring-ditch (Figs. 24, 26). It was sub-rectangular, 1.27m long and 0.7m wide, aligned north-north-east/south-south-west along its longitudinal axis (about ten degrees clockwise from north-south). The cut had steep, near vertical sides with a flat base, 0.33m deep (Plate 50). The grave contained the relatively well preserved articulated inhumation of a young adult male (SK 6.2, 16 to 21 years old) lying crouched at the base of the grave with the head at the north end facing east. The skeleton was radiocarbon dated to 1732–1537 cal BC (at 95 per cent probability; Table 6, UBA-12626). No grave goods were associated with the skeleton. The grave was backfilled with a sterile mix of brown silty clay and chalk.

Human bone clusters G6009

Two clusters of bone, possibly representing heavily truncated burials (G6009) were also found within the interior area of the barrow (Fig. 24). Both lay on the surface of natural undulations of the natural clay. The first cluster (SK 6.6) consisted of fifteen small fragments of probably adult human bone located 1.7m east of the central burial G6007. The second cluster (SK 6.8) comprised ten small fragments of human bone (one a part of an adult fibula).

Barrow 5

Barrow 5 was located in the central area of the site on Plateau 3 (Fig. 8), on a gentle north-east facing slope on the west side of a shallow dry valley (at 26.5m OD) (Plate 51). It was not originally cut as a continuous circuit, but in five interlinked elongated

segments (S3299, S3310, S3313, S3319 and S3325) forming a slightly irregular sub-oval ring-ditch (G3003) approximately 10.4m in diameter (Fig. 27). The segments varied in length between 3m and 7m and were on average 0.7m wide at the top, tapering to 0.3m at the bottom. Depth varied between segments, but had a mean depth of 0.38m and a maximum depth of 0.7m in places.

The four westernmost segments appeared to be joined by a much shallower U-shaped cut (unnumbered) between 0.16m and 0.33m deep. This cut, like the segments themselves, was filled with a homogenous reddish and grey-brown silt clay and no stratigraphic relationship between the cut and the segments could be established. A small assemblage of finds recovered from these fills included a small beaker base and seven sherds of late Neolithic pottery dated to 2900–2200 BC.

Barrow 5 Graves

Two graves (G3002: S3264 and S3267) were located adjacent to each other lying slightly north of centre within the ring-ditch (Fig. 28).

Grave S3264 was subrectangular, measuring 0.96m by 1.66m with its longitudinal axis orientated approximately west-north-west to east-south-east (about 35 degrees anticlockwise from north-south). It was 0.44m deep with moderately sloping sides and a flat base (Plate 52). Lying on the base of the grave was a single, crouched inhumation (SK 3.1) of an adult female (36–44 years old) with the head at the north-west end, probably facing east. Only fragments of the skeleton remained including bones from the skull, humeri and ulnae, scapulae, clavicle, and some eroded leg bone shafts. No grave goods accompanied the skeleton, although a large vacant space on the west and southern sides of the grave could have once accommodated perishable offerings. Radiocarbon dating of the skeleton gave a result of 2452–2062 cal BC (at 95 per cent probability; Table 6; UBA 21273).

Grave S3267 was sub-rectangular, measuring 1.06m by 2m in plan, with its longitudinal axis orientated north-north-west/east-south-east (about 21 degrees anticlockwise of north-south). It was 0.54m deep with moderately sloping sides and a flat base (Plate 53). A single, badly preserved crouched inhumation (SK 3.5), lay at the northern end of the grave. Little of this survived other than segments of the arm and leg bones, probably representing an adult with the head to the south, facing east. The skeleton was accompanied by a crushed ceramic Beaker of East Anglian style (SF 3.242) located at the north end of the grave beneath the lower legs and an undatable copper alloy pin-like object (SF 3.38) between the lower leg bones.

Barrow 6

Barrow 6 (Fig. 29) lay on a northward spur of slightly higher ground between the two dry valleys that spanned part of Plateau 8, just below the 24m OD contour. It consisted of a complete ring-ditch (G8005) approximately 21m in diameter (Plates 54 and 55). The width of the barrow ditch varied between 1.8 and 2.5m at the top and

around 0.8m at the base. Its depth varied between 0.7m and 1.1m. In profile the ditch had moderate to steep sloping sides, breaking sharply to a flat base (Fig. 30).

The primary infilling of the ditch consisted of laminated layers of sterile orange and yellow brown clay silts intermixed with similar layers abundant with fine chalk (G8333). These fills produced a small assemblage of worked flint and animal bone, along with a few unidentified grains and fragments of charcoal. Cuttlebone fragments (*Sepia* sp.) were also recovered from the primary fills. The deposits probably formed through hill-wash and the fairly rapid erosion of the ditch sides and possibly a central mound, also suggested by the virtual absence of land snails in the primary fills.

Overlying the initial infilling was a sequence of grey and orange brown silt clays of a uniform and sterile nature (G8006), much of which may have been deliberately backfilled. The disposition of the layers in section suggests that they entered the ditch from the interior of the ring ditch, perhaps deriving from the slighting of a central mound. A single fragment of worked flint was recovered from this sequence, along with very small quantities of hazelnut shell, charcoal, estuarine snails and land snails. The small numbers of land snails probably reflects rapid deposition, with the few that were recovered being indicative of open ground in the vicinity. However towards the top of the sequence was a significantly larger snail assemblage, including 35 individuals of *Pupilla muscorum* which is a strong pioneer species of cleared ground, perhaps reflecting a (partial) slighting of a central mound.

The uppermost fills of the ditch consisted of a sequence of generally homogenous silty clay (G8007). It produced an assemblage burnt and worked flint, animal bone, grain, hazelnut shell and mussel shell, along with five sherds of pottery dated to 2300–1600 BC and a single Anglo-Saxon potsherd. The dearth of land snails in this sequence suggests rapid deposition, perhaps deliberate infilling.

Enclosure 3

Enclosure 3 (Fig. 31) was situated and partially exposed in the extreme north-east corner of the site at the east end of the Plateau 1 pond area and consisted of two arcing ditch segments (G10006) forming a sub-circular or possibly 'D'-shaped enclosure approximately 37.5m across internally north-south and in excess of 26m east-west (Plate 56). About two-thirds of the feature was probably exposed. The enclosure was delineated by a ditch traced for a total length of 72m, with a gap of 3.5m situated at the south-western extremity which created an entrance-way. The enclosure ditch was of variable dimensions around the circuit, although of mostly similar profile with sides at about 45 degrees, occasionally uneven, and a flattish or concave base. Its width varied from 1.2–2.45m and its depth between 0.41–0.9m (Fig. 32). However, the northern terminus at the entrance was more substantial, 2.6m wide and 1.37m deep with very steep sides towards the flat base, although the upper third was of similar profile to the remainder of the circuit (Plate 57). The southern terminal was not enlarged.

The ditches were filled with a sequence of silty clays and clay silts with flint (some burnt) and chalk flecks and lumps, but virtually no charcoal or carbon. The fills probably represent natural erosion, though some more chalk-rich fills may be the product of purposive backfilling. A small assemblage of Neolithic, Early/Middle Bronze Age and Earliest Iron Age pottery was recovered, mostly from the upper fills, along with a small quantity of flint flakes, blades and other fragments, with one end scraper. Two slightly larger concentrations, again of flakes and blades, were recovered from the middle ditch fill at the southern terminal of the entrance. These were not particularly diagnostic. The only other finds from the ditch were two unidentified, pin-type pieces of copper alloy, one from the northern terminal of the entrance, the other near the southern terminal, both from middle fills of the ditch (SF 1.54 and SF 1.9032). No artefactual material was found in any basal layers of the feature, neither was there any material suitable for radiocarbon dating.

Late Neolithic/Early Bronze Age Burials

Human remains of 29 individuals dated to the late Neolithic/Early Bronze Age were recovered from the Thanet Earth excavations, along with 2 features without human bone that were interpreted as possible graves. Of these, 17 were articulated inhumations (including the badly decayed SK 7.7 and SK 7.9), 8 disarticulated human bone and 4 cremated bone. Nine burials were associated with beaker pottery, and one possible grave feature contained beaker ceramics unassociated with human remains.

21 inhumation burials, disarticulated assemblages of unburnt and cremated bone and potential grave features were associated with Barrows 1–5. These have been described above. The remaining 10 features were spread across the northern half of the site in plateaus 1, 2, 3 and 4. These are described below.

Burial features within Enclosure 3

Lying within Enclosure 3 was a group of four burials (G10002; S10824, S10833, S10838 and S10843) lying just to the north of the western entrance and a small feature (S10758) lying close to the southern enclosure ditch that contained a small amount of cremated human bone.

Grave S10824 was rectangular, 0.6m wide, 2.2m long and 0.13m deep, aligned a few degrees off north-west to south-east (Fig. 37). The heavily truncated cut had steeply inclined sides and a flat base (Plate 62). It contained a single, articulated, adult inhumation (SK 1.7) in a poor state of preservation, lying crouched on the base of the grave, facing south-west with the head at the north-west end. Only the limb bones and skull survived, plus a few vertebrae. The skeleton was lying on its right side with legs flexed, the left arm positioned across the chest area with the right arm stretched down towards the legs. The remains were of an adolescent about 12–16 years old, but the sex could not be determined. A small and fragmented but highly

decorated Southern Style Beaker (SF 1.9018) was placed immediately in front of the skull. A large oval worked flint flake (SF 1.9031) had been placed in the area of the feet. A gap of 0.4m between the feet and the southern end of the grave, and a similar gap at the northern end may have been intended to accommodate organic grave goods which had not been preserved. The grave contained a single fill, of brown silty clay with chalk fragments. The skeleton failed a nitrogen test and could not be radiocarbon dated.

Grave S10843 was subrectangular, 0.72m wide, 1.74m long and 0.41m deep, aligned north-west to south-east with steeply inclined sides and a flat base (Fig. 38). An articulated inhumation of a male aged between 39 and 46 (SK 1.4) lay on the base of the grave (Plates 63–65). The interment was laid on its right side, with legs flexed, facing south-west with the head at the north-west end. Preservation of the burial was poor with mainly the limb bones and skull surviving. The left arm was flexed and lay across the torso area. The skeleton was radiocarbon dated to 2019–1829 cal BC (at 95 per cent probability; Table 6, UBA-12622). A large finger-pinched rusticated Beaker pot (SF 1.9015) lying on its side was located at the foot of the skeleton and four amber beads, much deteriorated and not recovered intact (SF 1.169–1.172) were located around the neckline. The grave contained a single fill of grey brown sandy clay silt which yielded a few tiny fragments of unidentified prehistoric pottery, a single flint flake and some unidentified animal bone.

Grave S10838 was circular, about 1m in diameter and 0.30m deep, with steeply inclined sides and a wide, flat base (Fig. 2.38). A relatively well preserved articulated inhumation (SK 1.3) of a young adult, probably female (18–26 years old), was crouched on the base of the grave, aligned north-west to south-east (Plates 66 and 67). Unlike the other burials, the head was at the south-east end, the skeleton facing south-west. The interment lay partially supine, on its left side and very tightly crouched with legs flexed and drawn-up close to the chest suggestive of the use of binding material, although no evidence of this was found. Both arms were flexed with the lower arms raised across the chest area and the hands resting on the clavicle bones. Bone condition was poor although representation was good with most of the bones present. The skeleton produced a radiocarbon date of 2198–1923 cal BC (at 95 per cent probability; Table 6, UBA-21276). The grave was filled with a uniform brown silty clay with chalk inclusions. A single sherd of Beaker ware was recovered from the fill, along with four sherds of Bronze Age pot.

Grave S10833 was oval to subrectangular in shape, 0.94m wide, 1.51m long and 0.17m deep (Fig. 39). It was aligned north-west to south-east with shallow sloping sides and a slightly concave base. The cut did not contain any human remains, but was interpreted as a grave based on its size, shape, location and the presence of a very worn and fragmented Beaker pot (SF 1.9017) on the edge of the base near the northern end. The vessel was of a long necked form but incomplete and could not be fully reconstructed but was probably of Clark's Southern Group. The grave was filled with yellow brown sandy silt with chalk.

Feature S10758 consisted of a small sub-circular cut 0.44m wide, 0.54m long and 0.10m deep just inside the southern side of Enclosure 3. It contained a single fill of very dark brown to black charcoal rich silty clay containing less than a gram of calcined bone of probable human origin (SK 1.23), which suggests that this was a truncated un-urned cremation burial, probably of early/mid to late Bronze Age date.

Isolated burials

Grave G2000 was located at about 27m OD on the eastern side of Plateau 2 (Figs. 8, 33). It was subrectangular, 0.47m wide by 1.1m long and 0.22m deep with steep, concave sides and a flattish base, aligned a few degrees off north-west/south-east (Plate 58). It contained a poorly preserved inhumation (SK 2.1), probably of an adult female 36–45 years in age, crouched on its right side with the head positioned at the north end of the grave facing south-west. Isotope analysis of the skeleton suggested that she was not local, but that she grew up elsewhere in Britain, probably further west but well away from the coast. There were no grave goods apart from a copper alloy pin (SF 2.3) situated close to the skull. The grave was filled with silty clay which yielded two sherds of early Bronze Age pottery and some fragments of unidentified animal bone.

Grave G3004 was located on Plateau 3 at an elevation of just over 24m OD (Figs. 8, 34). It was subrectangular, 1.28m long by 0.91m wide and 0.44m deep, with vertically inclined sides and a flat base, orientated near north-south (Plate 59). In the north-western corner, a small step, no more than 0.1m in breadth, and about 0.4m long had been cut in the side, 0.27m down from the surviving top of the grave. The grave contained a single, crouched adult inhumation (SK 3.2) representing a female between 28 and 38 years old with her head to the south, facing east. The skeleton was radiocarbon dated to 2195–1977 cal BC (at 95 per cent probability; Table 6, UBA-12624). Isotope analysis of the skeleton suggested that she was not local, but that she grew up elsewhere in Britain, probably further west. The burial was accompanied by a near complete East-Anglian style beaker (SF 3.241) in the south-west corner of the grave, placed above the shoulder. The grave contained two fills, a deposit of crushed chalk sealed by yellow brown silty clay.

Grave G4043 was located on Plateau 4 at an elevation of just over 30m OD (Figs. 8, 35). It was subrectangular, 1.40m wide, 2.40m long and 0.30m deep, with steep sides and a flat base, aligned close to north-east to south-west (Plate 60). It contained a single, poorly preserved articulated adult inhumation (SK 4.1) lying crouched in the grave, facing south-east with the head at the south-west end; the arms appeared to have been placed across the chest. Age was determined as 36–45 years but the sex could not be gauged. The skeleton was radiocarbon dated to 2108–1895 cal BC (at 95 per cent probability; Table 6, UBA-12630). Isotope analysis of the skeleton suggested that she was not local, but that she grew up elsewhere in Britain, probably further west. A decorated long necked beaker (SF 4.37) was placed at the south-west end of the grave behind the skull. The grave was filled with light brown clay silt with lenses of chalk, from which a few flint flakes were recovered.

Grave G10003 was located on Plateau 1 at an elevation of about 18m OD (Figs. 8, 36). It was sub-circular, about 1.6m in diameter and 0.58m deep with steeply inclined sides, sloping more shallowly at the western side, and a wide, flattish base (Plate 61). Sporadic patches of burning, in the form of pinkish coloured chalk, were noted on the base of the cut, indicative of scorching within the pit prior to its infilling. The grave contained the poorly preserved skeletal remains of a single articulated inhumation (SK 1.2), possibly a female aged 26–35, lying crouched in the grave, facing south with the head at the north-west end. The skeleton was lying on the base of the grave, on its right side with legs flexed and the lower right arm on the chest area. Bone survival was poor, with mainly the limb and skull elements surviving. The skeleton was radiocarbon dated to 2137–1907 cal BC (at 95 per cent probability; Table 6, UBA-21278). It was accompanied by two complete Beaker vessels; a small finely decorated beaker placed by the front of the head (SF 1.78), and a small, long necked Barbed-Wire Beaker in front of the skeleton by the elbow (SF 1.79).

The grave contained two fills, the lower of which consisted of erosion deposits of chalk and silt which lay at the edges of the cut. This suggests that the grave cut may have been left open for some time before being backfilled with a uniform bulk fill of silty clay and abundant charcoal, the latter concentrated around the skeleton. Animal bone, a few scraps of pottery and worked flint were also retrieved from this fill, the latter a small assemblage of almost entirely residual early Neolithic material.

Possible grave S1201 was located in the centre of Plateau 1 at an elevation of about 22m OD (Fig. 8). It was subrectangular, 1.60m long, 0.63m wide and 0.25m deep with gradually sloped sides and irregular base. Its primary fill consisted of a light brown silty clay which yielded 62g of unburnt human bone (SK1.8) and two small sherds of unidentified prehistoric pottery. The morphology of the feature suggests it may have been a grave.

Sub-circular Feature G2001

A large sub-circular feature (G2001) was investigated on the eastern side of Plateau 2 (Fig. 8). It was around 41.5m long (north-south) and 35m wide (Fig. 40). The feature, interpreted as an infilled doline (*sensu* Sperling *et al* 1977), was investigated by two perpendicular trenches which were machine excavated to a maximum depth of 3m, but the feature was not bottomed. No finds were recovered from the fills of the doline.

Pond feature G2003

By the early Bronze Age a pond (G2003) had developed over the upper infilling of doline G2001 (Fig. 40). The base of the pond (S2900) was 21.3m long (east-west), 19m wide and 0.92m deep, with moderately sloping sides and a concave base which formed quite a regular oval shape apart from a section on its north-west side, possibly due to differential truncation (Plates 68 and 69).

Sealing much of the base of the pond was a deposit of red-brown iron enriched silty clay (S2447). This was overlain by a deposit of sub-angular flints (S2899), many with a greenish patina, probably procured locally from exposures of degraded Thanet Beds. The inclusion of burnt and fire-crazed flint, including some particularly large pieces further confirmed that this was a deliberately laid deposit. This flinty deposit formed a rough metalling, laid down to consolidate the lower fills of the pond in an attempt to stabilise the base. The regularity of the surface is suggestive of careful preparation including, as a minimum, removal of vegetation and uneven elements, if not more intrusive re-modelling of the earlier pond fills to form the smooth concave profile.

Late Neolithic/early Bronze Age pits

Eight pits can be dated to the later Neolithic/early Bronze Age due to the presence of Beaker or other early Bronze Age pottery within their fills, scattered across plateaus 1, 2, 3 and 5 (Fig. 8).

Pit S1148 was located in Plateau 1, cutting into a pocket of natural clay close by the possible grave S1201 (above). It was subrectangular, .40m long, 2.10m wide and 0.58m deep at maximum, with an irregular U-shaped profile. It was filled by a greyish brown clay silt which yielded over eighty sherds from one beaker vessel. The beaker, located on the eastern side but above the base, must have been discarded in pieces rather than intact and was incomplete. The vessel could not be reconstructed or positively identified, but it would appear to be an early form classified as a European Beaker and the only Beaker vessel on the site made with a purely flint tempered fabric, suggesting perhaps that the vessel was originally intended for use in a domestic context.

An assemblage of 41 pieces of worked flint was also present, much of which was possibly earlier Neolithic in date along with burnt flint. The latter was highly fragmented, concentrated in the eastern half of the pit, perhaps part of a single concentrated deposition (although not recorded as such), while the worked flints appeared to be distributed throughout; most of these may have therefore been residual, derived from the colluvium in the area, particularly considering their early date.

The feature may have had some connection with pottery production, perhaps originating as a clay quarry exploiting the clay it was cut into, whilst the concentration of fragmented burnt flint may have been intended as pottery temper.

Pit S1749 was also located on Plateau 1; it was oval, 0.50m wide, 0.60m long and 0.24m deep with steep sides and a flat base. It contained a dark brown clay silt with abundant charcoal content, abundant burnt flint, animal bone and daub flecks. A few early Bronze Age pottery sherds were recovered and a late Neolithic/early Bronze Age flint assemblage comprising 32 pieces, predominantly flakes, most of

which appear to have been struck with a soft stone hammer. Two bladelike pieces could be refitted suggesting a knapping episode. There were no cores or implements present. The pit also produced a few sheep teeth, traces of grain, hazelnut shell, charcoal, oyster and barnacles.

Pit S2276 was located on Plateau 2. It was sub-circular, 0.70m long, 0.57m wide and 0.24m deep with steep sides and an uneven concave profile. It contained a single fill which yielded part of a small fragmented beaker, probably originally situated upright in the south-west corner of the pit. The vessel, which could not be classified, probably represented a comb impressed decorated Beaker but its short everted rim may suggest an East Anglian tradition. Similar to the vessel from pit S1148 (above), the fabric included coarse flint which may suggest that the vessel was not intended for a funerary use. The feature was probably too small to be a burial (unless perhaps of an infant where no bone survived), but some ritualistic function can perhaps be inferred from the presence of the beaker, which appeared to have been deliberately placed. The remainder of the feature may have held more perishable items, perhaps suggested from an environmental sample which produced some hazelnut shell, seeds and small fruit stones.

Discussion

Mesolithic (Fig. 7)

The entirely residual Mesolithic flintwork from the site does suggest some activity of the period in certain areas, but otherwise the complete absence of any well-defined evidence for any settlement or other activity, particularly in the fifth millennium BC, is common to virtually all other archaeological investigations on Thanet and in the immediate south-east (Garwood 2011, 51–52). It has been suggested that hunter-gatherer communities may have concentrated their activities near coastlines, areas that in Kent have lost extensive tracts to erosion and sea-level rise (Garwood 2011, 92–93), or that on the uplands most traces of transient settlement have been obliterated by centuries of erosion and agriculture (Moody 2008, 57–561). Both may explain to some extent, the limited nature of the evidence.

Neolithic (Figs. 8–12)

Jon Rady and Robert Masefield with Barbara McNee and Wendy Carruthers

Although Neolithic activity may have been slight across the site, at least five pits can be confidently dated to the initial period of the early Neolithic on Plateaus 1 and 8, with perhaps another four of early to middle Neolithic date on Plateaus 3, 5 and 6 (4th millennium BC). On Plateau 8, the cluster was augmented by at least three other pits that were probably contemporary (although one (S3454) may be later Neolithic). In addition, four late Neolithic pits were located on Plateaus 2, 3 and 5, the two on Plateau 3 possibly associated with groups of similar features that could not be

confidently dated. Barrow 5 almost certainly originated as a late Neolithic monument.

Initial and Early Neolithic

The results from Thanet Earth may now be read in the light of an enhanced chronology for the period established via important detailed analysis of radiocarbon-dating across the country provided by Whittle, Healy and Bayliss (Whittle *et al* 2011). Estimates for the start of Neolithic activity suggest activity began in the Greater Thames Estuary region of the south-east including Kent, London and southern Essex slightly earlier than elsewhere in southern Britain at between 4315–3985 cal BC (at 95 per cent probability) or 4145–4005 cal BC (at 65 per cent probability) (*ibid*, 729, 731, fig. 14.48). This was based on nine sites providing ‘15 likelihoods’ within the Greater Thames Estuary, including the Yabsley Street, Blackwall burial, and in Kent, White Horse Stone timber house and the Coldrum megalithic chamber. The model therefore predicts that the route of entry of Neolithic practices was via those areas closest to the continent. Their project indicated the arrival of causewayed enclosure building generally after *c.* 3,700 cal BC, although notably Chalk Hill on Thanet was possibly the earliest in their sequence (the first circuit built 3780–3680 cal BC (at 95 per cent probability) and probably 3740–3690 (at 68 per cent probability; *ibid*, 375).

The Plateau 1 and 8 pits at Thanet Earth are some of the earliest Neolithic features yet found in the county. The radiocarbon dates of three of these pits are fairly consistent at 95 per cent probability (Table 6): 3994–3668 cal BC (S10454); 3926–3659 cal BC (S12309); 3912–3625 cal BC (S3941) with one slightly later but overlapping in range (3796–3653 cal BC (S12304). At 68 per cent probability pit S10453 provides the earliest date range (3910–3708 cal BC), with the Plateau 8 pits closely clustered towards the end of this range (3786–3707 cal BC (S12309); 3787–3697 cal BC (S3941); 3773–3673 cal BC (S12304). The pits included distinctive Carinated Bowl ceramics of the initial Neolithic whose chronology tallies closely with the currency of Carinated Bowls suggested by Whittle *et al* (*ibid*, 759) as starting 4185–3975 cal BC (95 per cent) and probably 4080–3990 cal BC (68 per cent probability). However, the earliest dates depend on Carinated Bowl (CB) pottery from Yabsley Street Blackwall (*ibid*, fig. 14.88 KIA-20157) and no other CB assemblages from southern Britain can necessarily be dated earlier than the 39th/38th century cal BC (i.e. the latter end of the calibrated range). Currency of CB pottery in southern Britain ends no later than the 37th century BC. Notably the Thanet Earth CB pits were all found within a restricted area of the northern part of the site, with a noticeable cluster on Plateau 8, all (including those from the later Neolithic – below) situated on the flanks of the central ridge (particularly its eastern side) that spans this area south to north (Fig. 8).

Neolithic pits generally, and ‘initial Neolithic’ and early Neolithic pits in particular have not been a common find in Kent to date, with only small concentrations at Deal and Sittingbourne and isolated pits at Minnis Bay (Margate), Nethercourt Farm, Ramsgate, Wingham and at Bogshole Lane, Herne Bay (Champion 2007a, 74–75).

Few of these have been radiocarbon dated, although two small pits at Saltwood near Folkestone gave calibrated determinations which placed them within the range c. 3650–3500 BC (Garwood 2011, 57–58). On Thanet, Westwood Cross, about 7km to the east of the present site has also provided a Neolithic ‘grain pit’ dated to 3500–3130 cal BC (at 95 per cent probability; Whittle *et al* 2011, 379), while some of slightly later date have recently been found on the East Kent Access road (EKA) scheme, a Thanet road development to the east (Andrews *et al* 2015a). Notably, early Neolithic pottery has also been found very locally within pits located during the Monkton roadworks (Bennett *et al* 2008, 11), but these features were not carbon dated; in fact early Neolithic radiocarbon dates remain rare (Whittle *et al* 2011, 377).

The Neolithic pits discovered on the EKA road scheme provide a more recently analysed corpus of such features on Thanet which can be compared to the Thanet Earth evidence. Early Neolithic activity was well-represented with groups of pits found towards the northern part of the Ebbsfleet peninsular and north east of Cliffsend (Zones 6 and 14) in addition to a number of more isolated pits, similar to the small clusters and isolated pits at Thanet Earth (Andrews *et al* 2015a, 23). Virtually all of these features were relatively shallow with bowl shaped profiles, although there were a few larger sub-rectangular examples. Some of the Ebbsfleet pits contained decorated shouldered bowls along with flintwork whilst two pits contained emmer wheat and hazel nut shells. This site is considered to represent a settlement in the lee of the Ebbsfleet Hill. A fairly concentrated group of 22 mostly bowl shaped pits, some of which contained flintwork and pottery, were found in Zone 14, forming both clusters and a more dispersed scatter. These were usually 0.5m to 0.7m in diameter with few more than 0.3m deep, although there were four larger examples of c.1m diameter, some of which had two or three fills with ceramics throughout. Again these contained decorated shouldered bowls rather than Carinated bowls indicating a date between the 37th and 34th century BC, a later date to the Thanet Earth pits being confirmed by radiocarbon determinations on three charred plant samples from one pit which provided a modelled date of 3640–3520 cal BC at 95 per cent confidence (Andrews *et al* 2015a, 23–27 and 69).¹

Neolithic pits most commonly take the form of relatively small, shallow round-based features that only have one or two individual backfills, similar to the majority described from the EKA scheme (Thomas 1999, 64 and fig. 4.2; Champion 2007a, 74). At least three of the earlier Neolithic pits at Thanet Earth present a significant variation to this, primarily represented by the isolated large grave-shaped sub-rectangular pit in the northern area of Plateau 1 (S10454), and at least two, perhaps three others on Plateau 8 (S3941, S12309 and S12304; Figs. 10, 11; Plates 18–20), the first slightly larger than the others. These features seem to belong to a group of early Neolithic pits of distinct form, quite separate from the usual types recorded, generally both larger and deeper and with a greater complexity of more numerous, discrete fills (Woodward and Woodward forthcoming).² These features generally

¹ The individual dates were 3640–3380 cal BC, 3650–3380 cal BC and 3640–3370 cal BC, at 95 per cent probability (Andrews *et al* 2015a, table 2.3)

² We are indebted to Anne Woodward for supplying their article prior to publication

date to the 'initial Neolithic' (Garwood 2011, 55) of the first quarter of the fourth millennium cal BC (or perhaps later). They nearly always contain a number of vessels, of varying size and shape, usually comprising large freshly broken sherds and often in association with other artefacts or animal bone suggesting some derivation from feasting. As with the Thanet Earth pits of this type they either occur in isolation, or in small structured groups. The fills themselves are very often redolent of structured deposition. Although these complex pits seem to be of a much rarer form, the types of deposit found within them and their associated finds are well documented in England generally and are often considered to represent selected deposition of 'domestic' items, possibly when occupation sites were abandoned (Bradley, 2007, 44 citing Healy 1987). Such depositions were also effectively a cultural expression of the emergent domestication of the landscape.

Whether the pits were necessarily dug entirely as part of the enactment of special or ritual practices is related to the much discussed question regarding the potential for variant primary function/s, such as for storage. Nevertheless, the more common, smaller and shallower bowl shaped pits are usually considered unsuitable for such a purpose (see Thomas 1999, 64, 68 or Garwood 2011, 59, for example). Although there is no clear direct evidence that any of the early Neolithic features at Thanet Earth were used for storage some of the larger more flat-based and vertical sided examples (such as S10454 and S3941) could potentially have performed this function originally. This is discussed further below in reference to the later Neolithic features.

The more common small bowl shaped pits were also evident at Thanet Earth, some in close spatial disposition with the more complex features on Plateau 8 (S3456) or isolated on Plateaus 3 and 5 (S3205, S5216). However, the radiocarbon determination from S3205 (3696–3540 cal BC at 95 per cent probability) suggests it was somewhat later in date (similar to the EKA road scheme pit on Zone 14, above) commensurate with the Plain Bowl tradition which appeared in Britain between 3970 and 3715 cal BC (95 per cent probability) probably 3855–3730 (68 per cent probability) and lasted to between 3475 and 3095 cal BC at 95 per cent (Whittle *et al* 2011, 759). The small bowl shaped pit form seems to be common to both the earlier and later Neolithic but is more evident in the later part of the period perhaps (see below).

The fills of the more complex pits, particularly S10454 and S12304, were not only quite distinct, but also individually contained particular concentrations of specific material, such as pottery from the basal level of S10454, or the later shell level from the same feature. This and the nature of the artefactual remains (discussed below) suggest formal ordering during infilling. In other respects however, these complex pits are also very similar to Neolithic pits found elsewhere. Their fills nearly always contain or consist of burnt material (Thomas 1999, 64), which in the case of the Thanet Earth features comprised charcoal laden fills, or much burnt clay (perhaps derived from hearths) and also burnt flint. Another facet usually noted is the 'fresh' nature of the pit edges, with little trace of erosion or weathering (*ibid*, 65). Although most of the Thanet Earth pits were similar, two of the features (S12309 and S3941) contained basal deposits of eroded colluvium, suggesting that they had been open

for some time. Even though this may have been of quite a short duration, as these particular features were cut into very easily eroded subsoil, it clearly demonstrates that they were not opened and closed in a single operation. Similar erosion of an early Neolithic pit base, here prior to the structured deposition of charred cereal remains, was noted at the Brighton and Hove Waste Water Works site at Peacehaven (Hart 2015, 63). It should also be borne in mind that whilst a deposit of potsherds directly on the base of S10454 might suggest rapid backfilling, the chalk cut pit might alternatively have been open for a short time and kept clean or covered prior to deposition. .

The suite of artefactual finds from these early pits is fairly consistent with other such features, although there were a few differences. During the early Neolithic pits probably provide the single most frequent context from which pottery is recovered (Pollard 2002a, 25). The concept of an early Neolithic to early Bronze Age pit deposition tradition, -a tradition distinct from preceding and later practices- was first articulated by Julian Thomas (Anderson-Whymark 2012, 187). In terms of the ceramic deposition, pits can occasionally contain whole pots, but much more often include parts of a number of vessels, predominantly the rims or upper portions, suggesting that these had been deliberately chosen due to their individuality (Thomas 1999, 68). Many of the early Neolithic pits excavated in the Kent area share these characteristics, although some are of the later Plain Bowl phase. At Thanet Earth, there are three almost complete early Neolithic vessels (Figs. 262/1, 265/25 and 266/26), and all are missing their rounded base sherds. At Ellington School, Ramsgate, several early Neolithic rim sherds were recovered from a pit. No complete vessels were present and there was also a distinct absence of base sherds (McNee 2012a). These however, belonged to burnished bowls, probably Plain Bowls similar to those recovered from the nearby site of the Chalk Hill Causewayed Enclosure (associated with calibrated dates of 3750–3638 and 3783–3656 BC at 95 per cent probability). At Mill Road, Kent, five early Neolithic pots were discovered and had been placed upright in the bottom of a pit (Dunning 1966, 1–3). It is interesting to note that these pots were also missing their base sherds.

The early Neolithic pottery from Thanet Earth is of some importance and since it is not well represented in Kent the recovery of a small number of initial Neolithic Carinated Bowls is notable (McNee 2014). The vessels are undecorated, which is typical of Carinated Bowl pottery of this early date, as confirmed by the radiocarbon dating. Use of decoration tends to occur in the later centuries of the early Neolithic period (after 3700 cal BC) counter-intuitively associated with the 'Plain Bowl' pottery tradition. Decoration is particularly common within causewayed enclosures but is generally less common on 'domestic sites', a contrast perhaps relating to variant attendant processes of settlement and ceremony/feasting (Hart 2015). The two vessels in pit S10454 were probably contemporary, considering that the pit was probably backfilled fairly rapidly. It is suggested that they date to 3900–3750 or possibly slightly earlier according to the radiocarbon date range (although not directly associated with the pottery, such as from residues on the vessel, the nature of the deposition strongly indicates the date on associated material is contemporary).

The Plateau 8 pit (S3941) also contained a fine Carinated Bowl in similarly good condition, suggesting deposition soon after breakage. The pot was concentrated in the basal level, but also dispersed throughout a number of contexts, suggesting rapid backfilling (similar to S10454 above) and was again incomplete. However with this vessel, the slight carination is set higher, which suggests that the Plateau 1 bowl is slightly earlier as after c. 3700 cal BC shoulders tend to be set higher or are absent altogether (Barclay and Edwards 2006, 24). With this potentially later date in mind for pit S3941, it is notable that nearby pit S12304 also produced a closer radiocarbon dating range which centres on c. 3700 cal BC. With the possible exception of pit S12309, the Plateau 8 pits may belong to a later phase of activity than that on Plateau 1, perhaps reflecting shifting cultivation patterns.

The derivation of the pottery and other artefactual or ecofactual material is of some interest and tends to suggest procurement from different sources, perhaps correlating with Thomas's (1999, 87) observation regarding the mix of 'special' objects, either purposefully made for deposition or curated, and 'more mundane objects and substances' that could either derive from 'midden accumulations or the debris of communal feasts'. Overall, the ceramics suggest deposition of semi-complete vessels soon after breakage, or following careful curation. Alternatively, wear evident on some of the sherds could suggest derivation from a midden where some sherds were subject to greater weathering than others (McNee 2014). In possible support of the former sooty residues on one of the larger bowls may indicate that it was gathered-up following a single act of consumption, such as a feast. A large vessel may have been deemed suitable for such use.

Redeposition from middens is a frequently suggested mode of derivation for much of the material found in Neolithic pits, particularly where there is evidence for variable wear and condition suggesting artefacts had been subject to different depositional factors. Similar variables have been noted at a Neolithic midden site in the Thames Valley, where clusters of refitting pottery, and groups of highly fragmented pottery were recorded. The flint assemblage recovered from this site displayed a high degree of breakage and slight edge-damage (Allen *et al* 2004, 89–90), considered to be indicative of exposure for a period of time prior to becoming buried. However, on balance the good condition of the pottery from the Thanet Earth pits, the carbon residues on one vessel, the generally larger sherd size and the relatively small number of individual vessels perhaps favour the possibility that these particular artefacts did not derive from a midden. At the very least these attributes suggest the artefacts had not been buried for long or more probably had been used (or curated) and perhaps then deliberately broken, just prior to deposition.

Some of the other material in the pits perhaps may also suggest a direct mode of origin, rather than via midden deposits, for example the concentrated layers of shell and burnt clay in pit S10454, while the more fragmentary material (such as the small quantities of animal bone – below) may in fact be midden derived. Crushed and unidentifiable pot fragments and small fragments of burnt flint from an upper level of pit S3941 could potentially relate to pottery manufacture so their derivation is

more uncertain, but they were more sparsely distributed within the matrix (recovered from samples) and thus more likely to have been unintentionally incorporated with midden refuse. The same can probably be said for the very small amount of burnt bone recovered, possibly human in one instance. Alternatively the burnt bone may be much more significant as a 'token deposit' associated with funerary activity, perhaps even directly associated with the proposed evidence for feasting and the symbolic breakage of pottery.

The worked flint from these early pits was not particularly distinctive, with only very small quantities recovered from pit S10454 in particular. Pit S12304 did yield a larger collection of flintwork including scrapers, blades and a knife/point, S3456 contained a few flakes, blades or bladelets, and flake cores while the slightly later pit on Plateau 3 (S3205) contained the butt end of a polished flint axe, a collection of soft hammer flint blades and flakes, but these seem to be an exception (the Plateau 6 pits are not considered here due to the uncertainty about their date – see below). Setting aside later pit S3205, perhaps this can be seen as a variance on the common association of Neolithic pits in general with significant examples of worked tools. Notably in relation to debitage 'finely crafted artefacts...tend to be rare as stray finds' (Thomas 1999, 66; 68–69). Therefore, although these modes of structural deposition may have been part of a 'widespread cultural phenomenon' they were 'not bound by a strict set of rules' or were perhaps, related to localised imperatives (Thomas 1999, 69). At Thanet Earth the paucity of other artefacts (apart from a few fragments of saddle quern from pit S12304) and of animal bone when both domesticates and wild are not uncommon finds elsewhere (*ibid*, 66–68) might also reflect this, perhaps further suggesting careful selection for burial of a particular set of artefactual and other material, rather than general mixed detritus from domestic occupation.

Thus the pit contents reveal little about animal husbandry, meat consumption or the importance of hunting wild animals in comparison to domestication. As noted, although there is little evidence for wild animal species these are often present in Neolithic faunal assemblages as a minor element (Thomas 1999, 26). On the other hand, the plant and seashell remains are of particular significance, although it must be remembered that because the plant remains were preserved by charring, the range of items present in the samples will be biased (below).

The three relatively large pits found on the central northern and western edge of Plateau 6 including the c. 1.4m diameter pits S6364 and S16014 cannot be closely dated from their ceramic content (which confirms how difficult certain fabrics can be to date) but contained charcoal rich single fills with large early Neolithic (with some Mesolithic) assemblages of hard and soft hammer flakes and blades including primary and secondary flakes (several hundred) in addition to tools such as end scrapers. Grain from pit S6364 supplied a radiocarbon determination of AD 782–984 (UBA. 22212), which is undoubtedly aberrant and probably due to contamination. Apart from this, there is no reason why these features should not be early Neolithic in origin, particularly given the substantial mix of early Neolithic with some Mesolithic flintwork, and the abundance of small chips and fragments that might

argue against their likely curation, but they do not all conform in profile or fill to other examples. It is possible that the flint was specially deposited from a curated assemblage (or potentially via an earlier midden, as proposed at the Thanet site of Ellington School; Rady *et al* forthcoming), possibly in the mid to later Bronze Age when activity was taking place in this area. The curation and later re-deposition of considerable quantities of flintwork and other material (perhaps derived from older middens) in later Bronze Age or earlier Iron Age pits is a recently observed phenomenon that might be quite common (see for example Champion 2011, 239–240). In any event, the question is probably academic, as none supplied any significant plant remains or other significant depositions (apart from the flintwork), that would make their exact date a matter of particular importance.

Wider cultural and bioarchaeological significance of tetraploid free-threshing wheat (Fig. 41)

There are perhaps illuminating differences between the Plateau 8 pits and the isolated Plateau 1 example, which as stated above were probably not contemporary. Whilst naked barley was not present on Plateau 8 and apple not found on Plateau 1, more significantly the relative proportions of main types of wheat also differed. Plateau 1 pit S10454 yielded predominantly free threshing tetraploid ('naked') wheat (*Triticum durum/turgidum* -group), with smaller amounts of emmer-type wheat, while on Plateau 8 (pit S3941) this proportion was reversed. As radiocarbon dating and potentially earlier longer necked Carinated Bowl ceramics within Plateau 1 pit 10454 suggest an earlier date than those of Plateau 8, lower proportions of free threshing tetraploid wheat on Plateau 8 perhaps reflect a decline in its use (see below). However, an element of caution should be stressed here given the possibility of selection bias of those depositing the material and the tentative nature of the ceramic phasing; in addition the data is only from one pit and that is probably not going to be representative of the earliest Neolithic as a whole (see above). Nevertheless, this suggested trend may be further illustrated by the early Neolithic pits within Zone 6 on the EKA road scheme, which were similar to the post CB pits at Thanet Earth in that they contained 'characteristically few' identifiable cereal remains apart from 'a few emmer-type grains and chaff'. The Zone 14 pits also contained relatively small amounts of plant remains (Andrews *et al* 2015a, 25; 27).

It is clear from the contents of these pits (in particular the Plateau 1 pit) that in the context of the British early Neolithic a significant diversity of cereal crops was being grown at Thanet Earth. This is due to the unique presence of tetraploid free-threshing wheat along with the more usual emmer, hulled barley and naked barley from pit S10454 in particular (Carruthers 2015). The high bio-archaeological significance of the first verified presence in Britain of the tetraploid free threshing wheat is fully discussed below, but it is worth reiterating that its presence is the culmination of its gradual transference from warmer climes across Europe. Its first northern European appearance is in the adjacent continental areas of the Michelsberg culture (and preceding Bischheim culture – see Fig. 41 and Kirleis and Fischer 2014, table 1) of parts of France, Belgium, the southern Netherlands and

Germany in the mid fifth millennium cal BC (Kreuz *et al* 2014, 72; Kirleis and Fischer 2014, S88–S89). The preceding Bischheim culture of c. 4,600/4,500 cal BC to c. 4,380 cal BC, however, exhibited a wider range of crops including oil/fibre plants, compared with a ‘reduced crop spectrum’ characterised by Michelsberg II–V (c. 4,380–3,500 cal BC; Kreuz *et al* 2014, 83). Significantly a reduced crop spectrum with restricted weed assemblages is also a signature of the initial/Early Neolithic of Britain and the Funnel Beaker culture of Northern Germany and southern Scandinavia. In particular these regions are characterised by a general absence of oil/fibre plants and pulses and dominance of cereals including emmer and barley (Kreuz *et al* 2014, 72 and 94). Although emmer wheat and barley are well known from the British early Neolithic, the relatively high concentrations of tetraploid free threshing wheat found within the Thanet Earth pits provide the first equivalent evidence to those of Michelsberg sites for its presence this country. Furthermore the tetraploid free threshing wheat has recently been identified at two sites of the Northern European Plain in Northern Germany at Dieksknöll, Schleswig-Holstein and southern Denmark at Frydenlund, Fyn (the latter dated c. 3,600 cal BC) corresponding with EN1a and EN1b of Funnel Beaker culture (Kirleis and Fischer 2014, S92).

The climatic associations and origin of tetraploid free threshing wheat are of particular interest. First it is a species that thrives in warm and dry summer conditions, hence its dominance in the Mediterranean from Classical times, whilst the hexaploid genomic form of free threshing wheat is most successful in terms of yields in temperate climates to the north (Kirleis and Fischer 2014, S82). This is significant with respect to the two main corridors of Neolithisation to central/western Europe, one being an ‘eastern route’ past the Balkans and Carpathian Basin, commensurate with the development of the Linear Pottery Culture (LBK) and which is closely associated with the temperate hexaploid free threshing wheat, and the other a ‘western route’ to Central Europe via the western Mediterranean’s Iberian peninsula and which is closely associated with the relevant tetraploid genomic constitution (*ibid*, S87–88). The earliest European records of the tetraploid variety are associated with ‘Cardial’ Early Neolithic groups of Spain and ‘most probably entered Central Europe through the Rhône Valley...[before spreading] rapidly towards the north and eastwards in the northern Alpine foreland...’ arriving in the Bischheim then Michelsberg cultural areas in the mid fifth millennium BC (*ibid*, S88–S89).

Fig. 41 (reproduced from Kirleis and Fischer 2014, fig. 7) shows the distribution of tetraploid free-threshing wheat within the Michelsberg cultural area plus its spread from there to the Funnel Beaker zones and the Baltic c. 3650 cal BC. It also plots the first confirmed arrival of tetraploid free threshing wheat at Thanet (Thanet Earth) in Britain between c. 3900 and 3700 cal BC (following correspondence with Wendy Carruthers). Just as the recent identifications provide an ‘archaeobotanical missing link’ of transference from the Michelsberg culture to the Funnel Beaker culture, they appear to demonstrate just such a link between Michelsberg and south-eastern Britain via the Greater Thames Estuary. In a sense this is therefore a ‘smoking gun’

for a route of Neolithisation (at least in terms of transference of cereals) into Britain, particularly since tetraploid free-threshing wheat forms a component of the earliest Neolithic signature in the Bischheim/Michelsberg and Funnel Beaker cultures. Whittle *et al* (2011) referred to the model preferred by some archaeologists '*for long-distance migration as opposed to short-distance migration akin to a 'wave of advance'.* *Economic advantage of moving and therefore knowledge of receptor region would need to be invoked for such rapid advance'* (Whittle *et al* 2011, 859) that has some relevance to these findings.

Kirleis and Fischer illustrate another significant correlation with the emerging picture at the south-eastern tip of England (2014, fig. 7), in that tetraploid free-threshing wheat was a major crop, alongside emmer wheat and barley, at the aforementioned Danish and North German sites in the earliest stages of the Neolithic (EN 1a and 1b); but by a later stage of the early Neolithic (EN2) and the Middle Neolithic, the type was virtually absent. Similarly the earliest Michelsberg sites provide much greater evidence for tetraploid free-threshing wheat than the later sites (Kreuz *et al* 2014, 86). Absence of free-threshing wheat at Thanet Earth and of course Britain generally after c.3700 cal BC and the lower concentration of tetraploid wheat in Plateau 8 Carinated Bowl pits compared to the seemingly earlier Carinated Bowl Plateau 1 pit, fits well with the Continental evidence for its decline, although it should be borne in mind that is here based on only four features to ascribe a corresponding major economic change in southern Britain. Climatological data suggests a persistent decline in summer temperatures in the Middle Holocene, corresponding with higher water levels within the continental lakes (Kreuz *et al* 2014, 86) that may have a bearing on the decline in use of tetraploid free-threshing wheat (hexaploid types being more tolerant of cooler temperatures but more importantly they are frost tolerant, whilst tetraploids lack these genes; Zohary *et al* 2012). However, soil depletion following initial burning of woodlands and changes in agricultural practices on the North European Plain around 3750 cal BC, suspected to coincide with the introduction of the ard there (Kirleis and Fischer 2014, S82), may also have had a bearing on crop choice. Evidence from lake sediments suggest however that climatic changes (which in any event can be locally variable) were not responsible for the establishment of a new arable regime in mainland Europe (Kirleis and Fischer 2014, S91; Kreuz *et al* 2014, 73–74), and multiple factors including cultural preferences may also have been involved.

Arrival of tetraploid free-threshing wheat in the extreme south-east of Britain and subsequent loss, possibly due to inherent unsuitability, is of some importance to the history of British agriculture. It is probably supportive of a south-eastern and specifically east Kent/Greater Thames Estuary route of entry of Neolithic farming associated with Carinated Bowl pottery as proposed by Whittle *et al* (2011). More specifically the cereals' presence strongly supports a cultural association and means of transfer from the donor region of the Michelsberg culture/northern France. Furthermore this could represent 'first contact' given its prevalence in the earlier stages of Michelsberg and subsequent decline there.

Of the other crops recovered from the same features at Thanet Earth, naked barley is most frequently found in early prehistoric assemblages up to the Middle Bronze Age in date, such as Trethellan Farm, Cornwall (Straker 1991) and Bestwall Quarry, Dorset (Carruthers, 2009). An association with such southern coastal sites in the British Isles is notable, further suggesting that climatic factors were also important in ensuring the success of this useful free-threshing barley (Carruthers 2015).

Wild Resources

Notably, wild resources, including seafood, were still important, and suggest a 'diverse subsistence base' (Stevens and Fuller 2012, 719). Two of the pits, S10454 and S12304 contained significant discrete layers of mixed seashell, primarily mussel indicating consumption on some scale. Quite a wide variety of other edible or probably edible specie were also present, including oyster and cockle, with lesser quantities of edible periwinkle, queen scallop, Baltic tellin and peppery furrow. Avian eggshell was also found in some quantity in the former of these features, signifying utilization of another wild resource as the eggs were probably not from a domesticated bird at this time. Other wild resources included native fruits and nuts (hazelnuts, rose-hips (*Rosa* sp.) and crab apple (*Malus sylvestris*) in the form of apple seeds, flesh fragments and core fragments. Mears and Hillman (2007) point out that rose hips (present in pit S12304) contain the highest concentration of vitamin C of all the fruits in the British flora and, as long as the hairs are washed from the flesh, they are good to eat. These comestibles may have been gathered from woodland margins, clearings or hedgerows (Carruthers 2015). The presence of a possible lesser celandine tuber (cf. *Ficaria verna*) suggests that vegetative materials such as tubers may also have been gathered for food (Mason and Hather, 2000).

Whilst a moderate amount of hazelnut shell was present in the earlier pit on Plateau 1 apple, rose and hazelnut remains were all recovered from the potentially later three pits on Plateau 8. The variation in apple presence could be due to seasonal differences, with the Plateau 8 pits receiving apple because the burning occurred at the time of harvesting and drying apples in autumn (although hazel nuts are also gathered around the same time of year, they can be kept for longer in their shells). Alternatively, if the pits served ritual functions and the burning was deliberate and ceremonial, the differences could reflect personal preferences for particular foods. However, it is worth considering that if crab apples and hazel nuts were being dried prior to storage, as suggested above, then perhaps the surplus of cereals was not sufficient at this time to last through the winter. Some of the large fragments of charred crab apple had clearly been cut prior to charring, suggesting that fruits may have been dried prior to storage. Drying also improves the palatability of many wild fruits and nuts (removing the astringency from fruits such as crab apple and sloe (Wiltshire 1995). There is a suggestion here therefore, that cultivated crops may not have been produced in enough quantity to provide sustenance across the winter months.

The complex pits described above are particularly significant considering that until recently there had been ‘almost no evidence for the details of food procurement’ during this period in Kent (Champion 2007a, 74). In particular the mixture of wild and tame food resources present in the excellent quality environmental samples indicate that far from being a taboo on shellfish consumption in the first centuries of the Neolithic (as has been suggested e.g. in Whittle *et al* 2011) as some of the old hunting and gathering ways were abandoned, these went hand in hand with arable farming that included a wide range of food crops. However, although the consumption of shellfish may be less evident generally in the later early Neolithic (such evidence appears to be rare within pit clusters and causewayed enclosures associated with the later Plain Bowl ceramic stage), significant deposits of shellfish were associated with the nearby Chalk Hill enclosure (although not directly associated with radiocarbon dates; Clark 2019, 49). Whether this more general observation is either representative of a taboo that had only been formalised by then or simply because the farming lifestyle was so labour intensive that there was little time for outmoded forms of subsistence, is perhaps a conclusion that cannot therefore be substantiated at this time. However, this trait may be evidenced by the later early Neolithic pit (S3205) containing Plain Bowl ceramics on Plateau 3 (3689–3540 cal BC) and possibly a pit on Plateau 5 (S5216), which may be contemporary with the Chalk Hill enclosure, which produced evidence for the consumption of nuts although cereal remains were sparse and shellfish completely absent.

Nevertheless ‘*early Neolithic diets will have been diverse, with particular persons, kin groups or communities having access to varied combinations of domesticated and wild resources according to location, time of year, social status and positions in networks of exchange and alliance*’ (Thomas 2008, 72).

Farming and Settlement

These environmental remains suggest that the most likely context of the Neolithic pits is within limited extent clearances for settlement and farming, which, as their content has shown, was quite developed, if not extensive by the first centuries of the fourth millennium BC. Further, not only are there indications that cultivation generally occurred in small cleared areas within an overwhelmingly wooded environment but also some possible indication as to its nature. A few common weeds of cultivated or disturbed ground were present in most of the pits, including black bindweed (*Fallopia convolvulus*), cleavers (*Galium aparine*), and bittersweet (*Solanum dulcamara*), all of which are climbers or scramblers. The frequency of these taxa in Neolithic assemblages (which generally produce a very limited range of weed taxa) may reflect crop husbandry methods such as harvesting by uprooting, or may further suggest that crops were being grown in woodland/scrub clearings (Carruthers 2015; Stevens and Fuller 2012, 708).³

³The small quantities of weed species not normally found in Neolithic features were almost certainly intrusive. This is not surprising, as the area has probably been under cultivation for many thousands of years and there are numerous conduits for such contamination to occur, such as earthworm action, rooting and other forms of biogenesis (Pelling *et al* 2015). This does not seriously affect the viability of

Interestingly a farming model developed for the Bischheim and Michelsberg cultures known as the “Braunschweiger Modell” hypothesised by Geschwinde and Raetzl-Fabian (2009; cited by Kreuz *et al* 2014, 95) is suggestive of a two tier society comprising both sedentary farmers and itinerating herdsman. It is suggested that both groups reconnected seasonally as a social whole at causewayed enclosures when communal feasting, social and religious activities took place.

It is often assumed that Neolithic pits represent the direct remnant of settlements but alternatively because their infilling often formed part of the enactment of special or ritual practices, they may not *necessarily* have been located immediately adjacent to the related settlement activity. Nevertheless ritual deposition and adjacent settlement were unlikely to be mutually exclusive. Neither do the features *necessarily* indicate continuous or extended occupation (Thomas 1999, 86), generally being representative of single, if sometimes complex acts of deposition. The content of the pits themselves however, whether ritually deposited or not, or wholly or partially derived from middens, comprises material that would have been generated from domestic activities of production and consumption, or the ‘events of habitation’ (Thomas 1999, 86–87). Settlement in the vicinity, however transient, is therefore suggested and would probably not have been at any great distance. Having said that, the range of crops grown would appear to indicate considerable investment in the adjacent landscape, particularly given the time and effort required to clear vegetation and break ground for cultivation for each episode. The location of the early Neolithic features would suggest that the edge of the valley at Plateau 8 is the most likely position for any related settlement, the valley itself perhaps carrying running water at this time. The more isolated pit on Plateau 1 and the later scattered early Neolithic pits further south, perhaps represent temporally separate clearings and perhaps more transient phases of activity in these locations.

However, wherever their associated ‘settlements’ were located, the precise position of the pits themselves perhaps has resonances with later ritual aspects of the landscape and may suggest a more substantial impact on the environment than is evident. Such an impact is after all implied by the presence of cereals which are most likely to have been grown on these slopes and imply at least a degree of attachment to place. In particular it may not be coincidental that the ridge on which these pits (both of the earlier and later Neolithic period) are situated became the focus of the probably late Neolithic Enclosure 3 and possibly other enclosures and barrows further north outside the site area (Fig. 5), Barrows 5 and 6 and most of the isolated Beaker burials, as well as a number of later Bronze Age ritual features (Fig. 8). This continuing use of particular areas for various ritualised emplacements, contributing to a long lasting ‘sense of place’ often seems to be the case. Hart (2015, 79) has suggested as much in relation to a correspondence of early Neolithic Plain Bowl pits with a later Neolithic barrow (and Bronze Age activity) at Peacehaven, whilst

the conclusions for the bulk of the remaining plant taxa, particularly the tetraploid wheat because other factors such as the very distinctive morphology mean it could not be intrusive (Wendy Carruthers pers comm)

Garwood has noted for example (in the SERF framework) that middle Neolithic pits are either found near structures and monuments that were already ancient or in what are assumed to be marginal areas. The 'complex' type of early Neolithic pits are often situated in places that later became the sites of significant Neolithic monuments (Woodward and Woodward forthcoming), and there are other examples such as Barrow Hills and Salisbury Plain (Barclay and Halpin 1999, 323). Thomas (1999, 72) sees this correspondence in terms of ritualised pit digging 'bringing a meaning to a locality [which then] became a place of significance'. This could imply a mechanism for transference of memory, perhaps taking the form of 'foundation myth', although without specific evidence for continuity of populations over several millennia such a reading is very speculative. Perhaps it is more likely that the signs of earlier occupation via remnant earthworks or artefact scatters (or middens) were 'read' by subsequent communities and their significance reinterpreted.

Contacts

An association of the larger more complex early Neolithic pits with southern coastal zones is reflected in their geographic distribution, with most found in coastal areas or being 'near cliffs or beaches'. Intriguingly, some of the pits recorded elsewhere have a likely association with northern France in that at least some of the ceramics were of possible French origin (Woodward and Woodward forthcoming). Their distribution also correlates with that of other 'exotic' items such as axe-heads, many of which are imported (*ibid*). Interestingly similar large pits with more complex fills, though radiocarbon dated a little later to between around c. 3,650 to c. 3,350 cal BC, were found amongst a cluster of 26 early Neolithic pits set above the Upper Piddinghoe valley close to the cliffs at Peacehaven (Hart 2015, 33–39, 57–70). It is notable in this discussion that the Thanet Earth CB pits of this type contained the free-threshing tetraploid wheat which certainly arrived from the continent in the initial Neolithic (above). It seems then, that these pits form part of this group of significant features that characterise a window of time within which Neolithic traits arrived in Britain from the Continent.

An 'Interpretative, schematic map of selected major features and processes in the cultural landscape of western Europe in the later fifth millennium cal BC' (Whittle *et al* 2011, 856, fig. 15.5) provides a synthesis of the cultural context on the adjacent continent in the late Mesolithic of Britain. For the area between the River Seine and River Elbe including cultural Chasséen area of northern France (N. Chasséen for Normandy), Michelsberg in the central area and TRB to the north-east area closer to the Elbe; reads 'Transformation of valley-based longhouse society to more expansive and dispersed communities, with fewer visible settlements but more prominent monumentality.' More peripheral to the Thames estuary are the 'Ertebølle' culture — 'Late hunter-gatherer society in definite contact with farmer neighbours' (e.g. use of pottery). These coastal areas on the opposite side of the North Sea and Channel therefore exhibit themes of acculturation and provide a precedent for fusion around the Thames Estuary represented by the adoption of elements of the Neolithic package around 4,000 cal BC.

The relative importance of migration of peoples already fully engaged with Neolithic practices and acculturation of indigenous peoples into the novel practices of Neolithisation is one of the most hotly debated subjects of British prehistory (cf. Garrow and Sturt 2011; Sheridan 2000; 2003a; 2003b; 2007; Thomas 1991, 1999). These are difficult issues as the latest Mesolithic and earliest Neolithic overlapped for the centuries either side of c. 4000 BC, when the terms Mesolithic and Neolithic are therefore defined by practices, and not chronology. The noted association of the initial Neolithic pit fills with CB pottery and tetraploid free-threshing wheat, but also with the gathering of shellfish, is of interest in this regard. Shellfish do appear to have remained a supplement to the 'new' diet at Thanet Earth in the 40th to 38th century BC, but the relative economic balance between such Mesolithic style gathered resources and farming products is difficult to ascertain on the basis of this evidence.

Like Whittle *et al*, Sheridan (2007; 2010) correlated the arrival of CB with the start of Neolithic practices and supported the conventional date of c.4000 cal BC for its arrival in the Thames Estuary (NB Yabsley Street's radiocarbon date on an oak plank of 4220–3979 cal BC (95 per cent reliability; KIA20157) might be earlier than its deposition with the burial). She proposed a lengthy period of 200 years for its spread into southern England. The earlier Thanet Earth CB pit probably dates to 3900–3800 cal BC, and if Sheridan is correct regarding an initially slow process of migration/acculturation, might well be representative of the very earliest arrival of Neolithic practices in eastern Kent. As discussed initial contact might in turn explain the presence of crops that appear unsuited to the British climate.

Whittle *et al* (2011, 864) and Julian Thomas (2008, 70–80) however, considered that the shift to use of domesticated plants (as well as domesticated animals) along with CB pottery and characteristic flintwork was rapid. The process envisaged by Pailler and Sheridan (2009, 1–2; cf Whittle *et al* 2011, 849) was one of '*small communities coming from the continent*' whilst still allowing '*for the subsequent – and apparently rapid – acculturation of indigenous communities.*' A slightly more protracted process may be applied to the Carinated Bowl pit evidence at Thanet Earth. This may explain the presence of shellfish in the earlier Plateau 1 pit and why the resource continued to be consumed in the period of potentially later pit use on Plateau 8. Perhaps only after this extended period of acculturation were shellfish deemed unsuitable for consumption later in the period, although the evidence for this is not conclusive. The origin of CB pottery itself is also a matter of debate. Significantly, given the likely derivation of tetraploid free-threshing wheat, Sheridan (2007, 468) correlated its form with the Michelsberg culture of the under-researched Nord-Pas de Calais and Northern Picardie regions of northern France, suggesting possibility of direct transference.

Whittle *et al* had found this unconvincing (prior to the tetraploid free-threshing wheat identification at Thanet) due to the partial nature of comparative material between French and English assemblages and their view '*contra to that of Sheridan*

[was] that there was probably more contact between late Mesolithic communities in southern Britain and Neolithic communities on the adjacent continent in the fifth millennium cal BC than currently meets the eye' (2011, 859, 864). In particular they noted that 'The enclosure site...of Spiere-De Hel in the middle Scheldt valley in Flanders – only a little over 100 km from the Kent coast, and rather less from the French border... is estimated to date to c. 4,000 cal BC...its pottery and flint assemblages include deep-necked jars and shouldered and even carinated bowls, and polished axes, scrapers and leaf-shaped arrowheads...would not look out of place in southern and eastern British assemblages of the earlier forth millennium cal BC, but they also include other jar and bowl forms, and triangular points and long edge-retouched pieces, which certainly would' (*ibid*, 857). Therefore if the Michelsberg cultural route is to be accepted some changes in their cultural repertoire would need to be accepted.

The presence of Mesolithic activity at Thanet Earth cannot be confirmed within the fifth millennium BC, let alone the early stages of the fourth millennium (although Plateau 6 pit S6364's mix of early Neolithic flintwork with a small Mesolithic component is of interest in this regard – despite the problems associated with its dating). At other sites of the Thames Estuary such as the Erith-Thamesmead Spine Road (A2016) some form of continuity is possible, though virtually impossible to prove. At Erith a radiocarbon date of 4550–4320 cal BC was obtained from a soil at the base of peat – in turn overlaying part of a very extensive and minimally disturbed late Mesolithic flint artefact scatter set within sand mantling gravels of the braided Thames (Beta 88688; Sidell *et al* 1997; Bennell 1998). Carinated Bowl pottery was also present in two slightly higher locations of this 'beach' and was tagged by a radiocarbon date of 4040–3700 cal BC (RPS 1997; Bennell 1998, 23). The ceramics and associated remains of a hearth were found tantalisingly close to further potentially later phase Mesolithic flintwork, including late microliths. As Mesolithic flintwork and burnt flint covered an area c. 300m in length in a series of concentrations, multiple visits over a protracted period are likely. However, in such cases where some vertical displacement is possible, due to post-depositional processes, it remains impossible to establish whether the latest culturally Mesolithic episodes were closely temporally and/or culturally related to the Neolithic pottery users. Similarly at Coldrum megalithic chamber above the Medway a coincidence of late Mesolithic flintwork may hint to either a 'remembered' location or more direct continuity (Champion 2007a, 80). Pailler and Sheridan (2009, 1–2) argue for 'small communities coming from the continent,' whilst allowing for '... the subsequent – and apparently rapid – acculturation of indigenous communities.'

There are other problems with an exclusively Michelsberg cultural transference of Neolithic practices. Although longhouses, megalithic monuments and causewayed enclosures are 'paralleled in some way or another on the continent' the precise source and chronology of transference remains unclear (Whittle *et al* 2011, 384). Substantial British timber structures have been suggested to reflect the memory of the great tradition of LBK and post-LBK longhouses in the middle of the fifth millennium cal BC (that is associated with hexaploid free-threshing wheat). However, it presently appears that true longhouses (like White Horse Stone) were

abandoned by the Bischheim culture with only a few smaller buildings found within northern France and Belgium associated with northern Chasséen and Michelsberg cultures (Kreuz *et al* 2014, 75; Whittle *et al* 2011, 384–385). Also, although causewayed enclosures are typical of both Britain and Michelsberg they do not appear to be contemporary with the initial Neolithic, despite Chalk Hill being the earliest yet known (although this gap might reflect a period of colonisation required before the social systems were sufficiently developed to require the monumentalisation of community facilities – see Whittle *et al* 2011 for discussion). Finally, early Megalithic monuments and long barrows ‘reflect diverse traditions, including continental ones’ with affinities from Brittany to southern Scandinavia but not necessarily the northern Chasséen and Michelsberg cultures, such that within these area ‘there appears to be nothing comparable to the Medway monuments...and little is known of earthen long barrows.’ (*ibid*).

Nevertheless Whittle *et al* agree with Sheridan that ‘Whether or not incoming people were involved, new ideas and practices must have been coming from the continent at this time...and to the modern eye it seems to make sense to think of the south-eastern tip of England, with the Thames estuary behind it, as a major landfall...We could think of the Greater Thames Estuary as a favourable part of the coast to approach, more or less directly over the Straits of Dover from the adjacent Continent, on the one hand because of its then fragmented character, offering multiple landing points...and on the other hand because it provided access to a large hinterland. From this perspective, and based on shortest distances, it might seem plausible for things to have happened early around the Greater Thames Estuary’ (*ibid*, 384).

Thus whether or not even the earliest pit at Thanet Earth represents ‘first contact’, its presence and its contents are generally indicative of the early generations now engaged to greater or lesser degrees in farming. Whether the people represented were newcomers, the descendants of newcomers, remnant indigenous Mesolithic people adopting Neolithic practices, or indeed a mixture of the above is a matter of debate. Although the protagonists remains elusive two aspects could be pertinent when weighed against the ambiguity of shellfish consumption; first the proximity to the continent and likely link with the Michelsberg culture (who similarly constructed causewayed enclosures) and secondly, an absence of any firm context for continuity with Mesolithic peoples. Although neither aspect is necessarily significant (particularly as evidence for Mesolithic communities may have been lost to coastal erosion) in combination with the short-lived wheat strain and the early date, perhaps a case can be made for the presence of some new settlers from the Michelsberg culture at Thanet, potentially alongside acculturation.

More generally, the Thanet Earth pits are particularly special because they belong to the beginning of the early Neolithic before the construction of most monuments, including long barrows and causewayed enclosures, and at a time of apparent contact between hunter-gatherers and farmers (Whittle *et al* 2011). This was thus a period of transition from hunter-gatherer style collection of ‘wild’ resources to the very beginning of agriculture in the country, generally considered to date between 4,050 and 3,700 cal BC (e.g. Bradley 2007, 32). Furthermore, as noted, Whittle, Healy

and Bayliss (2011) have recently argued, based upon their important radiocarbon dating analysis that the Thames Estuary and its approaches were the earliest location of Neolithic practices and material culture and was therefore potentially the best location to encounter transition in action.

Later Neolithic

The late Neolithic pits were all arrayed in the central area of the site across Plateaus 2 and 3, all in comparable topographic positions in relation to the northern ridge and dry valleys spanning these areas, and oddly enough, at virtually identical elevations (27.5m OD). The isolated pit on Plateau 2 (S2175 on the western side of the ridge) yielded a few sherds of Durrington Walls style Grooved Ware pottery (McNee 2014), as well as an assemblage of worked flint of late Neolithic/early Bronze Age derivation. Pit S3139 was located on the west flank of the eastern valley (Plateau 3) in a similar position to the valley as the early Neolithic pits on Plateau 8 and also within a cluster of undated features that were probably associated. This area would therefore appear to be a focus of activity at this time. The third late Neolithic pit, further to the east (S3068) contained a charcoal-rich fill with a large concentration of hazelnut shells possibly derived from hearth clearance or a midden, although the presence of a possible container for them, buried within the pit is suggestive, not probably of storage but perhaps a ritualized deposition. A radiocarbon date of 2851–2484 cal BC (at 95 per cent probability; Table 6, UBA-22208) was obtained from the hazelnuts.

All of these features were relatively small, with similar U-shaped profiles (sometimes double-dished) and single homogeneous fills (rather like the southern cluster of early Neolithic features on Plateau 8) which seem to conform to a common morphology for pits of both the early and later parts of the Neolithic (see Garrow *et al* 2005, 141–142; Poole and Webley 2008, 102 and fig. 18; Garwood 2011, fig. 3.37 and above). The spatial arrangement of such pits seems to form a common pattern across much of south-east England, either single pits in isolation or in small clusters (Thomas 1999, 72; Garwood 2011, 107). They would appear to be much more common than earlier Neolithic features and often found in larger groups, Thanet examples being Westwood Cross, where 23 pits were excavated (Poole and Webley 2008, 77). Surprisingly, hardly any later Neolithic evidence was found on the EKA road scheme (Andrews *et al* 2015a, 31).

The function of the features within the Neolithic generally is debateable and the evidence for what can be interpreted as structured deposition in many of them (such as S2175 on Plateau 2), has led to a polarization of viewpoint. Thus they have been considered to represent selected deposition of ‘domestic’ items possibly when occupation sites were abandoned (Bradley, 2007, 44 citing Healy 1987) in opposition to the idea originally advanced by Clark (1960), based on his excavation at Hurst Fen, that the small Neolithic pits were used for seed corn storage; thus a purely utilitarian interpretation has been discarded in favour of a mostly symbolic one. This is largely based on the dissimilarity of small round based Neolithic pits to later

(middle Iron Age) beehive shaped storage pits, a lack of burnt grain in the pits (the burnt rotting residues of the previous seasons reserves) and a lack of weathering of the pit sides that might suggest the pits had not been open for long periods of time (Thomas 1991). Garwood (2011, 107–108) however, has cast doubt on these arguments and there are problems with comparing potential Neolithic and known Iron Age storage facilities. In particular there are considerable potential differences between the subsistence versus surplus economies represented by the two periods, the relative sizes of population associated with the facilities, and relative probable durations required for seed corn storage. Some studies have suggested Neolithic farmers diet was mainly meat rather than cereal based (Richards 1996), a finding supported by pollen studies suggesting very limited (though consistently present) land clearance for cereal farming based on swidden style agriculture. It could be argued that because Neolithic cultivation was small-scale and semi-mobile compared to the ‘permanent’ higher yield arable farming (to achieve surpluses) of the Iron Age, that the small size of Neolithic pits is actually proportionate to the much smaller quantity of seed corn requiring temporary storage for the following season (i.e. much smaller areas of arable acreage). This may have been particularly so in the middle and later Neolithic, when it has been suggested that there was little arable farming (see Stevens and Fuller 2012 *passim*). Experiments into how grain was stored in the much larger Iron Age pits have suggested that a size of one cubic metre was desirable to provide for optimum conditions for seed corn storage, whilst grain rotting through damp conditions formed a barrier round the pit sides, so that the bulk of the material was unaffected (Reynolds 1974; 1979). However, this would not necessarily rule out small Neolithic pits being used in this manner, albeit at a relatively lower level of productivity, whilst as Garwood (2011, 107–108) intimates, food items (including but not exclusively consumption grain) could have been held in ceramic containers in small quantity and the pits could have been covered in a variety of ways. This could explain the usual absence of large quantities of charred cereal remains in Neolithic pits, as any rotting seed corn would not need to be burnt off to facilitate re-charging of the pits with fresh seed corn and, there would not necessarily be much evidence for weathering of the sides for covered pits. This primary function for storage use would not conflict with any ritual associations of final use but would imply some pits were directly associated with settlement.

‘Beaker period’ (c. 2350–c. 1700BC) and remainder of early Bronze Age (c. 1700–1500 BC)

Landscape and settlement

As is the case on other sites in the region, and further afield, there is little trace of domestic settlement during this period. However, activity was not exclusively funerary or monument related. The land mollusc sequences from most of the barrow ditches suggest that a significant proportion of the area had been cleared of woodland by this period and there was also evidence for bare ground, perhaps indicating some degree of arable farming near the barrows. No definitive evidence for field systems was discerned however, certainly not from earlier in this period

Early Bronze Age features apart from barrows and graves were very thinly distributed. A large pit (S1148) on Plateau 1 is likely to have been a clay quarry and may have been associated with pottery production, although there was no hard evidence for this. Other scattered pits (all fairly small and shallow) across the site may indicate minimal domestic activity taking place, although this is sometimes difficult to separate from potentially ritualised depositions. Thus, isolated pit (S1749) contained much charcoal, with burnt flint and sheep teeth and traces of grain, hazelnut shell, oyster and barnacles, associated with a few early Bronze Age pottery sherds and a larger late Neolithic/early Bronze Age flint assemblage. Pit S2276 yielded a small fragmented beaker vessel, probably originally situated upright in its south-west corner and may have had a ritual function but also contained some hazelnut shell, seeds or small fruit stones. It was very similar to pit 1716 found on HS1, where a ritual or burial association has been posited (Garwood 2011, 119). Isolated pits were also found on Plateau 3, although often un-datable features of similar form were situated nearby, and on Plateau 5, one possibly a flat-grave.

Beaker period pits are, if anything less common than Neolithic ones (Thomas 1999, 69) and this scarcity of remains is reflected on other sites of the region. Monkton-Mount Pleasant revealed no evidence for domestic activity (Clark and Rady 2008, 91), HS1 yielded very few features considering its extent (Garwood 2011, 118–119) and the EKA road scheme revealed very few non-monument related features (Andrews *et al* 2015a, 31 and 61–62). Although none of the Thanet Earth pits was particularly ‘rich’ in artefactual evidence, it has been suggested that these, and perhaps beaker burials, marked ‘significant boundaries and routes in the social landscape [and] may well have been a widespread feature of agricultural regimes and landholding systems’ (Garwood 2011, 121–122) although the landscape context of many such features, often completely isolated, is difficult to perceive. Perhaps the best example of a correspondence between Beaker pits and the creation of subsequent landscapes comes from the recent and similarly large-scale landscape investigations at Peacehaven (Hart 2015, 54–56, 84–86). Here an elongated ‘shaft-like’ pit 2.6m long by 1.15m wide and 1.75m deep contained a structured deposit of cattle bone including a skull along with Beaker pottery and an antler pick and was radiocarbon dated (1890–1690 cal BC, SUERC-30716). One side was very precisely overlaid by a formative trackway ditch of the Bronze Age landscape. The implication is that pit formation, perhaps associated with ceremony, was closely associated with the laying out of landscape divisions and that this process may have been instigated (in terms of laying out of its main axis), at least at Peacehaven, as early as the 19th–18th century BC (*contra* Yates 2007).

In this respect, although any Beaker period arrangement of the landscape at Thanet Earth is indiscernible, it may not be entirely coincidental that many of the isolated features do seem to relate to the later field system, which in part at least, may have originated towards the end of this period. So, for example, pit S1749 was very close to the projected alignment of a field ditch bounding field P13 (Fig. 8); both beaker burial G2000 and pit S2276, were directly on a postulated trackway or field

boundary alignment on Plateau 2; burial G4043 was within a nodal point of intersecting droveways on Plateau 4, while the potential grave (S5024) on Plateau 5 was cut by a middle Bronze Age ditch. Even pit G5014, otherwise quite isolated on Plateau 5 may have been positioned at the intersection of a number of projected alignments. Admittedly, this is a small sample, but it may suggest that at least part of the later agricultural layout was influenced by an otherwise invisible beaker period scheme of land division as postulated on other sites (Garwood 2011, 123; Hart 2015, 84–86), or here perhaps routeways more than actual field boundaries, as at Peacehaven, since the former seem to be the earlier element.

Later Neolithic/early Bronze Age barrows, burials and other monuments

The six excavated ring ditches of this period form part of a much larger distribution, known mostly from cropmark evidence, that extends predominantly to the east and north-east of the site (Figs. 5, 6). Other ring-ditches also undoubtedly survive within the unexcavated zones of the overall site, particularly to the south.

The form and chronology of the barrows and their associated burials

Barrow 5

What has been termed here as Barrow 5, located in Plateau 3 (Fig. 27) was probably not a barrow as such originally, but perhaps some form of small ceremonial enclosure. It was the earliest of the ring-ditches excavated and also enclosed the earliest beaker burials examined. The slightly irregular ring-ditch was a less substantial feature than all the other early monuments, comprising a c.10m diameter ring gully some 0.7m wide and 0.4m deep on average. Unlike the other monuments, its ditch was dug as a series of five elongated pit segments (Plate 51) which echoes late Neolithic practices, in this respect similar to the primary ditch of the much larger Barrow III at Monkton-Mount Pleasant (Clark and Rady 2008, 23–31). Four segments (S3325, S3313, S3310, and S3319) formed a horseshoe-shaped arc on the west, open to the north-east, which seem to have been interlinked, perhaps at a later date by the cutting of a shallower ditch between them, though a separate cut could not be positively identified. The detached segment on the east (S3299) was longer than the other segments and its slightly irregular placement in relation to the remainder of the circuit, particularly the kink between its north terminal and S3325, suggests it was added later to close the circuit. The fills of the ditch segments were mostly sterile but did yield a sherd of beaker pottery from one of the terminals of the closing segment and a few late Neolithic pot fragments, these from an upper fill of the same segment and therefore possibly residual (2900–2200 BC).

The ring-ditch enclosed two burials (S3264 and S3267), both crouched but with poorly preserved adult skeletal remains (SK 3.1 and SK 3.2). The former was female and provided a radiocarbon date of 2452–2062 cal BC, while the latter was associated with a complete decorated beaker of East Anglian style in addition to a copper pin or toggle, both situated near the feet (Fig. 28). Both interments probably faced east, but

the skeletons were reversed in orientation. The slightly differing alignment of these graves could have been deliberate, but the more central location of S3264 suggests primacy and the opposed positions of the skulls, may indicate that the burials were made at different times, although their close positioning suggests that the location of the potentially earlier burial was known. Parker-Pearson (1999, 87) has observed that secondary burials are often placed in opposed directions which would tend to support this interpretation. A Thanet example of this practise was excavated near the Queen Elizabeth the Queen Mother Hospital at Margate, where a clearly secondary burial was laid in an opposed direction to the earlier, facing east with head to south like the potentially secondary Thanet Earth burial here (Gardner and Moody 2006). Interestingly, the primary burial in this pair of graves was dated to 2460–2200 cal BC (at 95 per cent probability), a very similar range to SK 3.1.

The disposition of the various elements of the ring ditch and the associated burials suggests a progression from an earlier small enclosure, perhaps of Neolithic date, later used for the emplacement of two beaker burials. The primary enclosure is likely to have been composed of the four disconnected western segments. In this form it would correlate with a range of circular interrupted ditched enclosures of the earlier prehistoric period examined elsewhere, particularly in the Thames Valley (Hey *et al* 2011, 261–285). From the mid to later Neolithic, ‘a wide range of small, round to slightly oval enclosures, with continuous, penannular and segmented ditches are present in the [Thames] valley. These monuments are less commonly associated with human remains and, although this may be partly the result of subsequent ploughing, they may also have a more ceremonial purpose’ (*ibid*, 281). Some of these ring-ditches ‘can be seen to have kinks in their perimeter, suggesting that they were originally U-shaped, penannular or segmented but were later ‘closed off’, much like what is proposed for this example (below). These features are atypical and often demonstrably older than the much more plentiful late Neolithic/early Bronze Age round barrow repertoire. Those of the first phases of monument construction within the 4th millennium BC are particularly varied (*ibid*, 261) while the ‘greatest explosion of monument building in the Thames Valley probably belongs to the middle of the 4th millennium’ although the authors acknowledge that the dating evidence is often slight (*ibid*, 273). Small circular monument forms with interrupted ditches of the earlier-mid Neolithic are also evident although as with all heavily ploughed landscapes, the loss of the formerly extant elements of such monuments makes their comparison and interpretation difficult. Thus, it is usually unclear whether they contained a mound or were open within but with an external bank, although there is some support with certain examples for the latter. In any event they ‘appear to be part of a common tradition within which the presence of human remains is often, though not always, a feature’ (*ibid*, 274–276).

It is possible that the integration of these individual segments by the cutting of the connecting ditch was contemporary with the more central burial within the enclosure. Although this cannot be demonstrated stratigraphically, the orientation of grave S3264 is virtually identical with the alignment produced by the ends of the horseshoe shaped recutting of the ditch; the skeleton was also facing this open end

(Figs. 28, 42). The spoil from the cutting of the later conjoining ditch may have provided material for the construction of a small mound over the interment. That such a mound existed at some point is quite probably indicated by monuments position on the line of the medieval parish boundary, here represented by a medieval ditch (G3039) that cut through the east edge of the barrow but could have avoided a small mound.⁴ This placement is unlikely to be a coincidence and would indicate that there was a mound over the burials surviving long enough to provide a landmark for a later boundary reference. Interestingly, this type of progression has also been posited in the Thames Valley where it is noted that oval barrows formed the final phases of a number of U-shaped monuments, such as the small segmented oval enclosure at New Wintles Farm, Eynsham (Kenward 1982). This monument may belong to the 37th–36th century cal BC. Oval barrows overlaying U-shaped enclosures have already been described for sites as widely distributed as Radley in the Upper Thames and Horton in the Colne Valley (Bradley 1992; Ford and Pine 2003), and another possible example is known from air photography at Eton Wick (Ford 1991–3).

If we accept therefore that the adjacent burial (S3267) was slightly later, it was perhaps interred in tandem with the closing of the circuit by the detached eastern segment. That this segment is a final addition to the monument is suggested by the fact that the ditch conjoining the other segments did not encompass this section, when there seems to be no good reason why it should not have done so, if all the individual segments had been extant. This then could be construed as an attempt to form the barrow into the more continuous circular form common to the slightly later beaker period, but there can be no proof to this suggestion, particularly without a date for the potentially secondary burial.

This type of monument may well form part of an east Kent or Thanet tradition of such features, as other small oval segmented barrows in Thanet have been recorded, sufficiently distinctive for Perkins (1999, 41–42) to separate them into a specific class which appear also to be commonly constructed using five segments. However, there is no suggestion in what dating there is of these (c. 2000 BC; *ibid*) that they were of late Neolithic origin. It should also be noted that the suggested later Neolithic rather than early Bronze Age origin of some ring ditches on Thanet (*ibid*) has been recently questioned (Andrews *et al* 2015a, 66–68).

Barrow 1

The double ditched Barrow 1 on Plateau 6 (Fig. 14) was probably the next earliest in the sequence of excavated burial monuments, dated from its almost certainly primary central burial to 2193–1981 cal BC. The two ditches were probably cut at the same time, although this cannot be proved by stratigraphy or artefactual evidence. However, the barrow builders had left a consistent berm of c.1m between the ditches

⁴ A feature called ‘Round Bush’ shown on the First Edition OS map is in the correct location in relation to the Parish Boundary, but too far south. However, it could possibly represent some survival of the Barrow 5 mound

indicating that they were intended to accurately respect one another. In addition, both ditches were of near identical form, 1.7–2m wide (the outer slightly more massive) and about 0.85m deep with carefully cut flat bases (Plate 30). Given their similarity it is clear that both were probably in use at the same time and there is persuasive evidence for the ditches being exactly contemporary. A close examination of the ditch profiles and absolute basal level of both ditches around their circumference shows that they were both lower to the west (a 0.8m drop from east to west) reflecting the natural slope of the hillside. The inner edge of both ditches was steeper than the outside, but more remarkably, the inclination of the equivalent side in both ditches was often near enough identical (ignoring the more heavily eroded upper portion of the sides; see Fig. 43). Perhaps more significantly, the adjacent basal levels in both ditches were also similar, varying by no more than 55mm at any one point on average. Such consistency of level around the circuit seems unlikely to be chance, and suggests very strongly that the bottom of the primary ditch must have been quite clearly visible when the second was cut, for these depths to agree so closely and that an attempt was made to make the ditches very similar in both depth and morphology. This must indicate that both ditches were almost, if not precisely contemporary, in so far as the earliest cut must have contained little or no basal silt when the second ditch was excavated.

One caveat to this idea of a single phase monument could be provided by the dark, carbonised layer, which was only present in the base of the inner ditch. This was no more than a thin layer of dust, and rather similar to the bulk fill of the central grave (below). It is quite possible however, that this material represents residue from some form of ritual activity within the circuit of the inner ring ditch (much of which may have been used to fill the central grave), which may have been physically dispersed from the interior, all being therefore deposited only, or mostly within the interior circuit. It was noticeable that otherwise, the soil profiles of the two ditches were virtually identical.

Although many multiple ditched circuits can be shown to represent a chronological development or ‘multi-phase process of enlargement’ (Garwood 2011, 127) when they are remodelled or aggrandised, there are also many that comprise only one phase of major development (although later burials may often be inserted; see for example Clark 2008, 98–99). Hammond (2014, 81) suggests that at least half of all excavated Kentish multi-ditched monuments are of single-phase. It is, however, often very difficult to be sure of barrow development in Thanet, where truncation has potentially removed much of the evidence (see for example the EKA road scheme; Andrews *et al* 2015a, 63–64).

The grave in the centre of the barrow represented by far the most substantial burial pit within any of the Thanet Earth barrows. The skeleton was of a large male about 5ft 10” in height, laid on his left side in a crouched position usual for burials of this period, and with a typical beaker ‘package’ of grave goods, a crushed pot by the feet, a copper dagger behind the head or shoulder and stone wrist guard near the arms.

Isotope analysis suggests that the individual was local to Kent, unlike some of the other beaker burials (below).

The radiocarbon date indicated the burial derived from between 2193 and 1981 cal BC at 95 per cent probability, and the associated finds are not incompatible with this date. The East Anglian style beaker within this grave was decorated with a series of horizontal bands filled with cross-hatched incised decoration, with undecorated bands between (Plate 33). This type of decoration is typical of typologically early beaker vessels and this burial may therefore pre-date 2000BC. The tanged dagger form however, is usually provenanced to the 25th to 23rd century BC although an example from the Ferry Fryston burial is dated 2210–2030 cal BC (Paul Garwood *pers comm*). It is possible therefore that the dagger was old (curated) when buried. In addition, a close parallel to the grave goods is provided by a barrow burial from Barnack, Cambridgeshire dated to 2350–2100 BC (Donaldson 1977). That grave contained a comparable copper dagger and wrist guard and a very similar beaker with the cross hatched and banded decoration (the burial is on display at the British Museum). It seems probable therefore that the broad early Beaker period date range applied to that burial will also relate to the Barrow 1 example.

Stone wristguards or bracers, are a frequent find in burials of this date across Europe (Fokkens *et al* 2008, 109) and are often found in association with daggers usually in primary inhumations of males (Woodward and Hunter 2011, 90–91, 106). The greyish-green coloured Thanet Earth example is petrographically characterised as an amphibolite type (a type of metamorphic rock formed of silicate minerals). The precise source has not been identified, but although this may have been continental, a derivation from a British source is also possible (Woodward and Hunter 2011, 45, 116–117). The bracer exhibits three holes at either end, although one end has its corner broken off, removing most of the third hole at that end. This is a phenomenon that has been represented in other Beaker burials (Woodward and Hunter 2011, 74–80) including Barnack and at Pycombe in Sussex (Butler 1991) where the other grave goods also included an early style beaker with banded decoration and a dagger (represented by a bone pommel and traces of the copper blade). Removing one corner off the wrist-guards may therefore have had a symbolic significance, perhaps associated with the burial rite, since their functional effectiveness would have been reduced without one of the holes through which a thong would have secured it to the wrist. The date of this type of bracer is thought to be restricted to the latter part of the third millennium BC (Woodward and Hunter 2011, 94, 122), but as with the copper daggers, individual examples appear to have been in use ‘over several centuries’ (*ibid*, 86, 107), but in any case would not be incompatible with the radiocarbon date of the burial.

Fokkens *et al* (2008, 112) discuss the position of bracers in terms of where on the wrist they would have been worn at burial and make the point that this is rarely discussed (and sometimes in the past not clearly recorded or interpreted). This has potential implications in relation to the function of these ‘special’ objects themselves (assumed to be related to archery, where they would have been worn on the inside

of the wrist), whether they were merely ornamental (*ibid*, 116–117) or whether they were originally functional items which became important in terms of personal decoration or status (as discussed by Fokkens *et al* 2008 and Woodward and Hunter 2011, 122–125). Wristguards are normally found on the left arm (the functional position in terms of archery given the preponderance of right-handedness), but often, perhaps predominantly worn on the outside of the wrist at burial, which suggests a more ornamental perception. In the Barrow 1 burial, taking potential movement of the arm during decomposition into account (which perhaps explains the transverse position of the bracer), the wristguard was worn on the inside of the left wrist at burial.

Although the fill sequence within the grave and the relationship of the body to this sequence can be interpreted in various ways, that the body was interred within a coffin, shuttered box or basket is thought to be the most likely. This would not be unusual, either in Kent or further afield. Quite a few beaker burials on Thanet seem to have been buried in a wooden container with a distinct chalk packing around the perimeter of the grave (Moody 2008, 84; Clark and Rady 2008, 17–18). Although no others at Thanet Earth displayed any definite evidence for this, the size of some of the graves suggests the same possibility (see for example grave G4043 below). In the Barrow 1 burial, the chalk and silt layering (S6033) was the primary deposit (apart from the skeleton and grave goods) and was distinctly different from the bulk fill of the grave, which was of a uniformly dark colour. Soil micromorphology has indicated that the dark bands in S6033 were turves, these separated by chalky lenses. Thus it appears that these were laid specifically around the coffin after it had been emplaced, with the uniform upper fill overlying the entire basal content. The lack of such material at the ends would be explained by such a coffin being almost as long as the grave cut itself; this is certainly suggested by the disposition of the peripheral deposits.

There are two initial problems with this interpretation, firstly, no physical evidence of a container was found, and secondly, the lower part of the profile of interface G6004 was not vertical, but curved inwards. The lack of a soil stain from the ‘coffin’ does not, however, rule out its possible presence, as soil conditions may not have been conducive for any survival and some of the graves mentioned above, where a container of some form seems possible, showed no evidence for a stain. As to the nature of the interface, if it was delineating the outline of the container and not partly a product of post-depositional processes, then a fully vertical-sided coffin can be ruled out, but some other form of container could have produced such a rounded profile.

Interment in half a hollowed out tree trunk about 0.5m diameter, or what are sometimes known as ‘log burials’ is a distinct possibility. These would seem to be relatively common during the Bronze Age in Britain and further afield (indeed worldwide) with a particular tradition in Scandinavia, Germany and Denmark in particular (Holst *et al* 2001; Theunissen 2006, 155). Such an irregular construction, curving inward towards the base, may also explain the variation in thickness and

inclination towards the centre in some of the peripheral deposits, as it would be much more difficult to layer these more uniformly than if the coffin had been vertical sided. In addition if the tree trunk was wedged up against the ends of the grave, it would not necessarily need 'ends' in itself, or would negate the need for the peripheral deposits in this location. In Britain such burials have been recorded or postulated across the country, for example, at Risby in Suffolk (Vatcher *et al* 1976), the midlands (Clay 1999) and the highlands of Scotland (Cressey and Sheridan 2003). One of the more unusual and apparently very well preserved was found in the nineteenth century at Gristhorpe, Yorkshire (thus known as Gristhorpe Man); a few possible burials of this type have also been suggested in Thanet (the beaker burial at 'Beauforts', North Foreland; Hart 2005).

There is some additional evidence for such a container, which would have had to be covered with a lid that rotted, in the slump like context (S6023) higher in the grave fill. This was positioned directly over the interment and could represent slumped fills from higher in the mound collapsing into the void above the container. Although there was no sign of disturbance in the disposition of the skeletal remains that might perhaps have occurred in this event, the completely flattened nature of the beaker could possibly be due to slumped soil or a lid remnant collapsing onto it. Thus, it can be said with some confidence that the burial was the primary interment in the barrow.

One other potential burial should be considered, that of the juvenile (SK 6.3) in the very upper level of the possible slumped deposit S6023. An individual cut for these very fragmentary remains could not be discerned, and it seems more likely that, rather than being within the base of an even later grave that could not be defined, this was either the slumped remains of a burial higher up in the mound, or part of a fragmentary skeleton intentionally placed in the upper backfill. Deliberate inclusion of the remains of younger children, in whole or part is quite common for burials of this period, and a similar example was seen in Burial 40577 at Northumberland Bottom on the HS1 works (Garwood 2011, 139).

One feature of this burial that remains unusual is the niche cut out of the western side. This cut, as far as could be ascertained, was filled with the same dark deposit that filled the bulk of the grave. This niche was quite large, and flat-based, certainly big enough to be comfortably stood on, and it is possible that it was a step down into the grave, placed to aid the introduction of the coffin, which could have been of considerable weight. A smaller example of this may be the ledge in the corner of the similarly deep flat grave burial G3004. A small ledge in one corner was also evident in the central barrow grave at Beauforts, North Foreland in Thanet (Hart 2005), and may have had a similar function.

Overall, the form of the barrow probably correlates with the bell-barrow type. The ditches of the barrow were relatively slight in comparison with those of Barrows 2 and 3, or even Barrow 6 (see Figs. 42, 43) and therefore the mound itself may have been comparatively small, or perhaps of lesser diameter and with a wider berm

separating the mound from the inner ditch, i.e. a bell-barrow (the position of a later quarry, G6044 intruding into the interior perhaps indicates the potential extent of the mound; Fig. 42). Unfortunately, as with many of these monuments in Kent, such constructional details are difficult to determine. However, although the soil profiles of the Barrow 1 ditches do not provide particularly informative evidence for the central mound, or for the presence or not of an external bank, or even in this case a bank between the two ditches the lack of any clear erosion from the interior would not be incompatible with a wide berm. It is generally assumed that the mound, and any banks would have primarily been composed of the material excavated from the ring ditch or ditches and at Thanet Earth generally, where any suggestion of eroded mound or bank superstructure can be discerned, the deposits suggest that the structures were predominantly chalk rubble, as might be expected, but with quantities of finer grained clayey silts, probably washed out and forming thin lenses within the ditch profiles. This latter material probably derives from the extensive periglacial intrusions in the upper levels of the chalk, or the silty clay sheets of Thanet Beds that overlie it in this area. In both Barrow 1 ditches the deposits were rather evenly distributed across the profiles and it is possible therefore that only a small proportion of this fill actually derived from a barrow mound in this instance. In fact, the ditch profiles suggest that at least a third of the ditch fills if not more could have resulted from erosion of their edges.

There would appear therefore, to be a high probability that Barrow 1 was a single-phase but multi-ditched monument, possibly of bell-barrow type, with great care taken to form its structure and producing a 'finished' edifice. It clearly demonstrates traits discussed by Garwood (2007, 37), where *'These monuments express a strong sense of architectural finality and completeness, not only in terms of their massiveness but also in their symmetrical designs, bounded and closed architectural forms, and surface 'finish'. These qualities are consistent with the idea that Early Bronze Age mounds of this kind were essentially grandiose personal memorials that celebrated, sacralised and 'fixed' individual identities and achievements in the memories of the living, in ways that were not intended to be questioned or re-examined'*. This is surely also implied by the individuality of the impressive and primary central burial.

Barrows 2 and 3

At about 25m internal diameter, Barrow 2 was the largest at Thanet Earth with a correspondingly massive ditch c.2.5m–3m wide and 1.5m deep. Unfortunately, no radiocarbon dates were recovered to indicate a date for the monument, although there is no reason to suggest that it was particularly later than Barrow 1 (and could potentially be earlier –see below). In profile the ditch was similar to those of Barrow 1, although more symmetrical and proportionately deeper. The main difference was of scale and its sequence of fills was considerably more complex although a possible recut (V-shaped in profile and about 1m deep) is more likely to simply reflect the manner of silting. Although generally there was no particular indication of a predominant direction of infill from either external or internal sides of the ditch, some individual sections do perhaps indicate that at various times material may

have eroded from both a barrow mound and potentially also from an external bank. The primary ditch-fills contained very few finds although a few early Bronze Age potsherds and evidence for hard hammer flint knapping debris was found on the base of the ditch on the east side of the barrow and would not be inconsistent with a date similar to that of Barrow 1.

However, the structural and temporal development of barrows and 'barrow cemeteries' is not understood in enough detail to definitively indicate the potential chronological sequence between Barrows 1 and 2. In addition, the life-history of this particular monument is particularly difficult to determine or explain in a coherent way and the evidence perhaps engenders more questions than answers. Thus, although the barrow was of large size, it contained no substantial central burial like Barrow 1, but presented, in contradistinction to the other monuments, a group of at least four or more individual but rather ephemeral burials, none of which had any discernible grave goods. It seems likely therefore that significant details of the monument, which may have better illuminated its development and chronology, lie within its unexcavated portion, or have been lost to subsequent truncation. Many ring-ditches contain no indication of burials, which has led to the idea that these were never, or not originally burial mounds, but forms of open ceremonial enclosure (Drewett *et al* 1988, 84; Hey and Barclay 2011, 276; Garwood 2003, 51). Although it is suggested below, that in many of these cases, associated burials may have just been truncated away, the funereal arrangement of Barrow 2, and its size in relation to the other monuments, suggests the intriguing possibility that it was indeed originally a ceremonial enclosure, perhaps open in its interior and surrounded by a bank (for which there was some evidence within the soil profiles of the ditch; above).

The size of the ditch would suggest that if the monument was a straightforward bell barrow with a central mound, then this would have been substantial. Evidence from later features suggest that it was restricted to about 16m diameter (below), in which case the mound would have been at least 4m high at its apex (see Fig. 42). The burials, if they were all interred subsequent to mound construction, would have not only required excavation through the mound, but interment at almost exactly the same level. This seems highly unlikely, particularly with the rather small near central grave S7151, which would have needed a considerable stepped or funnel shaped excavation to achieve. It then stretches credibility that a subsequent burial (S7143) was, perhaps not long after placed directly over it. It seems much more likely therefore that all these burials took place prior to the construction of any mound, or that the monument never had any substantial mound at all.

That the ring-ditch never possessed a large central mound and was not originally a funerary monument could also explain the apparent dichotomy between its seemingly rather insignificant burials, particularly S7151 and its relatively imposing dimensions. Although close to the centre S7151 was unassumingly small and contained a child, while the subsequent burial (S7143) was also of a juvenile, this is not to deny the possibility that primary interments within barrows may sometimes have been children; see French 1994, Theunissen 2006, 156 for example). Thus the

burials could be seen as secondary features, possibly placed many centuries after the original cutting of the ring-ditch.

The remaining burials (S7573 and S7157), again all very shallow were set in a (not exact) line extending approximately from the centre to the south-west, this off centre positioning probably suggesting secondary insertions into the pre-existing circuit. Apart from a few fragments of beaker pottery from some of the burial contexts none of these interments could be reliably dated, although all are likely to be later than the central graves. Of interest is the seeming alignment of the burials away from the centre, which may well not be coincidence. If, as suggested above that the monument was originally some form of ceremonial enclosure, it is possible that it was penannular, with a causeway through the ditch circuit on the north-east quadrant (penannular ring ditches are not uncommon on Thanet; see Andrews *et al* 2015a, 63–64, table 2.2). The burials could be seen therefore as spatially aligned with respect to an entrance (see Fig. 42), although of course this cannot be demonstrated as this area of the feature was not examined due to its incorporation beneath made ground for the associated glasshouse. Something similar is however discernible within Enclosure 3.

It is almost certain, however, that at some point a mound was raised over the burials, but it was perhaps not as voluminous as suggested above (if all of the excavated material from the ditch had formed it). The presence of a mound is suggested by the position of the medieval hollow-way (G7028) and lynchet (G7006) that both eventually formed around the monument. These were set back about 3m into the interior, indicating (as referred to above) that the mound was probably about 16m in diameter (thus again of bell barrow form; Fig. 42). Material for its construction may have been taken from an encircling bank, or even from the removal of the postulated causeway, if the circuit had been closed during a later phase of funerary use. That the monument never had a particularly massive mound, could partly explain the location of subsequent medieval activity in its interior (including the placement of a sunken-featured building; see Chapter 7), which would appear somewhat unlikely on any substantial mound, even if considerably slighted.

It is increasingly recognised that at least some of these circular ditched monuments (including those of only one ditched circuit) were of multiple phase, remodelled in terms of both physical nature and use, including of course the nearby examples of Monkton-Mount Pleasant Barrow III (Clark 2008, 96–99), Ringlemere (which also seems to have had a rather low central mound added; Parfitt 2006) and various others in Kent and further afield.

A later fill sequence (G7004) within the barrow ditch, confined to its south-west quadrant attested to continuing, possibly ritualised use of the monument into the mid to late Bronze Age. These deposits yielded a greater quantity of cultural material than the other fills which included pottery sherds, burnt and worked flint (a large number of hard hammer flint flakes and a few scrapers, found particularly on the inside of the ditch) and fragments of cow skull and other cow bones, all in a dark

charcoal rich matrix. With the animal bone, there was some evidence that particular parts of the animal were selected for deposition. In addition, in comparison with other ditch fills examined the level contained surprisingly frequent cereal grains, which suggested that processed grain may have been brought to the site, or that cooking waste, rather than processing waste, was represented. Although some of this context may have formed from an accumulation of humic material, the finds suggest that the barrow's later use was accompanied by activities that included flint knapping and deposition of domestic waste (perhaps on a protracted basis) possibly related to feasting or some other form of ritualised activity. The deposit can be compared to a very similar midden horizon in Barrow 3 (see below).

Barrow 3, adjacent to Barrow 2 (Plate 39) comprised a ring-ditch of 14.7m diameter internally with a slightly off-centre inhumation burial. Unfortunately the burial was poorly preserved but there was no evidence that it had been interfered with or robbed although only fragments of the skeleton survived. The skeleton was radiocarbon dated to 1873 to 1687 cal BC, later than Barrow 1 and the dated Beaker flat graves (below).

The c.2m wide ditch was much deeper than anticipated for the scale of this barrow at c.1.5m–1.7m, approximately the same depth as the Barrow 2 ditch with a generally similar profile (see Figs. 42, 43), but considerably deeper in relation to its width and with steeper sides. There was no clear indication of an external bank in the ditch backfill profiles. The initial fills of the ditch (G7008/G7009) were relatively sterile, although remains of an inhumation (SK 7.1) were retrieved from these deposits on the south side of the barrow. These comprised disarticulated human skull, pelvis and long bone fragments. The derivation of these is unclear, but it seems unlikely that they were redeposited from a burial within the mound and they may represent a disturbed burial within the ditch itself, or even the placement of fragmentary human remains. Burials within ring ditches are not unknown (see for example the complex barrow at Eastling Down, 6km north of Dover; Bennett 2014) but not so far represented on many barrows in Thanet (only one, a child burial in a ditch base from North Foreland; Boast *et al* 2006).

The subsequent phase of fill (G7010) was very similar to the midden-like levels within the ditch of Barrow 2, and perhaps represents a similar, if not necessarily coeval event, perhaps feasting. Interestingly, the deposit was again (like in Barrow 2) concentrated in the south-west quadrant of the ditch. However, although in many respects a comparable assemblage of material was recovered, while the Barrow 2 fill only contained large mammal /cattle fragments this fill in Barrow 3 produced a wider range of species, including cattle, sheep/goat and one bone of red deer. Also, in opposition to Barrow 2 cranial/mandibular fragments were rare, limited to a single cattle tooth. This perhaps suggests a separate, but similar event.

Barrows 4 and 6

Barrow 4, exposed at the southern edge of Plateau 6 comprised a c. 15m ring ditch around a slightly off-centre crouched inhumation burial of a young adult male. The barrow was built on the 34m OD contour with fine views of the sea and western lowlands of Thanet. The central burial, radiocarbon dated to 1732 to 1537 cal BC was relatively well preserved but no grave goods were found associated. Thus, the burial was roughly contemporary with that of Barrow 3, or perhaps slightly later. Fragmentary remains of two other possible burials (G6009) were also recovered from the topsoil/subsoil interface within the circuit.

This barrow unfortunately does not provide much material for further analysis or comparison, beyond its size, probable date and burial, but this is not unusual and was also the case on HS1, where *'the evidence from these [barrow] sites is problematic in several respects and most provide relatively little information concerning monument architecture and use'* (Garwood 2011, 125). In this respect Barrow 6 was similar, with no dating evidence from the primary ditch fills and no related burials, although a feature near the centre was investigated and is thought to have been a tree-throw hole. The ditch fills of both barrows did however clearly indicate that significant and possibly purposive slighting of their mounds took place, possibly in the Anglo-Saxon period for Barrow 6 and the medieval period for Barrow 4 (below).

Although not therefore closely dated, the form and scale of both barrows is highly indicative of their early Bronze Age origin, and with Barrow 6 is also suggested by the disposition of certain elements of a middle Bronze Age field system, which seem to respect it. The lack of any burial associated with this monument is not necessarily surprising, and although it has been suggested that some barrows were never, or not originally used for burial, perhaps arenas for ceremonial activities, shrines or cenotaphs (see Barrow 2 above), the numbers of such 'empty' monuments recorded in many of the larger samples of barrows excavated in Kent at least, suggests that other factors must be involved. In any event, both Barrows 4 and 6 almost certainly once had a mound, suggested by ditch infill profiles and in the case of Barrow 6, the position of Roman enclosure ditches which cut into its silted up ditches, but stopped short of the central area, indicating that they respected the position of a still extant if slighted, barrow mound (Fig. 42). That in at least some cases, burials, primary or not, were situated at elevated positions, either higher in the subsoil or within the mound itself and have not survived later mound slighting or reduction in ground level, is suggested by the two scattered remnants of skeletal material within the orbit of Barrow 4 (G6009), which cannot have derived from the more deeply interred central burial.

The otherwise rather unremarkable Barrow 6 may actually provide further evidence that our modern perception of ancient sacred spaces, landscapes or areas is not just a conceptual or intellectual notion, but was a reality to those that lived in the vicinity. As stated, Barrow 6 was clearly still visible and used as a marker in later periods. In particular two parallel curving ditches of a potential drove way (Trackway 11) arrayed north-south across the Plateau 8 Iron Age settlement and possibly of mid to late Bronze Age date, clearly respect and circumnavigate the monument located to

the west (other field boundaries also seem to avoid this zone — Fig. 53). This is interesting in itself as it suggests the possibility of a 'dead'; or respected space in the area between these ditches and the barrow, a distance here of about 40m.

Conversely, several unurned cremations were found within 40m of the barrow (to the south and south-east) and it is possible that in later periods this area was still seen as a sacred place, to be respectfully avoided by more mundane activities or in turn utilised in a similar fashion. A comparable ethos has been observed at Barrow Hills (Barclay and Halpin 1999, 325). In addition, the barrow site later attracted an early Roman mortuary enclosure, but by the Anglo-Saxon period any respect for the funerary association took the form of choice of the areas around it for an early Anglo-Saxon settlement. However, the association of Anglo-Saxon cemeteries with Bronze Age barrows is also well known.

The later history of Barrow 4, is of interest in a different manner, as there is suggestive evidence that its mound was used to site a medieval windmill. This is more closely discussed in Chapters 7 and 8, but is partly suggested by the ditch fills, which indicate rapid backfilling from within the ditch circuit, in other words the deliberate slighting of a mound. A post-medieval mill was situated not far to the north and it is likely that this had a precursor, almost certainly to have been situated in the area of Barrow 4. There was no definitive evidence for this, but it is another possible instance of a prehistoric barrow influencing much later developments.

Enclosure 3 (Figs. 31, 32)

The date and function of this enclosure are somewhat equivocal, but it is probably of late Neolithic/earlier Bronze Age origin. The location of a group of beaker burials just within its entrance (see below) suggests that the enclosure pre-dated them, as does their layout and orientation. The interments align in a common direction for beaker graves, but significantly all of these burials (where skeletal arrangement can be observed) were facing to the south-west, even though some were reversed in orientation. This is not a particularly common disposition and in Thanet at least, the vast majority of interments face to the east. The positioning of these graves means that all are therefore facing directly at the entrance of Enclosure 3 (see Fig. 44). This may have been influenced by unknown factors, but that three variables (location, orientation and direction of face) should combine to produce this effect seems more than coincidental, and is quite suggestive of the earlier nature of the enclosure.

Furthermore, although no finds were recovered from primary contexts, all being from middle or upper fills, these would not preclude such a late Neolithic or early Bronze Age origin, and indeed a small proportion of the pottery would appear to be of this date, while one of the few other features (a post-hole) within the circuit also contained early Bronze Age pottery. Such material (discounting the burials) was not present elsewhere in the area, suggesting the likelihood that the internal feature was associated either with the burials (such as a marker post) or with the enclosure itself. Of additional significance is the fact that two ditches of the middle-later Bronze Age field system, respect the position of the ditch, strongly suggesting that it was the

earlier feature (Fig. 44). In particular, the south side of Field P14 aligns on the entrance, which is perhaps unlikely to be coincidence. The disposition of these ditches particularly the position of the terminal of the northern field ditch (G10029 – see Fig. 31), might suggest that the enclosure had an external bank, though there was no particular indication of this within the enclosure ditch backfills.

The enclosure does not appear to be related to domestic activity (which would be rare for its probable date) as there was virtually no domestic waste in the ditch, particularly in its primary layers which might be expected were this a domestic site and there was no other evidence of domestic activity either within the enclosure or its vicinity. Some middle to late Bronze Age and earlier Iron Age ceramics were evident in upper fills, but these levels could have accumulated many centuries after the ditch had been initially cut, particularly as the soil matrices suggested that the fills aggraded almost entirely from natural erosion. The Iron Age ceramics are more easily understandable as originating from the nearby settlement on Plateau 8.

Perhaps in similarity with Barrows 2 and 5 (above), although of a much different form, Enclosure 3 is best described as a variation on a theme and like the different types of ring-ditches found in the Thames Valley from the 4th to late 3rd millennium BC (Hey *et al* 2011, 261–262), similarly likely to have possessed a ceremonial/mortuary function, analogous to monuments (including some barrows) often interpreted as ‘open-area arenas’. The potential dating of the enclosure is perhaps supported by Garwood’s (2007, 34) assertion that ‘While deposits of human remains and artefacts are indeed exceptionally rare at durable open arena monuments in the period c. 2500–2100 BC...such deposits are relatively common at open arena sites built after 2100 BC’. This would tally quite closely with the dating of the interior burials of Enclosure 3 (2019–1829 and 2198–1923 cal BC).

The position in the landscape of Enclosure 3 is perhaps of some significance. The feature surmounts the low ridge in this part of the site that extends northwards to the marshes, commented on elsewhere in this volume as a location for a number of other ritual monuments. In this respect it is worth noting that a large sub-circular enclosure, at least 50m across, is clearly visible on aerial surveys on the eastern flank of the ridge, about 330m to the north (Fig. 5).

The beaker graves and their context

Isolated graves

The issue of isolated beaker period graves that do not appear to be related to ring-ditches (often perhaps misleadingly referred to as ‘flat-graves’) has been comprehensively discussed by Clark (2008, 92–93). It is impossible to conclusively prove that none of the so-called flat-graves were mounded or otherwise marked above ground, or whether they were surrounded by a small diameter and relatively ephemeral ring-ditch that has been removed by later truncation – indeed the evidence suggests that many were (*ibid*). However, the isolated (or non-

monumentalised) beaker burials (or those that may be considered 'flat') are undoubtedly different to those interred within the major barrows, as it seems improbable that in all these cases any evidence for associated barrow ditches (often substantial during this period) would have been completely removed. Given variable degrees of truncation (estimated at up to 300mm or more since the prehistoric period at Thanet Earth), it is significant that truncated but very shallow early Bronze Age barrow ditches (less than 0.25m deep say) do not (so far) occur in this area, which suggests that even quite severe truncation has never, or very rarely removed the entire profile of the larger barrow ditches. That these isolated burials were never enclosed within substantial barrows poses interesting questions as to why such interments were treated differently, particularly since the dating of both sets' or at least in the Thanet Earth sample, is not markedly dissimilar (although more widely complicated by the fact that some barrow burials are probably secondary and that the radiocarbon dates cannot be precise to more than a few hundred years; see below).

The Thanet Earth sample of Beaker burials, both in barrows or apparently un-enclosed, is not large enough in itself to determine if there are any other distinctive differences between the two and would require a considerably wider study (see below). Such comparisons in Kent are hampered by the lack of definite primary inhumations in many of the barrows themselves, although on the EKA road scheme five out of the ten ring ditches excavated had some evidence for graves contemporary with the construction of the monuments (Andrews *et al* 2015a, 65–66). At Thanet Earth, there also does not seem to be much difference between the two sets, in the actual graves, their date, or the type and disposition of grave goods where these are present (although the flat-graves are generally more varied in shape and size, discussed further below; Fig. 45). Unfortunately only just over a half of all the interments could be identified as to specific gender, with about the same ratio sexed in the flat burials. This makes it very difficult to determine whether sex was a factor in the particular mode of burial. However, although females seem to predominate in the flat graves (with the opposite the case in the barrows), the evidence is not robust enough to apply this more widely. Although the disposition of the body varied, most of the skeletons were buried on their left side, although this may not be statistically relevant with such a small sample. In this respect it can be noted that the Monkton-Mount Pleasant flat-grave burials were more evenly distributed in this regard.

Some at least of these factors are at considerable variance with what has been perceived or suggested elsewhere and seems to indicate that there is a distinct regional variability with burials of this type, at least in Thanet. Deverenski (2002) for example, examines the 'ways that people took gender into account in complex decisions involved in burial and the construction of difference' with particular reference to barrowed beaker burials and 'non-monumentalised' flat-grave cemeteries of the Upper Thames Valley. She quite reasonably states that 'On the level of the site, the very existence of at least two distinct types of mortuary setting itself constitutes a contrast and suggests the use of context to highlight and create

difference between people' (Deverenski 2002, 197–198). She asserts, during the ensuing discussion the following points, 'that flat-grave cemeteries are predominantly inhumations of adult males, whereas the variability encouraged through the form of barrow cemeteries is reflected in their more mixed demography. Here men and women are found in more equal proportions' (*ibid*, 198). The point about barrows may well be the case (as suggested by the ratios determined on the EKA road scheme; Andrews *et al* 2015a, 66), but accepting the difficulty in sexing these burials and the small sample, there would appear to be a preponderance of females in the Thanet flat-graves although males are also present (see Table 1). Further, the Thames valley flat-graves 'are highly standardized in terms of shape, the vast majority being rectangular. In monumental contexts, there is wide variety in the size and shape of the grave matrix, including a number of oval and circular pit graves' (*ibid*, 198–199). Further distinctions, such as women tending to be buried on the right-hand side and their burials having less regard to orientation are also suggested, although these factors are not so clear-cut (*ibid*, 201). None of these aspects are particularly evident at Thanet Earth, the flat-graves having a variety of shapes and sizes, although the majority are subrectangular (Fig. 45). However, it can be noted that virtually all were burials of adults apart from the juvenile in the Enclosure 3 group (S10824), but here a 'family plot' may well be represented; this particular possibility may also be relevant in the child burials on the Monkton-Mount Pleasant site (Clark 2008, 94–95).⁵ Admittedly, the Thames Valley sample is considerably larger than the Thanet one (over 100 early Bronze Age graves in Deverenski's studied group; 2002, tables 1 and 2), and none of the Kentish flat-graves, seem as yet, to be in what could be termed cemeteries, being mostly found singly or as very small groups in their own, individual foci, which may be conferring some difference.

As far as location is concerned, the Thanet Earth sample, although relatively substantial for the area, is again not big or extensive enough to suggest that certain positions in the landscape were preferred or chosen for interment. However, all of the flat-graves were situated on the flanks of the dry valleys, generally no more than 70m from the present day lowest point adjacent (the only exception being the group in Enclosure 3); this also holds true for the interment in Barrow 1. The only exception to this was a feature on Plateau 5 (S5210), but although potentially of the correct date, size, shape and alignment for a flat-grave, it contained no evidence for a burial. Even considering this as part of the corpus, within the wider funerary landscape of the period it does not appear that the flat-graves focus on the barrows in particular, quite the opposite in fact as most are some distance away, as on the Monkton-Mount Pleasant site (Clark and Rady 2008) and the EKA road scheme where this form of burial was singularly absent within the barrow complexes (Andrews *et al* 2015a, 64–65); the Plateau 3 burial was closest to a barrow (represented by a cropmark immediately to the east of the site), but even here it was at least 75m distant (Fig. 5).⁶

⁵ The burial in the single flat grave on the EKA road scheme was also an adult female (Andrews *et al* 2015a, 65 and table 2.6)

⁶ It is, of course, virtually impossible to say which came first, the barrows or the flat-graves (see below)

This at least may be a more general circumstance, as it has also been commented on elsewhere (Barclay and Halpin 1999, 326). The graves would all have been within sighting distance of one or more barrows however, but due to the number of these monuments in the area, a location not within sight of a barrow would be difficult to find, so this is unlikely to be significant. These points at least suggest that the entire area, rather than just the immediate zones around the barrows or barrow cemeteries was suitable for burial, part of the 'sacred' landscape. Some relation with the barrows can be suggested however, as the isolated graves tend to be completely absent on the highest ground, a zone that also seems to have been avoided by the barrow builders, the more visible 'false crests' on the upper flanks of the hillsides being preferred, perhaps because these locations are actually more visible from afar. The northern bias to the distribution of flat-graves can be noted, but this may be a reflection of the smaller areas investigated in the southern part of the site, as they were certainly present between the southern complexes of barrow cemeteries, partially exposed at Monkton-Mount Pleasant.

Potentially secondary burials within the orbit of barrow ditches obviously focus on the monuments, but few of these were associated with beakers, and two beaker-less inhumations from Barrow's 3 and 4 have returned radiocarbon dates potentially closer to the middle of the second millennium BC and could conceivably be secondary burials (they were both interred slightly off-centre, which would appear to be a facet of later, though not necessarily secondary, burials within circular monuments; Last 1998). Relatively few of what are termed 'satellite burials' (or interments adjacent to the barrow) were identified. These are more often of a later period, as is probably the case here, with the three un-urned cremation burials near Barrow 3.

Chronology

The chronology of all the radiocarbon dated burials associated with actual beaker vessels falls within the period 2200–1890 cal BC (at 94.5 per cent probability; Table 6). This applies to both those burials within and without barrows. The dating compares closely with many other Thanet beaker period burials (Monkton-Mount Pleasant; 2289–1890 cal BC; Bennett *et al* 2008, 17, although only one here was certainly dated; Clark 2008, 94), but they are not the earliest. Moody (2008, 82) suggests a burial at the Queen Elizabeth the Queen Mother Hospital, Margate dated 2460–2200 cal BC (at 95.4 per cent probability) is the earliest, while one at St Stephens College, North Foreland somewhat later (2350–2130 cal BC at 94.4 per cent probability). The former of these is of a similar date to the probably initial inhumation of Barrow 5. However, most Thanet beaker burials are of similar range to the Thanet Earth graves (Moody 2008, 82 and Table 1), and the immediate centuries either side of 2000 cal BC would more certainly appear to encapsulate the majority of beaker associated burials (in or without barrows) in Thanet and further afield (see for example Garwood 2011, 136).⁷

⁷ The dating of many burials by radiocarbon determination may be suspect for various reasons (e.g. problems inherent in the calibration curve, poor sample selection or poor collagen survival; see Ambers *et al* 1992) so this should always be born in mind when making comparisons, particularly

Garwood (2007, 34) states for example 'It is also notable that the most intensive phase of formal deposition of grave goods with burials at these sites also occurred in the period 2100 to 1800 BC: at first predominantly Beakers and Food Vessels (in the 21st and 20th centuries BC); followed later by Food Vessels, miniature vessels and Collared Urns (in the 19th and 18th centuries BC)'. It can be noted here that the burials located on the EKA road scheme were potentially somewhat later than those from Thanet Earth, but none were associated with beaker vessels, only a single Food Vessel from one inhumation, dated to 1930–1740 cal BC at 95 per cent confidence (Andrews *et al* 2015a, tables 2.2 and 2.4). The difficulties of dating the actual vessels themselves, by the variously proposed formal typologies and seriations from Clarke (1970) onwards are well known and will not be re-iterated here (see Clark 2008, 93–94). It is commonly perceived that many of the vessels themselves may have been quite ancient when interred, which complicates this issue (*ibid*, 96). At Thanet Earth, most of the vessels are not inconsistent with the radiocarbon dates.

Grave furniture

The majority of the Thanet Earth burials were lacking any perceptible form of grave furniture, such as evidence for coffins, internal packing or other structures. This is in contrast to Monkton-Mount Pleasant where the majority revealed evidence for interment in some form of structure (Clark 2008, 94). Only the central grave within Barrow 1 provided clear evidence for burial within a coffin or cist, possibly a hollowed tree-trunk (see above). A tree-trunk burial has also been suggested for a barrowed beaker interment at North Foreland, Broadstairs (Hart 2005) and coffin-structures are quite common in Thanet and elsewhere (*ibid*). The large width of the Plateau 4 burial (G4043; Fig. 45) however, may well indicate some form of coffin structure or packing that was not evident during excavation.

Multiple burial and burial groups

Although multiple burial in individual grave cuts was clearly evident in a number of the flat graves at Monkton-Mount Pleasant (Clark 2008, 94–95), it is not represented in any conclusive way at Thanet Earth. If nothing else, this demonstrates the variability of the burial rite, even over relatively small areas. The cluster of graves within Enclosure 3 on Plateau 1 is of some interest however, as such flat-graves in groups seem to be quite rare in this area, although there are two examples of successive or grouped burials at Monkton (Clark and Rady 2008, 15–21). It seems quite likely that in the Enclosure 3 group all the individual grave cuts may have been surmounted with a low mound, covering little more than the grave cut itself and thus rendering their precise alignment and position visible. They may have been deliberately buried in an area of ongoing ritual significance (see Enclosure 3 above). A possible explanation for the cluster is that this was a familial group comprising an

perhaps with older determinations (*ibid*, 918). A few cal BC dates (at 95 per cent confidence) are quoted by Ambers *et al* 1992 (table 2) for Thanet: Manston – 2140–1885; Cottington Hill – 2195–2155 or 2150–1875. The remainder of the dates across the country show an emphasis in the centuries around 2000 cal BC, although the full range covers a considerably larger timespan (*ibid*, tables 2 and 4).

adult male and female and at least one juvenile, probably all buried within a short space of time.

Grave Goods

There is quite a lot of variation in the internal arrangements of the graves, such as the location of the grave goods (if present), but there is a clear preference to depositing beakers at the extremities of the body, either at the feet of the interment or near the head, thus two had the vessel behind or near the shoulder (G3004 and G4043). In burial S10824, again part of the Enclosure 3 group, the beaker was placed in front of the face. There are exceptions however. The rather unusual 'fire-pit' burial on Plateau 1 (G10003) also had a pot in this position, but also another lower down the body by the hands. Although this might be a rarer location, there are a few others in Thanet, for example burial B6 within the South Dumps Down multi-burial barrow, with a beaker in front of the arms, closer to the midriff than the head (Perkins 1994). The vessels are also sometimes laid behind the back of the corpse, as in a barrow burial at Manston (Perkins and Gibson 1990) or the burial at Dumps Park Greyhound Stadium where the vessel was in an upright position to the rear of the pelvis (Philp and Chenery 2002). Preferential locations near the extremities of the inhumation are also perhaps more widely evident, both in Britain and abroad.

Apart from these observations, as at Monkton-Mount Pleasant the small sample size does not give much scope for making 'any significant generalisations about the placing of the various artefacts in the grave, their relationship to the corpse or the associations between different types of artefact' (Clark 2008, 96). However, it can be seen (Table 1) that the sex or orientation of the corpse does not seem to materially affect the disposition of the beakers in relation to the body. Most of the graves only had one associated beaker and no other graves goods, the Barrow 1 burial being the obvious exception. There were one or two instances of possibly deliberately placed flints, while burial S10843 in Enclosure 3 had a badly decomposed amber bead necklace around the neck). Such items, as with the wrist-guard from the Barrow 1 burial, usually seem to adorn the corpse in the places where they would have been worn, suggesting that these at least may have been personal to the deceased, although there is the view that some objects deposited with the dead were gifts from the mourners (Barrett 1994, 116–118; Brück 2004; Woodward 2000, 113–115). With the Barrow 1 burial, the association of copper daggers and wristguards is well documented

It can also be noted that an appreciable number of the burials had few or no grave goods at all. Burial G2000 had a copper alloy pin or awl buried by its head but no other artefacts were recorded. Grave S10838 in Enclosure 3 had no discernible associated artefacts and few of the barrow burials were accompanied. This is not unusual however (see for example Hammond 2011, 129). As Hammond states 'this does not necessarily mean that burials went unadorned. It is possible that individuals were laid to rest with items that have since vanished...in fact, any manner of perishable items'. This is quite possibly suggested by the number of grave

cuts that are considerably larger than required for the actual body, or the grave goods that are actually present. Although this evidence is circumstantial a clear example is burial S10824 (Enclosure 3 group), where only about half of the grave cut was occupied. These empty areas within such graves are usually found below the feet of the body, but here there was an equivalent space above the head (both positions often containing beaker vessels). This large open area below the feet of the interred is also evident in the Barrow 1 burial, where the beaker takes up just a fraction of the space available. It has been suggested that graves were often cut larger than required since the original intention was that they were to eventually receive more than one corpse. There may of course have been this intent in some cases but grave S10824 seems to belie this idea, as the skeleton is quite central to the grave and could have quite easily have been interred at one end, leaving more room in the remainder. The difficulties of such interpretations are demonstrated however by the fact that in some cases, original skeletal material is moved or removed during secondary interments (see above). In respect of grave size, Deverenski's study (2002, 202) indicated that 'the construction of the grave is not a straightforward reflection of individual biology or natural variation [stature for example]. Nor is it based on principles of least energy expenditure or practical considerations: more tightly flexed inhumations are not necessarily found in smaller graves'. If this is more generally the case, it would seem unlikely that graves were necessarily specifically dug larger with the intent of one day receiving additional remains.

The Beakers

Jon Rady and Barbara McNee

The beakers themselves have obviously been intensively studied over the years. The Thanet Earth pots are dominated by East Anglian and Southern Style Beakers most commonly decorated by toothed combs used to create complex patterns on the exterior surface of the vessels. Some beakers were probably made specifically for use in the funerary rite, perhaps with inferior fabrics to those intended for domestic use (Boast 1995, 71–72), and this is perhaps an evident if not comprehensive trait at Thanet Earth. There was no obvious correlation between fabrics used to make the pottery deriving from domestic and ritual/funerary contexts and some of the funerary Beakers were made with reasonably fine fabrics. The suggestion that many Beakers were being made for the grave is however an important point, and although some fine fabrics have been utilised the vessels are often quite soft, they appear to have been under fired and may not have been able to withstand the rigours of domestic use. It is perhaps significant in this regard that only one of the vessels displayed evidence of visible usewear such as burnt residues although this may be partly due to the evidence not surviving post-depositional wear and tear. Only one sherd from the Beaker associated with the Barrow 5 burial S3267 had carbonised residue on the interior of the vessel which might suggest the vessel had been used in a cooking activity. It is not clear that Beakers were used for cooking (Edwards 2006a), although research has shown that some contain organic residues associated

with food (Guerra-Doce 2006, 247). In this case 'it is possible that the burial rite included the celebration of special meals served in these vessels' (*ibid*, 252).

Of the funerary vessels, that within Grave S10843, part of the Enclosure 3 group (CAT no 2) was a rusticated vessel most commonly found in domestic assemblages (Gibson 1986, 33) and typologically late. The nearby burial (S10824) contained a highly decorated Southern Style Beaker (CAT No. 5). The decoration has been particularly well executed, and it has been suggested that Beakers displaying more complex design elements were chosen for inclusion in graves (Boast 1995, 76). The Beaker (CAT no 6) within the grave that did not contain human remains (S10833) was much more fragmented with several missing sherds. This could be a result of post depositional damage, but it is also possible that certain parts of the pot were chosen for burial. This vessel could be accommodated within Clarke's (1970) Southern series although may be a slightly earlier version (S1). This would suggest that two of the Beaker vessels were fairly contemporary (CAT no's 2 and 5) and that (CAT no 6) may have been made slightly earlier.

The 'fire-pit' burial (G10003) to the west of the Enclosure 3 group (G10002) contained two small finely grog-tempered Beakers (CAT no's 3 and 4). Beaker no 4 appears to be incomplete and part of the pot may have been broken prior to deposition. Both vessels may be accommodated within Clarke's (1970) Primary Southern Group. This could suggest a slightly earlier grave than those located in Group G10002. This is quite possible but not necessarily indicated by the associated radiocarbon dates. Grave S3267 of the burial group within Barrow 5 contained an East Anglian style Beaker while another was found associated with grave G3004. The latter was a fatter 'honey pot' version of the East Anglian type Beaker and 'following Needham's sequence both vessels fit into an 'S' profile (SP) series (dated 1900-1700 cal BC), and later SP Beakers are united in having bellies around mid-height and variation is expressed in a contrast between squat and slender forms (Needham 2005, 200). The two pots are likely to be contemporary. Grave G4043 on Plateau 4 contained a vessel that can be placed Needham's long necked group (2250-1700 cal BC; Needham 2005), and in Clarke's (1970) Developed Southern Group (S2) or Lanting and van der Waals' Step 6 (1972). Finally, the Barrow 1 burial was accompanied by a finely made vessel, characteristic of Clarke's East Anglian Group (Clarke 1970) and falls within Step 3 of Lanting and van der Waals series (Lanting and van der Waals 1972), and would belong in Case's Group E (Case 1993).

Orientation

The orientation of most of the Thanet Earth graves, with or without beakers, associated with barrows or not, follows a common pattern, which seems, as far as can be ascertained, to prevail in Thanet. Most of the graves were aligned close to north-west/south-east or north-south (four examples of the latter), the only exceptions being the interment on Plateau 4 and grave S7143 within Barrow 2 (north-east/south-west and east-west alignments do also occur but are quite rare; see for example Bennett *et al* 2008, 15-21; Moody 2008, 79-91; TFTA undated). The north-

west/south-east alignment was the most common (Table 1), with seven out of nine examples having the head orientated to the north (where this could be deduced). There has been a presumption, based on previous evidence that the majority of these interments face east, but this is not the case at Thanet Earth, where there was a near even distribution. The barrow burials on the EKA road scheme were similarly varied in this disposition, although the near north-south alignment was predominant, with two east-west aligned examples (Andrews *et al* 2015a, 42–43; 49; 52). However, taking the wider Thanet sample into account, the easterly facing disposition is clearly more prominent. The Thanet Earth data is influenced here by the grave group in Enclosure 3, where three of the interments faced south-west. This has already been discussed as an alignment influenced by their position within the enclosure.

There was an approximately equal division between those buried on their left hand sides and those buried on their right, which seems to also be the case more widely on the island, though with perhaps a greater predominance of left-hand burial (which would be the case if most are facing east with head to the north). The reasons for these various dispositions may remain unclear, and although differences between gender have been noted in other parts of the country (Parker Pearson 1999, 87–90), this does not appear to be a factor in the Thanet sample.

Notes on the latest Neolithic and Early Bronze Age funerary process

Jake Weekes

The first consideration when considering the funerary is selection: who received the type of funeral that led to an inhumation within a ring ditch, for example. The Thanet earth burials will add to that picture more widely, but the site also presents some noteworthy examples in itself. Before continuing such an appraisal of the early prehistoric burial 'population', however, it must be recognised that we are dealing with relatively few interments over a minimum of 500 years; our understanding of the funerary demographic is inherently insecure. Moreover, what follows mostly treats only with possibilities afforded by equivocal evidence. For instance, isotope analyses carried out on some of the early burials (Barrow 1: central burial G6004; isolated burials: G2000; S2084 and S3012) indicates that these people at least spent their childhood elsewhere: perhaps Leicestershire or Welsh Borders. Whence people from other burials derived remains untested.

Wherever some or all of these people came from, within the burial population, there would seem to be a predominance of older adults and adults as central burials within ring ditches and in burials generally (e.g. Barrow 5: S3264; S3267; Barrow 1: G6004; Isolated burials S2084; S3012), S3012; S4622 etc.; Barrow 3: G7007). In barrow contexts, children were either disarticulated or disturbed: could this hint a practice of specialised child burials within pre-existing monuments, later disturbed by a secondary funerary practice appropriating the same ditch delineated areas? The disturbance of the burial of a young child (S7151) by an adult burial, and probably subsequent burials in a linear arrangement, in Barrow 2 could suggest this pattern,

as perhaps could the child bones (G6003), if indeed disturbed and residual (see below) in Barrow 1.

The gender of an individual will likely also govern the funerary, but suggestions linking females and isolated "flat" graves (S2084; S3012) are still at best tentative. Another factor might be mode of death; for example, is burial S10833, within group G10002, with a beaker but no body, a cenotaph, where a corpse was unavailable for burial for some reason?

Where a body clearly was available, a number of initial funerary rites are suggested by Beaker and early Bronze Age burials at Thanet Earth, as elsewhere. The outermost burial in Barrow 2 (S7157) presented with the head markedly twisted to the side, a potential indicator of initial decomposition within a void, according to Duday (2009). This could suggest exposure prior to burial, but perhaps more likely decomposition within a rigid coffin of some sort. On the basis of stratigraphic observation, it has been suggested that burial G6004, the central burial in Barrow 1, may have deployed a tree trunk coffin. If so, placement of the corpse within could well have occurred prior to burial, and elsewhere. This has further implications: that the copper dagger (FN 6.33) lying beneath the right scapula would have to have been placed in the coffin first for example (or lodged in the deceased!?). Whether the crushed beaker in this burial (FN 6.9000) originally lay within the coffin is another question (see below). A staining, perhaps from a shroud, coffin or lining was also noted in the central child burial in Barrow 2 (S7151), and in the adult in Barrow 4 (G6007). Dress accessories and other worn accoutrements are also suggestive of an earlier phase of the funeral, including dressing and laying out of the deceased. In Barrow 5, burial S3267 the copper alloy pin (SF38), located near the femur and pelvis, suggests clothing (or a shroud?), while the corpse in Barrow 1 (G6004) probably wore his stone wrist guard (FN 6.34). The copper alloy pin situated near to the skull of burial S2084 may have been a hair or shroud pin, and the older adult male in isolated burial S10843, seems to have worn a necklace comprising four amber beads (SF 169–172) for his burial.

Graves needed to be dug, and there is some interesting diversity in design and context here, particularly in relation to the planned contents. The graves were variously rectangular, oval or near circular, and some were noted as being very spacious as compared to their occupants. For example the grave cuts for the early burials in Barrow 5 (S3264 and S3267) were spacious, and the central grave of Barrow 1 (G6004) seems not to have been made to measure for the coffin it was possibly meant to house: packing either side was apparently required. The outermost burial in Barrow 2 (S7157) lay in spacious cut, as did isolated burial S4622. Crouched burial S10843 was laid to rest in a rectangular grave surely more suitable for an extended inhumation, and S10824 lay crouched within a particularly narrow extended cut (0.6m by 2.2m). Either such graves were dug without precise reference to planned contents, or were once packed with material that has left no archaeological trace.

Another consideration is the degree to which the body's reasonably typical stages of death had a bearing on proceedings. For instance, if bodies were to be laid out the grave in a crouched position, factors like rigor mortis may well have been an important consideration, with secondary flaccidity, which might take effect after two or three days, possibly dictating the funerary timetable. Perhaps more noteworthy is the fact that binding is suggested in very contracted burials like the young probably female adult in grave S10838; could such constraints speak of secondary burial of some sort, or mummification (see below)?

Relative location is funereally important; coffins and other potential containers also represent the journey from a place of the living to the place of the dead. In the case of the inhumations Barrow 5, perhaps the earliest, a key consideration in this respect was seemingly location within an extant earlier monument of some sort, with perhaps contemporaneous modification of that monument through addition of an eastern extension of an already segmented ditch, to form a rough ring (cf. Eastling Down; in fact the annex to Barrow 5 at Thanet Earth could equally be seen as a way of enclosing those within than of 'immortalising' them, especially as they originally may have been intended to face the sunrise via this gap, see below). The outermost grave cut in Barrow 2 (S7157) seemed to be aligned with the ditch which did not present evidence of an adjacent mound, more than suggesting continued focus on a monument constituted by a clearly delineated and maintained circular area. Within Barrow 4, surface finds of human bone (G6009) probably also represent re-use of an already funerary monument. Whatever they focus on, these burial foci point to the recognition and continued use of a place of burial: as also evidenced by the cluster of burials in group G10002. That the ring ditches/barrows lay in a broad cluster, and at least some were adjacent is indicative that this was, or rather became a commemorative landscape in general.

Several possible indicators of deliberate modification of human remains have been noted among the early prehistoric burials at Thanet Earth, with some sort of initial exposure/secondary burial practice suggested by potential signs of early decomposition within a void (S7157), and binding, the latter even some form of mummification process. The apparent build-up of primary silts in the grave in burial S10838 could suggest that the feature was left open for while prior to deposition of the corpse. Objects other than the body can also be modified as part of funerary ritual, often through deliberate breakage. The crushed beaker in Barrow 1 most likely testifies to post depositional processes, but the extensive evidence of burning or speedy deposition of burnt pottery and food in burial G10003 is intriguing in this regard: a symbolic destruction of the body of the deceased along with domestic material?

When it comes to the ritual act of deposition, there may be tantalising clues to cosmological factors at play in the orientation of burials in Barrow 5, with both occupants apparently facing east through a large gap in the segmented ditch, perhaps subsequently filled in by the new segment of ditch. In every other case orientation of burials is all but impossible to match to ritual determination (cf.

consideration of gendered practice, alluded to above), without resorting to conjecture, it can be said that there would typically seem to be some considerable conservatism with regard to the crouched posture arrangement of burials, whether or not a coffin was used. In the case of isolated burial S10824 at least, this consideration may have outweighed an unsuitably shaped burial pit.

Beyond such general positioning, details of posture, especially disposition of arms, are also of considerable interest, even if impossible to interpret without a much broader study. The hand lay near the mouth in the central burial of Barrow 1, for example, although with a confined burial the possibility of unseen shifting of limbs during transit in a closed container to the burial site should be taken into account, and of course post-depositional processes. In isolated burial G4043 the arms appeared to have been placed across the chest; the right arm of burial G10003 also lay on the chest area, while the left arm of burial S10824 lay in the chest position, the right arm being extended towards the legs. The left arm of the older middle adult male in burial S10843 was flexed and lay across the torso area, and the young adult in burial S10838 may even have been bound so that both forearms lay across the chest, the hands resting on the clavicles.

We have already noted objects within the coffin that were in place during some sort of laying out process earlier in the funerary process. This is most likely the case with the dagger in grave G6004, for example, but was the beaker in this burial, lying at the feet of the deceased, placed outside the coffin?

Variations in Beaker placement in burials and the chronological separation between them preclude a realistic consideration of what these installations may symbolise by comparison. The fact that the majority of burials with beakers the vessel was placed at one end or another of the grave could separately relate to gender or some other cultural distinction in each case, or perhaps could even provide a clue as to typical graveside sequences, such as typical placement of beakers following placement of the corpse. The only alternative placement of a beaker occurred in a grave that contained two (G10003).

Finally, in terms of what we might call commemoration, it is important to note that the assumption of a direct connection between barrow function and burials within is no longer accepted without question; the occupants of Barrow 5 at Thanet Earth certainly seem to have taken possession of a much older ritual locus that may not have been 'funerary' per se. The ditch fills of Barrow 2 lacked evidence of mound erosion and enclosed a child burial, perhaps indicating a different quality of ritual given its initial occupant. But were some of the barrows at least nonetheless raised over their extant occupants as funerary monuments? Double ditched Barrow 1 certainly looks as though it was designed and built as a single monument, rather than being developed over time like other complex barrows (e.g. Eastling Down), but remains equivocal as to whether it was constructed as some particular funerary emulation of existing monuments in honour of, say, its surviving central burial (G6004) , or served another purpose. It may have continued to be a focus, if child

bones (G6003) within the backfill of the central burial in fact represent a truncated burial from the mound and not disturbed material. In Barrows 5, 2, 4 and the cluster of burials in group G10002 we seem to have clear evidence of spatial respect and therefore commemoration of existing graves.

With such compromised archaeological contexts, it is unknown whether disarticulated bones from ring ditch fills derive from early prehistoric disturbance of earlier deposits, prehistoric inhumations made into extant mounds or focussed on them, later deposits of disarticulated bone, or even barrow focussed burials from the Roman or early medieval periods. Certainly three un-urned cremation burials/pyre deposits focused on the ring ditch of Barrow 3 are likely to be later prehistoric or later still.

The Pond Barrow

Robert Masefield, Jon Rady and Becky Scott

One of the most intriguing findings from the project was a large depression (on the east edge of Plateau 2) which though natural in origin was subsequently modified and utilised during this period and perhaps later, probably as a 'pond barrow'. Although not originally considered as such the potential ritual significance of the feature was recognised during fieldwork. However, since its excavation in 2007 various discoveries elsewhere and the application of absolute dating confirming its early Bronze Age use, have influenced interpretation. Its later history extends into the middle Bronze Age, when it may have had a more mundane function as described in Chapter 3.

The Thanet Earth feature (G2001) was located just above the 27m OD contour, 233m south of Barrow 6 and 182m north-west of Barrow 5 and was set within a larger solution hollow or doline. Such natural features when of Pleistocene date have long been known to represent potential capture points for Palaeolithic artefacts on the high ground, away from fluvial archives, and they have thus represented an important resource for examining hominin activity in the wider landscape. This was the prime reason for the initial investigation of G2001. Examples from Britain include Worthington Smith's classic Chiltern sites (Smith 1894; Sampson 1978; White 1997), several sites discovered in south-east Kent – notably West Cliffe St. Margaret's, Wood Hill Kingsdown, Eyethorne, Finglesham and Whitfield (Halliwell and Parfitt 1993, Parfitt and Halliwell 1996), as well as Dreal's Farm, Elham, a site originally discovered by Tester (1952). Excavations at Wood Hill and West Cliffe have produced substantial artefact assemblages.

Given this, it seems that such features did not merely act as capture points within which parts of the Palaeolithic landscape are preserved, but may have acted as locations to which Pleistocene hominins were attracted; raw material is readily available, having been released by the solution of the chalk, and, being filled with thick, impervious clays, the hollows themselves sometimes become filled with water

for many months at a time. An alternate drying and wetting cycle was demonstrated by some of the earlier layers of silty clay within G2001, which exhibited clear signs of the polygonal desiccation cracks that occur in dried clay. Although the behavioural signatures of assemblages from dolines in north France do suggest that they were repeatedly visited and exploited as nodal points within hominin itineraries, there was no evidence for such early activity, in this or the other dolines (on Plateaus 2 and 4) examined at Thanet Earth.

In Northern France, such features are generally dated with reference to the regional loess stratigraphy (cf. Antoine 1990), infilling as they do with complex sequences of fine sediments within which soils have sequentially formed. Frequently, these sediments record notable loessic input, reflecting periods of marked cold and aridity. In Britain however, the few dolines which have been subject to excavation using modern techniques do not reflect such a clear regional loess fall, but infill with fine sediments derived from the surrounding landscape, especially from Palaeogene deposits which cap the chalk (e.g. Thanet Beds in Kent).

The significance of solution hollows as possible capture points for Palaeolithic material is self-evident, but solution hollows (sink holes) in fact can form at any time. The Le Pucueil doline in Normandy was excavated near to a modern “pond” – a recent solution hollow which is seasonally ponded (Delagnes and Ropars 1996). Catt (1978) suggested that their formation may be accelerated by conditions of enhanced drainage, such as the throughput of periglacial meltwater, but localised solution of the chalk can be affected by many factors, notably the acidity of any deposits overlying the chalk. Excavations at West Cliffe (Drinkall *et al* forthcoming) seem to suggest that solution hollows often “cluster” together, Holocene features having surface expression in the modern landscape, whilst older features nearby may be completely infilled with fine deposits resulting from surface run-off. At West Cliffe, a large “modern” solution hollow is visible on the surface of a ploughed field, and becomes seasonally ponded over the course of the winter; this yielded later prehistoric struck flints and burnt flint from within its fills. However, older dolines adjacent to the visible hollow contained Palaeolithic artefacts; these features exhibited no surface expression in the modern landscape. It was notable that the fine sediments infilling the dolines at West Cliffe (those which produced Palaeolithic artefacts) had been disrupted by periglacial features (Simon Lewis *pers. comm.*), indicating a pre-Holocene date for its formation and infilling. Such features were not observed within the “modern” hollow at West Cliffe, which is visible in the modern landscape. The origin of Thanet Earth feature cannot be dated as its primary deposits were a considerable depth below site formation level. However, no obvious periglacial disturbance of the exposed sediments was apparent, suggesting that this particular natural feature may have formed during the Holocene (or its final phase of infilling was completed within the Holocene); whatever its exact date it was clearly visible as a depression by the earlier Bronze Age.

At some point following silting, the hollow (now reduced to a diameter of about 20m), was modified to create a smooth concave based bowl (via presumed removal

of vegetation and any uneven elements) and then lined with gravel, including some quite large pieces of flint. Most of this material would have been available in the wider locality. Its purposeful deposition, rather than a natural accumulation that can occur around and within natural Pleistocene dolines, is confirmed by its evenness and because a small proportion of the flint comprised burnt and fire cracked material. Although there was no other associated artefactual evidence within the surface, silts directly above produced an assemblage of hard-hammer struck worked flints. The metallurgy was cut by a small pit containing re-deposited material from a hearth, the only feature found within the depression. A sample of charcoal from this dated to 1921–1625 cal BC and therefore provided hitherto missing evidence for the potential early Bronze Age use of the monument (any temporal displacement due to the age of the wood would however suggest a slightly later date). The ‘placed’ nature of a palstave axe just above the metallurgy level provides evidence for the continued significance of the feature in the middle Bronze Age (Plates 72 and 73).

No definite pond barrows have been previously found in Kent. Perkins (1999, Volume 2, 29) suggests one, uncertainly interpreted (and unpublished) at Lord of the Manor, a barrow complex near Manston a few kilometres to the east. However, its description is quite at variance to the evidence for other postulated pond barrows (below). Although pond barrows have long been a typological classification for certain Bronze Age monuments, there would seem to be a considerable variation in their details, apart from the obviously common pond-like characteristic. However, certain particulars do seem to be commonly recurrent and how the pond at Thanet Earth correlates with these is discussed further below (see Fig. 46 for comparative plans). The term pond barrow was first coined by Richard Colt Hoare (1810, 22) in his survey of ancient south Wiltshire (although William Stukeley had earlier investigated an example at Normanton Down, Wiltshire) but is strictly a contradiction since ‘barrow’ in Old English as ‘*beorg*’ means hill or mound. Grinsell (1941) provided a general consideration of the class, but until relatively recently only two, a flint-metalled example at Winterbourne Steepleton, Dorset (Atkinson *et al* 1951) and the Wilsford 33a barrow, Wiltshire (Ashbee *et al* 1989) had been subject to modern investigation techniques (Fig. 46). The distribution has been considered to lie within Wessex associated with the ‘Wessex Culture’ of c. 2000–1600 BC, and in these and other areas too they are mostly situated on downland in prominent locations but ‘rarely on hilltops or especially elevated positions’ (EH 1989).

Importantly for the understanding of the class, a further handful of pond barrows have been excavated in and following the PPG16 era (see Germany 2007 for useful review of some of these). Further Wessex examples have comprised Snail Down, Wiltshire (Thomas 2005), Down Farm and Monkton Up Wimborne in Dorset (Barrett *et al.* 1991; Green 2000) whilst ‘new’ pond barrow sites have also included several examples extending their distribution to central southern and eastern England. For example pond barrows defined only by their sub-surface elements, have been excavated and identified at Berinsfield (Boyle *et al* 1995) and two at Radley (Barclay and Halpin 1999) in Oxfordshire, whilst an example with a metalled surface was excavated in 2012 at Great Western Park, Didcot (Hayden *et al* 2014). The eastern

England examples are from Norfolk (EH 1989), Essex at Harlow and at Lodge Farm St Osyth (Germany 2007)⁸, whilst another metallised example was excavated at Pampisford, Cambridgeshire (Pollard 2002b) (see also Fig. 46). If a further (also metallised) example at Peacehaven, East Sussex (Hart 2015, 52–53, 80–81) and the present example, were indeed pond barrows, they would extend the distribution to the extreme south-east corner of England

There are a number of consistent factors evident in these monuments, though as with most prehistoric features there is also considerable individual variation. The Thanet Earth example might be unusual in that it was formed within a pre-existing natural feature, but otherwise it does exhibit many similarities with features interpreted as pond barrows elsewhere (see English Heritage 1989).

In terms of form, the Thanet Earth feature is on the large size but not excessively so, and in shape and profile its gently sloping sides, slightly concave base and slightly irregular oval form are also paralleled elsewhere. A recently excavated 12m diameter example at 'Great Western Park' Didcot (Hayden *et al* 2014; Hayden *et al* forthcoming) was approximately circular but with some irregularities around the edges relating to differential preservation of the shallow form. It was much like the Thanet Earth feature in this respect but also in that its primary silting, below the metallising, was consistent with a former manifestation as a shallow natural or artificial pond. The Didcot example's metallising was cut by several pits, with charred material from two dated to 1886–1700 and 1879–1682 cal BC respectively (at 95 per cent confidence). The majority of pond barrows tend to fall within the 8m to 12m range such as at Pampisford, Cambridgeshire at 10m (Pollard 2002b), Winterbourne Steepleton, Dorset at c. 11m (Atkinson *et al* 1951) and Lodge Farm, St Osyth at 8.4m x 7.6m (Germany 2007) although some, as at Peacehaven and Berinsfield, are smaller. At the larger end of the range are large examples such as Winterbourne Abbas 17, Dorset, at 27m in diameter. The Thanet Earth feature at over 20m diameter would therefore rank as one of the largest. Many pond barrows are approximately 0.3m in depth (e.g. Winterbourne Abbas 17, Lodge Farm, St Osyth and Great Western Park, Didcot, Peacehaven) although some are even shallower (e.g. Wilsford 1a at 0.2m). However, there are several deeper examples, including Down Farm in Dorset, Berinsfield in Oxfordshire, both c. 1.2m, and Radley 4855 in Oxfordshire at 1m. The Thanet Earth feature is therefore, amongst the deepest at c. 0.92m, although this is probably because it reused an existing natural depression.

Perhaps more significantly, metallising is increasingly recognised in association with pond barrows. Within the central depression of the well-known Winterbourne Steepleton, Dorset example the base of the chalk cut was worn smooth but had subsequently been covered '*with a pavement of tightly-packed flint nodules which had a rather irregular surface*' (EH 1989). The presence/absence of metallising at the other often cited example at Wilsford is unknown, due its truncation by a large shaft-like pit or well (*ibid*). Recent excavations suggest however that metallising within the base

⁸ The former is an unpublished example found by the Harlow Museum and West Essex Archaeological group by the Roman temple site

of the hollows represents a sub-class of such monuments. The flint metalling at Thanet Earth is comparable to metalled pond barrows at Pampisford, Cambridgeshire (Pollard 2002b), Monkton Up Wimborne, Dorset (Green 2000), Peacehaven, East Sussex (Hart *et al* 2010; Hart 2015), possibly at Berinsfield (Boyle *et al* 1995), and at Great Western Park, Didcot (Hayden *et al* 2014; forthcoming). There remains the possibility that the feature was specifically metalled for use as a stock watering hole. This seems rather unlikely though as there was no evidence that the thin metalling had been disturbed by stock hooves and it was not robust enough to withstand cattle trampling. Furthermore it would likely have proved more dangerous to the herd than a simple muddy base. Of significance in this respect is the small feature (S2475) that cut the metalled surface. Its charcoal fill had been sealed by what appeared to be a careful reinstatement of the metalled surface with burnt flint, which seems to have been done with more care than would be necessary if the feature was just a watering hole for cattle (Plates 70 and 71).

As with most prehistoric features, there are variations in detail, so for example it is notable that at Winterbourne Steepleton, Dorset pits seem to have been sealed by metalling, whereas elsewhere, including at Didcot, Peacehaven and Thanet Earth the metalling was cut by pits. This may be significant in that it suggests metalling was not always part of the primary construction phase and may have been laid late in some cases, in order to consolidate the hollow for use. However, the use of metalling also suggests a reinforcement of the special nature of the internal space for repeated use. In Thanet Earth's case gravel may have been imported from some distance away, emphasising that such metalling was considered important enough to warrant the effort. Its use is consistent with use as a ceremonial 'open arena' within which mortuary activities are likely to have taken place (see above). One possibility then is that the metalling was laid to provide a floor for such ceremonies and assist definition of the liminal space.

Burnt material deposited within internal pits and comprising charcoal and burnt stone is another characteristic of certain pond barrows, including Didcot, Peacehaven and Thanet Earth (feature S2475 above). Scorched fills were also found within five pits at Harlow (Germany 2007, fig. 68). At Peacehaven a shallow sub-circular probable pond barrow contained a rudimentary metalled surface of rammed (flint) cobbles over its base cut by two small pits with charcoal fills (Hart *et al* 2010, 17; Hart 2015, 52–53, 80–81). Scorching of the bases of pond barrows, possibly associated with pyres, is also recorded at St Osyth and Didcot. The combination of scorching and pits containing burnt fills contributes to growing circumstantial evidence that cremation was one of the activities that took place within at least some pond barrows (Germany 2007). However, as some 'pond barrows' continue to produce little or no direct evidence of burial one possibility is that dead bodies were laid in state or for partial excarnation within the monuments prior to final cremation, hence the occasional association with wooden platforms.

The dating of the Thanet Earth feature is consistent with evidence from pond barrows elsewhere notwithstanding the complexities of dating artefacts of this

period and the potential problems with radiocarbon samples. Recent radiocarbon dating combined with consistent artefactual evidence, including Beaker pottery, suggests that they were mainly formed in the early centuries of the second millennium cal BC and sometimes demonstrably continued to be re-used and modified until the middle centuries of the millennium (Germany 2007, 36–37, 109; Barclay and Halpin 1999, 115–128; Hart 2015, 80–81).

Regardless of the above, the Thanet Earth feature does exhibit differences with aspects of other examples of features interpreted as pond barrows (although these could well be accommodated within the wide variations apparent within the monument class; Fig. 46). For example no associated post-hole structures were found within the Thanet Earth monument. Occasional examples of platforms or other structures at other pond barrows include an albeit later (11th century BC) six-poster at Didcot (Hayden *et al* forthcoming), a four-poster at Berinsfield (Boyle *et al* 1995) and two post-hole ‘structures’ at St Osyth (Germany 2007) and on the south edge of the Monkton Up Wimborne pond barrow (although the latter might represent a formal entranceway; Green, pers. comm.). Well-preserved examples of pond barrows, including the extant Wessex examples have encircling banks formed from the material extracted to form the hollow that cannot be demonstrated here. Although banks have not survived due to plough damage at St Osyth, Pampisford, Harlow, Radley, Berinsfield, Peacehaven and Didcot, it is unusual for there to be cut features such as pits located in the surrounding bank zone probably reflecting its position. There were few other features in the immediate area of the Thanet Earth feature however.

Perhaps more significantly no burial evidence of any form was found directly associated with the Thanet Earth pond barrow (notwithstanding the flat grave S2084 20m to the west) and while some interpretations of pond barrows tend to downplay their direct association with burial (e.g. Didcot and Peacehaven), cremations have been found within eight of the modern excavated examples. There was one each at Radley 4866, Oxfordshire and Harlow, Essex, two at St Osyth, Essex, three each at Snail Down Wiltshire and Monkton Up Wimborne, Dorset, four internal and two more at the edge of the Down Farm, Dorset example, and seven at Winterbourne Steepleton, Dorset (Germany 2007, figs. 68 and 69). In addition the pond barrow at Great Western Park Didcot, Oxfordshire (Hayden *et al* 2014) produced some cremated bone of possible human derivation from the hollow’s backfill. There are also occasionally Beaker inhumations in the vicinity of some but the majority, where burials are found at all, show an association with cremation rites. Nevertheless Beaker grave G2000 of an adult female 36–45 years old was located only 20m west of the Pond Barrow and this situation may be paralleled by the six early Bronze Age inhumations (along with two cremations) found around Radley 4866 (Barclay and Halpin 1999, 115–128; figs. 4.60–4.64). Radley 4583 pond barrow actually contained two inhumations (*ibid*).

Some pond barrows are associated with placed finds that, although not directly attributable to particular burials may have been intended as offerings associated

with funerary or votive processes. In some cases complete non-cremation associated vessels (or at least containing no direct evidence of such use) were deposited in pits within and around pond barrows. At Winterbourne Steepleton fourteen pits contained broken or incomplete pottery vessels. More specific votive practice is suggested by an inverted Collared Urn placed in a pit, near the south-east side of the St Osyth pond barrow, whilst three middle Bronze Age vessels were also placed in pits cut into the silting. A similar secondary deposition of pottery may be represented by the smashed pottery of early middle Bronze Age date recovered from the fill of the Peacehaven hollow. At other sites the surface of the metalling itself seems to have attracted special artefactual offerings. At the Great Western Park Didcot, a collection of flint artefacts with a heavy emphasis on tools included a very finely made barbed and tanged form that was almost certainly produced for votive or ceremonial purposes (Hayden *et al* 2014). In this context the worked flints recovered from hand cleaning onto the metallised surface within the Thanet Earth hollow and the valuable middle Bronze Age palstave axe deposited a few centimetres above the metalling may be significant. Certainly the continued deposition of artefacts into the middle Bronze Age at these sites is likely to confirm their ongoing relevance as 'open arenas'.

The setting of the Thanet Earth feature is not inconsistent with the placing of such features in what could be considered 'ritual landscapes'. Most examples of pond barrows appear within landscapes that contain other funerary monuments including round barrows and other open arena forms, as at Thanet Earth. This association with other monuments is particularly evident for the extant Wessex examples and the Radley sub-class, where they are set within associated monument/barrow cemeteries. Nevertheless, this is not always demonstrably the case. Later, non-contemporary monuments mainly comprise field systems and nearby settlements' (EH 1989). Sometimes the relation can only be made in the '*most general spatial terms to other nearby monuments*' (*ibid*) and there is not always '*evidence that pre-existing monuments influenced the choice of the barrow's location, although there is evidence from Down Farm and Radley that this sometimes took place. The Down Farm pond barrow was associated with the many other monuments of Cranborne Chase...Radley pond barrow 4866 was incorporated into the alignment of the Barrow Hills complex and lay near the Abingdon causewayed enclosure*' (Germany 2007, 109). The St Osyth feature was located within an early Neolithic causewayed enclosure, about 50m south of a group of five or more probable late Neolithic/early Bronze Age ring-ditches and just to the north a cemetery of Ardleigh-style, small middle Bronze Age barrows (Germany 2007, 33, 36; Pls V-VII; figs. 24-26). The possible pond barrow at Peacehaven was located on the north side of an early Bronze Age trackway along the north side of the Upper Piddinghoe Valley. It is probable that it was integrated into the contemporary landscape (which included two ring-ditch barrows and an 'open arena' or 'ring barrow' style monument and was accessed from the track (Hart 2015, 82-87).

The Thanet Earth example was set within a landscape with numerous ring-ditch defined barrow monuments. At least three probably earlier barrows were located within eyesight of the possible pond barrow, Barrows 5, 6 and the unexcavated

example just off the eastern side of the site, as well as the two probably middle Bronze Age examples (Barrows 7 and 8), just to the west (Fig. 6). Interestingly, but perhaps coincidentally, the feature was almost exactly due south of Barrow 6, but more specifically, in a precisely similar topographical position in relation to the north-south aligned ridge that divides the two shallow valleys in the northern part of the site. This zone it has been noted, seems to be chosen quite frequently for the emplacement of ritual monuments and features, including Enclosure 3 and various Beaker graves to the north, Barrow 6 as mentioned and the early Bronze Age flat-grave G2000. It may therefore be the case that this particular doline (rather than the others in the area to east and west; see Fig. 4) was chosen for conversion into the possible pond barrow because it was conveniently situated in what was already considered to be an area of ritual significance, the liminal edge or the ridge between the two valleys, which to the north extends as far as the coast.

A further point of association here in relation to dolines themselves has been pointed out by Gale (2012) amongst others (Pollard 2012, 97) and perhaps reveals the potential spiritual significance of the features. Such associations could have added additional meaning to the selection of the Thanet Earth doline for further ritual activity. Their presence may have influenced the choice of location for individual barrow groupings near the Knowlton Henge complex and the Allen Valley of Cranbourne Chase Dorset. Here it has been revealed that at 'every location (High Lea Farm, Horton Inn, Knowlton South, Knowlton Central and Knowlton North) the barrows/ring ditches are located in close proximity to Dolines (sinkholes). Indeed the Henge complex itself is located close to Dolines (Gale 2010, 164); this juxtaposition is also apparent elsewhere in Wessex (*ibid*).⁹ He also draws attention to the likelihood that although these features are rarely visible today 'where the topography has been smoothed by the passage of time and aggressive agricultural activity' that they were during the Bronze Age. It is suggested that, as a tempting interpretation 'the Dolines might have been viewed by contemporary Bronze Age society as conduits to a chthonic other world where the close situation of the dead at such places might have eased their transition between states'. As a tie to the emplacement of the probable Thanet Earth pond barrow and the deposition of the palstave later in the Bronze Age, he noted that the dolines 'would have continued to be utilised by the living as contact points to the ancestors in a cosmological order that rationalised the circle of life and death and allowed for the subsequent observance of necessary rituals' (*ibid*). Similar points are made by other authorities (e.g. Pollard 2012, 97). The use of pond barrows more generally as a form of portal-like 'open arena', for ceremonies associated with treatment of the dead during potentially protracted funerary processes, is entirely consistent.

By the middle of the Bronze Age, the feature was located close to a right angle arrangement of ditches and trackways and was almost certainly within the corner of

⁹ These juxtapositions are not obvious in Thanet, at least not as yet. However, it is worth mentioning that there are many cropmarks in the area of Thanet Earth, which could represent dolines, although some are probably quarries or other features

a middle Bronze Age field (in its later use perhaps as an actual pond for watering livestock– see Chapter 3).

Chapter 3: Middle to late Bronze Age

Jon Rady and Robert Masefield

The middle to late Bronze Age landscape

Overview

There were potentially many isolated, scattered features of this period (including dispersed, un-urned cremation burials; Fig. 47) indicating general occupation of the area, but the main elements comprise two possible enclosures on Plateau 5 (Enclosures 1 and 2), and an interrelated site-wide field system. This system, marked by ditches and double ditched, often sinuously coursed droveways is not closely dated, but overall ceramic evidence and its relation to later features is suggestive of an origin between the early and middle part of the Bronze Age, although some elements were probably slightly later. This is supported by the middle Bronze Age radiocarbon date of a crouched burial (one of two: G1173) that cut a ditch of the system on Plateau 1 and a relatively significant quantity of earlier Bronze Age pottery in the field ditches. Although the arrangement is very fragmentary due to erosion and truncation (mostly by subsequent agricultural practices), its general outline is clear and probably represents the largest exposure of such a system in Kent to date. The field system seems to be related quite closely to the two enclosures on Plateau 5, although the sequence between them cannot be clarified – they may well be roughly contemporary. Enclosure 1 eventually became the focus of a small area of middle Bronze Age settlement.

Postholes potentially related to poorly defined structures appear to be associated with the enclosures on Plateau 5, although these are difficult to date they are most likely to be of mid to late Bronze Age date by association. Some 4-post structures on Plateau 7 cannot be closely dated but are included here purely for convenience; it is not impossible that they are Iron Age. There were at least two concentrations of features in the north-west corner of Plateau 1 that also potentially represent traces of settlement of mid to late Bronze Age date (c. 1500–1100 BC). These suggest structures which have left no trace within an area of relatively well-defined fields and may be closely associated with a sub-square enclosure (Enclosure 4) flanked by three trackways (6, 7 and 14).

Other features include two uncertainly dated ring ditches on Plateau 2 (Barrows 7 and 8), and one (Barrow 10) on the pipeline. The potential early Bronze Age pond barrow was still extant in this period and was eventually used as a pond or waterhole, although the middle Bronze Age copper alloy palstave deposited just above the early Bronze Age metallurgy appears to indicate a continued symbolic significance prior to further silting later in the Middle Bronze Age. Enclosures 1 and 2 on Plateau 5 appear to form part of a surrounding but fragmentary network of ditch-bounded fields and trackways, but the dating evidence is not robust enough to provide a clear sequence of development; the following sequences are therefore open

to some doubt. Settlement evidence here was almost certainly secondary and is discussed separately below. There would seem to be a lack of late Bronze and earliest Iron Age activity on the site as a whole.

Enclosure 2

This potential enclosure, or perhaps field situated near the centre of Plateau 5 on virtually the highest part of the entire site, extended south and west of occupation Enclosure 1 (below) and seemed to encapsulate it in its north-east corner; it is assumed here to be the earlier feature, although there is no reason to suppose that both enclosures were not contemporary (Figs. 47–48). Although an enclosure type arrangement seems likely for Enclosure 2, only its east and south sides were well-defined, other alignments possibly truncated in antiquity, with just a fragmented suggestion of its western side delineated by ditch segments which formed a rough rectangle aligned north-east to south-west and about 90m by 50m in area internally. Its northern side could be represented by a number of ditches near Enclosure 1, probably G5059 and perhaps G5043 (see Fig. 49).

The possibly earliest representation of the enclosure was found on its south-eastern side and consisted of three re-cut and intercutting ditches (G5007, G5148 and G5149 in sequence) that extended to the north-east by 29.5m. The ditches were similar in shape and contained small amounts of worked flint and pottery. A possible ritual deposit of a fragmented mid to late Bronze Age pottery vessel (73 sherds) in association with a high concentration of carbon was located within the south-west terminal of ditch G5148. A possible fragmentary ditch segment adjacent to G5148 yielded two sherds of early Bronze Age pottery and some worked flint (blades and flakes of possible Mesolithic origin), although its relation to other features here was uncertain. Three other mostly shallow ditch segments (G5039) perhaps represented the south and extant west sides of the enclosure. Apart from traces of daub, carbon and burnt flint, these yielded little in the way of dating evidence, and from fourteen interventions only two provided a few sherds of prehistoric pottery, with worked flint from three. The pottery was of middle Bronze and mid to late Bronze Age date. In parallel to the earlier south-eastern boundary and 2m further east was ditch G5040, 73m long in total. This ditch averaged 0.8m wide and contained a comparable fill to the other ditches, with a roughly similar concentration of finds. However, the small quantities of pottery were more varied in date with a few sherds of early Bronze Age ceramics amongst the mid to late Bronze Age material. It is possible that this double ditched arrangement (with G5007) originally formed a drove road (perhaps earlier) down the edge of the enclosure, as has been suggested at other sites (Rady *et al* forthcoming). About 20m north of the southern end of the enclosure, a near parallel ditch segment possibly represents an internal partition of the larger space or part of a field in its own right. Environmental samples from various interventions provided little evidence although most yielded traces of grain.

As mentioned, ditch G5059 could be a trace of the northern side of the enclosure. Arrayed roughly east-west, this segment was 5.4m long, 0.49m wide and 0.41m deep

at most and contained a virtually sterile fill. Just to its south, and parallel was a more substantial, slightly curvilinear and near parallel feature (G5043), 7.5m long, averaging 0.85m wide and 0.41m deep, with very steep sides that led to a gradual break and a flat base. The southern terminal contained greater concentrations of sea shell, charcoal, animal bone and a few struck flint flakes. Although perhaps only another ditch section relating to the enclosures, the deep and steep sided nature of the cut and its size suggests it may have had a more specific function possibly associated with occupation of the area (below). The nature of the artefactual and ecofactual assemblage suggests deliberate infill, either as rubbish disposal or perhaps ritual deposition. The feature was cut by another linear feature (G5147; Fig. 49) on the same alignment, 4m long, 1.11m wide and 0.57m deep, which also yielded indeterminate prehistoric pottery, perhaps from one vessel.

Extending off the north-east side of Enclosure 1/2, were two ditch alignments (G5023 and G5029) their position suggesting a coeval relationship with Enclosure 2. On the west side the former was aligned roughly WSW-ENE, 25.2m long, averaging 0.73m wide and 0.14m deep. A posthole 0.3m in diameter and 0.14m deep was located at the western terminal of the ditch and probably contemporary. The eastern ditch alignment (G5029) consisted of an 'L'-shaped feature, extending east for about 11m from the northern-eastern corner of Enclosure 2, turning north-east for a similar distance. The ditch averaged 0.68m wide and 0.28m deep with a sterile fill and cut a possible early Bronze Age feature (G5024). Together, these two ditches formed a funnelled entrance into the Enclosure 1/2 complex.

The enclosure appears to be related topographically to the surrounding arrangement of fields and droves, particularly Trackways 1, 5 and probably 4, the segmented ditches of its circuit forming probable causeways. Thus, on the eastern side a gap of 7m probably represents an entrance, while a gap in the south-eastern corner may have performed a similar function. Other gaps were evident on the south side and south-west corner. The apparently contemporary nature of Trackway 1 and the converging double ditched track (G5040 and G5007) forming the east side of Enclosure 2, along with ditch G5039 closing their southern ends at their southern end, suggests stock funnelling and possibly the location of drafting gates for separation of stock (such as ewes and lambs from rams etc.; Pryor 1998).

Enclosure 1

The irregular Enclosure 1 appears to represent or become a focus of occupation in a later phase, but may have originally formed an integral part of the Enclosure 2 arrangement. The earlier ditches of the complex, all similar in shape with 'U'-shaped profiles, seem to relate, at least spatially with those of Enclosure 2 and were often cut by features more redolent of occupation. The enclosure itself primarily consisted of a curvilinear ditch (G5003) aligned north-south curving to the south-east towards the south and 22.92m long; it was 0.6m wide and 0.41m deep on average (Fig. 49). This formed an irregular enclosed area 19.8m north-east to south-west and 24.8m north-west to south-east. The northern terminal of the ditch was located about 3m south of

ditches G5043/G5047, these in turn 1.1m south of the line of parallel ditch G5059. These latter ditches may have represented the northern side of Enclosure 2, with the gaps between them typical of stock management. The southern terminal of G5003 stopped 9m short of the eastern side of Enclosure 2, here represented by the northern segment of ditch G5040. The feature contained a uniform fill with a concentration of carbon at the north terminus, but generally the fills were fairly sterile apart from a few sherds of mid to late Bronze Age pottery, a few worked flint flakes and mussel shell.

Ditch G5003 was cut by a later emplacement on the west, an 'L'-shaped ditch G5002, 9.5m long. It averaged 0.84m wide and 0.35m deep, with a maximum width of 1.19m at the north terminus. This terminal was adjacent to the northern terminal of the earlier ditch, suggesting a boundary on this line, apparently later reinforced by another ditch alignment (G5004; below). This feature perhaps represented an expansion of the enclosed area. The ditch contained a fill of silty clay with carbon and mammal bone with some grain and seeds. The very small amount of fragmented pottery recovered could not be closely dated. However, there was a single deposit of mammal bone which included cattle and sheep or goat crania and articulated horse foot bones with a high concentration of carbonised material in the northern terminus, this possibly comprising some form of ritualised deposition, particularly as it was associated with 23 struck flakes and three cores.

Seven ditch segments (G5010) formed a fragmented set of internal divides within the enclosure that were aligned north-east to south-west. The maximum length of the central ditch was 7.3m with an average width of 0.5m and depth of 0.3m. Three ditches intersected with this feature at right-angles and generally about 2.5m apart, forming an H-shape on its side [much cut about by later pits]. These cross-ditch segments were 3.3m long, 0.52m wide and 0.15m deep. Located 5.35m to the west, a second ditch segment (G5002), extending south from the northern side of the enclosure was 7.3m long, averaging 0.56m wide and 0.19m deep, thus forming, with the G5010 complex an enclosed trapezoidal space 7m long and 5–6m wide and open on the south. Its northern edge was perhaps represented by the location of later ditch G5004, which must have cut away an earlier alignment that bounded the northern terminal of all of these ditches. To the west of the north-south aligned ditch another enclosure, subrectangular in shape and also open on the south side was formed with ditch G5003; this was about 10m long and 7m wide. All of these features contained similar uniform fills of clay silt, all virtually sterile apart from a few possibly Neolithic flint flakes and traces of grain, hazel nut shell, oyster shell and charcoal.

Ditch (G5004) was recorded as cutting the northern terminals of all of these main north-south aligned ditches. However, given the T-junctions formed and the relatively shallow nature of these ditches it is possible that some of these relationships (e.g the relationship with G5002) were not correctly recorded or that ditch (G5004) was the original ditch but unlike the perpendicular connections had been recut. Therefore it is not impossible that ditch (G5004) represents the course of the original north side of Enclosure 2. The feature was aligned north-west to south-

east (but curving to an east-west line to the east), 13.83m long and averaged 0.5m wide and 0.35m deep with a maximum width and depth at its east terminal. The feature contained a uniform and virtually sterile fill consisting of dark clay silt with carbon.

The Trackways and field system

A near site-wide arrangement of generally shallow and often meandering ditches although relatively fragmentary, can be quite confidently seen to form a roughly coaxial but rather loose arrangement of fields and double-ditched trackways, aligned predominantly north-west/south east over the southern two-thirds of the site, turning to a more north-south alignment in Plateau 1. Although some elements of this system might be later there is no particular reason to suppose that most of the individual ditches are not roughly contemporary, dating evidence such as it is (relatively small pottery assemblages and radiocarbon dating) indicating a mid-Bronze Age provenance at the latest. Nearly all the ditches had shallow U-shaped profiles with often sterile fills of similar silty clay (suggesting that the ditches gradually filled by erosion), and only exceptions to this are detailed below. The excavation sample size was approximately 10 percent.

In the text below, the landscape arrangement of droves and fields is described from the southern part of the site northward [as it is possible that this is the earlier part of the system]. Further, the system can be conveniently described as a southern system and a disconnected northern system, separated by the relatively blank areas of Plateau 3 and 2 where only fragmentary traces were observed. An attempt to relate these two physically separate and slightly dissimilar arrangements is provided below. Only the more significant finds are described; many ditch fills contained small inclusions of fired clay or charcoal but usually in minimal quantities.

Trackways 1, 2, 4 and 5

Trackway 1 consisted of two straight parallel ditches G5006, approximately 2.4m apart that were aligned roughly NNE-SSW for a distance of 31m (Figs. 48, 50). The track was situated within the envelopment of Enclosure 2, seemingly aligned on its original south-eastern corner. Both ditches averaged 0.9m wide and 0.2m deep with mostly sterile fills, although one intervention yielded about 20 sherds of mid to late Bronze Age pottery. Burnt flint was relatively common and some parts of the ditches also contained small amounts of grain and chaff. One intervention in particular yielded emmer wheat (*Triticum dicoccum*) and barley (*Hordeum* sp.), but not spelt remains. The western ditch was re-cut on the west by a small ditch (S5035) that extended for 6.7m along the same alignment. The northern terminal of this ditch contained a concentration of sea shell, mostly mussel, with smaller amounts of cockle, winkle, barnacle and oyster. To the north the route may be represented by Trackway 4 and was less probably continued to the south by Trackway 2. In any case, this alignment would seem to bisect Enclosure 2 from its projected north-west corner to its south-eastern.

Trackway 2 (Fig. 50) was situated 30m south-east of Enclosure 2, aligned north-east to south-west with the eastern side of the enclosure. The drove way fragment consisted of two straight parallel ditches approximately 2.1m apart that extended for 15.8m. Together the ditches averaged 0.5m wide and 0.13m deep; they both yielded burnt flint, mussel shell, grain, chaff and charcoal but no good dating evidence. However, as the track is not closely aligned on Trackway 1 it is suggested that it actually formed a junction with Trackway 5 just to the south-east of the southern end of Trackway 1, at the south-east corner of Enclosure 2. As such it appears there was a multiple junction of tracks at that point allowing drovers with herds to select the appropriate route north, north-east or north-west from the junction (Fig. 48). It should be noted that two of the possible tracks forming the southern and eastern sides of Enclosure 2 are not labelled trackways but also appear to have performed that function.

The fragmentary Trackway 4, situated in the northern part of Plateau 5 consisted of a large number of ditch segments that extended for about 190m from the northern limit of the area to about 36m north of Enclosure 1 (Fig. 50). The main north-east to south-west alignment of two irregular, sinuously arrayed parallel ditches (G5011) was 82.8m long, the ditches approximately 2.5m apart (although there was some variation). This continued to the north after a gap of 16m, as an irregular single ditch in three segments (G5015) 27m long, which probably represented the eastern side of the trackway. Together the ditches averaged 0.7m wide and 0.18m deep and contained similar uniform fills which were virtually sterile, although one early Bronze Age potsherd was recovered from G5015. To the south of G5011 (by 25m) the route was probably defined by another single meandering ditch (G5017, probably the eastern side of the drove way), aligned north-south that was 50m long, 0.5m wide and 0.15m deep with a profile similar to the other ditches. The southern section of this ditch aligned quite closely with the western side of Enclosure 1. Another ditch (S5206) connected with this at a ninety degree angle and extended for 46.5m before petering out. This feature could conceivably have originally connected with Trackway 3 to the north-east (below). All of the ditches contained a uniform sterile fill, virtually indistinguishable from the natural subsoil suggesting they were backfilled by eroded material. The lack of finds from this ditch system suggests that there was little occupation in the immediate vicinity, also indicated by the near complete lack of other features in the vicinity.

The eastern part of Trackway 5 (Fig. 50) was situated 38m south-east of Enclosure 2 and consisted of two parallel ditches (G5020) between 2.4 and 3.8m apart, aligned north-west to south-east and 33m long. Located 33m to the north-west a further ditch segment (G5008) extended for 8.6m and led up to the southern side of Enclosure 2. The route thus aligned directly on the causeway into the south-east corner of the enclosure. However, as noted above, there was a junction of tracks at this point and a continuation of the track may also have extended along the southern side of the enclosure. This was defined by a third ditch segment (G5041), parallel to the enclosure ditch, 10.9m long and set outside the enclosure. Its width of c.3m is

similar to most of the other prehistoric drove ways. Together the ditches averaged 0.9m wide and 0.2m deep and contained similar fills and small assemblages of mid to late Bronze Age pottery, the latter from about three interventions; whilst another intervention south of the enclosure provided an early Bronze Age sherd. The northernmost terminus of G5020 yielded about twenty undiagnostic flakes and blades; the lack of any flintwork in any of the other ditch segments suggests this could have been a special deposit. Samples revealed traces of grain, chaff and burnt flint. This track was the southernmost representation of a drove way of this period found on the site.

Associated field system

A number of fragmentary ditch segments, mostly to the east and south of Enclosure 2 may well relate to these trackways and probably represent traces of an associated field system or further droves (Fig. 50). Extending south-eastwards (after a short gap; see Fig. 48) from Enclosure 2, from exactly the northern side of the entrance in its eastern side was ditch G5042, 23.2m long, 1.3m wide and 0.13m deep; this contained a sterile fill, but its position not only indicates its contemporary nature but that it also may have represented the northern side of a trackway. Forty metres to the south, another ditch segment (G5022) on a similar alignment was 12.2m long, averaging 0.7m wide and 0.25m deep. The uniform fill of this feature yielded two early Bronze Age pottery sherds, while the northern terminal provided nearly twenty flint flakes. This ditch segment was near parallel with and 44m north-east of Trackway 5. Other short but unclearly dated ditch segments were also recorded in this area.

Just to the south a meandering ditch or arrangement of ditches (G5031 investigated in 15 separate interventions) which comprised a curvilinear feature aligned north-east to south-west that was 42.6m long, averaging 1.3m wide and 0.3m deep. Its extents at both ends petered out and could not be traced any further, nor were there any other alignments in the vicinity that could be confidently associated with the arrangement, although it could be construed as the fragmentary remains of an enclosure or possible trackway, perhaps associated with ditch alignments to the south-west (G6017 and G6089 below). Located near the southern end was a ditch that extended out to the west, forming a small subrectangular enclosure, with the G5031 alignment delineating the south-east side; however, both of its bulbous terminals were recorded as cut by the alignment, which may suggest that this was an earlier and entirely separate, unconnected feature. This extension measured 14m long, with the ditch averaging 0.9m wide and 0.35m deep. Only two interventions in this arrangement yielded any datable material, possible early Neolithic and early Bronze Age pottery but in very small amounts. A small worked flint assemblage from the ditches was mostly of undiagnostic flakes, blades or chips, although the northern terminal of the extension yielded a few Mesolithic pieces.

Further to the south-west by 25m on Plateau 6, another ditch of comparable form (G6017; Fig. 50) was on a similar alignment and may represent a continuation.

Further south still, another analogous ditch (G6089) may also be part of the same system, this curving southwards before being removed by medieval features and truncation. The fills of both features provided no dating evidence. These features either represent a southwards continuation of the field system, or alternatively a rather irregular enclosure at least 150m across, only partly extending into the site area. Few other features were found in this area apart from a few undated pits and post-holes.

Finally, a number of ditches of similar form on the western side of Plateau 6, 140m or more to the west of Enclosure 2 might relate to this field system but they were extremely fragmentary and of uncertain date. Three ditch sections aligned WNW/ESE, the latter comprising two slightly sinuous and parallel ditches 2.4m apart, may have formed a driveway (Trackway 22). A few other ditch segments in this area, either near parallel or at right angles might be related but were not well dated, only yielding some burnt flint, a few flint flakes and a scraper and a small pottery assemblage, which was probably prehistoric.

Trackways 3, 8–9 and 19–21

Trackway 3 was an arrangement of two sets of parallel ditches (Fig. 504) located 105m north-east of Enclosure 1 and probably represented two separate routes forming a T-junction (with the arms of the 'T' arranged south-west/north-east). The two ditches forming the stem were 21m long located 2.2m apart. The 'arms' were 29m long and contiguous with the 'stem' ditches. All the ditches had an average width of 0.6m and depth of 0.3m and yielded a handful of early Bronze Age pottery sherds from three interventions. The southern alignment of the arms, may have connected to fragmentary boundary ditches in this direction (G5017) or perhaps curved west to ditch S5206 (above), while the northern part may well have been continued by Trackway 9 as a curvilinear route section (below).

Trackway 8 was 15m east of the Trackway 3 junction but appeared to be too far north to be a direct continuation of that features eastern alignment, suggesting it may have represented an earlier or later route on a similar course; the feature could not be related to any other ditches of the surrounding field system. Alternatively they may have formed an isolated stock management system such as a 'race' for separation/ inspection of livestock (Pryor 1998). Trackway 8 consisted of two parallel ditches approximately 2.1m apart aligned north-west to south-east and was 18.6m long. In addition, 2.2m to the south-west was a third ditch aligned at right-angles that measured 5.4m long. Together the ditches averaged 0.8m wide and 0.25m deep and yielded, daub and one sherd of early Bronze Age pottery. An assemblage of worked flint from the western terminal of the southern ditch has been dated to the earlier Neolithic, which suggests a possible ritual deposition of curated material. A smaller quantity of Neolithic flints came from the southern terminal of a perpendicular ditch at the western extent.

The southern end of Trackway 9 was located at the northern end of the Plateau 5 area where it comprised three segments of parallel ditch (G5016) aligned north-west to south-east (Fig. 50). The northern ditch was continuous, slightly sinuous and 40m long, averaging 0.7m wide and 0.2m deep. Situated 2m to the south-west of this was a fragmented ditch about the same length overall, and about 0.6m wide and 0.2m deep generally. The features were particularly sterile artefactually. Its ditches converged with those of Trackway 4 to the west but did not connect up. After a gap of about 15m, the drove way continued on a similar course into Plateau 4, where it comprised a pair of parallel ditches, set 3.7m apart, on the same line. These were visible for about 16m, where the line was interrupted by a large Iron Age ditch G4006. A small section of another parallel ditch (G4037) on the south was not traced for more than a few metres in either direction but was probably related. Only the southern ditch of the trackway continued across the remainder of the plateau, as two unconnected straight sections of ditch extending for 80m before disappearing. The ditches were all between 0.5 and 0.65m wide and usually quite shallow, with a maximum depth of 0.3m, though to the south this may have been due to machine truncation of the colluvial deposit in the area. The ditch fills were again sterile.

Trackway 19 was set at a near right angle to, and about 13m west of the surviving end of Trackway 9. It was traced over a meandering south-west to north-easterly course for about 130m and was mostly represented by a single ditch, although fragmentary sections of parallel ditches suggest that it was another drove way. The majority of the ditch comprised G4017 which was recorded for over 90m with an average width of 0.62m and depth of 0.16m. To the north this turned due north before becoming untraceable. Three short ditch segments appeared to mimic the curves of the ditch about 1.2 to 3.8m to its north-west. These ranged in length from 1–8m with a width of 0.50m and depth of 0.08–0.31m. The segments can thus be interpreted as the truncated remains of a parallel ditch or ditches. Other adjacent parallel ditch segments of similar form were also recorded further north. An additional ditch segment, the most northerly part of the observed drove-way, was defined by ditch G4106. The ditch was aligned north to south and visible for c. 30m and was relatively wide (0.83–1.41m) but still shallow, at 0.10–0.14m. The fill of this particular segment yielded five sherds of possible Grooved Ware with worked flint flakes and an end scraper. A few other segments yielded small quantities of earlier prehistoric pottery and many interventions yielded flint flakes and the occasional flint tool and burnt flint. Environmental samples were poor however. Overall, the multiple alignments of the ditches suggest that this was a long lived route that shifted its position laterally slightly over time. The fragmentary nature of the ditches was mostly due to truncation, although they were extremely difficult to define in the ground, only readily becoming apparent after weathering of the surface. To the north, the route may have diverged into two courses, the northward aligned course indicated by G4106 and a north-easterly route defined by Trackway 20. Trackway 20, again defined by two parallel curvilinear ditches separated by a distance of between 2.3–3.4 m, was traced for c.28m on a north-east/south-westerly course and was located about 30m east of the most northerly part of Trackway 19, to which it may have originally connected (Fig. 50). The ditches were between 0.40–0.88m wide and

0.18–20m deep. One sherd of possibly early Bronze Age pottery was recovered from the southern ditch, but most of the ditches appeared sterile.

Another potential drove (Trackway 21) was only delineated by a single, minimally investigated and extremely shallow ditch. However, it is considered to represent a possible track as it continued the alignment of Trackway 9. The ditch was visible for c. 87m on a north-west to south-east alignment with a width of 0.50m and maximum depth of 0.11m at a central intervention (but was shallower towards its extremities). No finds were recovered. Although the alignment of this feature was very similar to Trackway 9, it was offset slightly to the north. However, both ends of these trackways appear to converge on the northward curve of Trackway 19, suggesting that a continuous route between both may have conjoined with this short section of the latter track. The route was not discerned to the west side of the plateau, nor on Plateau 2 to the north-west, but could conceivably have connected with Trackway 7 on Plateau 1 (below).

Associated field system

A few additional ditches in the area seem to relate to these trackways and may represent adjoining fields. On Plateau 4 a linear cut (G4036) extended over 45m north-east from the central part of Trackway 9. This feature, following the spine of the shallow valley and cut through colluvium was about 0.70m wide and 0.30m deep; it yielded a few flint flakes but no other artefactual evidence. A similar ditch 50m to the south-west (G5033) was near similarly aligned but only traced for 9m. This yielded two very small prehistoric sherds.

In the northern part of Plateau 5, ditch (G5032) aligned north-west to south-east extended for 75m, averaging 0.65m wide and 0.15m deep. It could conceivably have connected with part of Trackway 3, 26m to the south-east but there was little evidence for this in the ground. The ditch was originally thought to be much later in date since it seemed to coincide with the south-western side of a band of weed growth that was observed and plotted. Although not discernible in the ground, this was presumed to be the residual colluvial fill of a possible negative lynchet, more seed laden than the surrounding natural subsoil, but this was never resolved. No finds were recovered from the ditch. Nevertheless the ditch cut across the line of Trackway 4, suggesting it was of later date.

To the west further ditches probably belong to the field system. Three linear features (G5045) formed a boundary aligned north-east to south-west and 75m long, averaging 0.5m wide and 0.2m deep and apparently forming a field with Trackway 9 to the north and Trackway 4 to the east (or alternatively associated with perpendicular ditch G5032 which post-dated Trackway 4). Located at the south-west terminal of this feature a slightly more substantial ditch was aligned north-west to south-east and traced for 16m. A few worked flint flakes were recovered from a few interventions as well as two early Bronze Age potsherds.

Further north, on the extreme eastern side of Plateau 3, a series of north-south aligned ditches (G3051; see Fig. 47) were somewhat divorced from the rest of the system. Situated near the base of a buried valley, they followed the contour of the valley bottom and may have been sealed by colluvium. While representing six individual features the sinuous segments formed three parallel ditches, the western two of which were intercutting, although stratigraphic relationships were impossible to define. Generally they were between 0.5–0.9m wide and approximately 0.12m deep with each filled by generally sterile silty clay, probably the result of natural erosion, although two very small sherds of probable prehistoric pottery were recovered. However, the more north-south alignment of them is at variance to the alignments in this part of the site. If not for their rather meandering nature and their probable relation with the colluvium (which was always rather uncertain), the ditches would fit more conveniently with the late Iron Age/Roman field system and in this respect it is worth noting that one Roman potsherd was recovered from them.

Trackway 33

Trackway 33 to the north-east of Trackways 9 and 21 was another possible route, aligned on a very similar course and represented by ditches on Plateaus 1, 2, 3 (Fig. 47, 51). On Plateau 3, parallel but sinuously arrayed ditches G3075 were investigated in the south-eastern part of the main area (Fig. 47). The ditches, aligned NNW/SSE, were about 3.8m apart and traced for a length of 23m. They were about 0.4–0.6m wide and no more than 0.2m deep, with sterile fills apart from a few flint flakes. Extended to the north-west, their course would have passed immediately to the east of Barrow 5.

Although somewhat speculative due to their distance (275m), ditches on Plateau 2 on a similar alignment may represent a continuation of Trackway 33, particularly as these exactly align on Barrow 5. Two ditches (G2092–2093) aligned north-west to south-east were traced over a length of 62m. In the southern half of this line, the two ditches were parallel and 2.8m apart, but the north-eastern ditch terminated and its course was replaced by the adjacent ditch (G2092) which continued individually. Ditch G2092 was more substantial than most others of the field system, up to 2m wide and 0.35m deep (G2093 was 0.9m wide and 0.24m deep at maximum) but the fills were mostly sterile apart from some mid to late Bronze Age potsherds and a flint flake from the former. Environmental samples produced little but a trace of grain. It is possible that the alignment was continued further northwards by Trackway 24 on Plateau 1 (below)

Trackway 34 and associated features

Another potential trackway and associated boundaries were located extending off Trackway 33 to the north-east in the north-east corner of Plateau 2 (Fig. 51). They comprised a sequence of near parallel and often intercutting ditches, of varying width (0.83–1.8m) and of mostly shallow depth (0.06–0.58m) aligned north-east/south-west and extending over a length of about 61m. Two alignments of ditch

on the west were between 2.8 and 4m apart, the western ditch (G2102) continuous, the second comprised of three segments. The comparable size and shape in plan of these ditches, where paired, suggested that they were contemporary and represented a possible drove way.

A more substantial ditch to the south-east (G2103), 1.13m wide and 0.54m deep at maximum, cut elements of this alignment. To the north, this curved eastward in a broad arc and extended out of the excavated area. The curve of this ditch was in turn cut by ditch G2105, a segment 41m long which consisted of a reasonably straight southern section which turned abruptly to the east towards its northern end and then curved towards the north-east. All of these ditches contained either sterile fills or yielded small quantities of worked flint flakes with one blade and some prehistoric pottery, three sherds of possible earlier Bronze Age material and two mid to late Bronze Age sherds. The disposition of this arrangement of ditches is highly suggestive of a drove road, extending at a near right-angle from Trackway 33, and bordered on the south-east side by a possible enclosure ditch or ditches (G2103 and G2105), although the latter is a highly tentative interpretation. The drove could relate to ditches found further north in the northern part of Plateau 3 (e.g. G3070).

Further, the potential enclosure ditches may relate to linear features on a similar alignment (G2104 and G3036) 30m to the south-east, which could conceivably form the other side of the postulated enclosure, though these could not be reliably dated (only a few fragments of pottery and some worked flint were recovered). These ditches were both larger than the majority of field and drove-way ditches, of similar size to both G2103 and G2105, suggesting that they may all have been related. If these ditches do represent an enclosure, it was probably related to stock-keeping as there was little sign of any occupation within or in the immediate area although there was a scatter of amorphous undated pits to the south east (not illustrated) and at least two within the enclosed area (G2111 and G2109). Both were large but shallow features, the former 3.25m long, 3.20m wide and just 0.20m deep which yielded a few sherds of indeterminate prehistoric pottery. However, pit G2109, partially exposed to the north yielded a small assemblage of possible mid to late Bronze Age pottery and another feature just outside the enclosed area on the east (G3073) was also redolent of occupation. This consisted of an oval pit 2.7m across, 0.29m deep with moderately sloping sides and a concave base filled with dark silty clay that contained a relatively large corpus of prehistoric pottery, worked flints and grain, chaff and hazelnut shell. The pottery from the feature was rather mixed and included a possible early Neolithic sherd, one beaker rim (similar to East Anglian style beakers) and middle Bronze Age material. The flint assemblage included flakes, blades and a hammerstone, perhaps indicating that the earlier material was curated (the beaker sherd could conceivably derive from a disturbed burial). The feature appears to have been a refuse pit of probable middle Bronze Age date.

Trackway 10 and associated fields to the north

Before describing the main northern system of fields and droves, a small fragment of a possible early arrangement should be considered. Trackway 10 was somewhat divorced from the rest of the system, at the northern side of Plateau 8, and, unlike the remainder of the fields and routes in this northern area was on a similar north-west/south-east alignment as the droves and field boundaries to the south (Fig. 51). The feature was formed by two intermittent, parallel ditches about 3m apart (the northern of the two more continuous) with a total length of approximately 111m. The features, generally about 0.5 to 0.8m wide and 0.2m deep were relatively shallow probably the result of truncation. To the east, the alignments were obscured by a colluvial deposit with the majority of the southern ditch largely removed by later agricultural activity. A single sherd of probable Iron Age date was retrieved from the fills, but the alignment of the track is at variance with that of the Iron Age features and its stratigraphic relationship with several pits relating to the Iron Age settlement suggest an earlier, probably Bronze Age date. One intervention also produced about fifteen flint flakes and fragmentary animal bone.

Two ditches (G8009 and G8011) about 46m apart, extended to the north-east from the trackway, the latter more substantial (about 1.3m wide and 0.4m deep); both features possibly cut the northern drove ditch, but may in fact be contemporary in use as they did not extend south of its line. The most significant find from these ditches was a large quantity of prehistoric pottery from the southern terminus of G8011, eighty-eight sherds from a late style Collared Urn dating to the early Bronze Age. This may well represent a special deposit in the terminal and indicates the potential early nature of at least parts of the field system. The features almost certainly represent fields to the north of the site area formed somewhat later than the trackway itself.

Trackways 6-7, 14-18 and 24

The main area of field system on Plateau 1 was better preserved than to the south, although again the ditches were generally shallow and fragmented with the quantity of recovered finds variable but never particularly high. There was a notable concentration on the west side of the plateau however, and a paucity of finds to the east (Fig. 51).

Trackway 7, on the western side of Plateau 1 could be a continuation of the Trackway 21 alignment (on Plateau 4) to the south-east. The arrangement of medieval enclosures on Plateau 2, if respecting the positions and alignment of earlier boundaries (which seems to be the case), suggest this route originally passed midway between Barrows 7 and 8 to the south, from where it *could* have curved eastward. This is of course supposition, since no actual trace of these ditches was found on Plateau 2. The route consisted of a number of segmented ditch lengths forming two parallel alignments extending north-south for over 50m. Although two ditches were not evident over the whole course (the western side was less fragmented), enough survived to indicate that this was almost certainly a drove way. The ditches were generally 2.3m apart, though closer in one location to the south;

this pinch point may have acted as a livestock funnel, and probably used for stock handling in tandem with Trackway 6 (aligned to the west from Trackway 7) and a sudden eastwards bend defined by an L-shaped ditch (G1008). Trackway 7 segments had a width range of 0.30–1.15m and were between 0.07–0.24m deep. Although most of the interventions produced no finds, a few contained burnt and worked flint, mostly flakes and the occasional scraper while a few early prehistoric pottery sherds were also recovered from one location, while another produced a more concentrated assemblage of flint, four flakes, a blade, scraper and a core. These finds were not too distant from two foci of possible settlement activity (below). An ephemeral linear feature traced for 42m on an identical alignment in the Plateau 1 pond area to the north (G10078) was almost certainly a continuation of the track, but here resembled a truncated hollow-way consisting of a 1.62–2.6m wide feature with a broad U-shaped, slightly undulating base 0.22–0.4m deep. This provided no dating evidence.

Two parallel ditches interpreted as a drove way (Trackway 6) extended west from Trackway 7 (21m from its southern located extremity) for about 34m. The ditches, about 4m apart were unusual in being extremely wide (about 3.2m maximum), with shallow flat based profiles no more than 0.15m deep, although the southern ditch (G1012) narrowed considerably at its eastern end. One ditch contained sherds of early prehistoric pottery, the other a few worked flint flakes. The northern ditch (G1007) was possibly cut by a further north-south aligned drove way ditch (Trackway 14) to its west while the southern ditch terminated just short; neither could be traced further westward, presenting the possibility that the features formed the southern side of an enclosed area (Field P2, or Enclosure 4) between Trackways 14 and 7. Another boundary (G1016) 32m to the north appears to have formed the northern side of the otherwise track-defined enclosure.

Trackway 14 was formed from two parallel linear ditches forming a near straight alignment arrayed NNW/SSE. The ditches were about 2m apart on average, both about 1m wide with a depth of 0.20–0.25m. The northern extents terminated together suggesting a definite end point which might be related to other ditched elements here possibly connected to stock handling, while the southern extents were gradually eroded away suggesting a further continuation originally (if extended this would slowly converge with Trackway 7, perhaps significantly aligning on Barrow 7). The western ditch (G1015) was interrupted by a gap of 1.6m near its southern end; the position of this correlated with the location of Trackway 6 suggesting a likely association. A few mid to late Bronze Age pottery sherds were recovered from one of the northern terminals, possibly originating from a nearby settlement focus, but otherwise all the fills were sterile.

Ditches forming another potential trackway (Trackway 24) spanning a total distance of over 250m were located about 70m east of Trackway 7 and on a closely parallel alignment, suggesting again that they were near contemporary. In the pond area to the extreme north of the site, the route may have comprised two roughly parallel curvilinear features (G10042–10043) on a near north-south line, 2.3m apart, 0.88–2.0m wide and about 0.47m deep on average. The fills were virtually sterile, apart

from a fragment of animal bone (a cow mandible), one flake and an iron nail, although the latter is likely to have been intrusive.

In the main area, the double ditched nature of the route was not so readily apparent but here there was a more complex arrangement of ditches, some of which may have formed field boundaries. There is compelling evidence that at least some of these alignments survived into the medieval period (perhaps as hedges), where they were respected by medieval enclosures. The drove probably consisted of a main north-south aligned and near continuous ditch (G1083 and G1142, the latter to the south), with a paired ditch (G1091) set about 5.5m to the east which only survived as a discrete segment 38m long towards the southern part of the area. Continued southwards, the alignment, if curved slightly to the east, may have connected with the putative Trackway 33 (above) although there was no physical evidence for this. Virtually no finds were recovered from these features, suggesting a lack of settlement activity on the eastern side of the plateau, also suggested by other evidence.

The putative Trackway 16 was the northernmost of a series of east-west aligned lateral routes, most fragmentary and only surviving over short distances. This drove was comprised of two parallel ditch segments 1.75m apart which extended over less than 20m at the extreme northern side of the main Plateau 1 area. Both ditches had a depth of between 0.22–0.28m, although the northern more extensive ditch was slightly wider at about 1m. The southernmost ditch was just 4.70 m long, although both terminated at the same point on the west, about 2m east of the west ditch of Trackway 7, which is highly likely to indicate they were contemporary and that the two routes connected. The northern ditch yielded animal bone and marine shell, some of which could potentially derive from occupation material in an earlier pit (G1132 below).

Trackway 17 was an arrangement of east-west aligned curvilinear ditches no more than 15m south-east of Trackway 16 and consisted of a number of segmented ditch lengths forming a rather irregular arrangement extending for about 50m. Two roughly aligned ditches (G1096) formed the southern part of the alignment, although the separate segments were offset and slightly overlapped, suggesting recutting. The northern side (G1113) only survived as a small segment 7.70 m long and was about 3.5m distant. The ditches had a width range of 0.43–1.10m and depth of 0.04–0.25 but were virtually sterile artefactually, one copper alloy lump (FN 1.1) being unidentifiable. An environmental sample showed a concentration of charcoal in the easternmost terminal of G1096, as well as some grain and a trace of barnacle shell. To the east, the route may be equivalent to Trackway 15. This alignment on the eastern side of the plateau (110m east of Trackway 17), comprised two parallel ditch lengths (on an east to west alignment, 2.4–3m apart) which extended for nearly 40m. The ditches varied in width, mostly no more than 1.5m wide, thinning to the east where they were finally eroded away, although the southern alignment appeared to coincide with the northern side of a prehistoric field further west (Field P8 below), beyond which the alignment was replicated by Trackway 17. Both tracks may have

merged at near right angles with Trackway 24 at this point though there was little evidence for this in the ground, apart from perhaps the arrangement of the field system ditches which may indicate that the track veered north to merge with Trackway 24 (see G1104 below). Virtually no finds were recovered from these features.

About 35m to the south of Trackways 15 and 17, another set of arranged segmented ditches recorded on a WSW/ENE alignment may have delineated the course of Trackway 18. The most evident and continuous ditch, although segmented was G1064, traced for 85m and made up of six closely spaced elements, separated by no more than c. 6m. Another ditch segment (G1065) situated c. 21.5m to the south-west on the same alignment and 9.2m long was probably a continuation. The double-ditched nature of the route was only obvious at the eastern end however, where G1064 was paired with a parallel ditch about 1.7–2m to the north. The ditches were of varying width (1.5m maximum) and varied in depth from 20mm to 0.52m, this range reflecting the eroded nature of the features where they spanned the colluvial spread in the centre of the plateau. Most of the excavated fills were sterile, just one early Bronze Age sherd being recovered.

Associated field system

Fragmentary traces of a field system appear to be related to the above described drove ways. On the western side of Plateau 1, two or three fields (Fields P1–3) can be discerned west of Trackway 7, the northern fields (P1–2) divided by an east-west curvilinear ditch (or hollow way fragment G1016), curving north-westwards, this alignment being continued by three further overlapping ditch segments (G1100). Feature G1016 was about 25m long, 3.20m wide at maximum and 0.25m deep, with a flat based profile. Its width and profile suggest that it may represent a hollow way rather than a ditched boundary. In form, this was similar to the two ditches forming the south side of Field P2 (G1007 and G1012), suggesting they were contemporary. The fill near the eastern termination yielded a small assemblage of mid to late Bronze Age pottery and a couple of flint flakes. The feature had an uncertain relationship with the Trackway 7 ditch on the east and petered out to the west suggesting it originally extended further. A further continuation is probably represented by a group of undated features of similar form a few metres to the north-west (G1099), that formed an irregular sub-oval about 8.4m long and with a near identical width, depth and profile.

These were immediately bounded to the south by G1100, a series of staggered ditches traced for approximately 31m on a north-west to south-east alignment. These were about 0.86m wide and 0.21m deep. The alignment appeared to be graded away to the west although this could have been a real terminal. The fill here contained a concentration of carbon and also yielded three sherds of mid to late Bronze Age pottery and a flint flake. Very small and probably prehistoric potsherds were also found in other interventions, these finds possibly originating from a nearby occupation area just to the north. Trackway 14 terminated just south of this

alignment. It may be related to additional ditch segments to its west that formed a small enclosed and divided triangular space about 15m across against the side of the trackway, bounded on the north by the G1100 ditch alignment and on the west by ditch G1067. Their disposition is suggestive of stock handling, perhaps the sorting of stock into different fields to the west. The southern terminus of G1067 yielded five small sherds of early Bronze Age pottery, about eleven worked flint flakes and some animal bone, perhaps suggestive of a special deposition, although the features were in a part of the field system that yielded a significantly higher proportion of finds than elsewhere.

To the east of Trackway 7, and either side of Trackway 24, a sequence of north-south arranged fields (Fields P4–P9) can be postulated between the lateral routes, with a number of individual, if ephemeral internal divisions being apparent. These collectively provided a very small assemblage of flint flakes as well as concentrations of burnt flint. The significance of this alignment is indicated by the ditch forming the southern side of Field P7 (G1107 possibly also delineating the northern side of Trackway 15) which returned south at its line. This more substantial ditch was visible for c. 50m on an east-west alignment, with its contiguous southern section following the line of Trackway 24 for c.19m and thus defining the north-western corner of Field P8. The ditch had an average width and depth of 1.20m and 0.36m respectively but only produced a few flint flakes and a scraper. The north-south part of the ditch was aligned with a further north-south field boundary ditch (G1094) a few metres to the east and seemed to respect its position and alignment. This ditch, which had a slightly curved terminal end to the north, was located 8–9m east of the Trackway 24 line and was intermittently traced for nearly 100m to the south before being eroded away. Significantly, it respected the slightly curving line of G1083 (the postulated eastern side of the drove) quite closely indicating that they were most probably coeval, and by extension the entire system of fields and drives here would appear to be near contemporary. The feature yielded a handful of flint flakes but no good dating evidence. Its line was later respected by a medieval enclosure ditch (Enclosure 22) suggesting that it survived in some form (e.g. bank and hedge) into this period. A third, more irregular ditch with a sterile fill was set between these main features at the northern side of the site.

The fields described above were bounded on the south side by an intermittently located but significant configuration of ditch segments, aligned near east-west, which curved in a broad north-easterly trending arc, across the line of Trackway 24 towards the centre of the eastern side of the plateau. To the west the alignment was fragmentary, being difficult to trace in the colluvium and disturbed by extensive medieval activity, but can be discerned in ditch segments G1158, and G1004 (at the west and east extremities). Here the features were between 1m and 1.9m wide, no more than 0.3m deep and only yielded a few worked flints, although there were a number of later prehistoric cores from one intervention. This alignment was continued north-east by ditch G1034 which provided a more definite boundary, and appeared to form the irregularly shaped northern and eastern extent of another field (Field P10), south-east of the potential fields (Fields P1–P9) straddling Trackway 24.

The ditch, extended north-east for c. 53m before sharply turning east for c. 15m in a convex arc, and then curving to the south-east on a meandering course for a further 62m. The feature ranged from 0.48–1.70m wide with a depth of 0.09–0.37m and generally provided a sparse assemblage of mostly residual worked flint and daub. One intervention on the north-east side however produced a number of very small indeterminate prehistoric pottery sherds perhaps from one vessel, suggesting deliberate and perhaps ritualized deposition. Some of the worked flint was also of potentially earlier Neolithic date, again from a terminus. The final south-easterly alignment of this side of the field was very similar to ditch alignments found in the northern part of Plateau 3, which with Trackway 33 and 34 might define the southern extents of this field.

There were significant kinks in this ditch (G1034; Fig. 51) as well as some sudden changes in width, suggesting it was dug in separate sections, perhaps by different teams, although there was no evidence for this in the fills (suggesting that any individual sections were contemporary and backfilled together). That sections of such ditches were cut by individual workers has been suggested on other sites (for example Masefield 2000) due to differences in morphology, but generally at Thanet Earth this was not particularly evident, possibly due to severe truncation of the profiles.

A perhaps slightly later set of ditches appear to form distinct, but irregular fields to the north of G1034; these did not connect with this ditch but terminated just short suggesting an extension to the system. To the east, G1042 extended north-east for about 60m (although its south-western extent was never fully clarified) before turning north for a further 53m. The northern part of this consisted of a fragmented L-shaped ditch (G8187) which turned west at its northern end and continued for c. 26m but could not be traced any further. The ditches varied in width from 0.5–0.8m, were no more than 0.3m deep and yielded prehistoric pottery of middle Bronze Age date, burnt and worked flint and one piece of animal bone; a concentration of pottery, possibly from one vessel in the southern terminus of G8187 may well indicate ritual deposition. This vessel was of uncertain date however, and more likely to be of Bronze Age date rather than the early Neolithic suggested by the specialist. The small assemblage of flintwork (of potential Mesolithic and early Neolithic date) is undoubtedly residual and probably derived from the colluvium in the area, which suggests that most of the backfill originated from erosion.

The western side of this field (Field P11) may be represented by a number of ditch segments forming a winding north-westerly alignment from the abrupt eastward turn of G1034. The most significant segment consisted of G1035, 14.50m long about 0.60m wide and 0.16m deep at maximum, with a clear southern terminal located just 2.6m from the kink in G1034. Although the ditch itself held a sterile fill, its significance lies with the two crouched burials that cut into it (G1173 below), respecting the position and alignment of the ditch; these have been radiocarbon dated to the mid Bronze Age (below). More northerly segments of the same ditch line comprised G1044, while a lateral east-west ditch (G1043) may possibly have

connected with Trackway 18; none of these features provided any significant artefactual assemblages.

The ditches delineating Field P11, although quite irregular, tend to replicate the more irregular north-west/south-east alignment in the southern part of the site, although there was a swing to a northerly orientation represented in ditch G1042, which formed the east boundary. With field P10, it is possible field P11 may represent an earlier part of the system than the more regular ditches to the west. Possibly later and more regular north-south alignments are present however (Field P12 below). Although the chronological relation of the ditches of Fields P10 and P11 cannot be deduced by stratigraphy, their relation topographically to the surrounding system suggests that Field P11 may have been later in date and represents perhaps a northward extension to the system, later re-modelled by the imposition of Field P12.

Inhumation burials G1173

These two adjacent inhumation burials were aligned with but cut the terminus of ditch G1035 (Plate 74). Both of the graves contained poorly preserved human remains and were on a similar alignment, just 0.7m apart from one another (Fig. 52). Of the two graves, S1567 to the east was sub-rectangular, 0.96m long, 0.49m wide and 0.1m deep (Plate 75). It was aligned north-west to south-east on its longitudinal axis. The cut had steeply inclined sides and a flat base and contained a single, articulated inhumation (SK 1.1) of an adolescent female (14–18 years old) lying crouched on the base of the grave, facing south with the head at the north-west end. Bone survival was limited, with mainly the limb bones and partial skull surviving. The skeleton produced a radiocarbon date of 1498–1401 cal BC (at 95 per cent probability; Table 6, UBA-12620). The skeleton was so tightly crouched that there is the suggestion that the body would have been bound.

Grave S1597 was also sub-rectangular, 0.9m long, 0.56m wide and 0.08m deep (Plate 76). It was aligned north-west to south-east on its longitudinal axis. The cut had steeply inclined sides and a flat base. Also heavily truncated, preservation of the skeleton was very poor. The cut contained a single, articulated adult inhumation (SK 1.5) of a male aged 24–30 years lying crouched in the grave, facing south with the head at the north-west end. It was also tightly crouched and may have been bound. The fills of both graves were similar, uniform and sterile.

The similar alignment of, and fills within each grave implied that each burial occurred within a relatively short period of time, with the added significance of having been buried cutting a boundary ditch. Their alignment suggests that this ditch was still visible at the time of interment, particularly as the position of S1567 closely corresponded with the terminal end of the ditch, and therefore represents important evidence for the date of this part of the field system. Radiocarbon dating of one of the interments (S1567; SK 1.5) indicates a relatively early mid Bronze Age date, 1498–1401 cal BC (at 95 per cent probability; Table 6; UBA-12620).

Fields P12 to P14

Two north-south aligned ditches, G1010 on the west and G1039 about 49m to the east defined Field P12, immediately south of Trackway 15. These alignments also extended north of Trackway 15 delineating a possible separate field of similar width (Field P13, partly outside the excavated area and which therefore, could have originally comprised more than one enclosed zone). The western ditch extended on a close north-south alignment for nearly 70m before terminating, while G1039 was 62m long, and near parallel to G1010). Neither ditch had a clear northern terminal but probably extended much further north (ground conditions in this area were particularly challenging for the identification of these ephemeral ditches), but to the south, G1010 respected the position of the north terminal of ditch G1035 (cut by the burials). The ditches were just over 1m wide at maximum, with average depth being 0.2m; no finds were recovered.

To the north, and closely following the alignment and position of Fields P12 and P13 and thus situated just west of Enclosure 3, a subrectangular field (Field P14) was clearly outlined by shallow ditches G10027 and G10029, the former defining the west and south sides, the eastern side formed of the latter. The area so enclosed (not fully exposed to the north) was between 46m and 50m across. A small gap in G10027, just over 1m wide and 7m from the south-west corner, may represent an entrance into the field. The eastward continuation of the ditch from this point terminated less than 0.5m from the ditch of Enclosure 3, just north of the entrance. Likewise, ditch G10029 appeared to respect the position of the enclosure, terminating 1.6m from its ditch (possibly against the remnant of an external bank of the enclosure). The ditches, 0.85m wide at maximum and shallow (0.18m maximum depth) contained completely sterile fills. Few features were located within the field area apart from G10008 a possibly contemporary cremation burial near the south-west corner (below).

The alignment of the western side of the field was continued southwards by ditch G10028, exposed for 37m. This feature terminated about 2.5m south of Field P14, and extended out of the site area, picking up again on the main part of Plateau 1, where its probable equivalent (G1010) delineated the western side of the southern fields described above. The ditch was about 0.6m wide and between 0.06–0.21m deep with a near sterile fill. An eastern side to the field so formed was not clear in this area although a possible undated ditch (G10005), 67m to the east of G10028, could represent this side (although it was on an unusual alignment) and was considered possibly natural at the time of excavation.

Few undoubtedly contemporary features were found within the internal area of these fields, apart from the odd instance outlined above, although there were a few areas of potential occupation (described below). The general paucity of artefactual material from the ditches themselves in the northern and eastern areas also suggests that there was no significant occupation here in the Bronze Age.

Trackways 11, 12, 13 and Field P15 (Plateau 8)

These features were originally considered to be later than the remainder of the field system and related to the Iron Age settlement on Plateau 8, but this was never certain and the ditches are now thought to be roughly contemporary (at least in their origin) with the rest of the arrangement on Plateau 1. The three drove ways broadly defined the western limit of the Iron Age settlement though they were later encompassed by pits and associated features. The dating of these ditches remains slightly obscure. Stratigraphically they were cut by a number of Iron Age pit groups, suggesting that they were of the early Iron Age at latest. The fills contained few early artefacts but a small number of flint flakes and small quantities of early Roman pottery, albeit abraded, suggested that they were still visible as landscape features into the early Roman period.

On an overall north-south alignment and roughly 38m in length, Trackway 11 was formed by two intermittent parallel ditches (G8076, G8077 about 2.5m apart), and possibly a third (in two sections, G8306 and G8147), just over 10m to the east and which closely followed the curve of G8076. Ditch G8077 was a short fragmentary length, which turned sharply to the east at its north end suggesting that it was part of a larger system that had been mostly lost through erosion. Each ditch was filled by deposits of largely sterile clay silt, probably eroded from the sides of the feature. The trackway bowed eastward in the centre, reflecting the presence of Barrow 6 that lay only 41m to the west, evidently still a significant feature in the landscape during this period. About 12.5m north of Trackway 11, two potential routes (Trackways 12 and 13) could either, or both be a continuation. Trackway 12 lying on an approximate north-north-east to south-south-west alignment was identified over a length of some 95m up to the northern limit of Plateau 8. It was formed by two parallel ditches the westernmost of which (G8300) was only visible from approximately halfway along the feature, the remainder having been truncated away. The ditches were only about 1.5m apart although wider to the south. Trackway 13, situated 14m to the east of Trackway 12 was on a very similar alignment and consisted of two ditches (G8082 and G8299, the former continuous, the latter very fragmentary) approximately 2.7m apart traced over a distance of some 90m. These were about 0.75m wide and 0.21m deep with moderately steep sides and flat bases. All of these ditch alignments showed some evidence for recutting, either of extant sections or the addition of extra lengths.

Field P15 was defined by these trackways on the west, and by two sections of east-west aligned ditch on the south. The western segment (S8075) appeared to terminate just short of the eastern ditch of Trackway 11 (G8306) and was 29m long. This was probably equivalent to ditch (G8296) on the same line. This turned north about 64m from the trackway, where it extended for 37m before being cut away by a later ditch of probable late Iron Age/Roman date. This later feature, mostly aligned east-west, turned north at precisely this point, suggesting it was following the earlier alignment. After 10m its course again turned sharply eastward, but whether the earlier feature (G8296) did so, or originally continued northward is not clear; this continuation was not however seen in the ground. No northern limit to field P15 was

located, unless it was bounded by Trackway 10. If so it would have been irregular but about 66m across east-west and between 72m and 109m north-south. Ditch G8296 was on average 0.95m wide and 0.34m deep with moderately steep sides and a slightly concave base and contained deposits of clay silt containing pottery fragments, worked and burnt flint and animal bone as well as a Kentish Primary potin (150–100 BC, FN 8.52). Much of this material was either intrusive, or more probably derived from the Iron Age settlement as it clear that the field ditches survived as depressions/recuts into the Iron Age period and possibly later. This is further emphasised by Iron Age burials set within these ditches (see Chapter 4). Apart from a possible short recut length, the ditch alignment was also later recut on a slightly different line (within the field area). This ditch (G8078) ran on a north-south alignment for approximately 37.2m before turning at approximately 90° and running westwards for a further 15m. It was similarly cut to the north by the Late Iron Age/Roman ditch. The feature was 0.54m wide on average and 0.22m deep with moderately steep sides and a concave base, and again yielded pottery and other material that probably derived from the later settlement.

Settlement evidence

Enclosures 1–2 and 7–8 (Plateaus 1, 5 and 6)

Settlement evidence within Enclosure 1 (Plate 77)

There was a relatively high concentration of features within or beside this enclosed area, mostly concentrated in its northern half. The features consisted of various sized pits, and a few post-holes, plus one possible two-post structure. Structure 1 (G5001) consisted of three intercutting features (S5338, S5340, S5334) that were just outside the enclosure adjacent to the eastern terminal of its north ditch G5004 and consisted of two adjacent small circular pits with an average diameter of 0.3m and a depth of 0.14m with steep-sided profiles (Fig. 54). They contained identical fills of brown silt clay. These were overlain by a third oval pit, 0.82m long, 0.63m wide and 0.28m deep with a steep sided 'U'-shaped profile, that contained dark brown silt clay. The physical relationships between these features suggest that they formed a single two-post structure that had later been robbed. Very little material was recovered from these features although S5340 contained grain, chaff, mussel shell, and eggshell.

The smaller pits (0.32 to 1.2m wide and between 0.15 and 0.24m deep) had similar generally sterile clay fills and flat-bottomed and shallow-sided profiles. Of these, two (S5349, S5365) cut the network of internal ditches (G5010) that together formed a distinctive semi-enclosed unit with projecting arms within the main enclosure. Two pits contained small quantities of worked flint and pit S5365 yielded a hammerstone. Grain, hazelnuts, seeds and small amounts of mussel shell were recovered from samples.

Slightly larger subrectangular or sub-circular features up to 2.1m across and 0.37m deep at maximum, possessed steep-sided and near flat-based profiles perhaps more

suggestive of storage pits; some of these also cut the internal division ditches G5010. All of these features contained a similar mixed fill of clay silt with carbon, burnt flint and daub (Plate 78), but yielded no datable evidence, although unidentifiable animal bone was recovered from S5260 and grain and chaff from S5281.

Three larger features including two subrectangular cuts (S5272 and S5324) possibly represent the same feature, although recorded as intercutting – their profile was very uneven, but in plan they appear as one unit about 4.3m long and about 2m wide, 0.55m deep at maximum. Both contained a uniform fill of near sterile silt clay, though a few fragments of animal bone were found in S5272. A few metres to the east was a large irregular but partly oval shaped pit (S5308) 2.52m wide, 3.49m long and 0.65m deep with steep sides and a flat base. This yielded a small assemblage of worked flint flakes and blades, a hammerstone and a relatively large assemblage of mid and mid-late Bronze Age pottery. Though finally used for rubbish deposition their primary function (if different) is unknown. Use as small quarries is possible.

Pit S5272 was cut by a smaller pit (or large posthole) S5274, almost 0.5m wide and 0.22m deep with a steep sided 'U'-shape profile, filled by sandy clay with eight relatively large mid-late Bronze Age sherds, possibly from the same vessel (similar pot was also recovered from an unrecorded context in the same area). Six other smaller pits and/or postholes (G5037: S5244, S5267, S5276, S5326, S5316, S5369, S5381) were also located in close proximity to each other in the same area. These were between 0.19 and 0.9m wide and from 0.12 to 0.33m deep, most with steep sides and flat uneven bases. They contained similar fills of clay silt, but only S5244 and S5276 contained datable material, a few sherds of mid to late Bronze Age pottery. Others yielded small assemblages of worked flint flakes and the occasional nut shell, seed, charcoal and daub fragments. They may represent part of a fence arrayed roughly east-west. In addition an irregular subrectangular pit (S5361) 0.9m long and 0.28m wide contained much burnt clay, burnt flint and charcoal; a very similar feature was found on Plateau 4 (S4012). To the west side of the enclosure an irregular cut (S5314), 1.5m in diameter and 0.22m deep, with a 'U'-shaped profile contained a fill of clay silt with large amounts of packed flint and an assemblage of flintwork including flakes, a core fragment an end scraper and a blade, perhaps indicative of knapping waste.

Features within and around Enclosure 2

Most of the internal area of Enclosure 2 was featureless perhaps indicating it was a related paddock rather than an occupied area. Nevertheless, there was a concentration of possible structural features (Structure 4) in the south-east corner and a thin scatter of pits and other possible structures in its immediate area (Fig. 48).

Structure 4 was situated in the south-east corner of Enclosure 2 and consisted of a group of nine postholes (G5049) that made a rough 'U'-shape, opening to the west in plan; this measured 4.1m north-south and c. 3m east-west. The main alignment was made up of seven sub-circular postholes that were all of a similar shape and size,

between 0.14 and 0.27m in diameter and from 0.1 to 0.25m deep. Two larger sub-circular postholes (S5082 and S5071) were located on the north-western side of the feature and measured 0.38m in diameter and 0.15m deep. All the postholes had a steep sided 'U'-shaped profile and contained a similar fill of virtually sterile clay silt. Although not dated or forming any obvious coherent structure, the concentration of these features in one location (in an otherwise sterile area) and their situation in the corner of the enclosure strongly indicates a prehistoric date and a structural function. The features could represent remnants of a six-post structure (these often interpreted as granaries), with additional supports on the east side.

In the north-east corner of the enclosure, four irregular sub-oval pits (G5038; S5300, S5328, S5351, S5359), were all of a similar shape and size in plan, between 1.15 and 1.39m in diameter and from 0.16 to 0.41m deep with shallow 'U'-shaped profiles. All, apart from S5359 which yielded some early Bronze Age pottery, contained similar sterile fills of silt clay. These features were located adjacent to one another aligned north-east to south-west in line with the eastern side of the enclosure, and rather than being individual pits may represent the fragmented terminus of the enclosure ditch (G5040).

Two isolated sub-circular pits (G5180; S5094, S5102) of a similar shape and size in plan, 1.61 and 1.7m wide and 0.1m deep with a shallow 'U'-shaped profiles were located to the south side of the enclosure, one inside and one 11m outside. Both contained a fill of clay silt with daub inclusions, and can only be tentatively dated to this phase. Two smaller pits about 0.5m in diameter (S5015, S5108 and S5169) and two isolated postholes (G5181), one containing worked and burnt flint were also found in the same area.

A considerable number of possible but isolated structures and scattered small pits were found in the area of Enclosures 1 and 2 and to the south and east on Plateaus 6 and 7, with a somewhat smaller number on the north facing slopes of Plateaus 3 and 4. Many of the individual features produced no firm dating evidence, but are, for various reasons considered to be prehistoric in date. They either contained flint-tempered pottery or a considerable amount of burnt flint (not closely datable but usually indicative of a prehistoric provenance), or seem to relate to other prehistoric features more certainly than those of later phases. In a few cases spatial analysis and/or stratigraphy suggest a prehistoric origin.

Structure 32 (not illustrated), just west of Trackway 9 and 215m north-east of Enclosure 1 in the northern part of Plateau 5, consisted of two sub-circular post-holes (G5019) located 0.8m apart with diameters of 0.28m and a similar depth of 0.15m with 'U'-shaped profiles. They possibly represent a two-post structure of prehistoric date, although they produced no artefactual material, were isolated and not obviously related to any other settlement activity.

Structure 33 (Fig. 48) was situated 15m south-east of the southern corner of Enclosure 2 and consisted of two adjacent sub-circular post-holes that measured

0.55m in diameter and 0.3m deep with steep sided 'U'-shaped profiles and were 0.7m apart. They contained a similar mixed fill of burnt clay silt with carbon, daub and burnt flint inclusions. The feature was isolated and may be tentatively dated to the prehistoric period due to burnt flint within the fills.

A group of six scattered sub-circular postholes or small pits (G5025; Figs. 48, 50) lay to the east of Enclosure 2 and between 40 and 70m south of Enclosure 1. These were generally of a similar shape and size in plan, on average 0.9m in diameter and 0.36m deep with steep sided 'U'-shaped profiles and the majority contained a mixed fill of burnt deposits including silty ash and carbon with burnt flint and sometimes burnt clay. Three yielded worked flint, mostly flakes and other fragments or chips (another in the area (S5018) could belong to an earlier phase. Some of these features were backfilled with domestic rubbish.

Structure 34 (Fig. 50) was located 85m to the south of Enclosure 2 on Plateau 5. Out of seven postholes overall, four were in a straight line on the east side, with two set to the west adjacent to the end post settings, thus forming a rectangular structure aligned north-south, just over 6m long and c. 2.6m wide. A further posthole to the north, in line with the eastern alignment suggests that the structure may have been longer (7.6m). The eastern line of settings were spaced fairly regularly, about 1.7–2.2m apart, although one posthole (S5621) was oval in shape (c. 0.5m across) and could conceivably have held two posts. Apart from this, the post-holes were of a similar shape and size, about 0.4m diameter on average and from 0.11 to 0.24m deep with steep sided 'U'-shaped profiles. All contained a similar fill of mostly sterile sandy clay silt although a few yielded various quantities of charcoal, grain, chaff, seeds, prehistoric pottery, fragmented daub, worked flint flakes and snail shell. Unfortunately, the pottery could not be closely dated.

Structure 34 correlates well with the known plans of 6- or 8-post prehistoric structures often interpreted as granaries, an interpretation that is perhaps sustained by the relatively large quantity of cereal remains within at least some of the backfills and which may have entered the post-voids during possible dismantlement. The western side of the structure probably originally mirrored the more complete opposing side with some settings having been lost to truncation (although it is possible that more than one structure is represented).

Much further to the south (400m) within the access road on Plateau 7, an isolated complex of postholes appeared to form overlapping simple 2- and 4-post structures (not illustrated). The date of these remains uncertain, but they are likely to be of the later Bronze or early Iron Age. The post settings were disposed in a wide arc (with a radius of about 40m), aligned approximately north-west/south-east and are probably outlying elements of a settlement that remains undetected, possibly under the bulk of the unexcavated greenhouse plateau to the west.

Enclosures 7 and 8

These potential enclosures were partially exposed in the south-east corner of Plateau 6 about 130m north-east of Barrow 1 (Fig. 50). Little can be said about them due to the limited nature of their exposure and the relation between each was also unclear due to their similar fills and shallow nature. Virtually no other features could be associated with them and they cannot be dated, although relationships with medieval features and their overall nature suggest a prehistoric origin. Enclosure 7 consisted of an 'L'-shaped ditch aligned north-west to south-east that extended for 45m from the limit of excavation to the south-east. At its north-west end the ditch turned to the south-west and extended beyond the edge of excavation.

Enclosure 8 was set within Enclosure 7 on a similar alignment and consisted of a heavily truncated 'U'-shaped ditch 12m long on its north-west to south-east alignment turning in a broad curve to the south-west for 16m. Recovered pottery consisted of a few prehistoric scraps, with probably intrusive medieval material from the southern segments where there was a complex of later features. The enclosure was later modified and contracted in size with several re-cuts and the addition of a further ditch within its north-east boundary. The enclosure contained three shallow pits that may have related to activity associated with animal penning or other occupation, but they could not be dated. Although little dating evidence was retrieved it is likely that both enclosures dated to the prehistoric period rather than the medieval, even though they were in a similar position and near alignment to the medieval enclosures that overlay them in this position. In addition, the ditches were considerably less substantial than the medieval ditches here (or elsewhere) which normally contained significant amounts of medieval material. As elsewhere on the site, some activity of the period was suggested in the area. Four pits north-east of Enclosures 7 and 8 (G6028) were of a similar size and shape in plan, between 0.77 and 1.17m in diameter and from 0.18 to 0.33m deep; with steep sided profiles with a flat base. Three contained burnt flint or worked flint and prehistoric pottery although this could not be dated.

Possible settlement areas on the west side of Plateau 1

A few more concentrated areas of activity, primarily represented by complexes of intercutting pits were located on the western side of Plateau 1 (Fig. 51). Other features likely to be of this period were more scattered, but generally nearby (below). There was also a distinct concentration of artefactual material in the field ditches in this area (above). A complex of partially intercutting large pits (G1132) was located south of Trackway 16 at the extreme north edge of the area. These were generally amorphous in shape, between 1.3 and 8m across and 0.56m deep at maximum, with mostly shallow sloping sides and uneven bases. Some of the pits were sterile while others yielded small assemblages of Bronze Age pottery, fragmentary animal bone, worked flint (earlier prehistoric assemblages possibly deriving from the surrounding colluvium), burnt clay, with some seashell and charcoal. G1132 was in turn cut by a ditch relating to Trackway 16 (G1057) also indicative of a prehistoric date. Although the features were of unknown function, their size, shape and irregularity are suggestive of *ad hoc* quarrying activity, probably for clay or flint. Their associated

artefactual assemblages, albeit minimal, may indicate rubbish disposal and suggest activity, if not actual occupation in the immediate vicinity.

Seventy six metres to the south-west was another complex of pits and a possibly associated line of postholes. Although some of the features had sterile fills, one (G1201) yielded a substantial assemblage (over 150 sherds) of unidentified prehistoric pottery and animal bone). Immediately adjacent on the east was a peculiar linear feature (G1199) aligned north-west to south-east; this was 5.6m long, averaging 0.5m wide and 0.15m deep with an uneven sided 'U'-shaped profile. It contained a uniform fill of clay silt with a relatively substantial quantity of mid to late Bronze Age pottery and oyster shell. This may have been a segment of ditch, but did not seem to relate to any other ditches in the vicinity and the deliberate deposition of pottery may be consistent with a former specialised function. Another feature just to the east 0.35m wide, 1.2m long and 0.24m deep had a weathered 'V'-shaped profile. It yielded 23 sherds of mid to late Bronze Age pottery. A few metres to the east three post-holes (G1196) formed a curved line aligned north- south. They were of a similar size, about 0.6 m in diameter but had near sterile fills. They may represent a short section of fence perhaps related to the pit complex. This small group of features is highly suggestive of domestic occupation, if not *in situ*, very close by. As is often the case regionally there was no trace of associated residential structures.

Isolated mid to late Bronze Age features

Small, isolated groups of features were found further afield from the apparent focus of occupation on Plateau 5, scattered across many otherwise negative parts of the southern plateaus, as well as to the north (Figs. 50–51). They are briefly described here; further details can be found in archive.

A complex of five pits or shallow scoops, some intercutting (G5050) was located about 100m north-west of Enclosure 1, in the generally undisturbed western part of Plateau 5. The features contained a similar fill of silty clay with burnt flint, daub and the odd flint flake or blade. The size and slightly irregular shape of these suggests that at least some may have been quarry pits, perhaps deliberately filled with material from domestic activity in the vicinity. Isolated pits were also found further to the north of Enclosure 1 but most contained sterile fills.

About 40m north-east of Enclosure 1, two sub-circular pits (G5053; Fig. 48), 7m apart were very similar in size, 0.9m in diameter and 0.2m deep with open 'U'-shaped profiles. They contained a similar fill of sandy silt with a few sherds of possible Bronze Age pottery and small quantities of undiagnostic worked flint. From the moderate amount of material within the fills these may represent small refuse pits used during a brief occupation in the area. Further north, some features from two groups of scattered irregular shaped pits or perhaps quarries (G5060 and G5114) contained high concentrations of carbon and burnt flint, some also with worked flints but no closely datable material.

On Plateaus 3 and 4 there was little evidence of mid to late Bronze Age activity and many of the likely prehistoric features in this area could not be reliably dated. Some contained very small quantities of early Bronze Age pottery (described in Chapter 2) which could be residual (for example see pit G3073 below), but many were barren of artefacts. On the far eastern side of Plateau 3, G3019 (not illustrated) was a large, irregular shallow cut approximately 4.75m across at maximum and 0.12m deep with an uneven profile. It was filled by a deposit of grey clay silt and burnt flint that contained a reasonable assemblage of mid Bronze and mid to late Bronze Age pottery. It is likely that this feature represents the remains of a heavily truncated pit or clay quarry used for rubbish disposal (suggested by the pottery assemblage), though alternatively it could be large tree bole. A scatter of variously sized and shaped but generally small features (G4045, G4076, G4092, G4099, G4112; Fig. 50) were also found on Plateau 4, but most contained little or no dating evidence. All contained considerable quantities of burnt flint suggesting they were of this period, but otherwise they were unremarkable. These and a number of other generally undated features in the area all indicate transient prehistoric, probably Bronze Age activity.

As with the southern part of the site, the northern area was also lightly peppered with features indicating transient activity of this period, although few could be closely dated and the finds may in some cases be residually derived from the colluvium in the area. Thus, four pits (not illustrated), about 200m west of Enclosure 3, were located near a concentration of medieval activity (medieval Site 1) and may well be of that period (many of the medieval features contained residual prehistoric material derived from the colluvium). They contained daub, burnt flint, and some grain, shell-fish and charcoal with indeterminate Bronze Age pottery.

Most of the few more certainly dated features were situated on the western side of the area, again suggesting that this saw more activity in this period. Somewhat isolated within field P11, about 230m south-west of Enclosure 3 for example, was sub-circular pit G1156, 0.30m wide, 0.86m long and 0.20m deep which yielded just one sherd of possible prehistoric date. To the south-west of the plateau, a small group of closely spaced features within Field P6 (G1122) consisted of two pits and one post-hole. The pits were shallow sub-circular features about, 1.9m long, between 0.86m and 1.68m wide and 0.28m deep with U-shaped profiles. Finds included a few sherds of mid to late Bronze Age pottery, knapping waste (flakes and cores), a hammerstone and a scraper. South of these, in the Plateau 2 area, the scatter of features continued, but were fewer in number. None were closely datable and do not seem to represent direct or significant settlement of this period.

Barrows and other funerary or ritual features

Barrows 7 and 8 (Plateau 2) and Barrow 10 (Pipeline)

Two ring ditches on Plateau 2 and one on the pipeline route, probably representing burial mounds (Barrows 7 and 8, both later enclosed within medieval enclosures and Barrow 10) have been allocated to this period mainly due to their form and nature, although dating evidence for them was scarce. On Plateau 2 the easternmost ring ditch (Barrow 8; G2052) was relatively large, just over 23m in diameter but with a relatively insubstantial ditch less than a metre wide and up to c. 0.45m deep (Fig. 55; Plate 79). The fill contained worked flint but no pottery or other significant inclusions. The flint was primarily knapping waste (flakes and cores), mostly recovered from the north-western quadrant of the barrow, and for the northernmost assemblage, perhaps representing the same knapping episode. A shallow un-urned cremation (S2855) about 2m south-west of the centre is likely to have been associated. Given inhumation is more common within early Bronze Age barrows perhaps it is most likely the barrow was of middle Bronze Age date, but the evidence is inconclusive.

The other ring ditch (Barrow 7; G3130) (Plate 80) was located about 40m to the west and was only about 7m in diameter (Fig. 56). No burial was associated with this ring ditch, probably having been removed by subsequent truncation (if originally present) and no finds were recovered from the c. 0.30m deep gully. It seems likely however that this monument derives from a similar period to nearby Barrow 8, particularly as they shared a near exact east-west alignment.

The extent of the original mounds within the ring-ditches can perhaps be deduced from the disposition of medieval features that intruded into their interior, and which suggest that the mounds were not much more than a third to a half of the external diameters of the ring-ditches. Barrow 8 was transected by a medieval trackway along the eastern third of its diameter, suggesting that the extant mound only survived to any great extent within the central third of the ring-ditch. The western two-thirds of the barrow were clear of later features apart from an internal dividing ditch of a medieval enclosure which also respected this inferred diameter. The same stands for Barrow 7 where a central area two-thirds the diameter of the ring-ditch was also devoid of medieval features although there were many positioned immediately adjacent (Plate 81).

Two sections of curvilinear ditch forming Barrow 10 were identified cutting across the pipeline trench approximately 290m from its northern terminus (Plate 82). Subsequent widening of the stripped area suggested that these formed part of a small round barrow that had been very heavily truncated by ploughing. The total external diameter of this feature appears to have been approximately 16m. Where excavated the ditch varied between 0.5 and 0.6m in width and approximately 0.3m in depth with moderately sloping sides that broke gently with a slightly concave base. The feature contained two fills, both of which appear to have formed through processes of natural erosion, probably from the sides of the ditch and the barrow mound. These contained small quantities of chalk, flint (some worked) and burnt flint, but as with Barrows 7 and 8 there was nothing closely datable.

Apart from the two probably related mid Bronze Age inhumation burials on P1 (G1173 described above), a number of cremation burials were also excavated, including the four relating to Barrows 3 and 7. These were mostly un-urned, indicating a pre-Roman, probably Bronze Age provenance and were concentrated in the north part of the area, seven on Plateau 1, three on Plateau 3 and two or more on Plateau 6. Small pits containing depositions of an apparently ritual nature were usually found in the same areas (Fig. 47). Although potentially ritual features or depositions were also found on Plateau 5, most of these seem to be closely related to the settlement evidence (see above), and no definite burials of any sort were located.

Feature G10008 was located in the south-west corner of Field P14 (Fig. 51), 45m west of the entrance of Enclosure 3 (Chapter 2). It was an isolated, sub-circular un-urned cremation burial, 0.45m wide, 0.5m long and 0.26m deep. A deposit of calcined human bone (SK 1.13) was retrieved from the fills, but no vessel was recovered. The absence of a vessel suggests a pre-Roman date for this cremation, although truncation may have removed artefactual evidence.

Directly 40m to the south of Enclosure 3 were two more possible cremations (G10048). These were immediately adjacent to one another, of a similar shape and size in plan, 0.33–0.38m wide, 0.38–0.43m long and 0.18–0.20m deep. They had steep-sided profiles and an uneven convex base. The fills consisted of very dark brown clay silt, with charcoal and traces of calcined bone (SK 1.13 and SK 1.20). Four sherds of prehistoric pottery from one of the features could not be further identified but may have once represented a whole vessel. The small amounts of cremated bone suggest that these were possible un-urned ‘token’ cremations.

Two isolated features within close distance of one another (c. 0.35m apart) just south-east of the southern end of Trackway 7 (S1063, S1064; Field P5) were of a similar shape and size, about 0.45m in diameter and 0.22m and 0.40m deep respectively. The fills consisted of a primary deposit of very light brown clay with rare chalk lumps and carbon flecking throughout. The uppermost fills consisted of a very dark grey carbon deposit. In S1063 this contained common burnt bone inclusions (SK 1.15) with their arrangement suggesting confinement within a perishable container. Feature S1063 almost certainly represents an un-urned cremation burial. S1064 is likely to have been associated but appears to have been completely sterile which suggests another sepulchral function, maybe a marker for the grave or some form of votive pit.

Another probable cremation burial (S1601) was found on the eastern side of this plateau. This sub-circular pit was 0.52m wide, 0.66m long and 0.16–0.34m deep filled by very dark grey clay silt with abundant carbon. It contained a few lumps of daub and burnt bone (SK 1.16), but no evidence for a vessel. Another feature nearby (S1371) may also have been a cremation, but was perhaps Neolithic in date (see Chapter 2).

A single pit (G1133) of Bronze Age date was found just north of Trackway 16 near a group of other prehistoric features at the northern end of Plateau 1. This consisted of a sub-circular cut (S274) c. 0.65m in diameter and 0.12m deep filled by dark brown silty clay with charcoal flecking which yielded an assemblage of about 60 sherds of mid Bronze Age pottery, possibly from the same vessel. This was considered a potential cremation burial during excavation, although no burnt bone was noted, and is more likely to be a feature of possible ritual significance than a rubbish pit.

To the south-east, on Plateau 3, a group of three features (S3040, 3043, 3045), were situated no more than 2.5m apart in the northern access road part of the area, about 40m south-east of Barrow 6. They consisted of circular cuts between 0.38–0.54m wide and 0.14–0.27m deep. Each was filled by a deposit of carbonised material sometimes with lighter silt identified near to the base. One feature (S3043) contained parts of a damaged ceramic vessel (including a large decorated rim sherd; SF 3.9001) of mid Bronze Age date. The fill included cremated human bone (SK 3.4). Feature S3045 also contained some burnt bone, potentially of human origin but was otherwise sterile. Feature S3040 did not contain any burnt bone and may have been a posthole, possibly a marker for the burials. All of the features appeared to have been heavily truncated by ploughing, which may have removed evidence for cremated remains. They were probably located in this area due to the proximity of the barrow which would have acted as a clear focus within the prehistoric landscape. Slightly to the north was a scattered group of similar sized features (G3076) consisting of circular cuts between 0.38–0.54m diameter and 0.14–0.27m deep; most were filled by carbonised material with lighter silty clay near the base (similar to the cremations), but none contained any evidence for cremated bone. Although two contained a few sherds of possible early Bronze Age pottery, it is perhaps more likely that they related to the cremations and formed a series of votive features. Alternatively, they may represent mortuary structures, despite forming no obvious pattern.

Much further to the south, on Plateaus 5 and 6 (Fig. 50), isolated features may represent votive deposits. A small pit (G6024), 0.24m in diameter and c. 0.16m deep was found, isolated, about 91m to the south-east of Enclosure 2. The initial fill consisted of clay silt with burnt flint, charcoal, and grain. This was followed by the deposition of fragments of a single vessel of mid-late Bronze Age date, closely fitted to the side of the cut. There was no evidence for cremated bone. Another feature in the area (G5058) was similar but might be Neolithic.

In the south central area of Plateau 6, another sub-circular pit (G6034) 0.82m wide, 0.72m long and 0.26m deep had steep near vertical sides and an undulating base with a depression in the centre. It contained a fill of sandy silt with carbon and calcined bone inclusions (SK 6.11) concentrated in lenses. This probably represents an isolated un-urned cremation burial. Located only 17.9m to the north-east of Barrow 4, another slightly smaller feature (G6036) contained a fill of clay silt, with carbon and burnt bone inclusions (SK 1.13) also suggesting this was an isolated un-urned cremation burial, possibly a satellite burial to the barrow. A similar feature was found, isolated about 200m to the south-east (G6024), a small pit, 0.24m in

diameter and c. 0.16m deep. The initial fill consisted of clay silt with burnt flint, charcoal and grain. This was followed by the deposition of a single vessel closely fitted to the side of the cut (unfortunately lost). There was no evidence for cremated bone.

Discussion of the middle to later Bronze Age features

Jon Rady and Robert Masefield with Barbara McNee

Dating and the development of the landscape

Close dating of the Thanet Earth features of this period is difficult, a not uncommon situation for such settlement sites more generally in Kent (Champion 2007a, 98–100). The pottery of the mid Bronze to early Iron Age presents what is still ‘*a somewhat speculative typological sequence*’ (*ibid*, 100) and although being continually refined by absolute dating there are a ‘*comparatively small number of dates, [and] varying degrees of reliability of association with date and pottery*’ (Champion 2011, 156). For many of the sites at Thanet Earth (and elsewhere) the difficulties are often exacerbated by scarcity of datable evidence in, and stratigraphic relationships between features. As the pottery is, overall, the most significant dating evidence from Thanet Earth for this period, it is worth considering it briefly here.

The pottery assemblage from Thanet Earth

Middle Bronze Age pottery in Kent is characterised by vessels in the Deverel-Rimbury tradition, which generally comprise ‘thick-walled vessels in heavily flint-gritted fabrics, mainly large bucket-urns with a few finer jars ... well documented in funerary contexts from the county’ (Champion 2007a, 98). More recent excavations have provided assemblages from domestic contexts with some associations to radiocarbon dates, although these are still limited. At present, an overall date range of c. 1600/1500 to about 1100 BC (Champion 2011, 158; McNee 2014b) can be suggested.

At Thanet Earth, the assemblage was quite small, only 198 sherds (McNee 2014b), all made of a limited range of fabrics, of a coarse flinty composition very typical of the type used to make middle Bronze Age pots in Kent; at Thanet Earth, it is silty clays rather than sandy clays that dominate the assemblage. The vessels are in a limited range of forms, well paralleled across Kent, primarily straight sided bucket jars with flat topped or rounded rims (*ibid*). A small number of the middle Bronze Age vessels have been decorated with fingertips on the shoulder of the vessel, and two have either fingertip decoration on the exterior edge of the rim or on the exterior of the rim and shoulder. These decorative techniques are common during the middle Bronze Age, and continue into the middle to late Bronze Age on a very small number of vessels.

As Champion indicates 'the production and usage of pottery was a continuous, common and widespread social process from the Middle Bronze Age onward, and dividing such a continuum into separate phases is problematic' so that 'there were no abrupt breaks where one ceramic tradition was replaced by another' (2011, 156). Thus, at present, the ceramic chronology employs a transitional stage from the middle to late Bronze Age, and it is tentatively suggested that this transitional period is characterised by the continued use of coarse fabrics but on vessels with thinner walls and new forms. Slightly finer fabrics are also introduced, some of which however, were also used on middle Bronze Age forms (McNee 2014b and see Champion 2011, 158–160).

In this report, the vessels that can be assigned to this transitional phase, and the periods of activity that can be associated with them are termed of the mid to late Bronze Age (Phase 6 in McNee 2014b). However, it is important to remember that there is no clear sequential progression from one to the other in the 'emerging regional ceramic chronology' (Champion 2011, 156), and some inevitable overlap. For Thanet Earth, McNee (2014b) suggests a date range of approximately 1300–1100 BC (compared to Champion's suggested range of 1350–1000 BC (2011, 160)). A more recent definition of the onset of the late Bronze Age has been provided by radiocarbon determinations relating to an excavation at Cliffs End Farm, near Cliffsend, where a range of c. 1150 cal BC to 800 cal BC is suggested (McKinley *et al* 2014, 85–89 and 147–161).

At Thanet Earth, the mid to late Bronze Age assemblage comprised about 470 sherds. A greater variety of fabrics have been used to make pottery, and this is fairly typical of ceramic assemblages of this period. Two of the represented fabrics recipes employ a sandy clay matrix and appear to represent developments from the Deverel-Rimbury through to the late Bronze Age plain ware fabric tradition (see Champion 2011, 160–162 for the latter where the phase is dated 1100–800 cal BC). Upon this transition (that should be seen perhaps as an evolution of the middle Bronze Age at Thanet Earth, whatever its precise date), it seems that fabrics made with very fine sandy clays start to re-appear, some fabrics become slightly finer and some vessels have slightly thinner walls. However, coarse flinty fabrics are also still very popular and appear to be quite long lived. This greater variety of fabrics would have enabled the production of a larger range of vessel forms, and there is a small shift from straight-sided neutral jars to vessels with slight shoulders and everted rims. One recorded form type may represent a middle to late Bronze Age ovoid or convex jar, but this form is a very long-lived, later prehistoric vessel type and can also date from the late Bronze Age through to the middle Iron Age (McNee 2014b). A small number of middle to late Bronze Age sherds have been coated with a thin clay slurry and then smoothed. All examples contain coarse flint temper, and the addition of a clay coat may have helped with achieving a smooth finish. The application of this extra coating of clay may also have reduced permeability in vessels intended for storage, or may have been used to make the pot more attractive by disguising unsightly coil joins. In addition, two sherds are very similar to the Birchington Bowl type globular bowls, and have been decorated with horizontal

tooling and ring and stamp decoration (Figs. 6/41 and 7/51). These distinct ring and stamp decorated bowls are quite rare in Kent and have mostly been recovered in Thanet (they include the Birchington hoard pot (Powell Cotton and Crawford 1924; Macpherson-Grant 1992, fig. 6). The Thanet Earth examples have been assigned to this ceramic phase but may be slightly earlier.

Finally, those sherds belonging to a middle and middle to Bronze tradition have a varied and irregular mix of reddish and grey colours, and suggest that it was difficult to control firing conditions. However, pottery specifically assigned to the middle to late Bronze Age ceramic phase is often unoxidised throughout and exhibits a more uniform colour of darkish grey. It is possible that potters had developed different ways of firing pottery by this stage (McNee 2014b).

The Thanet Earth assemblage does not appear to have any pottery belonging to the late Bronze Age Plain Phase as defined by Barrett (1980), and there may be a hiatus of activity until the earliest Iron Age (800–600 BC), or early Iron Age (600 BC). The pottery on Plateau 5 relates to the latest ceramic phase (until the early Iron Age) and it is possible that some of it was deliberately deposited when the area was abandoned.

The ceramic evidence for occupation across the site area

Considering the pottery alone, Plateau 1 yielded the greatest concentration of middle Bronze Age material, although there was also a larger assemblage of pottery from the mid to late Bronze Age ceramic phase. However, there was little evidence for settlement enclosure or expansive open settlement. Rather the occupation evidence comprises poorly-defined or even transient activity in confined areas (Fig. 47). By the mid-later Bronze Age, there is greater evidence of occupation from Plateau 5, which yielded the largest assemblage of this ceramic phase, with hardly any pottery of the mid Bronze Age. However, considering the difficulties in assigning any chronological progression to these pottery phases (see above) and the relatively small size of the assemblages, these trends should perhaps be treated with some caution. However, the difference in ratios between the pottery types on Plateau 5, may be indicating a chronological progression and on Plateau 5, the pottery was concentrated in and immediately around a single enclosure (Enclosure 1), although even here, some of the features were dispersed over a wide area.

There is some evidence for middle and mid to later Bronze Age activity on Plateau 3, and also on Plateaus 6 and 7, but there are generally very few sherds, often only coming from one or two contexts and therefore not particularly indicative of direct settlement. Very little evidence for this period was found on Plateaus 2, 4 and 8, or indeed for the eastern part of Plateau 1 apart from driveway and field boundary ditches, suggesting that occupation in these zones was negligible. Over all of the Thanet Earth site, archaeologically visible activity seems to cease around 1100/1000BC, before the late Bronze Age and is focussed throughout the Iron Age in the Plateau 8 area. Apart from the lack of late Bronze Age evidence, which is further

discussed below, this potentially has implications for the debate on the seemingly general disappearance of settlement around 600BC (or before) in the south-east and the paucity of early to mid-Iron Age sites in the county and further afield.

The initial development of the agricultural landscape

Establishing the sequence and development of the various parts of the Bronze Age field system (fields and drove ways) and their relationship with settlement areas is challenging due to the near complete lack of stratigraphic relationships between any of their elements and the difficulties of exact dating mentioned above. Generally elsewhere it has been perceived that drove ways were primary because of their often greater extent and that the infilling fields were a secondary development (Yates 2007, 142; Framework Archaeology 2006, 105). Often a primary ditch or droveway forms a spine which the fields appear to subsequently respect (such as Westhawk Farm below and Peacehaven; Hart 2015). This sequence of development is not necessarily always the case however (certain examples at Heathrow Terminal 5 for example; Framework Archaeology 2010, 143–147). There are only a few instances at Thanet Earth where this relationship can be positively determined as in the handful of cases where field ditches and postulated drove way ditches physically interconnect (mostly on Plateau 1), but the relationships are often ambiguous.

A sequence is very apparent with Trackway 10 (Plateau 8), however, which is almost certainly one of the earliest trackways on the site. Here, two field ditches respect the line of the northern drove way ditch but just cut into, or slightly across it, indicating the fields were later. Unfortunately, the relationship of this track with the remainder of the system was uncertain. One of the ditches of Enclosure 2 (Plateau 5) just clipped the eastern ditch of Trackway 1 at the south-east corner of the enclosure, but this might be a special case as the drove clearly relates to and is within the enclosure (suggesting although earlier than the ditch clipping it, the outer ditch of the enclosure may have been contemporary from the outset). On Plateau 1 however, at least some of the fields seem to respect the drove way alignments, the northern ditch of Field P8 being the most notable example and a number of other field ditch alignments terminate just short of, or touch, drove way ditches suggesting that they were indeed later. There were no drove way ditches that clearly cut across any boundaries of a field, which might be expected to occur, at least occasionally, if the fields had been set out first. If the entire system was not conceived as one (and there are enough indications to suggest that parts of it were chronologically accretive), then the evidence would tend to suggest that the drove ways were generally primary.

The actual date of the field system overall is considered more closely below but all the evidence suggests that it could have been established around or even before c. 1500–1400 cal BC and parts may in fact be early Bronze Age in date, although probably from the latter part of the period. Of potential significance here are a few instances where drove way ditches seem to bear near, or align on early Bronze Age features, particularly Beaker flat-graves (Fig. 8). Although it is not impossible that

earlier, now invisible elements of land division were re-used or referenced, the small number of close instances of this here do not allow us to categorically state that this was so. However, these juxtapositions have been observed elsewhere (such as Fengate (Pryor 2001, 72), Beechbrook Wood on HS1 (Garwood 2011, 122–123) and Peacehaven (Hart 2015)) and as such do appear to be a widespread phenomenon hinting at the possibility of an early date for the formative origin of field systems. The Peacehaven juxtaposition is particularly striking. Here an axial or formative trackway ditch, traced across the 30ha site for several hundred metres, was so precisely laid out over a rectangular pit (2.8m x 1m) containing elements of a dismembered cow (including the skull), that the two events must have been closely associated (Hart 2015, 98). Radiocarbon dating indicated a 19th–18th century BC (1890–1690 cal BC; SUERC-30716) date for the votive pit deposit and therefore also for the axial track aligned on it (*ibid*, 113). However, co-axial field subdivisions may have been subsequently added, as is suggested at Thanet Earth.

The relation between the Thanet Earth field system and settlement activity is more apparent than relationships with potentially formative pits, and it is more certain that least parts of the field system originated first. Any settlement relating to this earliest phase was not particularly evident (which is unsurprising if of early Bronze Age date) but could have been outside the site boundaries. The poorly-defined open settlement evidence on Plateau 1, probably originating in the middle Bronze Age, is only represented by a few features but at least some of these were cut into the field ditches (where the relationships were not ambiguous). Nevertheless, these never completely crossed their line and therefore can be considered later events taking place immediately adjacent to the ditches. The mid-late Bronze Age and more distinct settlement on Plateau 5, within and around Enclosure 1 certainly post-dates some of the probable stock management-related features associated with Enclosure 1, and the more clearly dated settlement features, as far as can be determined from the ceramics, are also of a later date than the field system generally.

Thus, apart perhaps from elements of the field system, there is little settlement evidence for the largely unknown transitional period between the early and middle Bronze Age. In general terms the construction and use of large scale funerary and ritual monuments declined in this period, and appears to give way to an increasingly sub-divided landscape, with evidence for more permanent occupation (discussed in depth by Brück (2000) and Yates (2007) amongst others). Thanet Earth, and a number of other recent sites (see for example Martin *et al* 2012), suggest that this emergent transformation, usually defined only by trackways and field systems, may have occurred earlier than previously realised.

Field system and other landscape features

The beginnings of the field system

The establishment of coaxial fields and rectilinear land-blocks with associated enclosures, drove ways and other specialised agricultural features appears from the

middle of the second millennium BC, or possibly before if the recent evidence is considered. Co-axial field-systems are recognised in many parts of south-eastern England but have often been attributed to later in the Bronze Age (Yates 2001 *passim*). The creation of such 'ordered' landscapes in relation to their associated societal model can be interpreted in many ways, so they have been seen as evidence for an '*important transformation*' in human society (Champion 2007a, 97) and that in the middle to later Bronze Age there was '*a regime of highly organised mixed farming with livestock rearing a special priority*' (Yates 2007, 21). Pryor (1996, 1998) and others (Yates 2007 in particular) have extensively discussed these systems, their usage and what they tell us about the contemporary society. Nevertheless, whether their emergence was purely an economic imperative, or as a result of a more complex amalgam of socio-economic factors can still be debated (*ibid*; Brück 2000 *passim*). At the very least, from a more practical viewpoint, they can be seen to represent '*a concern for the more active management and control of the land*' and in this sense they suggest that landscape definition equated with land ownership or tenure (Champion 2011, 185). In this sense it is possible to speculate that unbounded pastoral landscapes that had formerly been held in common and accessed by several communities practicing fluid livestock transhumance systems, were claimed and sub-divided, thus leading to a severance of 'traditional' practices and an intensification of farming.

However, most of the recorded field systems in Kent (or potential fragments of them), are rarely closely datable and it is often difficult to discern at what point in the Bronze Age they originated. Further, they are revealed only as fragmentary parts of a potentially much more extensive system, even on larger archaeological schemes such as HS1 (Champion 2011, 185), Brisley Farm (Stevenson 2013) or Westhawk Farm (Booth *et al* 2008), and the field system exposed at Thanet Earth, itself very fragmentary in parts, is probably the most expansive such landscape so far revealed in the region.

As far as the date of the Thanet Earth field system is concerned, the most reliable evidence is derived from the two adjacent and evidently contemporaneous burials (G1173) that cut into a partially backfilled field boundary on Plateau 1. The disposition of these burials in alignment with the ditch and their location immediately next to a terminal must indicate that the interments occurred while the ditch was still visible in the ground. One burial gave a radiocarbon determination of 1498–1401 cal BC at 95 per cent probability, which implies that the ditch was emplaced before or during the fifteenth century BC. However, the possibility remains, perhaps unlikely in this instance, that these burials had been curated for some time before interment, so this is not absolute, certain dating evidence.

Admittedly, this only dates one small element of the arrangement, but the ditch in question was undoubtedly related and coeval with or probably even later than, other parts of the system in the area, such as the field to the south (Field P10). In addition, the remaining dating evidence is not incompatible with this mid Bronze Age date, and there is suggestive evidence for parts being even earlier. Most of the dating

evidence from the ditches is of pottery, either of the mid Bronze Age, or mid to late Bronze Age, with such ceramics found across the whole site (in ditches of Enclosure 2, Drove ways 1, 5, 14, 33, and 34 and other ditches of the fields on the western side of Plateau 1; Fig. 51). There was no Iron Age pottery (apart from in the vicinity of the Plateau 8 settlement), or more importantly, any pottery specifically identified as late Bronze Age, although this latter period is not evident anywhere on Thanet Earth.

There was, however, a noticeable background of earlier Bronze Age material, some admittedly perhaps consisting of special depositions which could conceivably be of curated material, such as the eighty-eight small sherds from a late style Collared Urn dating to the early Bronze Age (up to c. 1600 BC) from the southern terminus of G8011, the field ditch adjacent to Trackway 10 on Plateau 8. Elsewhere the pottery was not usually in such abundance as this, but early or potentially earlier Bronze Age ceramics (including Grooved Ware from Trackway 4) were recovered from ditches of Enclosure 2, Trackways 3, 5, 6, 7, 8, 18, 19, 20 and 34 as well as field ditches in the southern part of the site, and to the north-west on Plateaus 1 and 2. However, the concentration of earlier material was predominantly to the south (Fig. 47). Much of this pottery is probably residual, but its relatively fragile nature means that it does not usually survive for long in an open environment. Its presence in significant quantities therefore suggests the possibility that parts of the field system, particularly in the southern area of the site, may be earlier, pre-dating c. 1500 BC by perhaps a century or even more. This suggestion, despite caveats is perhaps supported by an environmental assemblage from a ditch of Trackway 1, where the presence of emmer wheat (*Triticum dicoccum*) and barley (*Hordeum* sp.), but an absence of spelt, suggests the material might originate earlier in the Bronze Age (Carruthers 2015). This proposed earlier date should perhaps not be considered particularly unusual, as there is increasing evidence that field systems in the south-eastern littoral zone can have a much earlier provenance than has hitherto been supposed. The closest example to Thanet Earth is part of a set of fields and perhaps droveways at Monkton Road, Minster (about 2km to the south-east), where there was good evidence for a derivation within the period 1910–1750 cal BC (Martin *et al* 2012, 50).

The southern field system

The southern field-system at Thanet Earth (Fig. 50) is less clearly defined than that to the north, but there are indications that it was part of the same landscape arrangement present in the northern area (below). The system appears to deliberately avoid barrow clusters at least to the south on the valley slopes, although to the north, where the barrows are more isolated, some at least may have been used as markers, through which the trackways navigated (below). Of interest here is the apparent lack of field systems on the southern slopes at Thanet Earth and on the topographically equivalent parts of the chalk ridge exposed on the Monkton-Mount Pleasant road scheme (Bennett *et al* 2008) and the higher ground of the EKA road scheme (Andrews *et al* 2015a, 105). At EKA, it was suggested that this area may have remained largely pasture during the middle/late Bronze Age, though scattered

ceramic evidence between Monkton and Mount Pleasant perhaps suggested an element of manuring and therefore arable ground (Bennett *et al* 2008, 65). It is possible that erosion has removed much of the evidence, but the dearth of Bronze Age field ditches in these zones is quite striking.

At Thanet Earth, the southern alignments were usually close to north-east/south-west or perpendicular with some variation due to the meandering nature of the droveways. One explanation for the sinuousness of the droves might be that it represents the formalisation of stock routes across (formerly) open pasture (such paths are formed on modern farms across pasture and reflect habitual routes of preference for cows). The alignment however, also reflects the east-north-east/ west-south-west line of the valleys in Plateau 7 and the southern part of Plateau 4 which trends north-north-east, and so may well be a more deliberate layout. Significantly, this is similar to the northern alignments in that they also appear, mostly, to follow the arrangement of the valleys and central ridge.

In fact, even with such a fragmented arrangement it is possible to determine that the overall disposition of the southern droves can be idealised into a series of relatively straight segments (some are in fact quite straight anyway), which curve widely at various points, often returning to the same or near same alignment. This is most noticeable in Droveway 4 where four of these divergences are evident. One alternative suggestion for the sinuosity of the droveways therefore, is that the overall alignments and major changes of direction were important and therefore consciously planned, but that minor or more localised variations were possibly due to obstructions that have left no discernible trace. One obvious candidate for such obstruction is trees, as although most of the landscape was probably cleared of woodland at this time, it seems not unlikely that small stands or copses of trees or perhaps shrubs survived. Environmental work on sites elsewhere in Kent, although at some distance and in different geographical/ geological environments, has suggested that although clearance of woodland was a distinct phenomenon of the Bronze Age, significant wooded areas did remain. Thus oak was a commonly used fuel and wild animal remains such as red and roe deer and wild boar found on the HS1 works indicate that forested areas were prevalent enough to provide suitable habitats (Champion 2011, 169–170).

Admittedly there was not a huge amount of environmental evidence from any of the ditches to support this proposition at Thanet Earth (charcoal for example was not recovered in sufficient quantity for meaningful analysis), and the survival of extensive tracts of woodland is not suggested here, although hawthorn, apple trees and hazelnut are clearly indicated from earlier Bronze Age features (Carruthers 2015). The snail assemblages from various contexts (Group G7010 from Barrow 3 in particular, which is probably mid to late Bronze Age in date), generally suggest that although much of the area had been cleared of trees and other substantial vegetation by the late Neolithic/early Bronze Age there are hints of the regeneration of more substantial vegetation showing that pockets of woodland/scrub/hedgerow habitat remained within the largely cleared landscape providing havens for shade-loving

snail taxa from which they were able to re-colonise areas if these were allowed to become overgrown.

However, hazelnut remains, although in small quantity, were found in some features in Enclosure 1, as well as Buckthorn berries (*Rhamnus catharticus*) from feature S5260. This deciduous shrub or small tree grows on calcareous soils in oak woodlands and fen scrub and apart from medicinal properties its berries can be used to make dyes; it is likely therefore that it was significant in the landscape and probably utilised (Carruthers 2015). Whether such copses of tree- or shrub-covered land were present, or that the plant residues derived from hedgerows is difficult to determine. Although the positions for the postulated obstructions also indicates that these zones are nearly always totally devoid of any prehistoric features (perhaps indicating the presence of quite long-lived areas where little activity took place), they are often part of much wider zones of little intrusive activity (Fig. 57). However, there are also two or three sudden swerves of direction, suggesting localised obstructions on Plateau 1, where otherwise, the drove way alignments are much more regular. Of course such woodland stands would have made useful navigation points in the original genesis of these routes, much as the barrows seem to have influenced other alignments. This then would seem a quite likely explanation for the sporadically meandering nature of the tracks and perhaps indicates the overall character of the immediate landscape, mostly cleared but with relatively small areas of overgrown land or stands of trees, shrubs and bushes at various points, similar in fact to what has been proposed at Heathrow during this period, where 'we should not imagine the Heathrow Terrace as prairie-like: there were certainly trees in the landscape... and with isolated trees or small stands of birch, pine, lime and elm dotted quite widely...many were left growing in the hedgerows and even within the lines of trackways, which sometimes zig-zagged around them' (Framework Archaeology 2010, 142).

Here, it is worth considering the antiquity of medieval Trackway 33, now represented by Seamark Road. Although there was no archaeological evidence that this route pre-dated the medieval period, its relation with the late Iron Age/Roman cropmark complex at Monkton road Farm certainly suggests that it was at least this old. Further, the alignment of certain medieval boundaries seems to replicate prehistoric ones in this southern area, and rather than these respecting the medieval route, may suggest that the trackway was actually originally formed in the prehistoric period. Its relationship with the topography and the prehistoric boundaries here would also indicate this possibility.

The drove ways themselves, which are commonly interpreted on sites of this period, are normally represented by two close-set parallel ditches forming straight or sinuously curving arrangements. The ditches are likely to have possessed a low adjacent bank, derived from the upcast of ditch excavation, probably eventually surmounted by a hedge, as has been determined at Heathrow (Framework Archaeology 2006, 102-104). Although the ditch might infill naturally over a long period, the banks and any hedges present might last for a considerable time,

dependent in part on the nature of any subsequent agricultural regime. In form, paired ditches interpreted as drove roads or trackways of Bronze Age date can vary quite considerably in separation, although the ditches themselves often seem to be generally U-shaped and relatively shallow, at least in east Kent; although their shallowness is often a result of subsequent truncation. The droveways can be as wide as 14m, as at South Hornchurch in Essex (Guttmann and Last 2000, 326), but are normally narrower, a trackway at Iwade, Kent being 7m wide (Bishop and Bagwell 2005, 16). Again at South Hornchurch a converging set of ditches narrowing to only a metre was interpreted as a sheep run or 'race' (Guttmann and Last 2000, 332). Fragmentary ditches, probably droveways at Beechbrook Wood on HS1 were 2–5m apart (Champion 2011, fig. 4.12). In comparison, the Thanet Earth droveway ditches were rarely less than 2m and not usually more than 5.5m apart.

The enclosures

Both enclosures 1 and 2, particularly the latter seem to be intimately connected with the surrounding fields and drove ways (Figs. 48–49). Enclosure 2, aligned similarly with the rest of the system, although bisected by Trackway 1 (possibly an earlier alignment), is clearly the focus of the surrounding routes. Trackway 5 aligns on its south-east entrance (as does perhaps Trackway 2) and Trackway 4 on a possible entrance in the opposing corner (alternatively or in addition, this may have continued on a similar course along the western side of Enclosure 2). The splayed ditches outside its north-east entrance are notable and appear as a funnel, perhaps to channel livestock into the enclosed area from adjacent fields. This particular type of arrangement (sometimes called 'antennae ditches' for obvious reasons) is sufficiently individual to have been noted on other sites such as the A2 works at Gravesend (Lambrick 2009, 70–72) and Brisley Farm, Ashford, although the latter example was late Iron Age in date (Enclosure OA40; Stevenson 2013, 65–66; see also discussion of Enclosure 1 below). Unfortunately the relation between the ditches of Enclosures 2 and 1 was tenuous, but, it is likely that the latter's ditches respected the position of the former's and they may have even been contemporary. Enclosure 1 may therefore have originally been a large enclosure or corral for the handling of stock, only later becoming a focus of occupation; the funnelling 'antennae ditches' and its internal short ditch sections, clustered near the entrance and forming small enclosures with multiple entrances and exits were very likely associated with close stock handling.

The convergence of five tracks at the south-eastern corner of Enclosure 2 (Fig. 48) appears to represent an excellent example of the location of drafting gates for sorting of livestock (Pryor 1998). Thus livestock seasonally driven from Trackway 2 or 5 to the enclosure could be separated at the drafting gate (i.e. Trackway 5's junction with the enclosure and with Trackway 1) with stock separated (e.g. ewes and lambs from rams) in one of three directions; onto Trackway 1 and leading north out of the enclosure, between the double ditches forming the eastern side of the enclosure which open into its interior, or between the double ditches forming the southern side of the enclosure leading into the landscape to the west (or into the sub-enclosure of Enclosure 2, west of Trackway 1). Similarly livestock brought into the enclosures for

milking, checking for disease, branding etc., or held for longer periods including over winter when fodder feeding was necessary, could be released into the surrounding landscape via various routes, again with animals inspected or segregated at the drafting gates locations.

The northern field system

A very well preserved and extensive prehistoric landscape is represented on Plateau 1 and the western side of Plateau 8 mostly flanking either side of a shallow dry valley, with ditches that appear to link these systems together some possibly sealed beneath the colluvium in the centre of the area (the relationship between ditches and colluvium was impossible to definitively identify). In sum the field system in Plateau 1 covers an area over 325m east-west by over 175m north-south in extent. If all or most of these ditches were indeed contemporary (at least in their later phases) then up to 16 separate fields and paddocks can be defined or part defined. The closely interrelated nature of the ditch systems, with three north-south aligned drove ways, lateral routes and more clearly defined fields, indicates that it was stock related with a probable emphasis on sheep rearing. Well-defined fields appear to have bounded both sides of Trackway 7, outlined by east-west aligned ditches, sometimes double ditched, and perhaps representing lateral routes. A further near parallel and more complex north-south boundary about 70m to the east consisted of a number of ditches, possibly in part another drove (Trackway 24) within the western side of the colluviated part of the valley. The multiplicity of ditches here could be due in part to their position at the base of the valley, where eroded material may have accumulated more rapidly in the ditches and the ground may have in any event been wetter.

The western side of the field system in particular, displays elements that can be identified with a pastoral landscape. Thus a sub-square paddock or enclosure (Field P2) with an entrance onto Trackway 7 in its south-eastern corner and related ditches in the central western area of Plateau 1, was probably designed for close handling of stock (e.g batching, sorting, milking, slaughtering etc.). The 'paddock' exhibited short sections of drove flanking its southern and western sides (Trackways 14 and 6 respectively, with Trackway 7 on its eastern side) and a single ditch flanking its northern side. A small pen may be defined by narrow ditches in the north-east corner, whilst an entrance at the north-west corner led to Field P1 to the north and a further system of interrelated compound ditches to the west. These formed a small rectangular pen perhaps for containing stock. The southern part of Trackway 7 exhibited a narrowing of its ditches at the entrance to Field P2 representing an excellent example of a stock funnel or crush (where a herd of sheep were funnelled to single file via the narrowing of a wide ditched drove). Several 'three-way entrances' (drafting gate locations) are possibly apparent in this node of the system, allowing stock sorting into various field options (rams from ewes etc.), and although perhaps not as clearly defined as in the model suggested by Prior (1998) or at sites such as Brisley Farm (Stevenson 2013), the general similarity suggests a comparable purpose.

The seemingly contemporary system to the east of Trackway 24 within the low relief valley and extending to the eastern extent of the plateau comprised a further series of probable fields with traces of east-west double ditches leading towards equivalent ditches in the western area; there was no evidence for north-south drove ways here. The rectilinear arrangement seems to disappear in the south-east part of the plateau, the irregular layout more reminiscent of the southern field system, with many of the ditches on similar non-cardinal alignments and therefore perhaps potentially earlier than the rigid, north-south arrangement (Fig. 51). The curvilinear ditch bounding Field P10 was central to the eastern area and formed part of the southern boundary of additional fields extending to the north. Accretive additions to the system may be displayed by the ditches (particularly ditch G1035 on the west) immediately north of Field P10, which seem to respect its position, terminating just short of the field but adjacent to significant kinks in its course. Its eastern counterpart (G1042), although tenuous at this point appeared to curve before it reached the ditch. Unfortunately, the features were particularly shallow in this area (perhaps due to increasing later truncation towards the higher ground that flanks Plateau 8), and the ditches were very difficult to discern, so there are gaps in what could be planned. The odd curve at the south end of G1042 therefore probably represents a terminal but this is uncertain. The topography suggests that the ditches in this area, including those to the east on Plateau 8 (Trackway 11), were purposively set out to avoid or more accurately to respect Barrow 6, all to east and west, curving around it.

Another important nodal point in the system seems to be represented in this central area, on the north-west boundary of Field P10, where a significant enlargement of the ditch and sudden change of direction forming an inverted U (as well as a number of potential recuts) was respected and referenced by a probable addition to the system (G1035, continued further north by G1044). Two perhaps later field ditches further north (G1010 and G1039 below) can also be seen to form a field (P12) aligned on the central northern point of Field P10, as well as ditch G1042, which forms the eastern side of field P11. This field's irregularity in shape to the south also appears to reflect the presence of Barrow 6, 34m to the south-east. The form is remarkably similar to a mid-Bronze Age enclosure at Heathrow (Settlement 4; Framework Archaeology 2010, 148 and fig. 3.10), though about half the size.

The two burials (G1173) cut into the fill of the silted ditch (G1035) were the most significant features in this area, and seem to respect this nodal point. Both were mid Bronze Age crouch burials, one with legs so unnaturally flexed that they must have been very tightly bound together. One was a female adolescent, the other an older male (up to 30 years old). Although such burials are very rare (cremation being the normative rite at this time), similarly tightly bound burials are known from the Bronze Age and in one case at least, this has been linked with possible mummification of the body (i.e. at Cladh Hallam on South Uist; Parker-Pearson *et al* 2004). Their additional significance here is that they provide a *terminus ante quem* for this part of the field system of c. 1500–1400 BC (above), although the possibility of curation of the bodies above ground before final burial must be recognised. However, apart from their rarity, they are of considerable interest in their own right.

They seem to be in an area away from significant zones of occupation, and their isolation, rarity and tightly bound nature would seem to suggest that their burial held a particular significance. Perhaps their location at the edge of, or at a key location within a claimed landscape, was intended to reinforce rights of ownership by descent (burial of ancestors), or was their burial for another reason such as criminality, with the liminal location and deviant mode of burial a warning to others? On balance the tightly bound legs appears consistent with a careful and probably respectful post-mortem cultural practice and the former interpretation is preferred.

To the north of Field P10, the north-south alignment is prevalent again, indicated by two ditches (G1010 and G1039) about 49m apart (with another to the east) that extended into the far north part of the site, thus delineating at least four more fields (P11, P12, P13 and P14). It is most likely that these were further additions to the more varied arrangement to the south although there was no artefactual evidence for this (the features were relatively sterile). In the Pond 1 area, the ditches almost certainly respected the position and perhaps entrance of Enclosure 3, which although insecurely dated is likely to have been of late Neolithic or earlier Bronze Age origin. The predominant north-south orientation of this landscape is in common with the following Iron Age, Roman, medieval and indeed modern landscapes in the northern area of the site, therefore implying that this landscape form remained 'stable', or open farmland throughout.

The overall disposition of the field system

There is also evidence, that although parts of the system might be later additions or extensions (therefore accretive), the arrangement generally appears part of one concept. To the south of Plateau 1 ditches were graded away, but the alignments of both Trackways 7 and 14 are closely positioned on the Barrow 7 and 8 complex at which point they could have turned more to the east. This possibility is suggested by the major alignment of Trackway 24, which demonstrates a much more definite, eastwardly curving trend towards the south, which in fact follows the base of the shallow valley (see Fig. 51). Overall, these, and including similarly disposed ditches on Plateau 2 and 3 allow us to suggest that this northern system curved further to the east to the south, more in line with the alignments in the southern part of the site, and thus suggest a unity for the otherwise disparate arrangement. It may be more than coincidental that the valley on Plateau 1, although extremely shallow in this area, trends also in this direction southward into Plateau 2. Thus Trackway 7, passing between Barrows 7 and 8 may have joined Trackway 21 on Plateau 4 and Trackway 24 would very closely align on the course of Trackway 33 on Plateau 2. Therefore, like the system to the south, the alignments of the valleys seem to have played a significant part in the overall disposition of the arrangement, and also perhaps indicates a unity of idea between the two apparently separate systems. It can be noted here also, that the ditched routes of this period on Plateau 8 (Trackways 11-13), align with that plateau's valley to the east.

The overall connectivity of the northern and southern systems is possibly further displayed by the southernmost extents of the Field P10 ditch, which to the west curved broadly to cross the alignments of the western north-south drove ways at a near right angle (although it was very fragmentary here). The eastern limb may have connected with a short length of L-shaped ditch in the northern part of Plateau 3 (G3070) and from there probably extended into the north-eastern part of Plateau 2. To the immediate south of this point, adjacent to the pond barrow (Chapter 2 and below), a right angle of multiple ditches (Trackways 33 and 34), form an L-shaped corner which appears extremely odd in isolation. Similarly inexplicable right-angled corners observed in the study of extant field systems are usually interpreted as survivals of boundary clearance. In this case although the expected continuations are not archaeologically defined, it seems quite likely that both these drove way alignments could have continued, to the south-east and south-west into the central zone straddling Plateaus 2 and 3. This area was virtually devoid of features and, similar to the archeologically more negative area to the north, it spanned the ridge of slightly higher ground between the two north-south aligned valleys and thus appears to have suffered more extensive truncation (as attested by the very shallow and truncated Roman cremations in this area). Shallow ditches may well have not survived in this zone. This places the pond barrow, by the later middle Bronze Age probably a pond used as a waterhole, neatly within a field corner, as is often, but not always the case.¹⁰ The Trackway 33 route would therefore reflect the postulated connecting line of Trackways 7 and 21 to the south-west, while the Trackway 34 alignment is virtually at right-angles to it.

The nature of the Thanet Earth field system

Yates (2007, 14–15) defined two individual types of field system following his study of those known in the south-east at the time, co-axial and aggregate systems, although in general it seemed to be that '*field layouts are distinctively rectilinear creating grids of fields*'. *They may be coaxial or aggregate in layout*'. Coaxial field systems are characterised as with '*one prevailing orientation*' where '*most of the field boundaries follow this axis or alignment (axial boundaries) or run at right angles to it (transverse boundaries)*' whilst '*the size of coaxial systems and their inherent inflexibility tends to make them terrain oblivious...seldom allowing variation for topographical obstruction*'.

Aggregate field systems on the other hand have no predominant axis and '*field blocks were clearly added to one another on a piecemeal basis rather than in adherence to one plan*' (after Bradley 1978, 268). With these forms excavation has shown that they can contain phases of realignment each of which '*may have conformed to one dominant axis*'.

The impression given by the Thanet Earth layout is that it does not strictly conform to co-axial criteria. First, although it covers a wide area it evidently curves in the central area from north-south and east-west aligned in the north, to nearer north-east/south-west in the southern half of the site (Fig. 50). This change in alignment is clearly influenced by local topography and therefore it is not a wider rigidly applied

¹⁰ There are numerous waterholes or wells at Heathrow, but not all were in the corners of fields, although often near the edges. See for example Framework Archaeology 2010, 152, 154, 162, 173 etc.).

co-axial network, although an overall north-south trend seems to be present. Thus, to the north the (more co-axial) ditches are in common with the dry valley axes on Plateaus 1 and 8, or in the central area between, more closely aligned on the central ridge. To the south, the valleys change in alignment, swinging eastward, much as the drove ways appear to, with the Plateau 8 valley then curving to a north-east/south-west line. The valleys to the south of the site's high central ridge are similarly aligned to this and therefore the southern system seems more closely to reflect this topography. Secondly, unlike some other Bronze Age field-systems in southern Britain, including the extensive system recently investigated over a 32ha block of Sussex downland landscape for the new Brighton and Hove Waste Water Treatment Works, at Peacehaven (Hart 2015), there is no overall dominant axis as such (discounting the overall north-south trend), with the boundaries represented being only loosely co-axial and with curvilinear stretches also evident (with minor fluctuations of course as discussed above). There are individual exceptions to these layouts, such as Trackway 10, but this may well be a more ancient route that became defunct earlier on. The impression is that this was a system with an overall organisation, but closely reflecting the local topography and with accretive elements (the fields in the north-eastern quadrant of Plateau 1 in particular), thus supposedly reflecting aggregate criteria. Although there is an element of aggregation, this does not however, as far as can be determined, seem to be a major factor overall. Thus the field-system represented seems to provide a formal, if not 'mechanistic landscape', of integrated droveways that was inherently globally designed but may have been added to in detail over time. Therefore, although the field-system better suits the aggregate definition, its symmetry with the natural landscape and overall coherence suggests that the distinction between rigid and aggregate systems is not simplistic. It is argued below, in relation admittedly to what little is known of the overall pattern of the agricultural landscape in Kent at this time, that this lack of rigidity may be related to chronology.

The function of the fields

Functionally, the fields were perhaps not much different to those revealed elsewhere, of whatever form, although the balance between pastoral and arable agriculture is difficult to judge and probably varied from area to area. As mentioned above, the system was evidently designed for stock control/movement, much as has been proposed for the Fens for example (e.g. Pryor 1998), with a probable concentration on sheep. The presence or absence of waterholes is discussed below, but if their rarity in the excavation was a true reflection for this period, then the emphasis is more likely to have been on sheep as they require less water than cattle (Cunliffe 2005, 416), a similar situation to that envisaged at Peacehaven, where there was also lack of waterholes (Hart 2015). Although the animal bone assemblage from this period was meagre, there was at least some indication for the presence of cattle, as well as horse from a probably ritual deposit in a ditch terminal of Enclosure 1 and a cow mandible was also recovered from Trackway 24. Deposits within ditches of Barrows 1 and 2, although uncertainly dated to this period, also yielded cattle bones but these were also predominantly of skulls or skull elements suggesting a ritual

element in their deposition, but even considering possible taphonomic bias, certainly indicate a bovine presence (Chapter 2). Conversely, the near absence of sheep remains may well be due to poor preservation, and cannot be construed as indicating an absence of sheep farming.

Pryor (1998, 100) has discussed '*managing and manipulating livestock*' with regard to interpretations of Bronze Age stock systems at Fengate and his understanding of modern systems for stock sorting. Two Thanet Earth examples of stock management systems stand out. On Plateau 1 (Fig. 51) Field P2 is approached via trackway 7 from the south with one ditch curving inwards forming a dog-leg to dramatically narrow the width of the drove at the junction with a perpendicular Trackway 6, forming the south side of P2. Pryor described such features as a funnels or crushes used to reduce herd flow to single-file, nose-to-tail, as they pass the entrance into a 'close-confinement handling system'. As sheep passed through single file it is suggested that they could be inspected for condition and then split up by (for example) selecting rams (for culling or breeding) lambs (for culling or separation) or ewes (for separation of breeding ewes, scanning for state of pregnancy – i.e. carrying single, twins or triplets). The main Field P2 enclosure could then be used for various functions such as delivering lambs or holding animals intended for exchange. The other striking Thanet Earth example noted above is the junction of five double ditched tracks at the south-east corner of Enclosure 2, with the complex junction suitable for sorting the various categories of animal in various directions and carrying out the above inspections. So called '*3-way drafting gates*' were also postulated at Fengate (*ibid*, 105).

Fields would (if hedged) have bounded both blocks of pasture and also, probably, arable, hence the need for tracks to segregate stock transport from the adjacent fields. Plant remains from the ditch of Trackway 1 included poppy (*Papaver* sp.) and brome grass (*Bromus* sp.), both common weeds of arable. What precisely was grown overall is less certain, but this sample provided emmer wheat (*Triticum dicoccum*) and barley (*Hordeum* sp.), but not spelt (Carruthers 2015). Although the plant assemblage from this phase was relatively minimal, the probably contemporary deposits within some of the barrow ditches 'produced frequent cereal remains, with emmer and barley being the main cereals present and a single flax seed'. It is possible that this represents the waste from periodic feasting activities taking place around the barrows. No spelt wheat was recovered from these samples and the limited charred plant evidence from this period suggests that occupation may have been small-scale (below) or primarily pastoral. Cereals were also found in the mid-late Bronze Age settlement of Enclosure 1 (below) with smaller quantities of pulses.

The final chronology of the field system

It is impossible to say when the field system finally assumed its ultimate form, or when, if at all it went out of use towards the end of this period. Its probable development, with some accretive elements in the northern areas has been outlined above, but there is nothing to definitively suggest a date for the final infilling of any

of the ditches. This of course could have been much later than any cessation of the use of the system, which could in any event have survived in other ways than as negative features (below). Significant evidence does suggest however, that many field boundaries and perhaps even some of the trackways survived into the Iron Age and beyond and there is indication for Iron Age maintenance with recutting of ditch alignments in the area of the Plateau 8 settlement (below). It is likely that the fields were being used to some extent as there is no evidence for any extensive regeneration of woodland, even though there appears to be no late Bronze Age settlement. Of interest here are the trackway ditches on Plateau 8, considered to be coeval with much of the earlier system due in part to symmetry of layout, but which contained later material obviously derived from the settlement that formed within bounded fields to the east of the tracks (see Chapter 4), later extending beyond them. The boundary ditches of Field P15 show an even greater continuity of use, being recut on a number of occasions, used for the disposal of domestic waste sometimes with ritual overtones, and finally becoming the repository of Iron Age inhumation burials. Even if the ditches did not eventually survive as landscape features, later collinear alignments of the late Iron Age/Roman and medieval periods, including some rather precise juxtapositions (Chapters 5 and 7), suggest that at least some elements of the Bronze Age field system survived for many centuries, probably in the form of banks or hedges.

The nature and date of field systems in Kent and the near south-east

In Kent, there are examples of isolated ditches possibly representing parts of field systems in numerous excavations, but rarely is there a wider picture which allows some appreciation of form, how they relate to the local topography, or even date (Fig. 58). This produces great difficulty in assessing the overall organisation of Kentish field systems, whether they varied over the county in date or morphology, or even that a rigidly co-axial system (as in Yates's definition) seen in other areas of southern England was actually ever present. Even where a larger arrangement can be perceived, there is often no knowledge of how this fitted into any more widespread configuration (Champion 2011, 185). Thus, if the north-western part of the Thanet Earth field system on Plateau 1 was seen in isolation, it resembles a co-axial arrangement, whereas the south part of the site would suggest a looser, aggregate organisation. Cropmark evidence does not help here as the rather ephemeral ditches of these fields do not commonly provide any trace.

Potentially the earliest fields yet located in the region (later in the early Bronze Age; see above), have been found at Minster, Thanet (Martin *et al* 2012), where they were interpreted as a being part of a co-axial arrangement. This is possible but by no means certain as only a few fields or paddocks were exposed and these were somewhat disparate in size and shape (*ibid*, fig. 1). Overall however, most field systems in Kent, where they are dated at all, have previously, and perhaps partly due to convention been interpreted as of later Bronze Age origin (Champion 2011, 179). There would seem to be however, in the light of more recent evidence, some distinction between systems south of the Downs and those to the north, although

this may yet prove illusory. At Beechbrook Wood, one of the largest area excavations of HS1, not far north-west of Ashford, there was a localised scatter of mid Bronze Age settlement features, set within a possibly later rather fragmentary field system. A rectilinear arrangement with some stretches of potential droveways is apparent, aligned roughly with the trend of the Downs escarpment about 2km to the north (Champion 2011, fig. 4.12; Brady 2006a, 23–24). Perhaps coincidentally, the near north-south alignments of the system are parallel to the shallow valleys that lay either side of the low hill straddled by the fields, and although the particular similarity here with the Thanet Earth system is apparent, the alignments may be due to the wider topographical factor of the North Downs escarpment which could have been a restraining factor (although not as steep here as towards Folkestone). Potentially co-axial in layout, one of the rectangular fields was about 100m long by 80m wide, a not dissimilar size to some of the Thanet Earth examples on Plateau 1 (and Enclosure 2 on Plateau 5). In any case ‘it was not clear that there was a regular pattern of rectangular fields laid out within the framework formed by the main ditches’ (Champion 2011, 185). Although there were some fragmentary ditch sections present that were dated to the middle Bronze Age, suggesting a more convoluted (and perhaps earlier) development, the main arrangement was conceived to be of the late Bronze Age (*ibid*).

South of Ashford, ditches at the near adjacent large scale excavations at Westhawk Farm (Booth *et al* 2008, 25) and Brisley Farm (Stevenson 2013, 20–33) can be interpreted as parts of the same extensive Bronze Age field system. The fields at Westhawk Farm, which provided no dating evidence were sprung from a north-east/south-west aligned spinal ditch that traversed the site. A potential droveway was evident at its south-west end (Booth *et al* 2008, fig. 2.1). However, apart from the relatively straight main alignment the remainder of the system was very fragmentary although quite possibly of co-axial form. The main ditch was aligned with the axis of the slight south-west facing promontory on which the site was situated, ‘following the topographical trend of the site’ (similar to the situation on Plateau 1 at Thanet Earth) and also perpendicular to a probable relict tributary of the Stour to the immediate south-east (*ibid*, 365; fig. 1.4). Thus, as with the previous examples some consideration of the topography seems to have had an influence on the layout, while the rigidity of a co-axial arrangement is possible but not explicit. The evidence at Brisley Farm was ‘in part fairly ephemeral’ with only minimal artefactual evidence such that the chronology ‘is to an extent open to question’ (Stevenson 2013, 20 and 29). The fields were however, dated to the late Bronze Age (*ibid*, 27, 29) and displayed a dominant north-east/south-westerly trajectory, similar to Westhawk Farm and could easily be seen as co-axial. However, here again there were more subtle variations, with some parts of the system on a slightly different alignment, and as with most of the local sites already considered, there was some element of respect for the landscape, rather than it being ‘terrain oblivious’ (*ibid*, 27–28). At Brisley Farm the question of the form of the system was left open due to the various uncertainties of progression and overall organisation, although both a co-axial and an added aggregate system was tentatively suggested (*ibid*). Similar problems of interpretation are evident at Saltwood, west of Folkestone (also on HS1),

where another fragment of a field system was exposed, dated to the late Bronze Age (Champion 2011, 185 and fig. 4.13). Similarly aligned to the ditches at Beechbrook Wood, a more extensive rectilinear arrangement is again possible, but some variation was noted, perhaps due to the presence of a significant early Bronze Age barrow cemetery.

As mentioned, these fields south of the Downs may represent a distinction to those of the northern Kentish littoral such as Thanet Earth as the 'large field systems to the south of the chalk escarpment' seem to develop after 1200 BC (Garwood 2011, 149). However, as can be seen, the dating evidence is not always clear cut. It may also be significant that most of these southern systems are possibly of more co-axial form than the Thanet Earth layout, even if not exactly terrain oblivious. Apart from Thanet Earth however, sites on the northern coastal zone are usually not as extensive or as well preserved (see for example Kemsley below), although less rigid fields of potentially earlier origin are perhaps more apparent (given the limitations of the evidence) and may resemble the northern zone of the Fengate site, where a more flexible field design was investigated at Eyeburry Quarry (1km SE of Eye and 4km NE of Fengate; Yates 2007, 89). Admittedly, the field system here was considered to be of the late Bronze Age. It exhibited 90m spacing between ditches (an interval also noted at Barleycroft and Great Ouse; Gibson and White 1998, 4 and in the order of Kentish examples) but unlike Fengate's rigid system, a 'curvilinear field system' with a fluid design was created. This design enabled each of the associated land blocks 'to bend with the prevailing local topography' (Yates 2007, 89).

This type of development is at least suggested by a number of sites along the north Kent coast, although in all of these, again only a fraction of the landscape has been explored often with piecemeal survival. However there are often hints that a looser or less complex field system was replaced by one of more rigid form (rather than the usually suggested later aggregation to a co-axial system – see Hart 2015). On the south facing slopes of an east-west aligned ridge at Kemsley, near Sittingbourne, an early middle Bronze Age ditch was replaced by, or incorporated within a more complex arrangement and the layout was probably of aggregate form, although interpretation is complicated by the presence of possible enclosures. Additional fields (Group 16; Diack 2006, 18 and fig. 10) were added to the system in the late Bronze Age. On the northern flank, where the ridge overlooked the marshes, quite extensive excavations exposed elements of a Bronze Age field system, including probable droveways, but they were very fragmentary (Mackinder and Blackmore 2014, 7–13). It was suggested that the fields may have originated in the middle Bronze Age, but most of the finds from the ditch fills were of later Bronze Age date, probably having derived from nearby settlement. Perhaps significantly, traces of an earlier system (aligned north-east/ south-west or perpendicular) were replaced by a more north-south aligned arrangement (the latter more aligned with the overall topography).

At Shrubshole Hill, Sheppey (Coles *et al* 2003), one middle Bronze Age ditch, perhaps represented a significant land division running up-slope from the Swale,

but there was initially no evidence for adjacent fields. The feature was over-ridden by late Bronze Age fields or, as interpreted, enclosures (*ibid*, 52–53). On the other hand, the system at Iwade, north of Sittingbourne seemed to be completely late Bronze Age in conception although present by the beginning of this period (Bishop and Bagwell 2005, 16). A rather irregular layout was arranged north-east/south-west ‘following the contours of the hillside’ (*ibid*, fig. 24) but there was relatively limited exposure and it can be suspected to have originated earlier, particularly as there was a scatter of the type of middle Bronze Age features (including a well or waterhole, pits and cremations) often found in field systems within the area bounded by the fields and a bronze Palstave buried in one of the ditches of a trackway (admittedly possibly curated or residual; *ibid*, 14–15 and 51–52). Small fragments of similarly dated arrangements have also been recorded near Gravesend (Mudd 1994), and on this littoral are frequently interpreted as associated with the control of livestock and their seasonal movement (transhumance) from the higher ground to the coastal zone or marshes (Bishop and Bagwell 2005, 50; Mudd 1994, 407).

More recently on Thanet, the large linear area exposed during the EKA road scheme has also revealed ditched field systems. Although the dating evidence from the boundary and droveway ditches was ‘generally slight’, there was enough pottery recovered to suggest a middle Bronze Age origin, also confirmed by some stratigraphic relationships. However, the possibility of an earlier beginning in the Bronze Age was not ruled out (Andrews *et al* 2015a, 105–106). The EKA field systems were mostly found in the southern parts of the site, on the slopes of Cottington Hill, at Sevenscore and towards Cliffsend and appeared to be co-axial layouts, in as far as most of the boundaries appear to be straight. In a significant difference to Thanet Earth, the landscape appears to have been developed into the late Bronze Age with associated settlement evidence for this period. Otherwise, the system was probably similar to that of Thanet Earth’s northern area, with features related to the movement and management of livestock, such as small paddocks or stock enclosures. In addition a number of rather similar arrangements of double ditches occur in the southern area (compare for example Trackway 3 and the arrangement of the enclosure corner shown in Andrews *et al* 2015a, fig. 3.10). However, it is difficult to say whether the EKA road scheme systems were terrain oblivious although some elements were obviously constrained by the local topography of the spur extending south into the Wantsum (see Andrews *et al* 2015a, fig. 3.63). Both this factor, and the closeness of the fields to the sea, rather than the landlocked nature many of the above examples, might have conferred some difference.

The complexities of this are evident, and it would appear that our perception of such systems in the county is not clarified to the extent that a consistent chronological development, or variation between locations (if either exist at all) is yet evident. The ditches are nearly always very difficult to date and some on HS1 south of the Downs, although indeterminately part of a field system, have been considered middle Bronze Age (Cobham Golf Course, Sandway Road, Tutt Hill and others; Champion 2011, 185). It may be that the development of these field systems was more complex, with perhaps earlier fields and trackways of lesser extent or

complexity, present in more areas than can yet be perceived. This perhaps correlates with the mass of evidence at Heathrow, where it was concluded that 'the farmed landscape resulted from a dynamic process of creation, maintenance and alteration' (Framework Archaeology 2010, 143–145). The concurrent theme in Kent, admitting the limited nature of the evidence, is that known field systems are often landscape oriented, or at least partially dependent on it. Thus, it could tentatively be proposed that there is no definite evidence for a wide-ranging, rigid form of landscape-oblivious co-axial field arrangement (as defined in Yates 2007 *passim*) anywhere in Kent, at least not in the northern and eastern parts of the county, but perhaps a rather more localised and irregular arrangement.

More widely, the problems in dating the inception of field systems are well demonstrated by the aforementioned vast area (75ha) of Bronze Age landscape revealed during the Terminal 5 excavations at Heathrow, where 'it is very difficult to identify the beginnings of this new agricultural system' (Framework Archaeology 2010, 136). A more important comparison possibly has a bearing on the earliness of the Thanet Earth fields and tracks and what has been suggested above. At Heathrow, the western part of the complex was more representative of an aggregate arrangement, while to the east a more co-axial system is evident. Although not completely certain of the chronology, it was suggested that there was a 'broad indication that elements of the aggregate system predate elements of the eastern coaxial system' (*ibid*, 140).

The potential overall complexity of defining and analysing Bronze Age field systems in the south-east and their probably convoluted development can be glimpsed from the above, but it does seem possible that generally, more loosely organised aggregate, or rather landscape observant systems could be earlier, embryonic manifestations of Bronze Age land management, perhaps laid out and used under a more local form of authority and probably over a more restricted area than the west London/Middle Thames Valley, Dartmoor or Salisbury Plain landscapes, a less centralised and more local response to agricultural management. The more rigidly designed co-axial grid-works may thus, in some cases, represent a later phase of development under a wider, more regulated and dominant organisation. If it turns out that rigidly co-axial systems are not primarily the norm in Kent, and that the chronological difference between the two is actually a reality, this could suggest that Kent had a formative role in terms of the change from open to enclosed landscapes, perhaps stimulated by its close proximity to Europe, as has been intimated by Yates (2007, 19–20), Barclay and Stevens (2012, 51) and others.

Provision of Water

One element that appears to be largely missing from the fields revealed at Thanet Earth is the issue of water provision to stock. In Kent and elsewhere watering holes and water management systems associated with field systems are well recognised (Framework Archaeology 2006, 133). Although the 'pond barrow' at Plateau 2 may well have been utilized for the purpose of stock watering during this period,

following its ritual use an open arena, it is the only such feature observed so may have been vital for the well-being of the flocks/herds. The pond (or pond barrow) is discussed in detail elsewhere (Fig. 40), but in terms of the later deposits which had begun to develop above the metallurgy when the palstave axe was deposited, there were various indicators of water lain deposits or content. However, the environmental samples have proved unfortunately unproductive, possibly due to a repeated cycle of drying and wetting.

Otherwise, the lack of waterholes on site contrasts strongly with the thirty or so found at Perry Oaks, Heathrow (Framework Archaeology 2006, table 3.7). This is mainly explained by a significant difference between Thanet Earth and Heathrow, as at the latter waterholes could be cut deep enough to encounter the water table; at Thanet Earth this lies between 15 and 25m below ground surface, and can only be reached by the use of deep wells, such as those sunk in the medieval period (Chapter 7). It is probable that some of the other clay filled dolines nearby may have presented as shallow ponds at this time (not all were investigated), and it is likely that other shallow ponds were present in the landscape, probably situated on areas of more clayey impervious subsoil; there is some evidence for this during later periods (see Chapters 6 and 7). Such depressions may have been too shallow to survive later erosive episodes at Thanet Earth.

Ritual deposits within field-systems

Depositions that can be seen as sepulchral or ritual evidence are scattered across the site (discussed more widely below), but there are some elements that relate to the fields, the most obvious examples being the two crouched inhumation burials placed at a significant location or 'nodal point' of the field system on Plateau 1 (above) and the axe in the Plateau 2 pond. Brück (2001, 151) has observed that '*critical points in the fields and the settlement were marked by the deposition of artefact concentrations or the placing of special single finds including quernstones, bronze objects and token human cremations*', also emphasised by Yates (2007, 18) referring to so called token cremations (further discussed below) or other special deposits which '*appear to emphasise important points in the land and settlement boundaries. They provide clues to the complexity of the cultural landscape in which formal land tenure was not solely an impersonal expression of demographic and economic forces*'. Cremation burials at Thanet Earth were concentrated in the northern area of the site (Fig. 51), one (G10008) located in the south-east corner of field P14, another in a similar position in relation to field P5. Others were not so evidently positioned in relation to the fields or droveways *per se*, but did tend to be situated near these boundaries.

There were a number of depositions within ditches, particularly terminals, but these were more obviously associated with the settlement evidence than the fields themselves, apart from a few exceptions. These included a fragmented mid to late Bronze Age pottery vessel in the south-west terminal of ditch (G5148) of Enclosure 2 (Fig. 48) and an assemblage of early Neolithic worked flint from the western terminal of a Trackway 8 ditch. The most significant find was probably the large

quantity of late style Collared Urn from the southern terminus of G8011, a field boundary north of Trackway 10 (eighty-eight sherds dating to the early Bronze Age). Two aspects particularly stand out, the generally larger quantities of worked flint (sometimes evidently from knapping episodes) from ditch terminals and very often its date, much earlier than the ditches themselves. Some of this could be coincidental, but it is a recurrent pattern, which suggests that curation of flintwork, even debitage, may have been quite common during this period. As for the concentration on terminals, this also seems to be a trait that recurs in many periods, and is even seen in the medieval fields and enclosures. Such points in any ditched system seem to be important, or hold a certain attraction, independent of period; this may have had a partly psychological basis and correspond with the lure of nodal or liminal points that can be seen in numerous interpretations from the prehistoric period.

Settlement Enclosure and settlement evidence

From the middle of the second millennium BC, evidence for settlement becomes much more common in southern England (Cunliffe 2005, 34–35) and in Kent sites of the middle Bronze Age in particular become increasingly evident. Although middle Bronze Age occupation has previously been seen as relatively scarce by comparison to the late Bronze Age period (Champion 2007a, 103), recent large scale fieldwork has changed this view; middle Bronze settlements seem to be much more frequent, but widely scattered and of less discernible form, not so detectable in small scale interventions (Champion 2011, 179). However, many of these sites have only been very partially investigated and often they remain difficult to characterize (Champion 2007a, 102). The most commonly quoted model for Bronze Age settlement in the south-east of England derives from fieldwork on the Sussex Downs (e.g. at Itford Hill and Blackpatch; Drewett 1982), and involves one or more buildings or houses, nearly always of the ubiquitous ‘Sussex round-house’ type, accompanied by a few pits, perhaps one or two four-post structures and sometimes a pond with an associated set of finds which can include storage and cooking vessels, loomweights, quernstones, and bronze tools (Brück 1999, 145). The settlements, often unenclosed, are usually interpreted as relatively small, often short-lived farmsteads composed of no more than one family or extended family group (*ibid*; see also Cunliffe 2005, 46). The evidence of several scattered small middle Bronze Age settlements at the 32ha investigations at Peacehaven in Sussex perfectly demonstrates the dispersed form of occupation across field-systems (Hart forthcoming). These small family units predate an apparent aggregation of settlement into one area of the site in the late Bronze Age and Iron Age.

Brück’s model has so far, proved elusive in Kent (Champion 2007a, 104; 2011, 188–189), and sites appear to be more varied. On the High Speed rail link, areas of mid to late Bronze Age activity were mostly unenclosed by ditches, about 20–40m across and usually ‘with a low density of postholes and shallow pits, though individual structures were difficult to discern’ (Champion 2011, 210). In north-east Kent however, there would seem to be more evidence for more formally arranged

enclosed sites (Champion 2011, 210). Evidence for buildings and other structures also seems to be rare on settlement sites of this date in Kent more generally (Champion 2007a, 105–106), and although a few possible examples of small post-hole structures can be seen at Thanet Earth, most cannot be ascribed to any particular part of the Bronze Age, or in fact, the Iron Age and there was no positive evidence for roundhouses or other structures that could be more clearly identified as being ‘domestic’ in character rather than purely agricultural.

The tenuous occupation evidence on Plateau 1 would seem to conform to the pattern outlined above; there was certainly no sign of domestic enclosure and the areas of activity were not much more than 20m across as far as can be ascertained, although, as elsewhere on the site there was always a widely dispersed set of probably similarly dated features in the vicinity. A scattering of activity seems to be common on sites of this period (such as various excavations on HS1 and Iwade (Champion 2011, 191–195; Bishop and Bagwell 2005). On Plateau 1, many of the features comprised wide and shallow pits that might have originally functioned as clay quarries or ‘working hollows’. However, apart from relatively small quantities of pottery and shellfish, there was little other evidence for actual settlement.

The small spread of features at the south end of Enclosure 2 was similar, although the precise relation with the field or enclosure remains unclear. The post-holes (Structure 4) appear to be contained within the corner of the ditched area but it is difficult to see them forming part of a roundhouse. They resemble more of a screen-like feature (somewhat similar to Structure 19098 at White Horse Stone; Champion 2011, 202) or could quite easily represent more than one simple structure in the same position. The other features comprised pits, some outside of the enclosed area but most cannot be accurately dated to this precise period. Without doubt, the main centre of occupation would appear to be in the north-east corner of Enclosure 2, contained within Enclosure 1, although both enclosures are quite likely to have been earlier.

The Enclosure 1 settlement

Jon Rady, Barbara McNee and Wendy Carruthers

The settlement evidence within Enclosure 1 was concentrated in a relatively small area less than 20m across in its north-western corner, mostly consisted of shallow pits of various sizes and a few post-holes that may comprise part of a fence line. The features were all delimited by ditch G5003 on the west, and a later ditch G5004 to the north, although one other possible structural arrangement (Structure 1) was to the north of, and cut by this alignment. This ditch would therefore seem to be a part of the occupation phase. Otherwise, none of the pits or other features could be shown to predate the field system or associated internal ditches of Enclosure 1 and as many cut the backfilled internal ditches it is very likely that the occupation phase here was secondary. There was no significant dating evidence from any of the internal divides (thought to belong to the earlier ‘corral-like’ feature) again suggesting they predated

the main occupation phase, although the boundary ditches to the west (G5002–5003) did contain a few sherds of mid-late Bronze Age pottery and other perhaps ritualized depositions of animal bone and other material that may relate to the occupation phase, or its termination (see below).

The pits in this concentrated zone of activity provided nearly all of the artefactual evidence (Fig. 49), mostly pottery of mid to late Bronze Age date (see below). The minimal quantity of worked flint found in some was generally not closely datable, apart from a small Mesolithic/early Neolithic assemblage from S5186, slightly south-east of the main group and pit S5216 (Neolithic flintwork), thus both potentially of an earlier period. There were no obvious storage pits here, and it seems likely that at least some were dug for waste disposal, clay extraction or for retaining small fires – much carbon was present sometimes in layers in a few of the smaller examples, interpreted as possible hearths during excavation. There was little other artefactual evidence, no metallic or other finds and no quernstone fragments. A scarcity of manufactured items was also noted on the HS1 sites of this period (Champion 2011, 231–232), although these were not uncommon in unusual (or ‘abnormal’) contexts such as waterholes, cremation deposits or with other significantly varied depositions within pits. Such items obviously existed, but they do not seem to have been casually discarded with other waste.

The pottery from the site is of some interest. Several sherds of middle and middle to late Bronze Age pottery were recovered from pit (S5308). The upper fill contained sherds belonging to bucket jars and a Birchington Bowl type vessel. It is interesting to note that some of the pottery is in quite good condition and with a higher than average sherd weight. It is not unusual for a mixture of ceramic phases to occur in the same features, and for the condition of the pots to vary from highly abraded to less abraded (McNee 2010). The varied condition of the ceramics would suggest that the pottery itself might have come from different sources prior to deposition. Pots which are in very good condition may have been deliberately smashed and placed within the pit soon after breakage, and may also have been carefully curated. Sherds which are quite worn may have derived from a rubbish dump. If the pit was filled within a single act, it may suggest that freshly broken pots were mixed with pots that had fallen out of use. A small number of other features also contained sherds of higher than average mean sherd weight. This could suggest the deliberate deposition of selected artefacts within the settlement, and this may relate to a special event (McNee 2014b). The domestic nature of the activity, apparent only partially from the remains, is perhaps also evidenced by the pottery. The middle and middle to late Bronze Age ceramics are well paralleled on sites across the region (c. 1600–1100 BC). The characteristics of the pots would suggest that most of the vessels were utilitarian, and made for household consumption, rather than trade and exchange, but it is also possible that pots were made for use during social activities and on-site production is a possibility but difficult to prove due to a lack of firing evidence and tools used for constructing the vessels. Clays and tempers were likely to have derived from local geological sources however (*ibid*).

Apart from the animal bone, all in too poor a condition for close identification, the botanical and molluscan evidence, although usually in small amounts, is of some significance when considered overall. A large proportion of the features contained grain, or chaff while smaller quantities of pulses suggested other possible crops. The grain and chaff indicate food processing so the lack of any quernstone fragments from the site is somewhat mystifying. Crustacea and molluscs including mussel, oyster, barnacles and peppery furrow shell (*Scrobicularia*), were also recovered, the last two, less or inedible species probably brought to the site inadvertently with the commonly consumed seafood. In this respect it is worth noting the near complete lack of evidence for the consumption of seafood, particularly fish, between the mid Bronze Age and later Iron Age in Kent (Champion 2011, 174). That consumption of marine resources occurred during the middle Bronze Age is indicated by some sites on HS1 and at Westwood Cross on Thanet, but this 'was already declining by the later phases of the occupation' (*ibid*). This may well be a further indication of the comparatively early nature of the mid to late Bronze Age occupation at Thanet Earth. Notably shellfish was also present in some of the middle Bronze Age occupation features on Plateau 1 of this period.

Of interest amongst the other seeds recovered is the buckthorn berry (*Rhamnus catharticus*), which can be used both medicinally (as a laxative and cathartic) and to produce dyes. The fact that the berry was charred suggests the latter was most likely to be the case, since for medicinal purposes the juices would have been squeezed from the fresh berries, whilst dyes were extracted from dried berries, with yellow being obtained from unripe berries and green from ripe berries (Greive 1992, 135). The evidence may be slight, but where there is proof that the species was present it is very likely that it was exploited and that there was knowledge of its useful properties (Carruthers 2015).

Although there was no physical evidence for any structure that could actually have been lived in, the completely empty space just south of the complex of pits would have been large enough to accommodate a relatively small roundhouse (of about 11 or 12m diameter) with the additional open space evident on the east to south-east suggesting the possibility that its porched entrance was situated here, the most common location. The case for such a structure is certainly strengthened by the concentration of features elsewhere in the enclosure and totally absent from this location.

Although lacking many of the elements of Brück's settlement model outlined above, the Enclosure 1 complex of features and its associated suite of ceramic and environmental remains almost certainly indicate that a settlement is represented. The site can in fact be compared quite closely to one discovered on the A2, at Site G (Allen *et al* 2012, 22–36), where a range of features were enclosed by an irregular shaped enclosure, somewhat larger than Enclosure 1 (c. 44m), bordered by a double ditched trackway (Fig. 59). The enclosure was in some respects similarly shaped to that of Enclosure 1 (although not completely exposed and not as densely occupied with features) with a curved ditch on the west, and the track forming a straight

alignment to the south-east. Although the sequence between enclosure and internal features could not be demonstrated it seems unlikely that they were not contemporary at some point (*ibid*, 102).

Site G contained evidence for a small roundhouse, a short post-hole alignment (interpreted as a possible fence) and a range of pits and hollows, none of which could be considered as having a storage function. Few contained great quantities of artefacts, similar to the Enclosure 1 settlement, although a loomweight/oven brick and quernstone fragments were present. The spatial arrangement of the features within the enclosure is paralleled also with the pits tending to cluster in one area (here to the south-east rather than the north-west), with the fence and roundhouse in the north-east area where other features were mostly absent (*ibid*, 103). Other similarities included specialised deposition of animal bone, at Site G all recovered from the termini of the boundary ditches, paralleled in two instances at Enclosure 1 and a common enough type of deposition on other middle Bronze Age settlement sites (Brück 1999, 152) and indeed in later periods.

As with the A2 and HS1 sites, there is little in the evidence to clearly define the nature of the subsistence economy, apart from the suggestion of a mixed agricultural regime (which would compare with other sites in the region such as Ellington School; Rady *et al* forthcoming) or the duration of the settlement itself, although overall it is considered that they were relatively short-lived (Allen *et al* 2012, 104). The adjacent trackway is a significant factor in both settlements and in others of this period, which Allen *et al* (2012, 106) suggest may have been partly emplaced in these locations due to the protective nature of the adjacent banks, ditches and probably hedges. At Enclosure 1, this is not so certain, but in any case, any decision by the Bronze Age inhabitants to form a small bounded settlement within an already extant system of fields and trackways, would likely be determined by such factors, but also the ease of constructing the enclosure itself. In the corner of a ditch-bounded field, two sides of the enclosure are already present, there is likely to be an associated trackway, used for communication and stock management, and such arrangements as Enclosure 1 were probably going to arise quite commonly.

In conclusion, the settlement evidence for middle and middle to late Bronze period at Thanet Earth is remarkably similar to much of Kent, seemingly comprising relatively small scale, and relatively humble settlements of an extended family unit at most. It is unlikely that truncation has removed the physical remains of larger scale settlements, but even with such a wide investigation, some related element of occupation could be present nearby but outside the site boundaries. Chronologically, the ceramics suggest occupation of these areas from 1500–1100 BC (McNee 2014b), possibly sometime after the origination of elements of the field system.

Although there was no great evidence for an associated field system with the A2 Site G, Allen *et al* (2012 107), refer to Bradley's (2007) observations on the discrepancies or 'lack of correspondence' between the small scale of mid Bronze Age settlements and the large scale of the associated field systems, a dichotomy that is clearly

apparent at Thanet Earth. Although the Thanet Earth evidence does not necessarily add anything conclusive to this debate, it would not rule out the idea of right to the use of land (possibly on a transient basis) being distributed by a 'central authority, to lower status social groups...a pattern of settlement of varied duration which is similar to that found elsewhere in southern England'.

Other structures

Four-post structures, usually near square in plan and about 2.5m across are common features of later Bronze or Iron Age sites across south-east England and are usually interpreted as granaries, although other uses, such as platforms for excarnation are also possible. They are often accompanied by two-post structures, perhaps drying racks (see Chapter 4 for a fuller consideration of these), obviously more difficult to isolate, but usually discerned due to regularity of spacing (again somewhere in the region of 2.5m apart) and similarity of post-hole size and depth. More complex rectangular or subrectangular structures are also found on Iron Age sites, particularly more regular six-post features, also often interpreted as granaries. Most of the potential examples of these in the southern area of the site were isolated and undated features, such as the probably rectangular Structure 34, or the complex of overlapping four-post features in the southern area of Plateau 7. They are all quite likely to be of mid-late Bronze Age date in this southern part of the site (although none could be dated), but are not considered further here.

Funerary and ritual evidence

Three of the Thanet Earth barrows (Barrows 7, 8 and Barrow 10 on the pipeline) have been assigned to the mid to late Bronze Age, purely on morphological grounds as none were associated with clear dating evidence, and only one contained a burial. Barrows assigned to this period, tend to be of lesser diameter, with smaller ditches than their early Bronze Age counterparts (such as the one on the EKA road scheme, of 6m diameter and dated 1410–1200 cal BC; Andrews *et al* 2015a, 101–102), although Barrow 8 was quite large at 23m diameter. This also contained a near central unurned cremation (not radiocarbon dated), and although it is possible that this was not primary, it does suggest a mid-late Bronze Age date.

Apart from the ditch inhumations on Plateau 1, the few examples of burials, all likely to be of mid or mid to late Bronze Age date (although none can be closely provenanced) conform with the usual practise of cremation at this time (Cunliffe 2005, 67) though none were associated with ceramic vessels, seemingly buried within a bag or other organic container (particularly evident in G10008. In Kent, unurned cremations of this period (often suggested to have been confined in a bag-like organic container) date from about 1400 BC into the early first millennium BC (Champion 2007a, 111; Cunliffe 2005, 543) and examples have been found on a number of sites on the High Speed Rail Link (HS1; ranging from the late second/early first millennium BC; Champion 2011, 232); on the A2 widening scheme from the thirteenth or fourteenth centuries BC (Allen *et al* 2012, 108–109), Bridge

Down (where a radiocarbon date of *c.* 980 cal BC was obtained; McPherson-Grant 1980, 170) and Shrubsoles Hill, Sheppey (*c.* 900–800/700 cal BC; Coles *et al* 2003, 17–19). These burials reflect the transition from the Beaker/early Bronze Age barrow tradition of inhumation burial, to the more widespread use of cremation by the middle of the Bronze Age (refs). Initially these cremation burials were often concentrated around, in the vicinity of, or even within extant barrows, a consequence perhaps of the continuing religious significance of these monuments. This concern, becomes less noticeable into the middle Bronze Age, seen as an indication of complex social factors such as a greater perception of individual identity. The three cremation burials adjacent to Barrow 3 reflect this earlier tradition, but the majority at Thanet Earth were widely dispersed in the fields (see above), suggesting that they belong to the later part of this period. The Thanet Earth cremation burials have not been radiocarbon dated but most are therefore likely to be contemporary with the middle to late Bronze Age occupation phase. These features are often found within or very close to settlement areas at this time (Coles *et al* 2003, 18) and not necessarily in formal cemeteries, but in small groups or isolated and dispersed within the landscape (see for example Donnelly *et al* 2012), such as the case here.

Despite the relatively low amounts of bone in the cremations themselves, surprisingly, little or no evidence was found for ‘token’ cremation deposits in features or ditches, suggested from other sites in the region such as Shelford (Boden and Rady 2003, 46) and further afield (Brück 2006a, 80; Guttman and Last 2000, 355). Such depositions represent only a very small part of the likely original cremated body-mass (even allowing for truncation and inefficient collection from the pyre; see Brück 2006a, 80) and have been regarded as representing the ‘dispersal of the dead across space’ (*ibid*), perhaps indicating that much of the bone was kept as relics. The lack of such deposits at Thanet Earth may lend some weight to more recent critiques (Brudenell and Cooper 2008) of a *carte blanche* interpretation of these (and other deposit types) as specifically ‘placed’, ‘special’ or ‘ritual’ depositions. The quantities involved are often so small and abraded that identification of a human origin is impossible, and the nature of many such cremated deposits, usually invisible during excavation suggest that their incorporation into the soil matrix of features was probably not even noticed and therefore not necessarily a deliberate act (*ibid*, 28). The overall lack of such depositions, or instances of human bone, cremated or otherwise in most features of the Thanet Earth settlement or field system, and on another similar period site on Thanet at Ellington (Rady *et al* 2006), but which are often referred to for many sites of the late Bronze and Iron Ages (Brück 2006a, 81), suggests that this is not such a general occurrence and that caution should be taken when allocating this overall interpretation.

However, It is probably significant that features containing what would originally been whole or near complete vessels were found, often close to the cremation burials in at least two instances. This type of deposit is common on Bronze Age sites (Brück 2001, 152; 2006b, 298) and very often the vessels are upside down or incomplete,

often lacking bases so as to rule out a storage function. On some sites, buried pots near cremation vessels may have directly related to the mortuary rite, such as the buried Bronze Age vessel containing charcoal from Star Lane, near Manston (Egging Dinwiddy and McKinley 2009) and that is possibly evident here with some of those with carbon rich fills. They are in any case further indication that other ritual or specific depositions associated in some way to the burials took place, either as votive offerings or of reinforcing the importance of the location in terms of its ritual significance.

The end of settlement activity

The complete absence of late Bronze Age activity or settlement at Thanet Earth is surprising considering the relatively constant continuum of evidence up to this point. This may not be significant more widely as there is evidence elsewhere in East Kent for this period, including the sites at Minnis Bay, Birchington in Thanet (Worsfold 1943) and at Swalecliffe where evidence for c. 500 years of continuous use of wells, beginning in the 13th century BC, was demonstrated via dendro-chronology and radiocarbon-dating (Masefield *et al* 2003, 47–121). However, this absence does conform to a pattern of apparent abandonment of fields and settlements, that can be discerned in Kent and beyond in the so far often archaeologically unrepresented period between the Bronze Age and Iron Age (Champion 2007a, 103). The reasons for this lack of evidence for the early to mid-Iron Age in Kent are not fully understood, although many often interrelated causes have been put forward. Thanet Earth appears to fit into this pattern, where widespread mid to late Bronze Age activity (admitting the late Bronze Age hiatus), is replaced by a spatially restricted but intense period of Iron Age activity on Plateau 8. There is already some suggestion that late Bronze Age sites are in reality more scarce than mid Bronze Age ones (Champion 2011), which might be suggesting an overall trajectory of initial dispersal, towards a propensity for settlement agglomeration during this period. By the mid Iron Age this may have reached its apogee. There is a strong suggestion at Thanet Earth that dispersed activity coalesced into the significant settlement on Plateau 8 with virtually no significant activity anywhere else – there is for example no evidence for new field systems, a common situation for this period. There is unlikely to be a simple site specific cause for this and the ensuing rarity (so far) of early Iron Age settlement sites. The phenomenon, although discussed at length by others (see Champion 2007b for Kent and more broadly Haselgrove and Pope 2007b for example) is examined in more detail in Chapter 4.

Apart from the lack of settlements in the immediate post-Bronze Age, it is probable that the earlier field layouts were still used, as although the ditches may have completely silted up there is good evidence, on this site and others, that at least some boundaries, probably still marked by low banks and hedgerows, survived right through the Iron Age and Roman periods and in some cases into the earlier second millennium AD (Champion 2011, 209–210). At Thanet Earth, a number of boundaries were almost certainly respected by similarly aligned and often juxtaposed medieval alignments for example.

Chapter 4: Early to Middle Iron Age

James Holman and Russell Henshaw with a contribution from Jake Weekes

Overview

Following the somewhat diffuse evidence for settlement in the early to middle Bronze Age, and the general absence of late Bronze Age or earliest Iron Age activity across Thanet Earth, significant settlement evidence is again visible from approximately 550 BC (Fig. 60). In contrast to the preceding period, activity was focussed in a single part of the site, on Plateau 8 adjacent to the west side of the buried valley. Here a substantial settlement zone was identified, characterised largely by pits and post-holes, including numerous four and six-posters and occupied until around 100 BC. Round-houses were elusive but two partial drip-gullies were defined. Due to the number of features, it has not been considered instructive to describe each individually. Instead, select examples, including exemplars of particular pit forms, those containing 'placed' or special deposits of artefacts/ecofacts and articulated human or animal remains, are described throughout the general text to illustrate key points or to generate points of discussion.

On Thanet, Iron Age sites are often associated with hollow ways (Moody 2008, 117–120, and it is possible that the late Iron Age–early Roman Trackways 25 and 27 (below) have their origin in this period, if not before. How closely the Thanet Earth settlement related to these remains slightly unclear, given the absence of a meaningful date of origin. In addition, the more northerly track-way remained unexposed in the area adjacent to Plateau 8 so the relationship between track-way and settlement was not explored.

Elsewhere the only substantive evidence for Iron Age activity was formed by a substantial boundary ditch that lay some 1.3km to the south of the Plateau 8 settlement, at the division between Plateaus 4 and 5. This major boundary influenced the development of the subsequent Roman, Anglo-Saxon and medieval landscapes, a fact confirmed by its part incorporation as a section of the parish boundary between Monkton and St Nicholas-at-Wade. It is possible it formed an estate boundary associated with the Plateau 8 Iron Age settlement.

The Iron Age produced the largest finds assemblages from any period of the Thanet Earth project. In particular, substantial assemblages of pottery (c. 18,500 sherds), animal bone and charred plant remains are of value due to their size and the current paucity of sites of this period in Kent (Champion 2007a, 106).

A significant number of burials were attributed to this period, again all located on Plateau 8. In the main settlement, two of these were placed in pits with two more cut into the top of semi-backfilled ditches. Several other features (mainly pits) were found to contain disarticulated human bone. This practice is characteristic of many

Iron Age settlement sites containing pits, with similar examples found elsewhere on Thanet such as North Foreland Road, Broadstairs (Diack 2001, 24–25; Boast 2003, 1–2).

Notably further inhumations lay on the far east of the plateau in the area of the proposed Research Centre. Two of these formed an unusual double burial located within a small ring-ditch (Barrow 10). Immediately adjacent to the barrow, a second grave containing the body of a young female with perinatal baby, a highly unusual find, was identified. The final set of burials formed a small, regionally distinct, inhumation cemetery of twenty-four graves. While these were very poorly preserved, carbon dating and associated finds demonstrate that the cemetery had its origins in the middle Iron Age at the very latest, continuing in use until the late Iron Age.

Problematic chronology

The substantial pottery assemblage has provided the primary means of phasing the site. However, its sequencing is problematic not least due to a still developing understanding of Iron Age ceramic developments in East Kent (Champion 2007b, 300; Fitzpatrick *et al* 2015, 180). Nevertheless the understanding of the ceramic sequence for East Kent has been enhanced by the work undertaken on the Thanet Earth pottery and will be enhanced further following future analysis of the c 11, 000 early–middle Iron Age sherds recovered from recent excavations on the University of Kent campus overlooking Canterbury (McNee 2014a, 14).

Chronologically, the pottery, enhanced by radiocarbon dating, has allowed the identification of four broadly defined sub-phases. The earliest, Sub-phase 1 (Early Iron Age c. 550–400 BC) indicates that the Plateau 8 settlement began to develop from the mid sixth century BC. This is supported by absolute dating, with the earliest Iron Age date from the site ranging from 513–382 cal BC (at 95 per cent probability; Table 6, UBA-22214). Activity intensified during Sub-phase 2 (late Early Iron Age 400–300 BC) and Sub-phase 3 (early Middle Iron Age; 300–150 BC), with a number of radiocarbon dates crossing the boundary between the two sub-phases. Toward the end of the Middle Iron Age, activity began to fall away, as is reflected by the comparative scarcity of feature attributed to Sub-phase 4 (Middle Iron Age; 150–100 BC).

Despite the sub-phasing, it is difficult to provide a detailed chronology of the Thanet Earth Iron Age due to problems that are inherent to the period more generally (Haselgrove and Pope 2007b, 2–5; Hamilton 2007, 82). In particular, chronological dating is made difficult by the Hallstatt Plateau, the flattening of the radiocarbon curve for the period 800–100 BC. This makes it hard to gain an accurate radiocarbon date for much of the Iron Age (Barratt and Reimer 2007; Bowman 1990). While it can be possible to improve accuracy in conjunction with other dating methods and Bayesian analysis (Bayliss 1998), this requires a large number of radiocarbon dates to be undertaken. Unfortunately, the abraded and mixed nature of the finds

assemblage, with much material clearly redeposited, created wider problems associated with residuality and meant that insufficient samples for radiocarbon analysis were identified.

The early to middle Iron Age settlement

Settlement location

The Plateau 8 settlement lay in the northern part of the Thanet Earth development, encompassed an approximate area of 96m east-west by 150m north-south. The entire site was not revealed, with features extending beyond the northern limit of excavation. Situated on a gentle north-east facing slope, the site lay between the 23m and 20m contours, though this drop in level was not particularly obvious across the area. Barrow 6 lay approximately 56m to the west of the southern periphery of the settlement, with the edge of the colluvium that filled the buried valley positioned only 10m to the east.

The excavated evidence

In all, the Plateau 8 settlement consisted of some seven hundred features, dominated by 384 pits and 289 post-holes, together with ditches, gullies, ring-ditches and burials (Fig. 61). The majority of the pits, some of which were exceptionally large, appeared to have been cut for storage, latterly being filled with refuse, generally domestic, once they fell into disuse. A total of twenty-five post-hole structures and two potential round-houses were identified. There were also some spaces between pit clusters that might have been occupied by round-houses which have left no other archaeological traces. The remaining post-holes were scattered across the settlement area, representing occasional fence-lines and two-posted structures, with many forming no obvious patterns.

Feature clusters

The settlement evidence is primarily represented by fourteen distinct feature clusters that were spread across the central area of the site (Figs. 62–63). In all, the feature clusters contained anywhere between four and fifty-six individual pits and post-holes, with each, barring Feature clusters 12 to 14 clearly dominated by pits. The pits in the feature clusters encompass 196 out of an overall total of 384 but contain a smaller percentage of the total number post-holes. A brief overview of each cluster outlining the sub-phasing, the number of storage pit and any anomalous features is presented below.

Feature cluster 1

Contained within Feature cluster 1 were eighteen pits and ten post-holes. Of this total, pits S8670 and S8833 were attributed to Sub-phase 2 (300–150 BC), pit S8407 to Sub-phase 3 (300–150 BC) and pits S8188 and S8189 to Sub-phase 4 (150–50 BC), the remainder of the features could be dated only as general early to middle Iron Age. In

total fourteen of the eighteen pit features were classified as storage silos.

Feature cluster 2

The most densely packed bunched group, Feature cluster 2 contained twenty pits and two post-holes. Pits S8293 and S8572 were dated to Sub-phase 1 with pit S3648 and post-hole S8339 to Sub-phase 3. The remainder of the features were attributed the general early/middle Iron Age. All pits, with the exception of S8506, were classed as storage silos.

Feature cluster 3

Forty pits and twelve post-holes were contained in Feature cluster 3, with pits S8434, S8543 and S8592 and post-holes S8433 and S8533 dated to Sub-phase 1, pits S8456, S8563, S8605, S8642, S8645 and S8707 to Sub-phase 2 and pits S8413, S8424, S8482, S8616, S8701 and S8757 to Sub-phase 4. The remaining features could not be dated beyond general early/middle Iron Age. Within this cluster twenty-six of the forty pits were classified as storage silos including two from the period 450–300 BC, and all from 300–150 BC and 150–50 BC.

Also included in this cluster was linear pit S8481, a sub-rectangular feature, 0.62m wide, 2.81m long and 0.56m deep with vertical sides and a flat base, that was unique on the site. It had been deliberately backfilled with clay silt that contained moderate quantity of domestic refuse, including animal bone, pottery, and a fragment of quern stone. The south side of the feature clipped the edge of a sub-circular post-hole, S3533, but it is unclear whether the two are associated with one another.

Unfortunately, despite intensive investigation it remains unclear as to what the function of this feature was. The fills, while producing cultural material, were formed by midden material and virtually identical to those contained within many other of the features on the settlement.

Feature cluster 4

Forming Feature cluster 4 was a total of twenty-one pits and two post-holes. Again, the majority of features could not be accurately dated beyond early/middle Iron Age. Pits S8264 and S8392 lay within Sub-phase 1 with pits S3550, S8329, S8722 and S8901 dating to Sub-phase 2. In this cluster thirteen features were classified as storage pits, with two from Sub-phase 1, four from Sub-phase 2 and seven of the general early/middle Iron Age.

Feature cluster 5

Contained within Feature cluster 5 were forty-four pits and thirteen post-holes. Of this total, pits S3644, S3674, S8180, S8211 and S8229 were attributed to Sub-phase 1; pits S3557, S3596, S3761, S3621, S8178 and S8247 to Sub-phase 2; and pits S3761 and S8286 to Sub-phase 3. The remainder of the features could be dated only as general early to middle Iron Age. In total twenty-five of the pits were classified as storage

pits, with four from Sub-phase 1 and seven from Sub-phase 2.

Feature cluster 6

Within Feature cluster 6 were fifteen pits and fifteen post-holes. Within this group pit S3699 lay in Sub-phase 1, with pits S3664, S3724 and S14307 in Sub-phase 2 and S3521, S3534, S3541 and S14219 dated to Sub-phase 3. All remaining features were classed as of early/middle Iron Age date. Of the pits ten were classified as storage pits, with one from Sub-phase 1, three from Sub-phase 2 and three from Sub-phase 3, the remainder were of the more general date.

Feature cluster 7

Fifteen pits and five post-holes were contained in Feature cluster 7. Of this total, one pit S14342 was attributed to Sub-phase 1 and three S8130, S14419 and S14496 to Sub-phase 2. All remaining features were of general early/middle Iron Age date. Six of the pits in this cluster were classified as storage pits with one from Sub-phase 1 and two from Sub-phase 2.

Feature cluster 8

Feature cluster 8 lay to the east of Trackway 13 and contained only seven features, all of which were pits. Three formed storage pits, one of which, S12154 would seem to be of Sub-phase 1 date with S3861 of Sub-phase 3. The remaining features were of general early to middle Iron Age date.

Feature cluster 9

Five pits and one post-hole formed Feature cluster 9. Of the pits, S14276 lay within Sub-phase 1 and pit S14488 in Sub-phase 3. Three of the pits were classified as storage pits, with only S14276 attributable to a sub-phase.

Feature cluster 10

A linear alignment of four pits formed Feature cluster 10. These ran along the line of, and truncated, ditch group G8075. Of these, pits S8783 and S8801 would appear to lie in Sub-phase 1, pit S8762 in Sub-phase 2 and pit S8799 in Sub-phase S8799. All of these features, bar pit S8801, are thought to have formed storage pits.

Feature Cluster 11

Feature cluster 11 was isolated from the main area of settlement, lying some 20m to the west. It was formed by three storage pits (S14814, S14800 and S14758), a shallow scoop-like pit (S14739) and a post-hole (S14753). None of these features could be dated to sub-phase though what little pottery that was recovered and the form of the storage pits was characteristic of the Iron Age.

Feature cluster 12

Lying on the north-western periphery of the site, some 4.3m to the west of Feature cluster 7, feature cluster 12 was formed by eight sub-circular post-holes. It is possible that this group of features formed some sort of structure, however if so the form was particularly irregular. Also contained within this group was an irregular feature of probable natural origin. No features within this group were attributable to sub-phase.

Feature cluster 13

Feature cluster 13 was positioned some 4m to the east of Feature cluster 12, consisting of three small sub-circular pits and ten post-holes. Within this group, post-holes S14561, S14543 and S14604 were somewhat deeper than the remainder, with the latter two features containing post-pipes. In addition, post-hole S14604 contained a large quantity of pottery within its upper fill that indicated a Sub-phase 1 date. Features S14543 and S14604 would seem to be of Sub-phase 2. It may be that these post-holes were related, though this is not clear. Indeed, as with Feature cluster 12, it is possible that this group of ten post-holes formed some form of structure the form and function of which is not readily identifiable.

Feature cluster 14

Containing only four features, a single pit and three post-holes, Feature cluster 14 lay immediately to east of Feature cluster 13 to which it may relate. Post-hole S14535 was of interest due to the comparatively large finds assemblage that included numerous fragments of probable quernstone, animal bone and a piece of loomweight. Pottery indicated that this feature was attributable to Sub-phase 1, with the remaining features in this group undatable beyond general early to middle Iron Age.

The pits

Pits were by far the most common feature on Plateau 8, largely defining the archaeology of the period. Most were hand-excavated, generally being half-sectioned, with full excavation undertaken only for those features containing structural elements or deposits of particular interest. Such cases included significant articulated remains, such as inhumations and animal burials, and deliberately placed artefacts such as loom weights and concentrations of fragmented pottery. In a few exceptional cases, larger pits were excavated to a depth of 1.5m, with the upper portion and surrounding natural later removed by machine to provide safe access to the lower deposits. The following discussion seeks to describe the pits and consider their significance, with particular emphasis on those used for storage, for understanding the nature of the settlement economy on Plateau 8.

In total, 384 pit-like features were identified with 176 classified as storage pits and fifty-five as refuse pits, though these latter features were probably cut for another

purpose being used for refuse disposal following disuse (Fig. 64). The remaining 153 features were typically small, less than 0.6m in diameter, but were often broadly circular, so may have also had a storage purpose, seemingly involving smaller stored volumes (Rawlings 1991).

Form

The definition here of a storage pit employed similar criteria to those used at Maiden Castle where a pit was defined as having a distinct flat base which meets the sides at 60–100 degrees (Rawlings 1991, 89). In general, the Iron Age pits on Plateau 8 were circular, though most featured slight irregularities. Nine were ovoid and eleven distinctly oval or elongated. A typology was developed to classify the pit profiles, consisting of three principal forms: open, cylindrical, and undercut (sometimes referred to as ‘beehive’ form) (Fig. 65).

Such an insight is especially relevant when assessing comparisons made with pits from other sites. Following excavations at Little Woodbury (Bersu 1940), a variety of pit typologies have been developed (for example Cunliffe and Poole 1991a, 159–160), many of which reflect the idiosyncrasies of the particular sites at which they have been found. As such, attention should be accorded to the nuances implied by these respective typologies, especially when the results presented here are placed in a broader archaeological context.

At Thanet Earth, open shaped pits were defined as those where the lower breaks of slope formed obtuse angles. On Plateau 8 this form predominated, accounting for 46 per cent of pits. Cylindrical pits were formed by those features where the sides were generally vertical and bases were flat. Approximately 23 per cent of pits were of this category. Undercut pits were classified as those where the upper break sloped away from the pit interior, forming a reflex angle from the horizontal (such pits have been described elsewhere as being beehive shaped). These were also flat-based and included those features of a distinct hourglass shape. In all, this category contained approximately 14 per cent of the total number of pits.

Some continuum was present connecting these types, with a number of examples less obviously attributable to one or another category. A distinct subset, largely of pits in the open category was formed by those features such as that contained distinct alcoves or niches in their sides, termed alcoved pits. Similarly, two features in the open category could also be termed ‘stepped’ pits, with conspicuous platforms noted near to their bases. For a small minority, classification was not possible, mostly due to truncation from later activity. Any remaining pits which did not conform closely to the defined types were grouped in a miscellaneous category. Other than those pits with stepped profiles or containing alcoves, pit bases were uniformly flat.

The relatively small number of pits assigned to phases makes for a limited discussion of pit forms by phase, with no distinct patterns evident. Despite this, it is

worth noting that the ratio of open-shaped to cylindrical pits generally seems consistent during Sub-phases 1 and 2, as well as when unphased pits or the whole corpus of pits are considered. At a ratio of roughly 2:1, this perhaps suggests some continuity in patterns of use. Sub-phase 3 differed from this pattern in that cylindrical pits were relatively more common, though by no means the dominant feature form. Finally, pits with alcoves were dated only to Sub-phase 2, while stepped and miscellaneous-shaped pits were only dated to phases Sub-phases 3 and 4. Overall this would seem to indicate a diversification of pit forms through time.

Examples of the main pit types

OPEN, as illustrated by pits S8189, S8670, S8722, S8762 and S8799.

CYLINDRICAL – S8264.

UNDERCUT – 3596 and S8642.

ALCOVED – 8722.

STEPPED – 8722 and 8642.

It is not feasible, or probably instructive, to describe all the individual pits in this volume (further information can be found in archive). Rather, descriptions of some examples of the main variants are presented (Fig. 78). This is then followed by the results of a detailed statistical analysis of the whole corpus, considering form, types of infill, and the various finds assemblages recovered, laying out the separate but interconnecting categorisations of the features in these particular terms.

Pit S8722 (Stepped)

Forming one of the largest pits on Plateau 8, Sub-phase 2 feature S8722 was circular, measuring 3.54m in diameter and 1.99m deep with steeply sloping to vertical sides with a stepped based leading to an alcove that severely undercut the western edge of the pit (Figs. 65–67; Plates 84–87). The primary fill consisted of a thin layer of orange brown clay silt devoid of artefactual material spread partially about the base of the alcove. Above these were mixed deposits of chalk rubble and orange brown clay silt filling the lower portion of the alcove and formed through a partial collapse of the undercut area. Notably, during excavation a similar collapse was observed following a period of heavy rain, perhaps implying that after disuse (see below) the pit remained uncovered or incompletely sealed. Above the lower, naturally accumulated deposits were a series of dumped fills. The lower of these were dense with small to medium chalk inclusions more rarely interspersed with sandier deposits. Occasionally some of the lower fills were rich in carbon, indicating only limited deliberate infilling during the early period of disuse. Many of the chalky deposits accumulated around the pit edge suggesting erosion of the sides.

A secondary fill sequence was represented largely by those deposits that filled the middle portion of the pit. In contrast to the lower fills, these were darker and contained sometimes large quantities of cultural material and carbon. The distribution of secondary fills would seem to indicate that the pit was backfilled repeatedly from the east, directly opposite the alcove. At some point during the latter part of this phase of dumping a collapse of the alcove all but sealed the secondary fill sequence with a substantial deposit of natural chalk. Backfilling continued but with a further change in the composition of the deposits now predominated by orange-brown clay silts with relatively few inclusions. The final, tertiary, phase of infilling was formed by orange and grey-brown clay silts dense with burnt flint inclusions. These were clearly clustered in the centre of the pit to form a consolidation deposit.

Clear distinctions in the pattern of infilling, represented by the three fill groupings, were therefore evident and imply, for this pit at least, intermittent backfilling over a prolonged period of time. However, despite intensive sampling there were no obvious temporal differences between successive fills within each of the groups. Unfortunately, no *in situ* deposits that may have helped to indicate the primary purpose of this pit were identified. The refuse layers did, however, contain large quantities of cultural and environmental data. These assemblages typified the material recovered from the more productive pits more generally, with large quantities of pottery and animal bone recovered, together with occasional complete and fragmented triangular fired clay loomweights (FN 8.27; SF 8.29; SF 8.61; FN 8.127, FN 8.130, SF 8.9037; SF 8.9046; SF 8.9047), a fired clay spindle whorl (SF 8.37), Greensand quern fragments (SF 8.32, SF 8.33, SF 8.126) and an unidentifiable iron object (SF 8.9090). The environmental assemblage was dominated by wheat and barley grains, with smaller quantities of chaff, cultivated flax seeds and numerous weed taxa including ribwort plantain.

Pit S8670 (Open)

Similar in size and form to S8722, pit S8670 measured some 2.9m wide by 3.74m long and was 1.82m deep (Fig. 68; Plate 88). In this case a 0.5m wide step was positioned on the east side of the pit, some 1.4m from the top of the cut. The primary fill (c8680) consisted of a 0.08m thick layer of grey white crushed chalk, probably eroded from the sides of the pit. This contained a very small quantity of domestic material and had been compacted in such a way that was suggestive of trampling. This was sealed by a sequence formed of eight deposits of re-deposited clay and chalk from which only very small amounts of domestic refuse, mostly animal bone, was retrieved. Unlike the primary fill, the deposits forming this sequence were not obviously compacted, perhaps being formed of material excavated during the cutting of adjacent features. Sealing the uppermost layer in the sequence was a layer of brown-grey clay silt from which the remains of three to four juvenile dogs were recovered together with a very small quantity of early to middle Iron Age pottery. The upper fill sequence was formed by eight deposits very similar in character to the lower sequence, again these were suggestive of material excavated from nearby

pits. As with the lower sequence, small amounts of domestic material was intermixed with these deposits.

Pit S8642 (Undercut)

This pit was formed by a near circular cut some 2.3m in diameter by 1.9m deep with concave sides and a flat base with small subsidiary cut located toward the northern side of the cut (Fig. 69; Plate 89). Contained within was a sequence of fifteen fills of which the primary consisted of a sterile clay silt, eroded from the sides of the feature. Sealing this was a thick sequence of similarly sterile deposits, perhaps formed from spoil created during the excavation of nearby features. A primary fill produced a small fragment of human skull (SK 8.34). The remaining nine deposits contained large quantities of rubbish, mostly of domestic origin. This included large quantities of early to middle Iron Age pottery, animal bone, daub, a fired clay loom-weight (SF 8.133) and a small iron ring (FS 8.9088). A single fill contained moderate quantities of charred plant remains, with this assemblage dominated by cereal grains and chaff but also featuring a small number of cultivated flax seeds. Absolute dating undertaken on the lower part of this sequence indicated that the feature provided a date of 389–204 cal BC (at 95 per cent probability; Table 6, UBA 22215).

Pit S8189 (Open)

Pit S8189 was flat-bottomed, measuring some 3m in diameter and 1.25m deep, with steeply sloping sides that to the north were slightly concave (Fig. 70; Plate 90). The primary fill consisted of a layer formed by blue-grey ashy silt, up to 0.02m thick that contained a relatively abundant quantity of charred grain. While potentially representative of *in situ* burning, there was no evidence that the sides of the feature had been scorched.

The ashy deposit was sealed by a secondary sequence of fills represented by eleven layers of silty clay from which small quantities of animal bone and a larger amount of burnt flint was recovered, though perhaps not in sufficient quantities to be suggestive of domestic rubbish. These deposits were in all likelihood derived during the excavation of nearby pits. The division of this sequence into one representative of two phases of backfilling was indicated by a single deposit of mixed clay and chalk that separated the two lower deposits from the remainder. This was probably representative of natural material that had weathered from the sides of the pit and indicates that the feature was left semi-backfilled, albeit for only a short time. The uppermost fill was formed by a substantial layer of mixed domestic refuse that contained varying quantities of burnt flint, animal bone and pottery together with a single piece of granite and an unidentified iron object (SF 8.1).

Pit S8762 (Open-shaped)

Sub-circular in plan, pit S8762 measured 1.8m in diameter and 0.64m deep, with steeply sloping sides and a flat base. It was backfilled by a series of grey-brown clay

silts containing varying quantities of animal bone, quernstone fragments (SF 8.43, SF 8.44), burnt flint, and pottery sherds, as well as a fragment from a fired clay loom-weight (SF 8.42). The uppermost fill was characterised by a greater quantity and diversity of finds with additional elements that included daub, metalworking residue and a flint scraper (SF8.72). Inclusions of flint, re-deposited natural and fine chalk were common throughout. The fills were distributed evenly with no evidence of slumping and were likely formed by the periodic dumping of domestic refuse. Either the pit remained covered during between periods of dumping or was backfilled rapidly with little time for natural deposits to accumulate.

Pit S8264 (Cylindrical)

Sub-circular in plan, pit S8264 measured 1.5m in diameter and 1.05m deep and had vertical sides and a flat base (Fig. 71; Plate 91). The pit contained six backfill deposits, typically between 0.1 and 0.2m thick although one deposit reached up to 0.6m and contained pottery, animal bone and burnt flint common throughout. The primary deposit was composed of grey-brown clay silt and sat evenly in the base of the pit. Following this was a deposit of brown-black silt rich in carbon inclusions. Sampling of this deposit revealed the presence of an assortment of grains and chaff predominated by emmer and spelt with lesser amounts of barley and traces of oat. Other species represented included sloe/cherry/plum, opium poppy, pea or vetch, clover, knotgrass, dock, black bindweed, sheep sorrel and brome grass. Unidentified fish and amphibian bone was also present as were oyster shell and daub. The next four deposits consisted of grey brown clay silts alternately with common inclusions of redeposited chalk. The uppermost of these was also sampled and contained small mammal and amphibian bone, mussel and other freshwater/estuarine snail shell, chaff and seeds. Fills in this pit were the result of recurrent dumping of domestic refuse although the clear differentiation between deposits indicate either the material derived from a number of sources or the feature was backfilled periodically over time.

Pit S8799 (Open)

A sub-circular cut 1.79m wide, 2.19m and 1.03m deep, with steeply sloping sides and a flat base formed pit S8799 (Fig. 72; Plate 92). The primary sequence was formed by three fills with a combined thickness of some 0.3–0.4m thickness. A slight depression, probably created as the fills settled was noted in the top of the uppermost deposit. These fills were largely devoid of cultural material, with only a small quantity of early Iron Age pottery recovered. Sealing this group was a secondary fill sequence formed by a single deposit of refuse above which lay two layers of sterile clay silts. The uppermost of these adhered to much of the southern side of the pit, perhaps suggesting that this phase of backfilling was undertaken from the north. Contained within the refuse deposit were copious amounts of early Iron Age pottery, animal bone, a quern fragment (SF 8.49) and a fired clay loomweight (SF 8.50). It seems likely that this group of deposits derived from material excavated during the cutting of nearby features.

Pit S3602

Pit S3602 was formed by a sub-circular cut 0.80m wide, 0.86m long and 0.77m deep, that possessed steeply sloping sides and a flat base (Plate 93). The basal deposit consisted of a thin layer of dark ashy sandy silt, some 0.08m thick that lay in the central area of the pit and was sealed by a layer of scorched sand of 0.24m thickness. This upper deposit contained various finds that included early-middle Iron Age pottery, animal bone and daub. These deposits were sealed by two layers of mixed sandy silt from which a small quantity of early-middle Iron Age pottery sherds and animal bone were retrieved. Notable in this deposit was the semi-articulated remains of a dog. Two mixed dumps of sterile clay and chalk formed the part of the backfill sequence in this pit.

Pit S3596 (Undercut)

Cutting the edge of pit S3602 was pit S3596, a circular cut approximately 2.24m in diameter and 1.94m deep (Fig. 73; Plate 93). The sides of the pit were not uniform, varying from concave on the south side to slightly irregular but steeply sloping to the north. Containing ten fills, the primary sequence was formed by three deposits of mixed clay-silt and chalk, probably a mixture of eroded material and that removed during the excavation of nearby features. The secondary sequence consisted of ten deposits containing varying quantities of mixed refuse from which pottery, animal bone and an unidentified iron object (SF 89) were retrieved. Two upper fills were identified, formed by sterile clay silt, again probably formed of material excavated from nearby pits.

Pit S3668

A distinct cut (S3668) was noted in the top of pit S3596, forming a re-cut, or more likely second pit (Plate 93). Filled by four deposits of dark clay silt, each contained large quantities of mixed refuse, largely domestic in nature. Dominated by general early to middle Iron Age pottery and animal bone, a fired clay loom-weight, six fragments of quernstone and a small quantity of charred grain, chaff and charcoal was also recovered.

Pit S8733

Pit S8733 measured 2.03m in diameter and 1.14m deep with deeply undercut sides forming a slightly hourglass shape (Fig. 74; Plate 94). The primary fill was heterogeneous, up to 0.29m deep and formed of brown-grey clay silt with inclusions of charcoal, pottery, burnt flint and animal bone. Above this sterile deposits of orange-brown clay, forming a shallow sequence approximately 0.2m thick were present, derived through silting. The following deposits were light yellowish-brown clay silts formed primarily of eroded chalk. Daub, pottery and animal bone were recovered along with the remains of a clay fired loom-weight (SF 8.100). Sandwiched

between these and an additional chalky layer was a deposit of grey-brown clay silt interspersed with pockets of carbon. More loom-weight fragments were recovered from this deposit (SF 8.98, SF 8.101) along with animal bone and pottery. The next series of deposits were again formed by orange-brown silt clay and contained much the same material as the previous fills. The upper fills consisted of brown-grey clay silts again containing a similar assemblage of material but also with more common burnt flint fragments throughout. Unlike the lower fills which mostly formed horizontal bands the upper fills were slumped and may have been intended to consolidate a cavity left but the settling of earlier deposits into the base of the pit.

Pit S3584

A shallow sub-circular cut (S3584), 0.93m wide, 1.32m long and 0.45m deep, with steep, near vertical sides and a flat base (Fig. 75; Plate 95). The primary fill consisted of grey brown silty clay, varying between 0.03 and 0.06m thick that seemed to line the interior of the cut. This was sealed by a small patch of re-deposited chalk and clay that lay against the northern pit edge. Above this was a sequence of three deposits containing large quantities of domestic rubbish and burnt material, the lowermost incorporating comparatively large quantities of pottery and animal bone, with smaller amounts of burnt flint, daub and hammerscale. Above these were two deposits of re-deposited natural, with the uppermost part of the sequence formed by further layers of probable refuse.

Pit 14240 (Undercut)

Pit 14240 was sub-circular in plan and measured 1.52m in diameter and 0.52m deep with slightly undercut sides and a flat base (Fig. 76; Plate 96). The primary fill was composed of sterile orange-brown clay silt that was possibly the result of silting in the base of the pit. Above this was a single deposit of orange-grey sandy clay containing worked and burnt flint, pottery, and animal bone. Given the undifferentiated nature of the deposit either the pit was backfilled in a single dump or successively with material of a similar composition, following a period of exposure.

Pit S8308 (Open-shaped)

Circular in plan, pit S8308 measured 1.7m in diameter and 0.74m deep, with steeply sloping sides and a flat base (Fig. 77; Plate 97). It was backfilled by a deposit of yellow-brown sandy silt containing burnt flint, pottery sherds, bone fragments and fine chalk inclusions. A total lack of any form of differentiation in the backfill deposit and the uniform, even distribution of inclusions within would seem to indicate backfilling took place as a single event.

Size and Volume

In order to estimate the volume of each pit, the individual sections were digitised

and the diameters of their profiles measured at 0.1m intervals. Using these measurements, areas and volumes for each segment was calculated with the results aggregated to determine total pit volume. A similar methodology was applied at Maiden Castle (Sharples 1991, 90), though at a number of other sites, for example Gravelly Guy (Lambrick and Allen 2004, 112–113), Battlesbury (Ellis and Powell 2008, 31) and Danebury (Cunliffe 1984a, 131), alternative approaches were taken. At Gravelly Guy, volumes were calculated by multiplying surface area by depth, a method considered appropriate given the easily eroded gravel subsoil and consequent uncertainty concerning their original profiles. The same methodology was employed at Battlesbury, where pit sides were uniformly vertical and bases flat, making this simple method both expedient and accurate. Meanwhile, at Danebury the formula for a truncated cone was used, reflecting the predominance of beehive shaped pits and attempting to compensate for loss of the upper profile of pits due to later truncation.

At Thanet Earth, the preponderance of open-shaped pits, complemented by a mixture of undercut, stepped and alcoved pits explains the choice of a rather more complicated and time consuming method that was more sensitive to pit profiles. Again, it should be emphasised that such differences in analysis must be borne in mind whilst making inter-site comparisons. Equally, the loss of an indeterminate proportion of the upper soil profile on Plateau 8, estimated to be as much as 0.4m, has the consequence that reported volumes and depths are likely a slight underestimate.

Surface pit diameters ranged between 0.39m and 3.43m, depths from 0.17m to 2.02m and volumes between 0.03 and 12.95m³. On average the pits measured 1.59m across and 0.7m deep, with an estimated mean volume of 1.32m³. Chronologically, a slight trend towards larger pits developed between Sub-phases 1 and 2. As pits in these sub-phases contained a comparable distribution of forms this might tentatively imply recurrent patterns of use accompanied by a uniform increase in pit size. However, the inclusion of pits S8722 and S8760, both markedly larger than others on the plateau, tends to skew the data. When these are excluded the mean dimensions for Sub-phase 2 are much more comparable to those in Sub-phases 1 and 3. Nevertheless, in absolute terms overall storage capacity nearly doubled from 32.16m³ in sub-phase 1 to 62.33m³ in Sub-phase 2.

While sizes between the phases differed slightly, more significant differences were present between phased and un-phased pits. Generally un-phased storage pits were smaller, on average 0.56m deep compared with a depth of 0.88m for phased examples. Similarly, in terms of diameter un-phased pits averaged at around 1.48m versus 1.75m. This was particularly reflected in pit volumes, with the un-phased average just 43 per cent of average phased volume. One explanation for this is that larger pits are more likely to contain datable material and hence more likely to be dated. Alternatively, if the view that all deposited material culture is in some sense curated (Hill 1995) is accepted, this may imply distinctive patterns of deposition for smaller, shallower pits than larger, deeper ones.

Pit sizes also varied by form, with a few notable trends. Open-shaped, cylindrical and miscellaneous-shaped pits had comparable mean depths, 0.62m, 0.68 and 0.68m respectively. In contrast, undercut and stepped pits were deeper, 0.8m and 0.95m on average, and alcoved pits were significantly deeper at 1.95m. By diameter, pits fell into three discreet groups; cylindrical and undercut, open-shaped and miscellaneous-shaped, and stepped and alcoved-shaped. In terms of volume, open-shaped and cylindrical pits were again most similar, 0.95m and 0.98m, then undercut and miscellaneous-shaped, 1.61m and 1.18m, stepped pits much more substantial at 3.81m and alcove-shaped the significantly larger, 8.4m on average. Taken as a whole, open-shaped and cylindrical pits were the most comparable, despite the slightly larger diameter of the first type. Both undercut and miscellaneous-shaped pits were broadly comparable to these, though with slightly increased volumes reflecting the more substantial depth of the former and diameter of the latter. Stepped and alcoved pits were substantially bigger owing to their much larger diameters, further justifying their allocation into a distinctive category of pit. These variant forms can also be classified as modified and large examples of the basic undercut and open forms.

When plotted, distributions of metrical data from the pits illustrate additional trends. Comparing diameter against depth (Graph B1; Fig. 79), it is clear that cylindrical pits have fewer outliers than open-shaped or undercut pits. Equally, the spread of data for open-shaped pits is less evenly correlated with only a few pits exceeding 1m in depth but many with diameters larger than 2m. Finally, stepped and alcove pits are both relatively discreetly positioned, being respectively deeper and wider than the majority of pits.

Most notable when diameter is plotted against volume (Fig. 80), are the extreme outliers formed by pits with steps and alcoves. Removing these from the dataset reveals a clearer pattern in the majority of the data – a relatively discrete correlation between diameter and volume for lower values but a much more variable distribution as these dimensions increase (Fig. 81). This seems especially pronounced for open-shaped pits although this may simply reflect the larger number of cases in this category. A neat correlation for smaller values may in itself not be surprising, smaller variations being less obvious in smaller pits, but if pits were being constructed to a strict specification we could expect this correlation to hold for larger values. In absence of this, it would seem that pit volumes bear less relation to diameter as size increases. Much the same can be said when depth is plotted against volume (Figs. 82–83). Pits with alcoves were distinct outliers although stepped pits were closer to the norm in this case. After pits with alcoves, undercut pits were the deepest but remained consistent with the fairly narrow correlation between volume and depth. Overall, this stronger correlation, true for the majority of pit types, implies some consistency in the construction of the pits and, potentially, in their intended use.

Pit Function (evidence of use prior to infilling)

Pits of the size and quantity found on Plateau 8 have typically been interpreted as grain storage silos later reused for the deposition of (primarily domestic) waste (e.g. Lambrick and Allen 2004; Robinson and Lambrick 2009; Masefield *et al* 2015, 268–271). At Thanet Earth, aside from form little evidence for their primary storage function remained, with the vast majority backfilled by deposits of clay silt that contained varying amounts of domestic refuse. Extensive environmental samples were taken, many of which contained charred and mineralised grains including spelt, emmer and barley. The composition of these re-deposited remains, in terms of the relative proportions of cereal waste to grain and the ratio of grain to weeds and other seeds, did not exhibit the characteristics expected from fully or mostly processed grain. This was not unexpected with the grains found in the pits forming re-deposited midden material and representative of a secondary function.

One pit, S8189, contained a thin deposit of silt ash up to 0.02m deep spread across its base. Environmental samples from the deposit revealed the presence of cereal grains, but these were in poor condition with no indication as to their provenance. While suggestive of the burning out of the pit, no evidence suggestive of heat exposure was indicated by this or any other feature on Plateau 8. Only seventeen of the pits contained naturally accumulated deposits in their bases, perhaps implying they were cleaned as a matter of routine, that they were kept covered when not in use, or that their period of use as storage features was relatively short.

In terms of their use for storage, Structural elements found in pits included a number of stake-holes in the base of S3500 (Plate 98) and shallow post-holes in the bases of S8222 and S8517 (Plates 99–100). Such attributes could potentially indicate pit coverings, but given the level of truncation across Plateau 8 no further evidence for such superstructures remained. The only exception to this were post-holes S8653, S8651 and S8649 in Feature cluster 3, that formed an arc around the southern edge of pit S8642. In this case they may represent the remains of some form of fence or screen.

Pit fills

Following categorisation by form, classification of the pit fills was undertaken. Overall thirteen classes of pit fill were identified, numbered A1 to C4.

Homogeneous fills, represented by classes A1 to A5, predominated across the site making up 73 per cent of fill types. Within this group the vast majority of deposits were formed by deposit type A1. These fills were formed by undifferentiated deposits of orange or grey-brown clay silts with few inclusions. Further subdivisions of the homogeneous category were made on the basis of dominant inclusion types. Distinctions were made between fills with dense chalk or carbon inclusions, those with fills that were particularly sandy in nature, and finally, those pits backfilled with clay silts but where inclusions varied between the successive deposits. Deposits in this category were invariably formed though intentional

backfilling of pits.

Heterogeneous fills were represented by classes B1 to B4 and C1 to C4. These deposits were formed by clay silts intermixed with distinct bands of carbon and chalk bands. In addition, they included those pits that contained intermittent deposits derived from periods of natural silting, collapse of pit sides and those containing consolidation layers in their upper portions. Further sub-classifications were made to accommodate those instances where more than one of these elements occurred within the same pit.

It is clear from these analyses that in no instances were pits filled completely by natural processes. Among the heterogeneously filled pits, fourteen (S3521, S3621, S3699, S3724, S8134, S8596, S8642, S8670, S8722, S8733, S12082, S14240, S14265, S14276) showed evidence for the accumulation of silts in their base with only one example demonstrating episodes of backfilling interspersed by periods of silting (S3913). That several features may have remained open for a period of time before being backfilled is evidenced by those features that contained the bones of small mammals (mainly rodents) and amphibians.

Subsequent to their backfilling eight pits clearly needed some form of consolidation (S3621, S3699, S8456, S8642, S8670, S8722, S8733 and S8901 (Plates 100–101). Due to the heavy truncation on Plateau 8, such layers may once have been more common but no longer present at the time of excavation. They were largely represented by substantial deposits of burnt and unburnt flint, with the most obvious deposit that which covered the top of pit S8722.

Correlations of form, depth and fill

Fill types were compared with pit dimensions and forms to investigate potential patterns. As might be expected, larger pits typically contained fills that were more heterogeneous in nature, especially with respect to volume with homogenous pits averaging at 1.06m³ and heterogeneous 2m³. In respect to form, the generally shallower bowl shaped features tended to have homogeneous fills, with the deeper cylindrical and undercut pits generally having heterogeneous fills. Deviating from this pattern stepped pits had only homogeneous fills despite their large mean volume of 3.92m³. Significantly, these pits were relatively shallow despite their large volume, on average 0.93m deep compared with averages of 1.54m and 1.95m for undercut and alcove pits, suggesting pit depth was the prevailing factor in determining how pits were backfilled.

On average, homogeneously filled pits were smaller than their heterogeneously filled counterparts in all dimensions. When phased, examples the homogeneous fill types were infrequent, due in no part to the sparsity of finds, with at most four instances recorded per sub-phase. The one exception to this was the frequency of class A1 deposits that stayed largely constant across each sub-phase, perhaps indicating some consistency in patterns of backfilling over time. While there was

some variation in Sub-phase 4, similar distributions of fill type by phase were also noted when deposits were amalgamated into homogeneous and heterogeneous fill types.

Fill Contents

As noted above, the artefactual and ecofactual contents of the individual pits varied considerably. Many features, in particular those that contained largely homogeneous fill deposits contained only sparse artefactual assemblages with the heterogeneously filled bits displaying far greater variation. Others, for example pits S8722 and S8642 contained a rich and varied assemblage of finds. Principally, these assemblages were very mixed, containing fragmented pottery, daub, animal bone and environmental materials such as burnt grain and chaff. Burnt flint was also common, with the greatest quantities occurring in the upper fills of features. More unusual finds came in the form of loomweights, quernstone fragments and spindle-whorls, found in twenty-five, fifteen and two pits respectively (Figs. 84–86; Plate 102). A similar division between pit form and fill type has been noted at Dolland's Moor (Jon Rady *pers comm*). While this may simply reflect the fact that the shallower features made less suitable rubbish pits, it is likely that the processes behind rubbish disposal contained a ritual element in such cases (Hill 1995).

The fragmented and on occasion degraded nature of many of the finds groups, particularly the pottery and plant remains, indicate that the pits were not used as the primary means of refuse disposal. Instead, finds assemblages suggest that refuse was initially piled in midden heaps that were later redistributed into disused pits. This was indicated further by the animal bone assemblage where bones that had been gnawed by scavengers, presumably whilst in a midden, had later been redeposited into pits (Jones 2012, 5). An element of control relating to this redistribution of rubbish was also noted, with pits producing 95 per cent of the entire assemblage of gnawed bone (*ibid*, 7).

The redistribution of refuse was particularly noticeable in the pottery and plant remains assemblages. In the case of the latter, the assemblages from thirty-four pits were subject to more detailed analysis. Where the stratigraphy of the pits was complex, several samples from individual features were examined in order to determine the extent to which the composition of waste varied throughout the period of backfill. This was most particularly the case in relation to pits S8722 and S8642.

Overall this investigation confirmed that the pit assemblages primarily represented redeposited mixed charred waste. In particular, this was indicated by the identification of mixed assemblages of emmer, spelt and barley grains from over 80 per cent of the samples, despite it being unlikely that all were used for the same purposes by all households over a length of time, or that they were grown together as mixed crops. The presence of small numbers of mineralised seeds and mineralised nodules (Carruthers 1989) in 37 per cent of the pit samples supports this suggestion,

as mineralisation is characteristic of middens and faecal deposits (Green 1979; Carruthers 2000).

There was insufficient evidence to indicate that human faecal waste had been deposited, as no bran-rich concretions or mineralised fruit seeds were preserved (though small amounts of cess could not be ruled out). A midden rich in hearth sweepings and animal waste, however, could contain sufficient moisture and nutrients to enable the more readily mineralised seeds such as brassicas (*Brassica/Sinapis* sp.) to become mineralised in localised damp pockets. Henbane (*Hyoscyamus niger*) was recovered as mineralised seeds from three pit samples and as charred seeds from fourteen samples, and this plant is typical of nutrient-rich deposits such as middens and farmyards.

In more detail, minor variations within individual assemblages would seem though, to suggest that deposition was piecemeal coming from a number of smaller middens, perhaps associated with individual households, rather than from a central midden-type dump. This is principally suggested by seeds of flax and opium poppy that were concentrated in specific pits (S8722 and S8642 respectively).

Within features classified as storage pits frequent cereal grains, chaff fragments and weed seeds were identified in a generally uniform proportion of c 5:3:3 respectively. Occasional variation was noted, generally where chaff dominated by a small margin, and in pit S8260 seeds of robust corn gromwell formed the largest proportion. In no cases was an assemblage formed entirely from crop processing waste, indicating that had processing been taking place it was very inefficient. This seems unlikely, and it is instead suggested that the plant remains derived from a number of sources. As each sample contained mixed waste, with no unmixed material identified it seems likely that mixing primarily took place before charring. Most likely is that these assemblages represent the waste from small scale domestic tasks rather than large scale crop processing.

The spatial patterning in relation to the fills of individual features was also investigated in an attempt to identify whether the character of waste varied across the site. However, it was concluded that deposition was fairly random. No obvious temporal trends between pit fills were identified, though at certain points adjacent samples contained the same rare items, for example two contexts in pit S8722 contained flax seeds. Similarly, all six samples from pit S8642 contained opium poppy seeds, though they were found in only four other pit samples across the site. This indicates either a long term specialisation in this crop for the household responsible for backfilling the pit, or that the pit was fairly rapidly backfilled using the same source of mixed waste.

Peripheral pits

While the majority of the pits described above lay within the broadly defined feature clusters, forty were sited outside of these areas. These were concentrated in the peripheral areas of the settlement, with a small number lying between the larger

feature clusters. Approximately 40 per cent of these were formed by storage pits of varying size, with the remainder a mix of scoop-like pits and 'refuse' pits. As with the feature clusters, these pits were of a range of dates largely covering Sub-phases 1 and 2. Only one pit (S8774) that cut Ring-ditch 3 could be dated to Sub-phase 3.

While most of the peripheral pits were fairly uniform, the fills of two marked them out as more noteworthy. The first was pit S8885, situated on the eastern periphery of the settlement in the area of the buried valley. This feature was 1.19m in diameter by 0.66m deep and contained three fills (Fig. 111). The primary deposit appeared to be the result of erosion from the sides of the feature. This was sealed by two deposits, of a combined 0.49m thickness, that contained a large quantity (34.37kg) of non-metallic slag. The composition of the fragments indicates sorting of some sort, with similar material from elsewhere on the site perhaps deriving from the same source.

Located on the western edge of the settlement, sub-circular pit S3854 was 0.93m wide, 1.32m long and 0.4 m deep (Plate 95). The sides of this feature had clearly been lined, the only feature within the settlement that had been so. Sealing the lining were eight fills, the two lowermost in the sequence being indicative of natural silting. Three fills that lay above this contained considerable quantities of burnt daub, perhaps the re-deposited remains of an oven or kiln, together with sherds of pottery, mammal bone and small amounts of grain and none ferrous slag. These layers of refuse were then sealed by two deliberately dumped deposits of sterile clay, with the final deposits in the sequence again formed by redeposited midden material. While the fills seem largely unremarkable, being largely of mixed midden material or sterile clay, the presence of the oven/kiln debris is of note as it was the only such material recovered from the settlement. The pottery suggested that the feature was of later early Iron Age date.

Possible Round-house structures (Fig. 87)

That occupation must have lain within, or close to the Plateau 8 site is clearly indicated by the quantity of domestic refuse within the fills of the cut features. Little evidence for domestic structures was identified with the exception of two fragments of ring-ditch G8085 (Round-house 1) and G8312 (Round-house 2).

Round-house 1

Identified approximately 36m immediately to the west of Feature cluster 2, Round-house 1 (G8085) was represented by a curving section of ditch 8.15m in length and some 0.6m wide by 0.19m deep. Its fill was a sterile clay silt, indicative of natural erosion. Projection of this feature to form a full circle suggests that it may originally have possessed a diameter of some 12m, typical of relatively large round-house of approximately 10m. This allows for a 1m berm between the non-archaeologically defined outer building wall and the drip-gully. This spatial arrangement is demonstrated for fifth to third century BC round-houses where both a drip gully and wall plate trench survive, as at Crick, Northamptonshire (Hughes and

Woodward 2015, 28). It is notable that middle Iron Age roundhouses of the Thames Valley and East Midlands are generally defined by pen-annular drip gullies or fragments of such gullies, rather than post-holes (other than occasional doorways). Conversely those pre-dating the fourth/fifth century BC in these regions tend to be defined by their load bearing post-rings (Robinson and Lambrick 2009; Oxford Archaeology 2015; Masefield *et al* 2015, 285).

Round-house 2

Round house 2 lay approximately 11.25 metres to the south-east of Round-house 1. The ditch was again relatively shallow, only 0.19m deep by 0.23m wide, and had been mostly removed by a combination of later features and horizontal truncation. A total diameter for the feature is estimated to have been no more than 7.7m. As with Round-house 1, the silty nature of the fill contained in this feature is thought to have a natural origin. If this feature represents the drip-gully a small circular structure of c 5.7m diameter may be represented.

Post-hole structures

More definitive structural evidence was provided by the twenty-seven post-hole structures that were identified across the Plateau (Structures 5–31). Most of these were formed by four or six posts (Figs. 88–92), with the majority identified in the eastern half of the settlement area. A number of possible two posted, and more irregularly numbered structures were also identified, though several of these are somewhat dubious in form. Inevitably, the post-holes possessed smaller finds assemblages than the pits, bearing an average of only 5.2 pottery sherds per feature. As a result, only five of these (Structures 13, 14, 15, 20 and 21) could be closely dated, each to the later stages of the early Iron Age. The remainder have been placed in the broader later early to middle Iron Age date range. The majority of the post-holes forming these structures were filled with material typical of the midden deposits discussed above. Only in occasions where there is a degree of variation from this norm are the fills of specific post-holes discussed in more detail.

Structure 5

Structure 5 consisted of six sub-circular postholes (G8062) on the western fringe of the settlement. Four of the post-holes formed a north-south aligned rectangular structure, with the remaining two offset slightly to the east. The post-holes were 0.3–0.55m in diameter and 0.25–0.48m deep. A seventh post-hole lay in the footprint of this structure but may not have been directly associated with it as it did not line up with the other structural elements.

Structures 6, 7 and 8

Forming the northern part of Feature Cluster 13, structures 6–8 remain somewhat tentative in identification. Structure 6 was formed by two postholes set on a north-

south alignment approximately 1m apart. A further two-post structure, Structure 7, was formed by two posts 1.2m apart on a north-west to south-east alignment, located immediately to the south of Structure 6. Structure 8 was formed by two posts lying approximately 1.2m apart 1.88m apart within a cluster of pits to which they may relate.

Structure 9

Lying on the eastern periphery of the settlement, Structure 9 (G8049) was a six posted building overlooking the buried valley. The posts forming Structure 9 were on average 0.45m in diameter and 0.24m deep, distributed in a rectangular pattern formed by two parallel lines of three posts aligned on an east-west axis, 3.80m long and set 2.70m apart.

Structure 10

Located approximately 58m south-west of Structure 9, Structure 10 (G8050) was formed by six posts on average 0.57m in diameter and 0.28m deep. They were distributed in a rectangular pattern aligned on an approximate north-west to south-east axis, formed by two parallel lines of three posts 3.65m long set 2.86m apart.

Structure 11

A four-posted building, Structure 11, was located to the north-west of Structure 10. It was formed from sub-circular postholes (G8051) on average 0.35m in diameter and 0.20m deep. They were distributed in a square pattern aligned on a north-west to south-east axis with a posthole in each corner.

Structures 12

Two four post structures were located in the central area of the settlement. The first of these, Structure 12 (G8052), was formed by postholes on average 0.37m in diameter and 0.18m deep distributed in a 2m square aligned on a cardinal axis with one posthole in each corner. This was situated 9.8m south-east of Structure 6.

Structure 13

Located 7m to the north of this was Structure 13 (G8053) formed from four postholes on average 0.49m in diameter and 0.36m deep. All exhibited evidence of post removal and subsequent backfilling with domestic refuse, with S8339 containing a substantial rim sherd from an everted vessel. They formed a 2.4m square again aligned on a cardinal axis.

Structure 14

Lying some 22.7m to the south of enclosure ditch G8075, away from the main focus

of the settlement, this structure was formed by nine sub-circular post-holes (G8071: S8515, S8525, S8529, S8536, S8538, S8568, S8586, S8588 and S12189). These were on average 0.42m in diameter by 0.23m and were generally filled by deposits of clay silt. The fills contained variable amounts of largely domestic material that included daub, fragmented animal bone and a large quantity of carbonized seeds. Notable, was the 1kg of pottery recovered from post-hole S12189 that belonged to a single F41 storage jar. Post-holes S8586, S8588 and S8529 also contained pottery but in much smaller quantities.

Six of the post-holes formed a rectangle formed by two 4.10m lines, each containing three post-holes, set 1.65m apart and aligned north-west to south-east. The remaining features lay around two metres to the north, forming distributed in a triangular pattern. This would seem to indicate a six-post raised granary with some form of ancillary structure, probably a fence.

Within the structure, the charred plant remains from post-holes S8515, S8525, S8568 and S8586, stood apart from the remainder of the Iron Age assemblage, demonstrating that it had served a specific function. The assemblage from these features all contained high concentrations of clean, well-preserved hulled barley (*Hordeum vulgare*). This would seem to corroborate an interpretation of the feature as a raised granary (possibly principally a fodder store, see below), used in this case to store six-row hulled barley, based on the identification of twisted lateral barley grains. However, it should be noted that the grains had been incorporated into the fill, rather than as an *in situ* deposit in the base of the feature. Clearly, this must re-open the question as to whether this group of features did indeed form a granary type structure, though again such a deposit may reflect the deliberate selection of midden material.

The samples were remarkably free from chaff fragments and weed seeds demonstrating that the grain had been threshed and sieved (removing straw, rachis segments and small weed seeds), though protective husks were still in place. Instead of containing mixed, re-deposited waste, as in most (if not all) of the other samples from this phase (see below), these samples contained a prime stored product, perhaps indicative of deliberate placement.

Also recovered from this group of features, in this case from post-hole S8525, was an assemblage of over 637 probable hedge mustard seeds. Smaller assemblages of hedge mustard were recovered from two of the associated post-holes. This is a short-lived, common ruderal plant, so could have been growing as a crop weed, though it is rarely found amongst cereal assemblages, especially in such large numbers. In addition, the fact that the structure had held clean, fairly weed-free grain suggests that these small seeds would have been sieved out of the crop during processing if the plant been growing as a weed.

Structures 15, 16 and 17

A group of five sub-circular postholes (G8055) on average 0.44m in diameter and 0.33m deep formed Structure 15 which lay approximately 7m south of Structure 7. Forming two parallel lines approximately 4.8m long and set 2.4m apart they likely formed a six post structure with the central post of the eastern line unidentified. It is possible they may have been related to Feature cluster 4 that directly to the east, though this was not altogether clear.

Perhaps related to Feature cluster 5, Structure 16 was situated 19.4m to the north-west of structure 16. It was formed by five sub-circular postholes (G8056) on average 0.46m in diameter and 0.15m deep, distributed on an approximate north-east to south-west axis, all set approximately 2m apart. The layout suggests is suggestive of a rectangular structure, with a sixth post perhaps not identified.

Structure 17 lay towards the centre of the main settlement located approximately in a largely blank area that lay between feature clusters 1, 5 and 6. It consisted of four sub-circular post-holes (G8057) on average 0.49m in diameter and 0.29 m. deep all of which had been deliberately backfilled. They were distributed in a 2.10m square aligned on a cardinal axis forming another four post structure. A large post-hole (G8025) 0.68m in diameter and 0.5m deep was situated 1.7m south of this apparently forming an extension to the eastern line of posts. It was partially filled with a deposit of domestic refuse before being left to silt up naturally. While dissimilar to the other post-holes in this group it suggests that Structure 18 may in fact have consisted of six rather than four posts.

Structure 18

Structure 18, formed by three post-holes 0.27–0.38m in diameter and 0.19–0.40m deep (G8061) lay 2m to the west of Ring-ditch 2. These appeared to have been deliberately and rapidly backfilled after the removal of the posts with sterile deposits of clay silt. It seems likely that they formed a four-posted structure, the south-west corner of which was not identified.

Structure 19

Structure 19 (G8066) was located close to the northern limit of excavation 5.8m from the eastern edge of Feature cluster 1 consisting of seven sub-circular postholes, one containing an associated post-pipe. They were on average 0.41m in diameter and 0.25m deep. Each appeared to have been deliberately removed and filled with domestic refuse. Three formed an L shape, each approximately 1.2m apart suggesting the presence of another square four-post structure, though the south western post was not identified. Both the north-west and south-east posts were re-cut indicating at least one phase of repair. Two further posts lying slightly to the south-west may have formed part of a small ancillary structure or fence line.

Structure 20

Four sub-circular post-holes (G8067) on average 0.30m in diameter and 0.23m deep formed Structure 23 that lay immediately north of Round-house 1. These formed an L-shape, some 4.33m in length orientated east-west. The southern wall line was formed by three of the post-holes with the fourth located some 2.1m to the north of the south-eastern post. Each was filled by a deliberate deposit of domestic refuse. This layout could represent a six posted structure, with two of the posts in the northern line not identified.

Structure 21

Structure 21 lay immediately north of Structure 13. It was formed by three sub-circular post-holes (G8068) on average 0.38m in diameter, 0.29m deep with and deliberately filled with domestic debris. This layout conforms to that of a typical four-posted structure though with the south-western post-hole not identified. A fourth post-hole that lay slightly to the south of the north-western post perhaps indicates that this feature was replaced at some point while the structure was in use.

Structure 22

Four sub-circular post-holes (G8069) on average 0.48m in diameter and 0.20m deep formed Structure 22. These lay on an east-west alignment and formed two parallel lines approximately 1.2m apart that formed a roughly trapezoid shape. It is probable that these features represented some sort of posted structure, though this was not altogether clear and some other function remains a possibility.

Structure 23

Structure 23 was positioned immediately to the south of the southern ditch forming Field 15 some 13.2m to the east of Feature cluster 10. It was formed by four post-holes (G8317), between 0.28m–0.45m in diameter and approximately 0.15m deep. These formed a near square, with the post-holes positioned some 2.3m apart, though the south-western post formed a slight outlier. Despite this, the layout would seem to conform to that of a four-posted structure.

Structure 24

A large group of twenty two sub-circular post-holes (G8072) was identified immediately to the west of Ring-ditch 3 and formed Structure 26. They were on average 0.45m in diameter and 0.25m deep and generally backfilled with domestic refuse. One (S12827) contained two unidentified iron objects (SF 8.248, SF 8.9094) and another (S12702) a fragment of clay loom weight (SF 8.219). Covering an area 12m wide and 9.4m long, they likely formed a structure related to the ring ditch. This is consistent with the uncharacteristically high incidence of daub concentrated in both the ring-ditch and those post-holes closest to it perhaps suggesting that the structure was demolished or burnt down at the same point as the ring-ditch fell into disuse. An isolated post-hole lying approximately 3.5m to the north may also relate

to this structure.

Structure 25

Three sub-circular post-holes (G8029) formed Structure 6 lying immediately to the north of Round-house 1. They were on average 0.59m in diameter and 0.32m deep all deliberately backfilled with clay silts. Forming an 8m line with three aligned north-east to south-west in, it is likely that they represent a fence that may have related to Structure 13, a four posted structure 4.5m to the south-east.

Structure 26

Lying approximately 32m north-west of Structure 26, Structure 26 was formed from two sub-circular post-holes (G8232) on average 0.30m in diameter, 0.16m deep, deliberately backfilled with domestic refuse and aligned north-east to south-west, 1.92m apart, possibly indicating a structural purpose. They lay in a comparatively blank area to the north of Feature cluster 6 and the west of Feature cluster 9. It is possible that they related to one of these groups but this is not clear.

Structure 27

A row of four sub-circular post-holes (G8236) formed Structure 27 which lay close to the north periphery of the plateau, 22m to the north-west of Structure 26. On average 0.48m in diameter and 0.31m deep each contained small quantities of domestic refuse. They were distributed on an east-west axis and spread over an area of some 13m. It is likely that they formed a fence line with a further post-hole positioned slightly to the south probably also related to this structure.

Structure 28

A possible two-posted structure (Structure 29) was situated on the eastern edge of Feature cluster 5. It was formed by two post-holes (G8023) which measured on average 0.43m in diameter and 0.16m deep that lay on an east-west alignment approximately 1.1m apart. Located 1.7m south of Structure 16 was Structure 30, formed by two sub-circular post-holes (G8021) 0.62m in diameter and 0.33m deep. They were located 1.2m apart and may have formed a two-posted structure.

Structure 29

Structure 29 was formed by a line of three sub-circular posts (G8334) between 0.34–0.68m in diameter and 0.12–0.43m in depth. This lay some 2.6m to the north-east of Structure 18 and appeared to represent a fence, though what this related to is unclear.

Structure 30

Lying 7.8m to the south-west was Structure 3, formed of two post-holes each

approximately 0.6m in diameter by 0.15m deep. These were set 1.72m apart, with the layout suggestive of a two-posted structure, perhaps forming some sort of frame (drying racks for animal hides being one possible explanation).

Structure 31

The final post-hole structure within the main settlement, Structure 31, was positioned 19.1m to the north of Structure 30. This was again of the two-posted form, with the post-holes 0.45m and 0.49m in diameter by 0.18m and 0.26m deep respectively.

Sub-circular enclosures (Figs. 93–94)

Three irregular ring ditches were identified on Plateau 8 with one lying to the south of the main settlement and one near the northern limit of excavation.

Sub-circular enclosure 1 (Plate 103)

Sub-circular Enclosure 1 was the most southerly as well as being the smallest with a diameter of approximately 5.5m. The feature was 100 per cent sampled due to its small size and limited assemblage of dateable material. It was very shallow, generally less than 0.1m deep with a gently sloping profile and concave base. The fill, a fine clay silt, appeared to represent material washed in by natural erosion though a few very small pieces of early Iron Age pot were recovered. The cut was suggestive of the drip gully more usually associated with a round-house, however, the small size, slightly irregular shape and lack of internal features suggests that this was not the case.

Sub-circular enclosure 2 (Plate 104)

Sub-circular Enclosure 2 (G8060) was slightly larger at 9m in diameter and lay 80m to the north close to the site boundary, and the eastern limit of the settlement. It comprised a sub-oval ring-gully approximately 0.9 m wide and 0.22m deep with moderately sloping sides and a concave base. Investigated by four quadrants, this feature was filled by a single deposit of clay silt that contained a large quantity of domestic rubbish including large quantities of daub and pottery of the early to middle Iron Age. The daub was very similar to that identified in several nearby post-holes (Structure 26 above) and could imply the presence of an ancillary structure perhaps demolished as the ring ditch fell into disuse.

Two post-holes, S3780 and S3782, on average 0.41m wide and 0.12m deep, were identified in the south-east portion of the ring-ditch. Set approximately 2m apart, they appeared to have been deliberately backfilled. These may represent the remnants of an entrance though they could equally be earlier features that the ditch had truncated, perhaps forming a two-posted structure.

Lying within the enclosure were four features S3750, S12627, S12725 and S12734

though whether these directly related to it remains debatable. Positioned slightly to the east of the central part of the enclosure, pit S3570 was irregularly shaped, some 0.38m wide, 1.15m long and 0.38m deep, with uneven sides and a slightly concave base. Filled by sterile silty clay, it is possible that this feature was of natural origin.

Lying 1.45m to the north-west, in the north-western quadrant of the enclosure, pit S12627 was roughly circular, measuring 1.5m in diameter by 0.3m deep with moderately sloping sides and a flat base. It had been filled by a deposit of re-deposited natural clay that contained small quantities of general early-middle Iron Age pottery and fragments of animal bone. Similar in size and shape but located in the south-west quadrant of the enclosure, pit S12725 contained two fills.

Comparatively large quantities of general early-middle Iron Age pottery, animal bone and fragmented daub were recovered from both. These deposits were similar to those filling many of the post-holes that formed the adjacent Structure 26.

The final feature located within the enclosure was post-hole S12734, located slightly to the west of centre. This feature was sub-circular, with an approximate diameter of 0.55m and 0.28m in depth. The fill of this feature was very similar to that of pit S12627, containing small quantities of early-middle Iron Age (Sub-phase 2) pottery and fragmented daub.

Sub-circular enclosure 3 (Plate 105)

Located 17m to the west of the buried valley was Sub-circular enclosure 3 (G8059), again close to the eastern edge of the settlement. This was sub-oval measuring 5.9m wide, 7.5m long and between 0.4–0.6m deep with the variation probably caused by plough erosion of the west side of the feature. The ring-ditch lay on an approximate north-south axis with steeply sloping sides that broke to a flat base. The fill, a homogenous deposit of clay silt suggested that the feature had been backfilled as a single event.

The north-west portion of Enclosure 3 had been cut by a large sub-circular pit (S8774) 1.3m wide, 1.8m long and 1m deep. The profile of the feature was similar to many of the early-middle Iron Age pits suggesting it may originally have been cut for storage. This would seem to indicate that Enclosure 3 had gone out of use before occupation within the main settlement had ceased.

The remaining post-holes

The remaining 164 post-holes existed as a scatter across much of the plateau, with most forming no coherent patterns. While all were sub-circular, these features varied in size between 0.1 and 0.5m in diameter, by 0.04 to approximately 0.4m depth. As with the pits, the post-holes had been backfilled with varying quantities of sterile silt clays and/or midden material.

Ninety-five lay within Feature clusters 1–14, but largely possessed no obvious

relationships with the pits. However, as suggested above, it is possible that some or all of those forming Feature clusters 12 and 13 may have formed structures.

The western quarry complex

Lying on the western periphery of the settlement, clustered around ditch G8332, was a group of twenty-six intercutting pits (G8045, G8046, G8047, G8328, and G8331). These varied greatly in size, from 0.61m–1.14m wide and 0.14–1m deep, extending over an area some 7m by 12m. Backfilled largely by deposits of clay silt, flecked with carbon and chalk it was only the presence of occasional bands of more chalky silt that allowed the identification of individual features. Despite their proximity to the adjacent settlement, the fills were surprisingly sterile, with sherds of pottery and fragments of animal bone the only cultural material recovered. Following backfilling, many of the pits subsided leaving a shallow depression visible across much of the area (G8326). This was filled by a number of clay silt deposits that again contained occasional fragments of pottery and animal bone.

While difficult to date due to the general dearth of identifiable pottery, those few sherds that were recovered were indicative of an Iron Age date. However, no more detailed phasing could be undertaken within this group of features due to the small size and mixed nature of the pottery assemblage. It seems likely that the pits, together with a similar eastern complex (see below), situated on the opposing side of the valley were contemporary with the settlement. Functionally, it is clear that these features were very different to the storage pits that dominated the area of settlement. Instead, it seems likely that they represent an area of quarrying.

Subrectangular pits within the buried valley

Two groups of features (G8202, G8203) were located approximately 83m west of Sub-circular enclosure 3, cutting through the colluvial material that filled the buried valley. The first (G8202) consisted of five subrectangular pits (G8202) between 0.59m to 1.07m wide, 1m to 1.7m long and 0.12m to 0.47m deep (Plate 106). They had sharply sloping sides with flat bases and were filled by clay silts composed mostly of carbonised material containing worked flint, pottery fragments of a general early to middle Iron Age date and very large quantities of burnt flint, clearly deliberately backfilled. The features were distributed irregularly in an area 5.66m wide and 12.68m long and seem to have served specifically for refuse disposal. The quantity of burnt flint recovered from the fills suggests that they may have related to unidentified industrial activity perhaps lying in the unexposed zone immediately to the east.

The second group consisted of two sub-circular pits (G8203) on average 1.15m in diameter and 0.49m deep with moderately steep sides and concave bases. Filled with clay silts containing smaller quantities of carbonised material, burnt and worked flint than those in (G8202). The pits were located 7.30m from one another and seem to have served specifically for refuse disposal.

Middle Iron Age burials within earlier ditches (Fig. 95)

Two inhumation burials (G8309) were identified immediately to the south of Ring ditch 03, cutting into the top of re-cut ditch (G8296) (Fig. 96). The preservation of both was poor as this area of the site had been heavily disturbed by agricultural activity. The first, grave S8896 measured 0.75m wide, 1.46m long and 0.3m deep and contained a single female adult inhumation (SK 8.3) aged 36–45 (Plate 107). The skeleton was lying supine with the skull lying in an upright position, situated at the east end of the grave. The right leg was flexed and the left extended. The left arm lay flexed over the torso with the right to the side of the body. A deliberately placed round shouldered jar that had been broken into halves and dated to Sub-phase 3, lay adjacent to the left leg of the skeleton. Further pottery sherds were included in the backfill of the grave, incorporated as general background material as rubbish. The pottery dating is tentatively supported by absolute dating that provided a date of approximately 352–3 BC cal (at 95 per cent probability; Table 6, UBA-22216).

The second burial, S8912, was heavily truncated with no clear grave cut evident (Fig. 97; Plate 108). The skeleton (SK 8.1), a female aged 16–18 years, lay in a supine position with the skull at the west end. Both legs were extended with the right arm positioned to the side and the left flexed across the torso. It is assumed that this burial is broadly contemporary with burial S8896 but given the absence of dateable pottery and unsuitability for radiocarbon analysis this cannot be proven.

Early to middle Iron Age activity on the eastern side of the valley (Plateau 8)

Further Iron Age features were also located on the eastern side of the buried valley, in the area of the new research centre. These included a ditch, two four posted structures, a ring-ditch containing a double inhuman with satellite burial and a cemetery of middle to late Iron Age date.

Possible enclosure ditch or field boundary

A ditch (G8083) lying on a north-east to south-west alignment that turned east-west at the south was identified in the south-west corner of the area running beneath the limit of excavation (Plate 109). Measuring 26.3m long, on average 1.63m wide and 1.06m deep it contained initial fills of naturally accumulated silt with the upper portion deliberately backfilled with clay silts containing domestic refuse. The function of this quite substantial ditch is unclear, but it possibly represents part of an enclosure or some other settlement activity in the lower, unexcavated part of the valley. After backfilling the ditch provided the focus for a small later Iron Age inhumation cemetery (G8084, G8278 and G8279).

Structures 20 and 21

Two four post structures, lay in virtually identical positions though on slightly

different orientations on the eastern side of the buried valley, approximately 170m from the main settlement (Fig. 112; Plate 110). The first, Structure 20 (G8064, G8260), consisted of four sub-circular post-holes on average 0.40m in diameter and 0.35m deep forming a 2.2m square aligned roughly north-west to south-east. The posts forming this structure appeared to have been deliberately removed with the holes quickly backfilled. The western corner post, S14053, contained a considerable quantity of pottery, most of which belonged to a single carinated bowl and is suggestive of deliberate placement. A fifth, far shallower post-hole (S14070) 0.35m in diameter and 0.13m lay slightly to the east of the northern corner of the structure perhaps indicating that it was cut in the wrong location.

Structure 21 (G8065) consisted of a 1.9m square aligned north-east to south west. A post pipe was identified in the north-east corner of this structure suggesting that the post was only partially removed and left to decay *in situ* though the other three seem to have been wholly removed and quickly backfilled. It remains unclear why these features were so isolated from the main settlement though it is possible that as they were located close to the edge of excavation further unexcavated settlement activity lies to the north and west.

Pits and post-holes of uncertain date

Situated 13.5m east of the northern terminus of ditch G8083 were two sub-circular pits (G8199). These measured approximately 1.5m in diameter and 0.14m deep having been heavily truncated by agricultural activity. Only the basal fills were extant consisting of sterile clay silt probably formed through natural processes of erosion. The pits were located 0.30m apart and formed a small cluster of features with group post-hole group G8200 to which they may have related. Due to the level of truncation the exact date or purpose of these features remains unclear, and the possibility that they may be of a different period, most likely late Iron Age or Roman remains possible.

Located approximately 6.5m east of pit group G8199 were four amorphous features, probably heavily truncated shallow pits (G8201) between 0.33m to 0.88m wide, 0.73 to 2.02m long and 0.14m to 0.2m deep with moderately sloping sides and slightly pointed concave bases. These had been filled with sterile clay silts probably formed through processes of erosion. They were distributed up to 10m apart aligned north-west to south-east in a 20.5m line. As feature groups G8199 and G8200 no definitive date can be provided for these features and it may be significant that they were clustered around Roman boundary ditches G8153 and G8154. Equally, however as they were located adjacent to the edge of excavation it is possible that they could relate to uncovered features in this area.

The eastern quarry complex

A cluster of inter-cutting quarries (G8086, G8087 and G8088) lay 29m north-west occupying an area of some 18.5m by 8.5m, with the features up to 0.95m deep. Most

had steeply sloping sides, both undercutting and stepped in places, with irregular bases. They were filled with a mixture of sandy silt and re-deposited chalk, apparently deliberately deposited. Due to continual re-digging of the area, stratigraphic associations were difficult to fully establish but based on the radiocarbon date recovered from an inserted burial (Barrow 9; G8172 below) they must be of the Middle Iron Age or earlier. Similar groups of intercutting quarries have been noted elsewhere, notably at Church Whitfield, Kent (Parfitt 2014, 95–97) and at Winnal Down, Hampshire (Fasham 1985, 41).

The purpose behind chalk quarrying in this period remains slightly unclear although Cunliffe (2005, 571–572) suggests that it was extracted and used as marl in the surrounding fields. Alternatively, the extracted chalk may have been used as a building material in the form of clunch as was the case in the Roman and medieval periods.

Subsequent to their backfilling the deposits in the quarries appear to have sunk slightly resulting in a slight depression (Plate 111). This was clearly visible in the middle Iron Age as it appears to have acted as a focus point into which a female inhumation (G8310) and a small ring ditch (Barrow 9: G8172) containing an associated double burial (G8173) was cut.

The middle to late Iron Age cemetery

A small cemetery of twenty-five graves (Fig. 113) was identified alongside the east side of the buried valley clustered around ditch G8083. Overall, the cemetery occupied an area around 19.2m long by 12.5m wide, with one burial located slightly outside this zone. Given the high level of truncation in this part of the site, it seems likely that additional burials may have been entirely removed by ploughing, but the disposition of the graves suggests the bulk of the cemetery was exposed.

The grave cuts were generally very narrow, between 0.32–0.53m wide (Plates 112–113). Only four, graves S12965, S12978, S12981 and S12984, at 0.6m+ width, would have been able to comfortably contain a body. Where preservation allowed, it was clear that where possible the inhumations lay in an approximation of a supine or extended position. However, in many cases body position was largely dictated by the narrow width of the graves. In many cases the legs were crossed, perhaps indicative of burial in a shroud (or of binding). The use of shrouds would seem particularly likely in the case of burials S12972, S14019 and S14929 where accompanying brooches may have been used as fastenings. One clear variation from the norm was burial S12974 where the body had been placed in the grave in a prone position. The graves appear to have been rapidly filled with re-deposited natural, probably the up-cast from the graves themselves with little artefactual material recovered.

Grave orientation varied, eleven (G8084: S12931 (SK 8.43), S12972 (SK 8.18/36), S12975 (SK 8.24), S12978 (SK 8.19/37), S12981 (SK 8.51), S14019 (SK 8.26/32), S14022

(SK 8.30), S14929 (SK 8.52), S14932 (SK 8.31), S14935 (SK 8.49) and S14938 (SK not recovered); Fig. 114) lay north-west to south-east, respecting the alignment of the earlier ditch. A smaller group of six graves (G8279: S12948, S12954 (SK 8.44), S12962 (SK 8.22), S12965 (SK 8.23), S12984 (SK 8.20/25) and G 8278, S14012 (no human bone); Fig. 115) were orientated virtually north-south, perhaps reflecting the presence of Barrow 10, that lay 29.7m to the north (see below). The final eight burials (G8278: S12944 (SK not recovered), S12947 (no human bone), S12952 (SK 8.15/35), S12987 (SK 29/38), S12990 (SK 8.21), S14016 (SK 8.16) and S14024 (SK 8.39); Fig. 116) were aligned somewhere between the two, broadly respecting the orientation of Trackway 26. A single burial, S12987 (SK 8.29/38), was radiocarbon dated, providing a result of 382–205 cal BC (at 95 per cent probability; Table 6, UBA-12629).

Coupled with the truncation by ploughing, generally poor soil conditions that further hampered preservation, only a small proportion of the graves contained a reasonably sized assemblage of human bone. On average, only 25–50 per cent of the skeletons survived.

The overall demography of skeletal population was therefore difficult to fully quantify. Seventeen of the skeletons were adults, of which the majority were aged under 45 years. A single juvenile was identified and fragments from a child were recovered from the backfill of grave S12954. The remaining graves contained too little bone to establish an age. The identification of sex proved even more problematic, and was possible in relation to only ten of the burials. Of these seven were female and two male.

Very few of the skeletons contained evidence for pathological conditions though narrowing of the right femur of burial SK 8.20 was suggested to relate to a mechanical rather than a metabolic condition (Geary 2014). Joint disease, perhaps also related to physical activity was also noted in right hand of burial SK 8.26. Only one example of infection was noted, with burial SK 8.19 demonstrating changes related to the femora and tibiae. Oral hygiene, as far as it could be determined, was good though SK 8.20 contained evidence for tooth decay.

Grave goods were rare, represented by brooches that accompanied the inhumations in graves S12972 (SF 8.249) and S14929 (SF 8.463). While one is not diagnostic, the other is closely paralleled by others of late La Tène *Drahtfibel* date (c. 100–50 BC). No evidence for additional grave goods was noted, though the length of grave S12972 suggests that room may have been left for artefacts to be placed at the end of the cut. Their absence implies that they were probably organic and had not been preserved.

Barrow 9

Cut into the top of the eastern quarry complex was Barrow 9 (Fig. 117; Plate 114). This was represented by a small annular ring-ditch (G8172) about 4.7m external diameter, with the ditch itself measuring 0.70m wide and 0.47m deep with steeply sloping sides and a pointed, concave base. The ditch was filled with chalky clay silts,

the lower of which were sterile and appeared to have been formed through natural erosion of the surrounding quarry fills. The upper fills may perhaps have been deliberately deposited, as they certainly contained a larger quantity of inclusions but this was by no means clear. It is likely that a small mound originally lay inside this feature, though this had been removed by later agricultural activity.

The ring-ditch enclosed a sub-rectangular grave (S14031; Fig. 118), positioned slightly to the north of centre aligned north-west to south-east 0.9m wide, 1.9m long and 0.20m deep with vertical sides and a flat base.

Contained within the grave was an arranged burial consisting of two carefully positioned articulated inhumations, SK8.46 and SK8.47, both male and aged between 26–38 years (Plates 115–116). Arranged on an approximate north-west to south-east alignment, the first (SK 8.46) lay on the left side of the grave, with the body lying in a supine position. A radiocarbon date obtained from this burial ranged from 353–112 cal BC (at 95 per cent probability; Table 6, UBA-12619). The head was positioned at the east end of the grave, facing south toward SK8.47, with the right arm lying on the sternum and the hand by the shoulder of the second burial. Inhumation SK8.47 was flexed, though the upper half lay in a slightly more flexed position, with the head again lying at the east end of the grave, facing toward SK8.46. Notable in this case was the twisting of the head and a fallen mandible, perhaps indicating that the body decomposed in a void. The right arm was partially flexed, resting on the left thigh with the left arm extending beneath the arms of SK 8.46.

Of note was that both SK8.46 and SK8.47 shared very similar non-metric traits skeletally and in the dentition. Skeletally these were recorded by the development of enthesophytes, bony spurs that develop at the attachment of tendon or ligament. Here they were recorded at the Achilles tendon insertions to the foot bones of both burials. These would seem, perhaps somewhat tentatively, to indicate a familial relationship, or at the very least suggest that they were from the same ancestral group. Burial SK8.46 also exhibited porosity and cresting in several areas of the pelvis, indicative of degenerative arthritis at an advanced stage.

The satellite burial

A second grave (S12969; Fig. 119; Plate 117) containing the bodies of a young female and perinatal baby, was located outside the ring-ditch 1.2m to the north-east. Absolute dating provided a date of 370–167 cal BC (2183 ± 32 UBA 22933) for this inhumation, indicating that they and burials SK8.46 and SK8.47 were broadly contemporary, with the location of the ring-ditch probably influencing the positioning of this burial.

The grave measured 0.5m in width, 2m long and 0.75m deep, aligned north-east to south-west, within which lay a female inhumation (SK8.11) aged between 12–19 years in a good state of preservation. The head lay at the southern end of the grave, facing south-east. The left arm was resting in the genital area with the right arm

slightly flexed to the side and legs extended. A rounded flint that may have been deliberately placed was found directly adjacent to the right hand of the skeleton.

Pathologically SK8.11 was of great interest with the identification of a cleft neural arch particularly noticeable. This was visible by the incomplete formation of the posterior wall of the sacral canal at the second sacral vertebrae, the result of a minor developmental delay (Barnes 2012, 73). This can be symptomatic of *spina bifida occulta*, the mildest form of spina bifida and perhaps suggests that this young female had problems such as bladder incontinence and recurring infection. Certainly low back-ache and other problems of the bladder, rectum and lower limbs should be considered possible in association with incomplete posterior wall of the sacrum (Chauhan and Khanna 2013). This individual may have required additional care in early childhood and the changes the body goes through during pregnancy may have heightened the symptoms, or made labour difficult. It could also be suggested that SK8.11 had a potential motor-neurological problem leading to a fall, causing the inflammation of the mandible.

That the young female died in childbirth was indicated by the associated perinatal baby (SK8.12) aged 38–40 weeks (Plate 118). This again appeared to have been deliberately arranged with the head and arms located above the pelvis of the adult. The lower body and legs were lying supine and extended beyond it. It seems likely that this individual and the associated female died during birth with the child still within the mother's pelvis or intentionally placed in this area at the time of interment.

The grave was filled with sandy silt that contained animal bone and worked flint and like Barrow 10 situated in a depression within the backfilled quarry (above). It was sealed by a layer of clay silt containing pottery fragments, ceramic building material, worked flint and animal bone (G8311). This appears to have formed naturally in the depression. The surrounding stratigraphy implies that this burial and that within Barrow 9 are of a similar date though a Roman feature (G8176) approximately 6m south-west suggests the possibility of a later insertion. Further radiocarbon dating would be needed to clarify this anomaly.

The major boundary ditch on Plateaux 4 and 5

Situated some 640m to the south of the Plateau 8 settlement was a substantial ditch (G4006, G5047) 356m in length (Fig. 120; Plate 119). This lay on an east-west alignment forming the boundary between Plateaus 4 and 5. The westernmost 79m lay beyond the excavation area but is clearly visible as a cropmark in the adjacent field. It was initially sample excavated using a combination of hand and machine dug slots; later much of its fill was removed in spits by machine in an attempt to retrieve additional dating evidence. Despite this extra work, little datable material was recovered with the feature which was remarkably sterile considering its size. A terminal, comprising a large rounded butt-end, was located at the east end of the feature with no continuation recorded beyond this point (and with no crop mark

evidence to support its continuation outside the site boundaries). The feature had an average width of 4.38m and depth of 1.70m.

Based on the depositional pattern of the fills, it seems probable that an associated bank lay to the south of the ditch (also suggested by later evidence; Chapter 7), with the lower fill deposits formed by erosion of the ditch sides and bank. The upper fill, a substantial deposit of silty clay some 1.1m thick, was very similar to the colluvial soils identified in the upper portions of the nearby barrow ditches. It would seem likely that this material accumulated through similar processes of colluviation at about the same time.

This major boundary influenced the development of the subsequent Roman, Saxon and medieval landscapes, a fact confirmed by its part incorporation as a section of the parish boundary between Monkton and St Nicholas-at-Wade. A single sherd of medieval pottery recovered from the uppermost fill was probably introduced when this alignment developed into a medieval trackway (Chapter 7).

The Thanet Earth Pipeline – Site 3

Finally on the pipeline, a small area of occupation was located on Site 3 (NGR 629325 168365), some 1.5km to the north-east of the Plateau 8 settlement. This would appear to be of middle to late Iron Age date, but may have originated slightly earlier.

Possibly the earliest features were two small pits (G24: S216, S234). The first, S216, 0.5m in diameter and 0.2m deep contained two deliberate backfills of re-deposited sterile natural. The second was slightly larger, 0.7m in diameter by 0.3m deep again filled with two deliberate deposits of re-deposited natural. The purpose of these features remains unclear.

Pit S234 was cut by a ditch (GP34), exposed for a length of about 20m on an approximate north-south alignment. The feature was 0.85m wide at maximum and 0.5m deep with steeply sloping sides that broke to a flat base and contained five fills, the lower of which appeared to be formed through natural processes of erosion. The upper deposits, contained struck flints, Iron Age pottery and large quantities of burnt flint, clearly deliberate backfillings. It seems likely that this feature formed some sort of boundary, possibly part of an enclosure.

The ditch was cut by at least two of another group of four intercutting sub-circular pits to the north (GP33: S236, S239, S260, S273), all between 0.9–1.6m in diameter and 0.4–0.9m deep. Each had moderate to steeply sloping sides and flat or slightly concave bases. The earliest of these, S260, was probably cut as a storage pit before later being backfilled with a mixture of re-deposited natural and domestic refuse. It is likely that the remaining features had a similar function.

The pottery comprises a range of mixed-tempered but mostly flint-tempered coarseware fabrics of mid- and late Iron Age date. Fragments of ‘rusticated’ pottery

were recovered from the ditch (GP34) but its upper fills yielded a few sherds which show a possibly later, 'Belgic' style of incised 'combed' decoration. The features are most likely to be associated with a wider settlement site.

The early to middle Iron Age pottery – an overview

The excavations on Plateau 8 produced c. 18,500 sherds of early to middle Iron Age pottery, of which 13,251 sherds, weighing 241.8 kg came from features which produced classifiable forms and served as a basis for establishing the chronology. Most were moderately to severely worn. Overall this assemblage forms one of (?the) largest assemblages of material of this date from (east? Kent), contrasting with assemblages of 10,421, 9,561 and 11,335 sherds from East Kent Access, Highstead and Turing College respectively.

Ceramic chronology

Few complete profiles were present but there were sufficient featured sherds to enable four Ceramic Phases (CPs) to be tentatively identified based on typological comparison, supported by four radiocarbon dates. CP1 (c. 550–400 BC) contains forms known to date from the sixth–fifth centuries BC, many of which continued later. CP2 (c. 400–300 BC) sees the introduction of forms placed in La Tène B1 (Buche 2011a). CP3 (c. 300–150 BC) witnesses the increasing use of vessels with rounded bodies more commonly associated with the Middle Iron Age. CP4 (c. 150–100 BC) includes early examples of forms which were to last into the LIA. The end date of c. 100 BC is not secure but has been suggested by parallels with continental LT D1 forms and the lack of a substantial body of grog tempered LIA forms or decoration.

While a few forms (such as a bowl with horizontally projecting rim, PRN 8145580018, recovered from a Late Iron Age/Early Roman enclosure ditch) indicate some occupation or use of the site during the Late Bronze Age or Earliest Iron Age, they were always associated with later material. No features could certainly be placed earlier than the 6th century.

Ceramic Phase 1 (550–400 BC Early Iron Age)

A wide range of forms combined those with angular and rounded profiles. Angular forms, mostly bipartite with one or two tripartite examples, included jars with rim diameters ranging from 70mm (F74, PRN 8121700001) to 260mm (F58, PRN 8088000003), with those between 240mm and 260mm being relatively common. Angular bowls, also mostly bipartite, spanned cups with shoulder diameter of 90mm (F81, PRN 8122040003) to dishes with rim diameters of 180mm (F61, PRN 8085920001) and deep bowls up to 320mm (F70, PRN 8142580001). Three examples of tripartite bowls were found with rim diameters from 130mm–190mm (F80, PRN 8126440001).

Vessels with straight sides included vertical walled cups (F102, PRN 8123650005), flaring bowls from 170mm diameter with smooth or burnished walls (R13, PRN 8084420013), and wider dishes with coarser walls up to 16mm thick. Relatively common, with eight examples in the phase, were more or less vertical sided proto-saucepan pots with roughly finished exteriors, smooth sometimes burnished interiors, and diameters ranging from 150–300mm (F100, PRN 8035850002).

In addition to the forms with crisp angular shoulders, there were others with softer slightly more rounded shoulders but maintaining broadly similar profiles. There was a tendency for these forms to merge, with the more angular forms having thinner walls and being more finely finished than those with more rounded shoulders.

Larger storage jars, up to 400mm rim diameter, had rounded shoulders (F32, PRN 8145600001). An example unique on the site, with a vertical neck, flat-topped rim, high shoulder and a rusticated surface beneath the shoulder (F47, PRN 8126450004), had a rim diameter of 420mm. Similarly, rounded shoulders were found on bowls (F37, PRN 8084350012); while thinner walled rounded forms, sometimes painted red, occurred from cups or small vases (F98, PRN 8123650003), to bowls (F50, PRN 8080620001) and so-called ‘onion’ pots (F97, PRN 8145090006). Plain jars with walls rising in continuous convex profiles had fine burnished (F15, PRN 8086830001), and coarser versions (F3, PRN 8080620007).

Bases included low footrings on wide flaring forms (B2, PRN 8140510002), pedestals with smooth rounded profiles from beakers (B6, PRN 8088000004) and larger jars. Most common was a variety of flat bases, including those with abundant flints on their lower surface. Examples of the latter were common in CPs 1–2 and were rare in CPs 3–4.

Decoration was found on 1.8 per cent of the sherds. The main styles comprised finger-tip and other impressions (38 per cent) mainly on the shoulder and rim; narrow linear grooves (26 per cent); light combing (29 per cent) and linear painted designs (5 per cent). It appeared on the rim (19 per cent), shoulder (15 per cent); between the rim and shoulder (19 per cent); on and just below the shoulder (15 per cent); or entirely below the shoulder (31 per cent).

A single radiocarbon date of 513–382 cal BC was obtained for this phase, from the fill of pit 8063 (at 95 per cent probability; Table 6, UBA-22214).

Ceramic Phase 2 (400–300 BC Late Early Iron Age)

Many of the forms in phase 1 continued into phase 2, which saw the arrival of distinctive bipartite jars with expanded flat-topped rims, some with impressed decoration (D25b, PRN 8086300003) beneath slightly rounded shoulders (R16, PRN 8035900003) and others, often with hard surfaces and very delicate rustication applied beneath the shoulder (F67, PRN 8085540001). Burnt residue on the inside of

the neck of one of the latter produced a calibrated radiocarbon date of 394–209 cal BC (at 95 per cent probability; Table 6, UBA-22218). The range of forms was maintained, from a small cup with gently rounded shoulder and flaring rim, with a diameter of 70mm (F28, PRN 8082410066), to bipartite bowls with high angular shoulders (F59, PRN 8081360002), bipartite jars with rims from 140mm to 330mm in diameter, and larger storage jars with rims in excess of 400mm. A fragment from a wide flaring bowl, unique on the site, had an externally projecting rim, diameter 160mm, with a deep recess (R1, PRN 8121040001).

More rounded forms continued, some with more careful moulding of the rim (F20, PRN 8037210009). A plain thick-walled open bowl (F8, PRN 8039120001) contained burnt residue which produced a radiocarbon date of 356–59 cal BC (at 95 per cent probability; Table 6, UBA-22217). Jars with rounded bodies and everted rims appeared, one with heavy rustication below the neck (F96, PRN 8035950006) together with slack shouldered jars; and proto-saucepans were joined by saucepan pots (F101, PRN 8035870003) with smoother, occasionally part burnished surfaces.

The majority of bases were still flat (PRN 8086220006), but omphalos and footring bases were joined by a tall pedestal (B8, PRN 8144170003).

Decoration occurred on 2.5 per cent of the sherds and techniques and position were similar to those found in CP1, but with increased finger-tip and other impressions (55 per cent) which appeared more frequently beneath the shoulder; narrow linear grooves (24 per cent); light combing decreases (14 per cent); linear painted designs (2 per cent) and now included deeply incised linear grooves (3 per cent) and one broad tooled linear groove (1 per cent). Overall decoration was found on the rim (33 per cent), shoulder (20 per cent); between the rim and shoulder (19 per cent); on and just below the shoulder (3 per cent); or entirely below the shoulder (22 per cent).

Ceramic Phase 3 (300–150 BC Middle Iron Age)

By this phase most of the angular forms had ceased and more rounded forms commonly associated with the Middle Iron Age, predominate. Nevertheless, there is no sharp break between these phases. Some round bodied everted rim jars were already known in Phase 2; but they became more prevalent, together with other MIA forms, during CP3. One example (F91, PRN 8142130001), unique on the site, is decorated with a curvilinear grooved scroll. New forms comprise small bowls and cups with plain internally-thickened rims (F9, PRNs 8037630003); bowls and jars with thickened bead and short everted rims (F30, PRN 8037200003) and large storage jars with sharply inturned necks and short upright or everted rims (R20 PRN 80350001). Also unique on the site is a vessel represented by an everted rim and neck with slight traces of a protrusion from a thickened shoulder at the base of its neck (R12, PRN 8082840009), comparable with vessels ‘à épaulement’ on the continent (Buchez 2014, 145).

Decoration was found on 3.5 per cent of the sherds. Most followed the techniques and styles encountered during CPs 1–2: with finger-tip and other impressions accounting for 34 per cent; narrow linear grooves, 38 per cent; light combing, 21 per cent; and deep linear grooves, 2 per cent. Two new styles of decoration were introduced: the broad curvilinear design (1 example, 2 per cent) and rough combing (1 example, 2 per cent).

One radiocarbon date of 389–204 cal BC was obtained from pit 8642 (at 95 per cent probability; Table 6, UBA-22215).

Ceramic Phase 4 (150–100 BC Late Middle Iron Age)

This phase saw the early appearance of forms which were to become common during the Late Iron Age. Two pits (3905 and 8616) also produced early Thurrock-type potin coins. Even so, most of the recognisable forms from features whose fills are attributed to this phase derive from earlier phases. New forms include globular jars with expanded bead or thickened everted rims (F18, PRN 8084210003); jars with internally thickened everted rims (R8, PRN 8082000003) and a jar with central perforation in its base (B12, PRN 8086100002) similar to a modern flowerpot. Also from this phase are two grog-tempered sherds, one decorated with rough combing, very distinct from the earlier fine combing, and one with a cordon-and-grooved design, both becoming popular in the Late Iron Age.

Fabrics

Fabrics employed both silt grade and sandy matrices and were sub-divided into broad groups on the basis of their inclusions. Deliberately added inclusions comprised predominantly flint, with rare use of grog and oyster shell. The large number of groups reflects combinations of these added and naturally occurring inclusions. All could represent local manufacture, with the silt grade matrices being derived from the loess forming the Head Brickearth, found over the chalk on the site; and the sandy matrices obtained from the Thanet Beds which outcrop just north of the Wantsum Channel, 1–2km to the south, but which would also have been available in periglacial features in the chalk closer to the site. There was no clear chronological distinction in the use of most of these fabrics. Fine sandy matrices were most popular throughout CPs 1–4; but there was a tendency for an overall decrease in the use of silty matrices. Nor was there evidence for particular forms being consistently manufactured from one fabric. Indeed some forms, which occurred in sufficient numbers, (such as bases with protruding calcined flint, proto-saucepan pots and saucepan pots) occurred in fabrics with silty, fine sandy and medium sandy matrices.

Purely shell and grog tempered fabrics however, were associated with a more restricted range of forms and decoration. In particular, fabrics tempered with oyster shell were associated with EIA forms. During CP1, these included a jar and bowl with high carinated shoulder (F70, PRN 8142580001), an onion jar, and a sherd with

light horizontal grooved decoration. During CP2, they were used for vessels decorated with fine horizontal grooves, a jar with linear grooved decoration (S1, PRN 8037210001), as well as jars with impressed decoration beneath the shoulder (R16, PRN 8035900003 with D25b, PRN 8086300003).

Purely grog tempered fabrics appear throughout CPs 1–4, but were always rare. They were used for EIA forms including the small carinated jar (F74, PRN 8121700001) and a bowl with low carinated shoulder. In CP4 grog was associated with sherds decorated with rough combing and a cordon-and-grooved design.

Use, repair and deposition

No direct evidence was obtained for the use of the pottery; but the variations in shape and size, from small cups less than 10mm in diameter, shallow dishes, colanders, bowls, and jars up to 420mm in diameter, allow a variety of uses to be inferred. Several forms had soot adhering to their walls suggesting their possible use in cooking or being stored close to a fire. Occasional examples of the broken edges of sherds being worn smooth imply that some were re-used after breakage, even if not for their original purposes.

At least 29 sherds had been repaired with resin, from fine decorated sherds and coarser forms; from sherds in almost pristine condition to those with severely worn surfaces. The pottery was evidently well used before deposition and even if it was manufactured on the site, there were occasions when repair was favoured over replacement.

Most of the sherds were small and worn and the average wear from pits, ditches and post-holes fell between moderate and moderate-to-severe. However, distinctions in mean sherd weight were noted between those buried in the linear ditches (from 6.9g to 9.9g from the trackways, enclosure, and ring ditches), the pits (from 14.1g to 24.2g average per CP 1–4) and the posthole structures (from 10.9g to 29.9g average per CP 1–4).

The pottery from the postholes was deposited after the removal of the posts. Some structures had single postholes with sherds which were larger and more worn than many of those from the pits. These were almost certainly deliberately buried, and may have held a significance relating to the occupier or function of the dismantled structure.

Clear examples of specific deliberate deposition were rare, but the unique decorated everted rim jar with curvilinear decoration (F91, PRN 8142130001) is likely to have been one. Its broken edges were worn, suggesting that it had been reused in that state; and the surviving portion, which represented about 30 per cent of the original vessel with wall thickness of 4mm–7mm, would have been quite delicate. Survival in this condition reflects either an extremely lucky circumstance, with it landing by chance on soft material, or its careful placing with suitable support. That this unique

decorated pot may have been regarded as 'special' and may have been a prized possession in its own right lends further support to the case for its deliberate deposition. Spreads of pottery which appear to have been deliberately placed in a few fills of the pits and the positioning of two recuts ending immediately above two of them (e.g Pit 14276, recut 14271; and Pit 12646, recut 12643) hint at deliberate burial, retrieval and, possibly, re-burial of artefacts.

Spatial analysis of the finds assemblages

While the use of redistributed midden material as backfill perhaps limits its usefulness, spatial analysis of individual find types was undertaken. This analysis encompassed only those features that lay in the main area of settlement, not those on the eastern side of the buried valley. In some cases distinct trends relating to potential ritual deposition and more general patterning of finds deposition was identified. However, these datasets should be used with caution, as the majority of pits were not fully excavated. The evidence may therefore be skewed, though trends are thought likely to be similar. Also, the problems associated with chronology hinder our understanding of how these patterns change through time, but again general patterns are thought to be largely correct. Essentially, these reflect the domination of datable finds groups by Sub-phase 2 deposits.

That many of the finds described above may have been deliberately placed as special or 'ritual' is widely asserted (Cunliffe 2005, 570–2) with in-depth analysis undertaken on the pits from Danebury (Cunliffe and Poole 1991a, 161–2; 1991b, 482–3). Hill (1995) has disputed the validity of such clear-cut distinctions between 'special' and 'ordinary' deposits. He argues that most material that survives on archaeological sites is 'special' as it is formed through deliberate processes of structured deposition (ibid, 125).

Nevertheless, during the excavation of Plateau 8 it was necessary to distinguish between 'special' and 'ordinary' deposits in the field due to the excavation methodology. In such instances, 'special' deposits were largely defined as those that stood apart from the more obviously midden derived layers. Such cases included the presence of articulated or semi-articulated animal remains, concentrations of particular finds or the clear placement of finds within individual features. When identified, features were subject to full excavation. While this methodology was advantageous given time constraints, it was also somewhat *ad hoc*. As a result, instances that may be defined as 'special' may have remained unexcavated. In other cases, particularly in respect to pottery the identification of what must have been deliberately placed material was not made until the post-excavation phase of work.

Pottery

Probably the most common form of deliberately deposited find was formed by pottery (Fig. 98). Generally this was fragmented, with three pits, S8211 (Plate 120), S12646 and S14276 (Figs. 99–101) identified during the excavation as containing the

remains of fragmented vessels apparently deliberately placed at their bases. During post-excavation analysis an additional placed deposit was identified, the sherds recovered from pit S14219. Less certain examples are represented by sherd groups from pits S8229, S8456, S8921 and S12366. It should be remembered, however, that the processes by which material is incorporated into archaeological contexts is complex (Hill 1995 *passim*; Garrow 2012).

In the case of pit S14276 it was the apparent deliberate placement of the sherds rather than the sherds themselves that was of interest (Plate 121). These were generally quite large and from five vessels. Unfortunately, the majority were body sherds with the only recognizable form a slightly worn jar. A second jar was represented by twenty-seven body sherds weighing approximately 1.3kg. Apart from these, the remaining sherds did not appear to be in anyway unusual.

In comparison, the material recovered from the base of pit S12646 was particularly interesting, being formed by an assemblage of 347 sherds from a magnificent plain tall jar (Plate 122). This form does not appear to be common on English settlement sites, but fine decorated examples are known from the Marne valley in eastern France. The sherds buried here, weighing 3.5kg, were worn and some were crumbly, suggesting it had been underfired. From the same context, a substantial portion of the rim and neck of a large jar was recovered. This was finely made and burnished on both surfaces. Such a form is known from the late Bronze Age and appears to have a long ancestry, with a distribution ranging from Surrey to the Netherlands. These sherds were only moderately worn, and if out of use for several hundred years, they must have lain undisturbed. Also recovered from this feature, though in this case from the upper fill, was a complete carinated bowl that was worn around both its rim and base (Plate 123).

Of these pits, S12646 and S14276 were broadly similar in proportion, on average 1.38m in diameter and 0.27m deep. The third S8211 was smaller but deeper with a diameter of 0.72m and depth of 0.37m. All were circular and very regular in shape, with the size of each indicating that they were not primarily cut as storage features. It was noticeable that each of the three pits were cut equidistant from each other at around 53m apart, forming an approximate triangular shape, though this may be coincidental. Also, each pit contained a small amount of silt beneath the smashed vessel, indicating that they had not been cut and immediately backfilled. If there was an initial function for these features it cannot on present evidence be identified.

Within pit S14219 about a third of an everted jar with curvilinear design was recovered from the sixth of the features seven fills. This vessel was unique from the site and comprised eight sherds, four of which joined to form a significant proportion of the jars rim and shoulder together with a large part of the body. These four sherds originally formed a single larger vessel fragment, with areas of wear on the broken edge suggesting use prior to disposal. It would seem that the sherd was then disposed of on a midden where it may have fragmented further, subsequently being lifted while carefully keeping the joining sherds together prior to redeposition.

The body sherds themselves were thin, with survival reflecting either lucky circumstance or more likely careful placement on suitable support.

The remaining examples may represent unusual deposition within re-used storage pits, but are less certainly deliberate. They are suggested to form deliberate placement because they include complete, or almost complete vessels that are apparently unique on the site.

Perhaps of most interest was pit S12366 that contained two fills. The lower contained two joining sherds from a miniature cup or flask with a red-coated exterior and worn black interior. Accompanying this was a second miniature vessel with plain flaring walls that had been buried complete, and six sherds from a carinated jar. In addition to these vessels, seventy-seven other sherds and fifty-six scraps were also recovered but these did not appear to be unusual. A second miniature cup comprising two joining sherds (70 per cent of the rim and 75 per cent of the base) was recovered from pit S8229.

Recovered from the centre of the base of pit S8456 was the base and most of the body from a third miniature cup. Associated with this were two sherds from a second base. No other sherds were recovered from this fill and their position together, in a slight hollow at the base of the pit is clearly suggestive of deliberate placement. Finally, an almost complete platter and a carinated jar was recovered from pit S8921.

Animal remains

In regard to the Thanet Earth pits, when the distribution of the main three domesticate animal species is examined a number of interesting patterns are clear. The most obvious is the spread of sheep and sheep/goat across virtually the entire area of the site (Fig. 102). Some 112 post-holes and pits contained sheep/goat remains, with a significant quantity also recovered from Ring-ditch 3 and small amounts from various ditch sections.

Notable within the sheep/goat assemblage was pit S3956, some 2.24m diameter, by 1.94m deep dated to Sub-phase 3. Within this feature was a dump of disarticulated sheep bone that included elements from most areas of the body (Plate 124). The collection of bones was very discrete and located close to the pit edge. They were positioned in along a steep gradient perhaps suggesting that they were deposited in some sort of container that has since perished. Among the bones were horn cores belonging to male sheep that further suggested significant deposition.

The widespread distribution of sheep and sheep/goat is perhaps unsurprising given that they form the dominant species within the wider Iron Age animal bone assemblage. It is only once comparisons are made with other animal species recovered from Plateau 8 that more unusual disposal patterns begin to emerge.

Most similar to the distribution of sheep/goat in terms of overall distribution, if not

in quantity of bone or the number of features in which it was recovered, is pig (Fig. 103). In this case, bone is present in each of the larger clusters, with the suggestion of a slight concentration in clusters 5 and 6.

The most clearly defined patterning was provided by the distribution of cattle bone (Fig. 104). This was located only on the western side of the site, largely within Feature clusters 4, 6 and 8 and in Ring-ditch 3 that lay along the line of, and truncated, Track-way 13. Noticeable here, was the high incidence of cranial and foot bones, suggesting removal during the disarticulation stage of butchery. Also of note was the lower jaw of a cow recovered from pit S3674 (Plate 125), with the bone broken into two halves and inverted, and a complete skull retrieved from pit S14396 (Plate 126).

Similar zoning is visible when the distribution of horse bone is plotted (Fig. 105), with most, though not all focussed in the southern part of the site in Feature cluster 3. Eleven out of the twenty-three features that contained horse bone were recovered from here, forming a distinct concentration. The remaining bone existed as a scatter across the site, with no articulated or semi-articulated remains recovered. In several cases (such as in pit S8833) two or three separate elements of the carcass were recovered, perhaps suggestive of deliberate placement.

In the case of dog (Fig. 106), it is clear that disarticulated remains, recovered from twenty individual features (not including ring-ditch 3), share a similarly even distribution pattern to sheep/goat and pig. Such remains were recovered from each of the feature clusters with exception of Feature cluster 7. The distribution of the articulated dog remains is more interesting. Recovered from four pits (S8670, S8799 (Plate 127), S8833 and S3767 (Plate 128), three of these were contained within features that cut through Trackway 10. The position of the remaining feature, S8670, lies only 6.9m to the south-west of pit S8833, immediately adjacent to the projected line of ditch S12447 that formed part of the drove-way. Both of these pits were of Sub-phase 2, with S3767 and S8799 belonging to Sub-phase 3.

Wild resources

The remains of wild animals and plants were noted in many features within the settlement, suggesting that these resources remained a minor part of the diet (Fig. 107). Even if considered as a single assemblage, the quantity of wild animal remains was small. Three species were identified, red deer, roe deer and hare, with bone recovered from only eight features.

Hare bone was located in the largest number of features, most notably Sub-circular enclosure 3, but also storage pits S3596, S3602 (located in Feature cluster 3), S12873 (located to the north-west of Sub-circular enclosure 3) and S14496 (located in Feature cluster 7). Hare bone was also recovered from Sub-phase 3 shallow pit S3767, in

association with the articulated dog skeleton. All of the hare bone, with the exception of that recovered from S14496 is considered to be of an early Iron Age (Sub-phase 1) date and may therefore have been preferred as a food source in that period.

The small quantity of red deer bone was recorded in two storage pits, S8293 and S14496 (lying in Feature clusters 2 and 7) and shallow pit S8349, that lay slightly to the north of Feature cluster 5. Roe deer was recorded in only storage pit S8361.

Native foods gathered from hedgerows and woody areas included rose hips, sloe, hazelnuts and blackberry. As with the remains of wild animals, none of these remains were numerous, with no species recovered from more than six environmental samples. Of note, but not unexpected, was that the majority of remains were recovered from pits S8642 and S8722 that contained largely quantities of mixed domestic refuse.

Quernstones

Also suggestive of possible household specialisation, the majority of the quernstones (most of which were fragmented) lay in the southern part of the site, with a distinct cluster noted in Feature cluster 3 (Fig. 85). Also notable was the recovery of quernstones from three of the four pits that formed Feature cluster 10. However, while the overall distribution is similar, the majority of quern fragments were contained in pit S8762 from Feature cluster 10.

Loom-weights and spindle whorls

The presence of textile industry was suggested by a significant number of loom weights and a smaller quantity of spindle whorls (Fig. 86). Of clear interest here was pit S12328 that contained four fragmented loom-weights (Fig. 84). The location of this feature stood apart from the others, being located some 35m from the southern limit of the settlement and 15.5m to the west of Structure 14. Also notable was pit S8801 that contained a spindle whorl and was one of only seven features on the site found to contain flax seeds. Whether these two sets of remains, both of which relate to the production of textiles, was coincidence is not clear.

Slag

Fuel ash slag of uncertain functional association was located in a number of features scattered across the site, albeit generally in small quantities (Figs. 110–111). Only in the case of pit S8885 were any clear concentrations noted, with the remainder of the assemblage recovered as small quantities of material recovered largely from environmental samples.

Human bone within pits

Human bone was recovered from only a small number of features (Fig. 108), with

articulated burials identified in pits S8934 and S8833.

Pit S8934 (Fig. 109; Plate 129) was located slightly to the north of ditch G8078, close to burials S8912 and S8896 that lay slightly to the east and cut through the ditch. The pit was sub-circular and measured 1.48m in diameter and 0.55m deep with vertical sides and a flat base. The primary fill of brown silt clay was devoid of artefactual material, 0.26m deep filling approximately half of the pit. Lying above was the badly degraded skeleton (SK 8.4) of a child aged 9–12 years. The burial lay in the western half of the pit, positioned close to the base in a crouched position on the right side, with the head to the west facing south. Although the skeleton had clearly been deliberately interred in the pit, no grave goods or other elements were associated with it. The remaining portion of the pit had been backfilled with a loose fill of brown silt clay rich in finds but with few inclusions. These included pottery sherds, animal bone, worked flint, the remains of a fired clay triangular loomweight (SF 8.62) and fragments of painted pottery dated to 450–350/300 BC with the overall assemblage typical of that found in other pits on Plateau 8.

Pit S8833 (Plates 130–131) cut through one of the ditches forming Trackway 10. It was 2.2m in diameter and 1.39m deep with vertical sides and a flat base. In the lower portion of the pit were six heterogeneous fills alternating between chalky silt clays or carbon rich silts and brown clay silts. In general these contained pottery, burnt flint and domesticated animal bone (including the only incidence of juvenile pig from the period and the maxilla, radius and astragalus from a horse) with rare instances of undiagnostic non-local stone. Environmental sampling of these lower deposits recovered grain, chaff, weed seeds and small mammal bones. Above these at a height of 0.79m from the base was the skeleton of a juvenile aged 13–16 years (SK 8.6). This lay supine in a flexed position, aligned north-east to south-west. The burial was inclined towards its left side with the head to the north facing north-west. A range of finds were present in close approximation to the skeleton and included pottery, and daub. The pottery was suggestive of a Sub-phase 2 date, an assumption backed up by the radiocarbon dating of the skeleton. This provided a date of 360–196 cal BC (at 95 per cent probability; Table 6, UBA-12623). Whether these were intentionally deposited is difficult to determine given their similarity to refuse deposits recorded in other pits across the site. Sealing the skeleton and filling the remaining portion of the pit was a deposit of brown clay containing animal bone and pottery fragments. This contrasts with the lower fills which were clearly differentiated and perhaps implies that the initial backfills were incidental to the subsequent interment.

Disarticulated human bone was recovered from only five features, pits S3724, S9722, S12821 and S14488 and post-hole S8048. Only flakes of bone were retrieved from pit S12821 (SK 8.57), with femurs from pits S3724 (SK 8.50) and S14488 (SK 8.54), lower jawbone from pit S8722 (SK 8.33) and rib fragments from post-hole S8048 (SK 8.56). In each case the human bone was found in mixed midden deposits, with no obvious spatial patterning noted.

Discussion

Truncation and impact

Prior to any meaningful discussion of the Iron Age evidence some consideration must be given to the level of horizontal plough truncation across much of Plateau 8. This was most apparent in the area to the west and east of the buried valley. To the west, the ground in the area of the Plateau 8 settlement dropped from approximately 24m OD on the south-west side of the settlement to around 21m OD at the north-east limits, reflecting the position of an area of low-lying marshland to the north of the site. The ground level on the eastern periphery of the settlement began to drop toward the buried valley. The level of truncation across this area was variable, and probably at its worst in the higher south-western part of the site. It was only on the eastern periphery of the settlement, in the areas approaching the edge of the buried valley, that a greater build-up of soils may have afforded the buried archaeology a greater degree of protection.

The level of truncation can be broadly surmised by the condition of a group of Roman cremation burials, in particular burial S3614. In this case almost the entirety of the burial had been removed, with only the bases of the accompanying vessels remaining *in situ*. When complete the burials are likely to have been 0.2–0.3m high and are assumed to have been sealed by at least 0.2m of grave backfill. In any event, assuming the contemporary topsoil was relatively thin, it suggests a minimum level of *c* 0.4m.

This notable level of truncation on the south-west part of the plateau is likely to have had an impact on this part of the site where up to 0.4–0.5m of the buried archaeology had been lost. Such a level of truncation may also explain the shallow depth and resulting poor preservation of burials S8896 and S8912 and the fragmentary remains of round-house gullies.

A similar situation was recorded on the eastern side of the valley where the upper ground level dropped from around 23m in the vicinity of the Iron Age cemetery. Toward the north-west of the Research Centre site this had dropped approximately 21m. It was noticeable in this area that the burials within the cemetery were shallow and very poorly preserved. In comparison the post-holes forming structures 20 and 21 were comparatively well preserved.

The settlement

As explained above, demonstrating the chronological development of the Plateau 8 settlement is difficult due to the limitations of precise dating. Most likely, is that the site represents occupation by a small group of households, the number of which remained relatively constant until occupation shifted eastwards by the beginning of the late Iron Age. It is possible, however, that had it been viable to undertake significant more radiocarbon dates that some further evidence for the chronological

development of the settlement may have been identifiable. For example, the numerous radiocarbon dates undertaken at White Horse Stone indicated that settlement developed initially across the southern part of the site (Champion 2011, 197). Activity to the north came somewhat later, and was perhaps confined to a period of no more than a century.

Location and boundaries

At first glance the position of the settlement on what appears to be an exposed and windswept north-eastern facing slope does not seem promising. Such a view is misleading, with Plateau 8 slightly more sheltered than several other areas of the Thanet Earth site. This was noted during the archaeological fieldwork, when on several occasions work could continue on Plateau 8, while other parts of the site, not least Plateau 2, were sufficiently exposed so as to become unworkable.

More generally, the site would seem ideal, being relatively flat (though the natural slope may have been slightly more pronounced during the Iron Age) and close to the buried valley. Previous activity across the area was slight, with the only obvious features that survived in any meaningful form likely to be Barrow 6 and the ditches that form late Bronze Age Field 15. Trackway 10, of probable early to middle Bronze Age date may also have remained a visible landscape feature, but probably survived only as a slight linear depression. This bears some similarity to settlement in East Kent Access Zone 6, where activity pre-dating the Iron Age was similarly light (Andrews *et al* 2015a, 86).

While the placing of the settlement in Field 15 is suggestive of enclosure, this view is misleading, particularly as the northern part of the site was not investigated. Instead while the early field boundaries provided a useful early focus for occupation, the settlement should be viewed as unenclosed. Where Iron Age sites have been identified as enclosed, as at North Foreland, such enclosures have been clear, being represented by moderately sized ditches.

At Thanet Earth it is apparent that settlement did not respect these early boundaries for long, with a number of post-hole structures (5, 10, 11, 12 15 and 31) positioned outside of this area. Features were also cut through the ditches, as was evidenced by Feature cluster 10 and burial group G8309 with both sets of remains perhaps representative of closure rites. Pottery recovered from the pits and the vessel accompanying burial S8896 suggest that this expansion probably occurred no later than 450 BC.

Layout

On Plateau 8, it is the spatial distribution of the pits that forms the primary basis for understanding the layout of the Iron Age settlement. Largely this is dictated by the chronological development of the feature clusters that dominate the central part of the site (Figs. 121–123). Unfortunately, the difficulties of dating again creates

problems, particularly in the smaller groups. It seems likely that most have their origin in the period 550–300 BC, though some doubt must remain. In particular, it remains possible that clusters 1, 6, 8 and 11 may have a slightly later origin. Whether each continued to develop through into Sub-phase 3 seems probable, though is only readily apparent in clusters 1, 3, 4 and 6. In these cases, each cluster contained one or more pits of (relatively) secure middle Iron Age date.

An exception is Feature cluster 10 that cuts through ditch G8075, and with burial group G8309 perhaps indicates a change in definition of this boundary. The linear distribution of this group, whilst clearly influenced by the ditches, bears some similarity to pit distributions on other sites in Britain and Europe (see Figs. 124–125 for comparative sites discussed in the following text). These include Gondreville and Soupir in north-eastern France (Deffresigne *et al* 2002, 83, fig. 3; Gransar 2002), Danebury (Cunliffe 1995a, 29–35) and Didcot, Oxfordshire (Oxford Archaeology 2013, 9). In the latter case alignments were established on the basis of similarities in fill, profile, dimensions etc., and are generally assumed, as at Thanet Earth to relate to boundaries.

In comparison to the somewhat limited evidence for patterning that is visible at Thanet Earth, sophisticated interpretations of spatial patterning has been achieved at Danebury. Here, a bipartite division of the hillfort was observed with in earlier phases, pits clustered in the southern half of the fort and to the left of the main thoroughfare from the south-western entrance (Cunliffe and Poole 1991a, 234–236, figs. 4.152, 44.153). In later phases, when this entrance was blocked the pits shifted into the northern half of the hillfort, again to the left upon entry.

At Gondreville Zone 1, pits occupied only one of a number of discreet areas of activity spread over an area of around a kilometre (Deffresigne *et al* 2002, 84, figs. 2, 3 and 27). These included a series of rectangular structures, an area yielding features associated with grain drying and areas dense with granary structures. Although little datable material was recovered from the pits, the suggestion was made for an initial radiating pattern that gradually shifted to the south-west and becoming less nucleated. Unlike at Danebury where pits occasionally intercut, those at Gondreville, as at Thanet Earth, largely respected one another (*ibid*, 99). Presumably this avoided any risk of contamination created by the collapse of the looser backfills of earlier pits into newly cut features, with some suggestion that approximately 10 per cent were backfilled with material from newly dug pits.

The paucity of domestic structures

At Thanet Earth there is a paucity of clearly identifiable domestic structures when compared to other sites of the period such as Gravelly Guy, Mucking, Great Western Park, Didcot or many of the sites within the coastal regions of northern France (Lambrick 2009, 133–142; Evans *et al* 2016, 240–270; Oxford Archaeology 2015; Haselgrove 2006, 406). While previously a lack of evidence for buildings across Kent was apparent (Champion 2007c, 289) this absence has been addressed to some extent

in recent years, particularly in the eastern part of the county (see Bennett *et al* 2004, 39–41, 289–290; Barrett 2006, 19, CAT 2013, 9–10; Mackinder 2014, 13–22) and in the west at White Horse Stone (Champion 2011, 211–212). Nevertheless, it is apparent that the scant round-house remains at Plateau 8 site is quite usual for the period in Kent, where a combination of both shallow drip-gullies and ground-fast elements have been particularly vulnerable to erosion by ploughing. In contrast in other areas of the country, such as the East Midlands, deeper ring-gullies are apparent, leading to ease of round-house identification (e.g. Hughes and Woodward 2015; Masefield *et al* 2015). These include *c* 240 ring-gullies for structures at the ‘aggregated’ settlements of Daventry International Rail Freight Terminal (DIRFT), where deeper ring-gullies were due, at least in part, to drainage requirements (*ibid*).

It seems certain, given the quantity of refuse recorded across the settlement, that the pits and post-hole structures on Plateau 8 were associated with adjacent domestic occupation. However, only tentative evidence for this was identified in the form of possible Round-houses 1 and 2. If these structures are not simply illusory, all trace of additional buildings has been removed by later truncation. Similar site formation processes, whereby only the scantest traces of eaves-gully remain, are visible across many sites in agricultural areas of England. This has been well illustrated by numerous Iron Age settlements including those excavated along the route of the A63 at Melton, East Yorkshire and at Great Western Park, Didcot, where round-houses were often represented by intermittent gullies with much of the feature removed by later ploughing (Fenton-Thomas 2011, 94; fig. 65; Oxford Archaeology 2015).

Whether the Thanet Earth examples do indeed represent true round-houses remains debatable, due to the level of truncation. At 12m the diameter of Round-house 1, would be fairly typical for a structure of this period, comparable to examples identified at Island Road, Hersden (Barrett 2006, 19) and Kemsley near Sittingbourne (Mackinder 2014, 37) or to slightly later in the period at Brisley Farm, Ashford (Stevenson 2013, 63). In the case of Round-house 1 it was clearly abandoned during the lifetime of the settlement use as it was truncated by later pits. The diameter of Round-house 2 would seem relatively small, though the nature of the ring-ditch was indicative of a drip-gully. A note of caution in respect to this feature is that it also bore some similarity to sub-circular enclosure 1. Despite this, roundhouses of a similarly small diameter are not unknown, being identified elsewhere, with a ring-gully of approximately 8.5m diameter recorded at Winklebury, Hampshire and similarly sized stake built examples excavated at both Frilford, Oxfordshire and Mucking, Essex (Bradford and Goodchild 1939; Evans *et al* 2016, 242–270; Smith 1977). At DIRFT circular structures ranged from *c* 4m to *c* 15m in size, but it was considered that most at the smaller end of the range were probably ancillary structures such as store houses (Masefield *et al* 2015, 285).

The feature clusters and absence of domestic structures allow three broad interpretations of settlement layout, each dependent on the function of blanker areas between the clusters.

First is that the feature clusters are incidental creations and that any evidence for spatial clustering within the settlement is illusory. Based on the evidence from elsewhere and the tentative chronology of each cluster this does not seem likely.

More likely, is that the larger clusters (1–6) relate to individual households, as indicated at Gravelly Guy and to some extent Gondreville (Lambrick and Allen 2004, 153; Deffresigne *et al* 2002, 91). If this is the case, the chronology of the clusters, in as much as it can be defined, suggests that the Plateau 8 settlement encompassed no more than six individual households. Population estimates have been tentatively attempted at DIRFT, Northamptonshire, where it was suggested that approximately half the round-structures were residences and, based on ethnographic parallels, the estimate of 1 person per 10m² of domestic floor space was applied (Hughes and Woodward 2015; Masefield *et al* 2015, 293–295). Although similar estimates are not possible at Plateau 8, in purely theoretical terms if there were six residences at any given time and they were of *c* 10m diameter (the 12m external drip gully for round-house might suggest a building within of approximately 10m diameter with an area of 78.54m²) it is possible that a population of around 47 people may be represented (i.e. 6 x 7.85). Such a relatively small population density would seem to conform to that suggested for the open sites of the Paris Basin (Haselgrove 2007, 409–10). Here, individual households are characterised by varying concentrations of features that can be situated anywhere between twenty and several hundred metres apart. At Thanet Earth, the smaller feature clusters (7–10) perhaps form more isolated bursts of activity within this general framework.

If this is accepted, the problem created by the absence of domestic settlement remains. Unfortunately, due to the tenuous nature of the potential round-houses at Thanet Earth they cannot be easily related to either the pit clusters or post-hole structures. Also, the pit clusters themselves are more loosely defined than on many of the sites referenced above, with no clearly defined boundaries separating one from the other.

A final suggestion in respect to settlement layout, is that while the feature clusters again relate to individual households, domestic activity lay in a separate area of the settlement. Such division with Iron Age settlement is not unprecedented, with domestic activity suggested to have been separated from an area defined as for grain storage at North Foreland (Moody 2008, 128). Here, part of a sub-rectangular enclosure containing at least six four-post structures was found alongside a pit complex, a density of post-holes, and scatters of other small pits and ditches. Similar spatial divisions have been noted on the continental mainland, particularly in northern and central France, such as at Gondreville (Deffresigne *et al* 2002, 84). At both sites, the separation of pits and posted structures was very pronounced, with no evidence for the overlapping that is visible at Thanet Earth. Rectilinear enclosures were attributed to the middle Iron Age at South Dumpton, containing clusters of post-holes that may have formed structures; while forty-six pits were found both within and beyond their bounds (Perkins 1999, fig. 5.14).

A similar divide is visible at Turing College, Canterbury, where despite plentiful evidence for industrial activity, no trace of domestic settlement was identified (Lane 2014, 18). Occupation instead lay 120m to the west at St Edmund's School on the opposing side of a stream, where a substantial round-house was identified within a large enclosure (Lane 2012, 7). At Thanet Earth the division of settlement into zones of activity may help to explain the general absence of crop-processing remains from the Plateau 8 settlement. While considered likely, this need not necessarily have been the case with the round-houses at Didcot and Gravelly Guy usually positioned adjacent to pit clusters (Oxford Archaeology 2015; Lambrick and Allen 2004)

Perhaps the most complex pattern, is known from Danebury where a bipartite division in the use of the hillfort was evident (Cunliffe and Poole 1991a, fig. 4.151, fig. 4.153). In the early phases pits were most commonly found to the south and east in the hillfort. However, upon the closure of the south-west entrance, this situation was reversed with pits most commonly in the northwest portion with the implication that the use of space reflected a preference for these features to be found to the left upon entry to the hillfort.

If such division occurred at Thanet Earth, domestic occupation must have lain beyond the northern limit of the site. No structures were identified to the south and west despite intensive investigation, and to the east the buried valley may have remained somewhat damp and unsuitable for settlement. Nevertheless, on balance, at Thanet Earth it seems most likely that domestic buildings survived poorly and that the pit clusters do indeed represent the broad location of households.

The pits

The use of pits as storage silos is common throughout the early and middle Iron Age, known in a geographical range that stretches from northern England to southern France, and as far east as Poland, Slovakia and Hungary (see, for example, Sørensen and Rebay-Salisbury 2008, 53). However, as with many other aspects of this period, the incidence of this is characterised by a diversity of trends, often individual to particular sites or regions. Aside from these innate differences, neither excavation methodology nor subsequent classification has been standardised, with different methods applied to their analysis. Perhaps the only observation that does hold across the majority of British sites that contain storage pits is a discreet profusion in the early and middle Iron Age with numbers trailing away toward the latter part of the period (Oxford Archaeology 2015; Lambrick and Allen 2004). This is most clearly evidenced at Gravelly Guy and Didcot. Nor is this situation unique to the United Kingdom, with a similar trend observable across the Channel (Gransar 2000, 285). That common forces underlay the use of storage pits might also be attested by a gradual progression towards greater numbers and larger volumes of pits at many sites (Cunliffe and Poole 1991a, 161). In any case, that their use coincides with key transitional moments in the Iron Age, the period between the mid-early and early-late, is surely significant.

In the absence of a comprehensive synthesis it is difficult to appreciate the precise distribution of these features in the Iron Age. In the last British overview, Gent (1983) listed some 132 sites in Britain with pits, although this work is now outdated and, in any case, is primarily concerned with discussing four-post granary structures. While isolated or small groups of pits are not uncommon on Iron Age sites, the density of pitting seen on sites such as Thanet Earth is relatively rare, particularly in a Kentish context. Danebury in particular stands out, being estimated to contain approximately 4500 pits. No non-defensive settlement site can attest such a frequency of pits, with only Great Western Park, Didcot, Gravelly Guy, Little Woodbury, Coldharbour Farm, Aylesbury, Barton Seagrave, Northamptonshire and Gussage All Saints possessing anywhere near the number that have been identified at Danebury (Oxford Archaeology 2013, 9; Lambrick and Allen 2004, 16; Bersu 1940, 48–64; Parkhouse and Bonner 1997; Simmonds and Walker 2014; Jeffries 1979, 10). Aside from these examples, pits are far more likely to occur in numbers ranging between forty and two hundred and are best known from the hillforts and enclosures of central-southern England.

Function

Seed grain storage can be difficult to prove archaeobotanically unless exceptionally well-preserved *in situ* deposits are found, as at Danebury, Hampshire (Jones 1984). At this site a comparatively large number of pits contained concentrations of processed grain close to their base (Cunliffe 1984a, 137; Cunliffe and Poole 1991b, 440). At Gravelly Guy, the definitive use of the pits as seed corn storage silos was difficult to demonstrate, as only forty-six were environmentally sampled (Lambrick and Allen 2004, 431). Of this total only four contained useful assemblages of plant remains, with 75 per cent containing grain including in one case a deposit of processed barley situated near the base of the pit. Similar results were produced during the excavation of thirteen pits at Bishopstone, East Sussex (Bell 1977, 68). Such deposits are rare in Kent, but one such example was identified in a large pit excavated at North Foreland (Moody 2008, 123). However, even in these cases it cannot be absolutely proven that such deposits relate to primary storage, as in many cases they may relate to later deposition of domestic rubbish and/or ritual activity. For example, the presence of carbonised wood in the Gravelly Guy example was suggested to indicate that the grain had been burnt in a container of some kind prior to deposition (Lambrick and Allen 2004, 431).

No such *in situ* remains were recovered from Thanet Earth but this should not be seen as surprising given that any remnant unburnt grain at the base of pits will not be preserved. A dominant (though not necessarily exclusively so) seed grain storage function is, however, assumed based on the comparative data provided by the above sites.

The significance of processed and burnt grain deposits in the bases of pits derives from the suggestion by Reynolds (1974, 128) that storage pits may have been burnt out periodically to decontaminate them between periods of use. The difficulty,

however, is that this does not seem to have often occurred in practice within the British record. In addition the provenance of burnt grain deposits in pit fills remains unclear, with alternative theories also put forward (Cunliffe 2005, 593–594; Hill 1995, 110; see below). In most cases the grain within pit fills is simply refuse derived from middens and its occurrence, particularly given the absence of scorching from the sides of the majority of features involved, is arbitrary. While rare, examples of such activity do exist, notably at Tagnon, Ardennes where the scorched sides of a pit clearly indicated that it had contained a fire (Billoin *et al* 2002).

With little direct evidence for primary deposits containing grain, interpretation of pits as storage silos depends largely on ethnographic parallels (Gronenborn 1997; 2010; Wilson 1987), historical references (Hopper and Ash 1934; Mattingley 1948) and experimental evidence (Reynolds 1974; Marshall 2011).

It is possible that the open-shaped pits that dominate on Thanet Earth, may originally have been of the conical form demonstrated at Danebury and on the continent (Cunliffe 2005, 412, fig. 16.2). If so, the shape visible at Thanet Earth may be the result of subsequent erosion, with the nature of the upper fills suggesting that the pits may not have been completely backfilled with midden material.

Experimental work has suggested such pits, with narrower apertures would make for the most efficient grain storage (Reynolds 1974, 124–130) although cylindrical forms were also viable. If the narrow entrances were sealed and the pit possessed an adequate moisture content, the continued respiration of the grains would allow a sufficient build-up of carbon dioxide to inhibit the growth of micro-organisms and deter pests, whilst enhancing partial germination and thus improving crop success upon sowing (Reynolds 1974, 124–130). This interpretation is supported by the micro-excavation of deliberately deposited grained deposits at Danebury (Cunliffe 1984b, 493). Germination rates of grain were found to be significantly lower the further the grains were from the pit wall. On Plateau 8 most pits were cut into chalk bedrock that would have tended to facilitate this process, and as long as water flow was restricted the features would have remained structurally and atmospherically secure.

Recently, this consensus has been challenged by Marshall (2011 *passim*) following experimental research using sealed and unsealed pits, and granary-type storage. He argues that moisture content, as opposed to aerobic inhibition, is the most important variable in grain storage and that unsealed, covered storage forms an effective means of preservation. According to his results granary-type storage was best, yielding the least spoilt grain and the highest germination rate. Covered, but unsealed pits ranked second followed by sealed pits that yielded the worst results with the greatest quantity of spoilt grain. Given the predominance of shallow, open-shaped pits on Plateau 8, the suggestion that the pits were unsealed, seems plausible though direct evidence either way is lacking. The Thanet Earth dataset does not illuminate either argument greatly, as while the undercut pits tended to be deeper and bigger than their open-shaped counterparts, the latter were more numerous. Despite the above suggestion the common assumption has been that consumption

grain was stored above ground whilst seed grain for the next harvest was (in the Iron Age at least) stored in pits. This would explain the very clear finding that the aforementioned large pit cluster sites also include large numbers of adjacent four and six-post structures (e.g. Lambrick and Allen 2004; Oxford Archaeology 2015).

The occasional presence of alcoves in several of the larger features is also not unknown (Marshall 2011, 106). While rare, being identified in only four of the 176 silo type pits on Plateau 8, that nearly all were half-sectioned raises the possibility that further examples remained unidentified. The alcoves ranged from the small niches in the side S14496 and the base of S8833 to a much larger alcove, 1.3m long and up to 0.95m deep, in the base of S8722. In part this may relate to the size of the latter feature, yet no such alcove was found in pit S8670, of comparable dimensions. Too small for the effective preservation of grain, it seems likely that the niches were cut for some other purpose, maybe a secondary function following the cessation of grain storage. For example, the depth and size of the alcove in pit S8722 perhaps indicates use as a cold store. This may also explain the presence of niches in the base of S3596 and S8642, two of the deepest features on the site. An alternate view is that the alcoves functioned as collection points for moisture, insuring against particularly inclement conditions (Reynolds 1974, 128). In this model the grain that lies above the level of the water remains well preserved.

In addition to their use as storage features, the excavation of the pits would have created a large quantity of spoil. While it is not possible to estimate respective quantities of clay, chalk and flint, these materials would have had a range of uses. Such activities potentially include ceramic manufacture, metalworking and the construction or maintenance of buildings, with chalk clunch, commonly used as a building material in the Romano-British and medieval periods. The chalk may also have formed a useful source of fertilizer and an excellent source of marl. Superficial deposits that sealed the chalk on Plateau 8 were somewhat clayey, and prior to truncation may have been thicker and more extensive. Using upcast chalk as marl may, therefore have been a useful way of disposing of unwanted material while also improving the quality of the surrounding soils (Mathew 1993, 102).

Why was there a storage emphasis?

It seems certain then that a large proportion of Iron Age pits at Thanet Earth and elsewhere relate to the storage of seed grain and other goods. What is less clear is why such features appear in far greater numbers at the beginning of the Iron Age. In accordance with his theory of propitiation, Cunliffe (2005, 593) correlates the sudden appearance and disappearance of the pits with a set of cultural traditions emphasising chthonic ritual. In this view storage of seed grain in the ground (the chthonic realm) was a direct reference to the protection offered it by deities of the underworld. Previous existence of similar beliefs is supported with reference to a peak in votive deposits of metal in watery places and as hoards in the ground between 1000–800 BC, with bronze subsequently being seen as ‘redundant’ (Needham 2007, 53). From the early Iron Age, this belief system seems to have been

replaced by one perhaps involving excarnation and the placement of proprietary offerings in pits (*ibid*). Further developments in ritual activity from the late middle Iron Age may perhaps then explain why the frequency of storage pits such as those on Plateau 8, decreases from around 150 BC.

Van de Veen (2007, 120), meanwhile, has argued that an increasingly insular power structure, less focused on control of precious metals and more on control of grain surpluses, can explain the preponderance of storage pits in the middle Iron Age. This second view is supported by Gransar (2000, 418) in respect to the pits of Aisne valley. The possibility that the stored grain was for trade, rather than (or in addition to) seed, is further supported by the suggestion that it would not necessarily have been spring-sown (Van der Veen 2007, 207; Hillman 1981). This would remove the necessity for long term storage of seed grain over winter. As long distance trade increased in the late Iron Age, modes of political power returned to something approaching the earlier system, premised on control of exotic goods (Cunliffe 2005, 593).

Neither model is entirely supported by climatic evidence, which suggests a gradual deterioration with wetter, colder and more disturbed weather patterns developing from 800–700 BC onwards (Brun and Ruby 2008, 55). These would be the least suitable conditions for pit storage, yet the respective ratio of granary-to-pit storage would seem to indicate the reverse. This would seem to indicate that while climatic variables probably affected the Iron Age economy, they were no so extreme as to override social, cultural and economic norms.

Perhaps more relevant, are the issues of raiding and diversification of storage. In ethnographic research, both of these reasons were cited by the Maori in connection with the use of their own storage silos, known as Rua Kopiha (Best 1925, 227). Such considerations do not seem implausible in the Iron Age, characterised as it was by increased territorial and climatic uncertainty. Whatever the cause, it is clear that the occurrence of storage silos reflects a fundamental aspect of the socio-economic configuration of the Iron Age and warrants further attention.

Research from the Danebury Environs Project and the south of England more generally suggests a trend towards nucleation of sites, with the concentration of activity at a lesser number of larger defensive sites, such as Danebury (Payne *et al* 2006, 151; Cunliffe 2005, 253–266). In France, pits are common across a wide range of sites, but the emergence of ‘pit cluster’ sites apparently isolated from nearby settlement activity has led to speculation such areas were used specifically for the storage of surplus grain (Haselgrove 2007, 417–418). Most likely is that these sites held grain communally by a number of surrounding communities, explaining the general absence of associated settlement (Gransar 2002). As discussed the Plateau 8 site was clearly not of this type, due to the huge quantities of domestic finds recovered from the area. In this sense, it may be more pertinent to regard the unenclosed sites on the alluvial terraces of the Aisne and Vesle valleys, as expressive factors that were either not present, or reflected differently across the south of

England. Nevertheless, the themes of centralisation and specialisation that have characterised the interpretations of these sites remain consistent with those used to explain similar sites in the United Kingdom.

Spatial distribution

As discussed above, the pits at Thanet Earth generally, though by no means absolutely, lay in distinct clusters. The spatial distribution of pits within each cluster seems largely random, with only sixteen instances where they obviously intercut. Confined to Feature clusters 1, 2 and 3, the majority of these lay in three distinct groups. The site in this respect bears some similarity to French examples such as Gondreville (Deffressigne *et al* 2002). Whether this small group of pits served a distinct function is unclear, though at Danebury the cutting of silos through the backfills of earlier features seem to have caused no problems in relation to storage. Similar intercutting was present at English pit-cluster sites such as Great Western Park, Didcot (Oxford Archaeology 2015). Given that undercut pits were most common at Danebury and Maiden Castle (Rawlings 1991, 89–90), whereas open-shaped pits were most common at Thanet, it is interesting to question whether such variations indicate specific kinds of storage. Of course, it is equally likely that pressures of space at these respective sites may have contributed to such differences. Nevertheless, twenty-one instances of intercutting pits were observed at Soupir out of a corpus of only 107 (Gransar 2000, 74). Indeed, the pits there were quite densely clustered despite the apparent absence of any surrounding activity. In contrast, pits at Gondreville rarely intercut despite the relatively similar conditions of these sites (Deffressigne *et al* 2002, 83, fig. 3).

A comparison of size, shape and form

A brief review of Iron Age pits reveals one dominant trend: regional variation. Undercut or beehive-shaped pits were the predominant form at Danebury and Maiden Castle where 60 per cent were described as ‘overhanging’ (Cunliffe and Poole 1991a, 160; Sharples 1991, 89–90), while barrel-shapes were most common at Gussage All-Saints (Jeffries 1979, 10). Similarly, at Gondreville, *troconique* (truncated) and *bouteille* (bottle-shaped) forms made up the majority, 30 per cent and 39 per cent respectively, with only 20 per cent categorised as *cyindrique* (cylindrical) (Deffressigne *et al* 2002, 94–95). Undercut forms were also typical at Soupir, where 52 per cent of pits were *troconique* in shape. Despite this apparent similarity with the sites of central-south England, it is worth noting that many pits in this region of central-north France exhibit a pronounced ‘chimney’ (Gransar 2002, 284), similar to that known from earlier periods in prehistory and ethnographic examples.

Meanwhile, at other sites in England, such as Battlesbury, Didcot and Dolland’s Moor, storage pits were exclusively cylindrical, accompanied by some notable variations of shape in plan. A similar pattern can be observed in those pits excavated at sites from the HS1 excavations, where they were primarily cylindrical with only one example, from West of Northumberland Bottom, undercut (Champion 2011,

207). Finally, pit forms were more evenly distributed at Gravelly Guy, with cylindrical pits accounting for 39 per cent of the corpus, undercut pits 21 per cent and bowl-shaped pits 22 per cent (Lambrick 2004, 109). In comparison, the majority of pits from Plateau 8 were open-shaped (46 per cent), with cylindrical pits making-up 23 per cent and undercut pits only 14 per cent. Thanet Earth, then, seems distinctive in this respect, with open-shaped pits relatively uncommon at other sites. This variation would seem to relate to the underlying geology, chalk is relatively stable particularly when not exposed to the elements. At Dolland's Moor, the subsoil was very sandy and undercut pits would have collapsed almost immediately.

Explanations for the apparent distinctiveness of the open-shaped pits at Thanet Earth are varied. As observed above, open-shaped pits tended to be both shallower and contain more uniform backfills. Being shallower, the true profiles of these pits are more likely to have been distorted by truncation, especially if such activity was more pronounced than has been anticipated. In at least some cases, pits of a substantial diameter, and apparently identical to pits elsewhere on the plateau, were markedly shallow at only 0.3–0.4m deep, strongly indicating this may have been the case. Open-shapes may also have resulted from erosion of the pit sides over time or through widening of the pits as they were cleaned periodically, although Reynolds (1974, 127–130) indicates undercut profiles would have been favoured in both these eventualities.

The extent to which differences in pit shapes were purely stylistic, or whether different forms represent distinctive local trends, is unclear and difficult to assess. Conversely, it is easy to appreciate that pits of different shapes, and sizes, may have served specific purposes, reflecting the storage of grain products destined for variable uses: consumption, seed-corn and exchange. However, beyond this, it is impossible to provide any definite commentary.

Variations in pit shape can also be observed between sites with some notable differences apparent. On Plateau 8, non-circular pits comprised 11 per cent of the total compared with just 3 per cent of those found at Gravelly Guy (Lambrick 2004, 109). In contrast, 65 per cent of pits at Dolland's Moor were oval or sub-rectangular in shape (Rady 1999b, 2). This more even distribution of pits shapes is broadly similar to that at Battlesbury Hillfort where 59 per cent were circular with the remainder oval or sub-rectangular (Ellis and Powell 2008, 31).

Storage pits on Kentish sites are typically smaller than their counterparts from central England (Timothy Champion, *pers comm*). However, on Plateau 8 the pits were on average slightly larger than those at Gravelly Guy and Dolland's Moor. Circular pits from outside Battlesbury Hillfort were comparable to those from Thanet Earth although the sub-rectangular pits common to this site were larger in all dimensions (Ellis and Powell 2008, 31–32). Pits from Maiden Castle were significantly deeper: means ranged between 1.35m to 1.76m for different excavation phases, with the consequence that volumes were also markedly larger, on average 3.65m³ (Sharples 1991, 89–90). Diameters at Gussage All Saints were slightly smaller

on average but, again, notably deeper than at Thanet Earth: 1.33m, 1.58m and 1.5m for the various pit forms used (Jeffries 1979, 10). Pits at Soupir were only slightly deeper than on Plateau 8, a mean of 1.15m, but with much larger diameters, averaging at 2.05m with volumes of around 3m³ (Gransar 2000, 285). At Gondreville, pit diameters and depths varied depending on form, with basal diameters of between 1.86–1.98m, surface diameters of 1.27–1.85m and depths of 1.36–1.69m respectively (Deffressigne *et al* 2002, 92–95). Largest of all were the phased pits from Danebury, with average volumes between 2m³ and 4m³ and reaching in excess of 6m³ in the later phases.

A steady increase in pit volume has not been widely observed at sites other than Danebury. As at Thanet Earth a more typical pattern, such as that found at Gussage All Saints (Jeffries 1979, 10; fig. 11) and perhaps Maiden Castle (Rawlings 1991, 90), is towards a slight increase in pit dimensions followed by a subsequent contraction. One explanation for this disparity between sites can be attributed to the more complex stratigraphy, complete excavation of pits, and hence availability of dating evidence, and the much larger sample of pits at Danebury. Alternatively, Danebury may be aberrant compared with general trends. For example, at Gussage All Saints, overall volume was broadly equivalent in phases 1 and 2, despite a 50 per cent reduction in the number of pits during the second phase (Jeffries 1979, 15). At Thanet Earth, overall volume almost doubled in Sub-phase 2, due largely to the presence of features S8722 and S8760 as there was no significant change in the number of pits. By sub-phase 3 total pit volume had resumed its previous level.

Periods of Use

In the absence of complex stratigraphy, estimating periods of use for the pits is challenging, a problem further compounded by their latter use for refuse disposal. Cunliffe (1992, 79–81), in accordance with his chthonic interpretation, has proposed pits saw only one season of use in their primary capacity – although if that were the case many more pits might be expected at long-lived sites such as Plateau 8. On the basis of his experimental work, Reynolds (1974, 130) has suggested that pits could have been used indefinitely as long as they were regularly cleaned and remained structurally sound. Despite this, he notes pits might have been abandoned if permeated during especially wet seasons. Some indication of reuse has been found at Gravelly Guy in the form of rounded pit bases alongside the far more common flat bases (Lambrick 2004, fig. 3.5). Unlike most known pit sites in England where pits were dug into chalk bedrock, gravel could easily be removed as pits were cleaned out resulting in a rounded base.

With these considerations in mind, any determination of periods of use would seem impossible. However, as an interpretive exercise it may be productive to consider the number of pits relative to the estimated period of occupation. If occupation on Plateau 8 continued for approximately 400 years and during this time 176 storage pits were dug, the average number of pits open at any one time, assuming a 1 year life-span for each pit, would be estimated at 0.44 pits per year. With the assumption

pits were open for up to 5 years, only 2.2 would be present at one time. Assuming a decade of use, the figure rises to 4.4 pits a year – still a relatively modest number.

Notably at Gravelly Guy potential surplus for trade was suggested as the combined pit capacity of any particular phase was beyond the resource needed for subsistence, for which ‘only one to two medium to large pits would be needed annually’ (Robinson and Lambrick 2009). If, in good years at least, pit cluster sites such as at Thanet Earth were able to produce a grain surplus, contemporary local sites with a ‘pastoral emphasis’ may (at least periodically) have required imported grain to supplement smaller-scale arable output, potentially in exchange for pastoral products. Interaction between specialising settlements might therefore explain the unusually high pit concentration at Thanet Earth. Furthermore, if only two large to medium/large grain pits were needed per annum to sustain the subsistence grain requirements of a Gravelly Guy sized hamlet, the potential shortage of seed grain at east Kent pastoral emphasis settlements is brought into focus.

Attempts to model amounts of grain stored using calculated volumes has been attempted, both casually, at Gravelly Guy (Lambrick 2004, 117) and more formally (Marshall 2011 *passim*). Such approaches had, however, been previously criticised due to uncertainties attached to many of the variables involved in such modelling (Wainright 1979, 186). In particular, as Rawlings (1991, 90–91) suggests, even were it possible to accurately estimate these variables, there is no way to account for how grain was collected and distributed. Without knowing the catchment areas for grain collection, which would likely depend heavily on questions of social organisation, any estimations of grain storage could easily misrepresent the quantity of grain relative to population. A further problem particular to Thanet Earth is the possibility that settlement, and hence additional pits, extended north of the area of excavation. Considering these uncertainties, no effort has been made to calculate the potential volume of grain stored and its relation to the arable extent it represented.

Infilling and pit contents

It is clear that the majority of the pits were deliberately backfilled often by a tripartite division of deposits. Primary fills were often of naturally accumulated material, probably eroded from the sides and were sealed by two distinct phases of backfilling. The secondary phase of refuse material tended to be more variegated, containing dense finds assemblages when compared to the upper tertiary fills. These, while of similar composition, were more uniform and may also, in part, have been formed by the erosion of the pit edges. In some cases it is suggested that the lower fills had slumped, as in pit S8722; there is a similar example at Dolland’s Moor (Rady 1999b, 50–53). This would seem to have necessitated a consolidation phase, represented by the concentration of burnt flint noted in S8722.

However, while this tripartite system is broadly correct, it is clear that more complicated processes were also at work. These are represented by those pits that contained deliberately placed deposits, indicative of ‘ritual’ behaviour. The

conception of what in the Iron Age constituted a ritual deposit and what was merely 'rubbish' has been subject to intense study (Cunliffe 1992, 75–76; Hill 1995, *passim*). If the arguments put forward by Hill (1995, 125–126) are viewed as broadly correct then there is no division between 'special' and 'ordinary' deposits with all deriving from deliberate structured deposition. Such a view is not supported by all, however, with rubbish from other sites in many cases viewed as a mixture of 'ritual', accidental and more casual disposal (see for example Gransar *et al* 2008, 560).

At Thanet Earth, more obviously 'ritual' components within backfill assemblages include both the articulated and disarticulated human remains and the articulated dog burials. Moving away from these, the fact that the majority of the Thanet Earth pits were subject to only a 50 per cent sample makes the study of structured deposition more difficult when compared to sites such as Gravelly Guy where the entirety of each feature was excavated. Also of note is that several of the French sites display very little evidence for structured deposition of this type. Notable in this respect are Gondreville and Soupier where the pits produced only very sparse finds assemblages (Deffressigne *et al* 2002, 84; Gransar 2002, 78). Of particular interest from Gondreville were fourteen pits that were clearly filled by material extracted from adjacent silos (Deffressigne 2002, 99).

General conclusions regarding pit function

In sum, it would seem that a large proportion of the pits served as storage silos, with the shallower scoop like features having some other largely unidentifiable purpose. It is likely that the spoil produced during their excavation would have provided a useful raw material, perhaps used during the construction of buildings as daub, or for the manufacture of pottery. Latterly, as they fell out of use they gained a secondary function, being used as refuse pits. Due the nature of their backfills, it is not easy to estimate how long they served in either capacity particularly as both pottery seriation and absolute dating, both rather limited at Thanet Earth, correlates more strongly to their secondary use.

The four and six-post-hole structures

Posted structures such as those represented on Plateau 8 are common features on many Iron Age sites, as at North Foreland, White Horse Stone and Gravesend in Kent (Moody 2008, 123, fig. 70; Booth *et al* 2011, 203–206, fig. 4.30; Allen *et al* 2012, 134–138, fig. 3). Four and six-post structures are ubiquitous at sites across lowland England within individual farmsteads, larger pit-cluster, 'aggregated' pastoral emphasis sites and at the hillforts, for example, at Maiden Castle, Danebury, Mucking and Harting Beacon (Evans *et al* 2016, 270–277). Across the Channel they have been identified on sites as diverse as Gondreville, Oger and Oss-Horzac in France and Hilvarenbeek in North Brabant (Friboulet *et al* 2000; Durost 2001; Jansen and van As 2012, 96–98; Verwers 1975, 43, fig. 9; Gent 1983, 261). The geographic range of such features is not limited to western Europe, with similar features identified in oppida sites across central Europe (Daneilsova and Hajanlova 2014,

415).

It is traditionally assumed that the four- and six-posted structures that are well represented across the Plateau 8 settlement formed granaries. Largely this view is based on ethnographic parallels (Gent 1983, 247; Bersu 1940; Swanton 1946, 378–81; Ellison and Drewett 1979) and documentary data (Morris 1979, 29). As part of this argument it is usually held that above-ground storage was required for consumption grain to keep it dry (preventing it from germinating), whilst below ground storage was used for seed corn for sowing the fields in the following season, since damp conditions allow partial germination (e.g. Reynolds 1974; Cunliffe 2012). That the platforms raised were up a metre or more would have provided some protection from damp and rodents. Capacity depends on height but it has been calculated that a 'standard' c 4m² four-poster could hold between one and six tonnes of grain, 'easily enough to supply a small to large extended family for a year...' (Robinson and Lambrick 2009, 271). Similarly it has been suggested that one cubic metre of grain would have been sufficient to feed two people for a year (Cunliffe 1993, 80).

Functionally, the only direct indication that the Thanet Earth structures were perhaps used as granaries is provided by Structure 14, the only such building to provide evidence for preserved grains within its post-holes. Archaeological evidence supporting the preferred granary interpretation has been slight until recently, but systematic environmental sampling of associated postholes increasingly suggests that some had either burnt down when full of grain or had received offerings of associated burnt grain, potentially relating to their function. In addition to Structure 14 examples include a four-poster at a major Iron Age settlement at St Osyth, Essex (Germany 2007) and sites at Stanwick, Northamptonshire and Sutton Common, Yorkshire (Robinson and Lambrick 2009 citing correspondence with Gill Campbell). Similar concentrations of grain within four-posters were identified at two of the DIRFT later early Iron Age to middle Iron Age aggregated settlements (Hughes and Woodward 2015; Masefield *et al* 2015) whilst at Snarkhurst Wood, Kent, a late Iron Age/Roman example of a 4-posted structure contained the largest quantities of charred grain and chaff from the site (Booth 2011, 270). It should be pointed out that in these cases there is no unequivocal evidence for *in situ* burning, raising the possibility that the grains were, like the majority of the pit fills at Thanet Earth, re-deposited from elsewhere.

The case for charred grain being introduced into postholes of granaries as a deliberate act of deposition is supported by an Iron Age 'marsh fort' at Sutton Common, South Yorkshire (van de Noort *et al* 2007, 132–133; Andy Mudd, *pers comm*). Here charred cereals were found in the postholes of 'granaries' alongside the bases of the wooden posts that had survived *in situ*, indicating that the charred grain must have been deposited at the same time as the construction of the granary rather than deriving from a fire. The grain in this case at least was seen as a dedicatory deposit relating to concepts of transformation and regeneration, a form of ritualised behaviour that would be expected on other sites (*ibid*).

There are correlations between significant quantities of both storage pits and four-posters at hillforts, where grain may have been stored as surplus, and at 'pit-cluster sites' such as Thanet Earth and the Upper Thames Valley sites (Lambrick and Allen 2004, 144–146; Robinson and Lambrick 2009, 272). For example, nineteen examples were identified amongst 600 storage pits at 'Gravelly Guy', including three in a row on an access path between the settlement and fields on the same alignment as three early Iron Age round-houses (*ibid*), whilst twenty-four examples were identified amongst c 900 storage pits at GWP Didcot (Oxford Archaeology 2015). In common with other 'pit-cluster' sites the number of post-hole structures at Thanet Earth is high, even though they are outnumbered by pits by around 11:1. A further comparison with Gondreville, demonstrates the number of pits per posted structure is about half, standing at around 5.5:1 (Deffressigne *et al* 2002, 84). How this dichotomy relates to function/surplus provision is unclear, but the association of four and six-posters with particular pits groups perhaps suggests that (like the feature clusters themselves), the posted structures may have served individual households. Such a relationship is supported by four-posters associated with spatially distinct clusters of later early Iron Age to Middle Iron Age round-houses and ancillary structures, probably representing individual families, at Covert Farm, DIRFT (Hughes and Woodward 2015, 32). Unfortunately, how (or indeed whether), such putative relationships are real remains unclear as many of the Thanet Earth structures lie on the periphery of the site.

In respect to date, there is a growing body of evidence to indicate that post-built structures are concentrated in the earlier phases of many hillfort sites, particularly at Maiden Castle (Sharples 1991, 90). Moving away from hillforts, at White Horse Stone, all of the fifty-five identified posted structures were classed as early Iron Age (Hayden 2006, 136–143; Champion 2011, 202–206). In comparison, at East Kent Access the date range of the posted structures was somewhat wider (Fitzpatrick *et al* 2015, fig. 3.71). At Thanet Earth all of the dated posted structures appear to lie within the early Iron Age, problematic dating aside.

Given the general absence of direct supporting data to definitively define these structures as granaries, alternative explanations as to the function should perhaps also be considered. One possibility is that some of the buildings, particularly the four-posted examples formed were used for storing hay and other materials. Sometimes referred to as 'helms', on the continent these are defined as a structure with an adjustable roof that could be moved up or down, built using between one and eight posts (Zimmermann 1992b, 34; Barley 1990, 58). This a building type with a long history that comes in a variety of different forms (see Zimmermann 1992b, figs. 2–4). Bronze Age examples have been identified in the Netherlands at Bovenkarspel-Het Valkje and Andijk (Fokkens 2005, 418–419) and Rhenen-Remmerden (van Hoof and Meurkens 2008, 88; fig. 7.5), but they are known historically to have been very widely distributed. In the Iron Age, ring-gullies similar to sub-circular enclosure 01, on Plateau 8, are also suggested to have formed 'helms' (Boersma 2005, 566–567). In these cases, the gullies are thought have formed/been cut around cereal ricks or haystacks with examples located at

Middelstrum-Boerdamsterweg and Jemgum (Taayke 1991; Schmid 1984).

An alternative view is that some, though by no means all of this form of building were utilised as platforms upon which the dead were laid out for exposure (Craig *et al* 2005, 167). Their use as excarnation platforms is again suggested by anthropological parallels with Native American structures conforming to a similar four- or six-posted layout. Supporting evidence for such a hypothesis is lacking however, whether from Thanet Earth or elsewhere (Roth 2011, 300; further discussion regarding excarnation can be found below).

Unfortunately, given the similarity between the four- and six-posted forms to structures identified as granaries it is virtually impossible to distinguish between each type. However, given the lack of preserved grain that would indicate storage from the majority of these structures, the possibility that they were used to contain some other commodity (such as hay) cannot be ruled out.

Refuse disposal

While the presence of settlement within the excavated site remains debateable (though probable), the pits clearly indicate that this must have lain nearby. There remains some contradiction between the assemblages, with the animal bone indicating primary deposition within pits. Whether this was the primary means of refuse disposal is less clear as the pottery and plant remains assemblages suggests initial deposition within middens, followed by secondary disposal within pits following their disuse. This slight uncertainty is due to the majority of the animal bone showing little sign of wear, while the small average size of the pottery sherds is indicative of more prolonged exposure. More definitive evidence for redeposition was noted when sherds from individual vessels were contained within different fills within a single pit. While these occurrences were rare, a good example was pit S8642.

Disposal in middens was most recognisable within the plant remains assemblage where remains were very mixed, with little differentiation between different pits, being composed mostly by mixed cereals, chaff and weed seeds. This would seem to suggest that waste of different types became mixed prior to final deposition. Crop processing waste may initially have been stored separately to more general domestic refuse, becoming mixed only as the disused storage pits were filled.

Food sources and processing

A clear strength of the archaeological work undertaken on Plateau 8 was the quantity of environmental samples taken from a variety of different feature types. These have produced a wealth of information relating to subsistence strategies, something that is lacking from many excavated sites of this period. Only a small number of samples were taken at Gravelly Guy, though the evidence that they produced was of great value, with such data also scarce from many French sites

(Gransar 2000, 278). At Thanet Earth these indicate a mixed agricultural system, dominated by intensive cereal production but supplemented by pastoral farming as is fairly typical of Iron Age farming strategies in the south of England (Haselgrove 1999, 115). In particular, the arable economy of Danebury is best viewed as predominantly cereal based, with spelt the dominant crop (Cunliffe 2005, 408). However, there were also regions such as the clay uplands of Northamptonshire, or individual farms within arable dominated zones, where the balance was in favour of a pastoral economy (Masefield *et al* 2015)

On Plateau 8 the arable component is clearly indicated by the considerable quantities of grain, crop processing remains and quernstone fragments recovered from the backfilled storage pits. Although most of the charred plant remains came from samples representing re-use of the pits to dump waste, rather than stored products, a picture has been built up from a range of different deposits. Overall, the plant remains demonstrate that as with East Kent Access and Danebury, spelt was the dominant but though emmer was also grown (Hunter and Nicholson 2015, 227).

The eventual change from emmer to spelt wheat can probably be explained by the nature of the crops themselves – spelt provides heavier yields, will grow on heavier soils and is more suitable to exposed areas such as Thanet (Jones 1984, 121–122). The differing preferences of these plants therefore suggest that emmer and spelt were being grown as separate crops, rather than as a maslin or with emmer simply forming a relict crop within spelt fields. The Thanet Earth samples therefore confirm that separate crops of hulled wheats were grown in at least some fields.

Barley, such as that from Structure 14, averaged approximately 24 per cent of the total plant remains assemblage that was recovered from the pits. This is a far greater quantity than that recorded from sites located on heavier soils such as at Stansted Airport (Carruthers 2009). Its importance to the site economy can be gauged by its presence in 95 per cent of the Plateau 8 samples, with its constant presence probably indicating that it was used primarily for fodder (with a consequent possibility that the six-poster was actually a fodder store). Since livestock need to be built up during winter prior to spring calving and lambing, such grain would have been an important fodder crop. Oats may also have formed such a crop but were recovered in only small quantities, perhaps indicating that they were largely growing as weeds.

Peas were probably an important crop, but one largely under-represented, as they present problems in identification when the *hila* are not preserved and they become fragmented. Celtic beans were scarce, but again could have been more important than their charred record suggests. The backfilling of the pits with potentially useful midden material suggests that soil fertility was not a major problem on environs of the site, a hypothesis supported by the relatively low numbers of leguminous weed seeds in the assemblages in comparison with late Iron Age and Romano-British samples from Stansted, Essex (Carruthers 2009). Small-seeded legumes such as

trefoils and clovers often colonise poor, bare soils, as their ability to capture atmospheric nitrogen gives them a competitive advantage.

The hedge mustard seeds recovered from post-hole Structure 14 probably also represented a stored crop. While a common weed of waysides and arable fields, its seeds are rarely found in cereal assemblages in such large numbers. Most likely, is that this plant had been deliberately cultivated as, for example at an Iron Age settlement in Feudvar, Yugoslavia (Kroll 1991). In the British Isles over a hundred seeds were recovered from a Middle Bronze Age pit fill at Trethellan Farm, Cornwall (Straker 1991). They can be used as a spice, tasting like black pepper and mustard and as with opium poppy an oil can be extracted from the seeds if heated. Opium poppy can also be turned into an edible paste when ground up. Seeds from this plant and flax were present in some samples, with large tap roots similar to wild carrots also recovered. The latter is edible when young, but the roots quickly become woody as the plant matures.

The occurrence of sheep and cattle was fairly high, with sheep the most abundant animal in the assemblage, particularly as the period progressed. This compares well with Danebury where the agricultural system was dominated by the production of sheep and cereals (Cunliffe 2005, 323) but contrasts with the 'aggregated' settlements of the East Midlands where pastoral economy predicated on dominance of cattle was practised (Hughes and Woodward 2015; Masefield *et al* 2015). The increase in the quantity of sheep in relation to cattle at Thanet is also not unexpected, and thought elsewhere to demonstrate the intensification of arable production (Hambleton 1999, 87). That both the breeding and culling of each species was undertaken close to the site was indicated by small quantities of neonate remains and primary butchery waste.

The culling strategy for each species was similar, with a proportion of younger animals, aged between one and six months probably culled to provide lamb or veal. A second cull of juvenile animals undertaken at between six to nine months, would seem to indicate a later cull in late autumn and early winter. Yearly culls of only a small number of animals were represented by individuals of between two and four years. The majority of remains were of older animals, between four and ten years old indicating exploitation for wool, dairy products and traction.

That the quantity of pig bone was considerably smaller than that of cattle or sheep/goat is not unusual. Pigs are largely kept solely to produce food, and provide few secondary products when compared to the other species. There is also some suggestion that pig was something of a status food, particularly given the identification of possible suckling pig from the backfill of at least one storage pit. This may explain the tendency for pig remains to be found in pits, with their remains being disposed of with greater care. While few pigs could be aged, those that were support the suggestion of pig as a purely food animal, with no evidence for older animals in the assemblage.

Possible fodder crops

The keeping of animals in potentially large numbers would require the storage of fodder throughout the winter. This perhaps adds weight to the suggestion that some of the posted structures may indeed have contained fodder rather than stored grain (as suggested by the barley from Structure 14). The presence of fodder is not only suggested by the presence of relatively large quantities of barley (see above), but by the grass seeds and those from grassland species. These include those from plants such as the ribwort plantain that may be indicative of stable waste. Grass seeds are often recovered in substantial numbers from Iron Age and Romano-British assemblages and it is sometimes suggested that this may have been due to crop rotation involving fallow years. This is possible at Thanet Earth, but it is considered most likely that they represent burnt hay used for fodder or tinder. While there was no obvious evidence that features such as animal pens or stock enclosures developed their presence as post-hole features, albeit in forms not easily identifiable, cannot be completely ruled out. Their presence is attested to in the wider landscape, as at Hartsdown, Margate (Perkins 1995, 271; Archaeological Solutions 2001, 18).

The exploitation of wild species

Although there was little evidence for the exploitation of wild animals and birds during the Iron Age (as in earlier and later periods), the native foods gathered from hedgerows and wooded areas remained important. This was evidenced by their presence in a number of samples, albeit in small quantities. The species being gathered (rose hips, sloe, hazelnuts, and blackberry) are all common plants that would mostly likely have been growing along the margins of fields and tracks.

Unfortunately, despite the evidence for the exploitation of wild foods due to the mixed assemblages information from the ecology of the weed taxa is more limited in value. Largely this is because it is uncertain whether the weeds were growing amongst one of the crop plants or as grassland weeds, weeds of disturbed ground etc. The principal family represented in the samples was the *Polygonaceae*, which includes common crop/disturbed ground weeds such as black bindweed (*Fallopia convolvulus*), docks (*Rumex* sp.) and knotgrass (*Polygonum aviculare*). These taxa are common in disturbed, nutrient-enriched soils such as cultivated land and trampled waste ground.

Ritual and funerary practice

James Holman and Jake Weekes

Thanet Earth has provided a great deal of evidence relating to elements of Iron Age ritual and funerary practice. As with most sites of this period, this encompasses a wide range of material including the probable deliberate placement of domestic material (pottery, animal remains, loom-weights etc.) within various types of feature. However, some caution is needed in any discussion of this evidence due to

the nature of the excavation strategy, with generally only 50 per cent of individual features sampled. Also recovered from Plateau 8 was a comparatively large, assemblage of human remains.

Structured deposition

Various finds groups demonstrate evidence for structured deposition across the Plateau 8 settlement, whether in their general distribution or location within individual features. This was particularly noticeable within the bone assemblages with the distribution of articulated human and dog burials apparently focussed around site boundaries. Deliberate deposition of finds in individual features, for example the cattle remains in pits S3674 and S14396 or loomweights in pit S12328, was also clearly apparent.

Such patterning may relate to the suggestions made by Cunliffe (2005, 593) that probable propitiatory offerings such as this, whether animal, artefactual or human relate to wider and more complex rituals associated with the storage of grain. While informative, consideration should be given to the sample excavation methodology employed across the settlement site in regard to this dataset as this may create some skewing of the results. Despite this, general trends are thought to be largely representative of patterning more generally.

In regard to animal remains, species type, element and accompanying finds suggested that whilst at one level deposits reflected butchery or consumption waste, they may also have possessed symbolic connotations being placed carefully within many seemingly domestic features. This is perhaps most obvious when the distribution of the main three domesticated animal species is examined, with a number of patterns becoming clear. Particularly noticeable is the zoning of features that contained cattle and horse bone. In comparison, no evidence for similar patterning involving the distribution of animal bone was noted at East Kent Access (Strid 2015, 451).

Moving away from the spatial data, it is clear that pits frequently contained heads, teeth and metapodials rather than main limb bones. Further, for many species particularly pig, dog and horse the side of the element chosen may have been important in the act of deposition. Overall right sided elements were more frequent where deposits of more than one bone represented a single choice of side. This reflects earlier associations with side choice being important in depositional practice from the Bronze Age. Deposition of human remains on hillforts seem to suggest a similar practice with right sided elements noted to be more frequently chosen for deposition (Wait 1985, 83–121; Wilson 1992, 346–347; Fitzpatrick 1997, 82).

Whilst the majority of pits clearly contained primary butchery waste and consumption waste, as outlined above, others contained partially or fully articulated remains. In these cases the deposition of dog, horse bones, neonatal animals, goat,

cattle heads and whole or partial sheep in some pit contexts may have represented an act that contained greater meaning than just refuse disposal.

Slightly different patterning was noted when animal remains were recovered from ditches, with these features containing a smaller quantity of material than the pits. However, ditch contexts on Plateau 8 seemed to be a focus for heads of larger mammals including cattle and horse. Whether these deposits represent animals slaughtered by liminal features or deliberate and structured deposits is unclear.

In many respects, the distribution of quernstones closely mirrored that of horse bone though the concentration of such finds in pit S8762 was remarkable. It has been suggested that intact querns may have been deposited in an act of propitiation but deposition of fragments could be associated with death, perhaps of the user (Peacock 2013, 162–178). No clear patterning was evident for finds relating to the potential textile industry, though it was noticeable that the majority of the loom-weights were recovered from the southern half of the site, with virtually all from storage silos. The presence of both a spindle whorl and flax seeds in pit S8801 is though, unlikely to be a coincidence.

Ritual enclosures?

Forming three of the more enigmatic features on Plateau 8, Sub-circular enclosures 1–3 may have had ritual connotations, though the evidence is far from clear. In particular, Sub-circular enclosure 2 is similar in size to several of the smaller round-houses identified at Mucking (Evans *et al* 2016, figs. 4.16, 4.17, 4.18). It is only the absence of an entrance, and perhaps its slightly distorted shape, that led to alternate explanations being sought for this feature. One suggestion is that these features formed enclosed excarnation platforms, a process that remains somewhat obscure at Thanet Earth but has been inferred by the presence disarticulated bone elsewhere (Cunliffe 2005, 244–259). Such arguments have recently been questioned, however, with re-examination of the disarticulated material from Danebury and Suddern Farm suggesting that excarnation may instead have been something of a minority rite (Booth and Madgwick 2016, 22). Instead, the majority of the bone appeared to have been buried in pits to allow skeletisation, followed by selective re-deposition.

On Plateau 8, disarticulated human bone was found in only five features, all pits. No clear point of origin for this bone has been identified, with one suggestion being that Sub-circular enclosures 1–3 represent areas within which bodies were placed. This remains highly speculative, despite the post-holes in Sub-circular enclosure 3 that could tentatively be argued to have supported a platform. Further, no human bone was recovered from the backfills of these features or any in close vicinity. A greater quantity of disarticulated material would surely have been recovered had disarticulation been taking. An alternative suggestion, outlined above, is that a proportion of the posted structures formed excarnation platforms.

In regard to location, it is generally assumed that exposure of bodies was conducted away from the settlement area, with only selected portions of the body removed back for redeposition (Parker Pearson 1993, 123; Carr and Knüsel 1997, 168). Such a view would certainly be supported by Sub-circular enclosures 1 and 2, if their use as excarnation platforms was accepted, as they were located on the periphery of the site. In comparison, Sub-circular enclosure 3 would seem rather more central (though it is difficult to confirm this fully as the northern extent of the settlement is not known).

In these circumstances, whether all three, or indeed any of the sub-circular enclosures can be convincingly argued to relate to excarnation becomes increasingly difficult.

An alternative function can perhaps be argued for Sub-circular enclosure 3. Here, the backfilled ditch contained a comparatively large assemblage of finds with the animal bone of particular interest. This is due not so much to the quantity of bone, though the assemblage was reasonably well sized, but to the number of identified species and to the element distribution. That the feature contained sheep/ goat and cattle bone is perhaps not unsurprising given that these species were relatively well distributed across the settlement. Of more note is the identification of pig, horse, dog and hare bone from the north-west and south-east quadrants, with this the only feature in which such a wide spread of species was located. Additionally, it was noticeable that these features largely contained the head and foot bones of the domesticated species, and small concentrations of neonatal remains. While interpretation must remain speculative, one suggestion that may explain this concentration of bone is that the feature related to ritual feasting (Van der Veen and Jones 2006, 225).

Human burial (Jake Weekes)

Forming one of the more obvious datasets pertaining to ritual is the assemblage of human remains, with Thanet Earth producing an interesting group of spatially dispersed burials that demonstrate different practices. These range from disarticulated material discussed above, to the pit and ditch burials in the main settlement, the double inhumation in Barrow 10, its satellite burial and the nearby cemetery. Perhaps the central interpretive question here is whether, or how, these disparate burial types relate.

If contemporary, as is suggested by absolute and relative dating, we have on Plateau 8 part of a landscape of selective funerary practice. This is indicated by pit burial S8934, to have developed from Sub-phase 2. The ditch burials and Barrow 10 burials are of a slightly later Sub-phase 3 date that is contemporary with at least one of the inhumations within the cemetery. The cemetery, however, would seem to have remained in use following the cessation of activity on the main early-middle Iron Age settlement, as three burials were associated with late Iron Age brooches.

Pit burials are relatively common on Iron Age sites, with the body often lying flexed near to the base and close against one of the pit sides (Cunliffe 2005, 552) as was the case at Thanet Earth in pit S8833. Local examples of pit burials on Thanet include those at North Foreland, East Kent Access Zone 13 and both Hartsdown Technology College and Capital House, Margate (Moody 2008, 124; Fitzpatrick *et al* 2015, 186; Archaeological Solutions 2001, 18; Gollop 2013, 40). Further afield, similar inhumations in former storage pits are a widespread phenomenon, for example at Danebury and Maiden Castle, Great Western Park, Didcot and on the continent in northern France and Belgium at, for example Bussy-Lettrée in the Marne (Cunliffe 2004, 552–554; Oxford Archaeology 2015; Boonabel *et al* 2008, 591). While we should be careful not to project culture-specific views of death and the dead on to people of the past, the storage pit burials as with much of the structured deposition discussed above, clearly represent a change of use, or indeed closure of the pit. This is further confirmed by their location set within the disuse fill sequence. At Didcot a finding that only 2 per cent of the excavated storage pits contained articulated human remains (Oxford Archaeology 2015) is entirely consistent with the British record and suggests such events were a rarity, perhaps even representing proprietary offerings (perhaps even sacrifices) at times of hardship such as harvest failure (Cunliffe 2004, 554).

As with the articulated dog remains, there is an apparent association between human inhumations and boundaries, as represented by ditch burials (G8309). Lying to the south of the settlement and inserted into what was already an old boundary, this location can perhaps be viewed as an act of segregation from the living. The association of burials with the perimeter of sites is a common feature within the Iron Age, particularly in Wessex (Roth 2012, 311). Such behaviour may be seen as a reinforcement of heritage and ownership, defining liminal spaces for the benefit of the occupants of the settlement (Roth 2012, 311). Alternatively, they may relate to a change of use in this area of the settlement, not visible archaeologically and perhaps also to the early development of the nearby cemetery.

The cemetery

The identification of the Iron Age inhumation cemetery, while surprising for the period in Britain generally, was not wholly unexpected from a regional perspective given that similar examples have been identified locally at Mill Hill, Deal, Tothill Street, Monkton and East Kent Access Zone 12 (Parfitt 1995; Gollop and Mason 2003; Fitzpatrick *et al* 2015, 186). At Thanet Earth, what is also interesting was the location and chronology of the cemetery. It was situated on the east side of the valley, with the alignment of the graves reflecting that of adjacent ditch G8083 that predated the cemetery.

An early middle Iron Age origin at the latest suggested by absolute dating, with burial S12986 (SK8.29) dated to 390–200 cal BC. This would seem to place the foundation of the cemetery to a period when the Plateau 8 settlement remained the occupation focus. As settlement shifted eastwards, it remained a focus of burial as

indicated by the late Iron Age La Tène *Drahtfibel* style brooch. Given such longevity and the small number of burials, it cannot be representative of more than a small part of the nearby population, though the selection criteria remain unclear (see below).

The Mill Hill cemetery, while a slightly later foundation to that at Thanet Earth, contained forty-five graves that had been split into three separate cemeteries, with one single high status grave identified. Of these, the south-west cemetery seems remarkably similar to the Thanet Earth example consisting of twenty-eight graves, one of which was surrounded by a small ring-ditch (Parfitt 1995, 24). In this case however, the ditched inhumation was very different to that at Thanet Earth, with the burial at Mill Hill part of the so-called 'warrior burial' tradition (*ibid*; Cunliffe 2005, 557). Finds and carbon dating suggest that this site was in use from the early second century BC continuing into the Roman period (Parfitt 1995, 155).

At Tothill Street the cemetery was smaller, with only eleven graves excavated though it is likely that further burials lay in an unexcavated area to the west. Again very few grave goods were present with the burials dated to 100BC to 50AD on the basis of a single pottery vessel (Gollop and Mason 2003, 26).

While neither cemetery was identical to that at Thanet Earth there are enough similarities, despite the slightly later date of origin, to suggest that all form part of distinctive burial rite. While perhaps forming part of a burial tradition focussed largely on the south-east of England a pertinent comparison can also be found at Adanac Park, near Southampton (Leivers and Gibson 2010). Here, up to eleven flat graves formed part of a small, somewhat dispersed cemetery of probable mid-late Iron Age date (*ibid*, 11–14). Probably associated with the flat graves were seven burials contained within barrows. Six of these were penannular or circular with one, barrow 3, very similar in size to Thanet Earth Barrow 10.

Formalised Iron Age inhumation burials occasionally occur in the British record but, in addition to East Kent, are only distinctive in two other regions in Britain. Distinctive rites have been recognised in the south-west and in Yorkshire. So called 'south-west cist burials' cover an area comprising Cornwall, the Isles of Scilly extending as far east as southern Dorset (Cunliffe 2005, 551–2; Whimster 1977a; 1977b; 1981, 60–74). They comprise small cemeteries with the bodies usually, though not absolutely, being placed in stone lined graves arranged in rows. Generally these burials are thought to date from the fourth-century BC to the first-century AD.

To the north, the Yorkshire burials of the Arras culture are represented by three distinct ritual practices from the fifth-century BC (Cunliffe 2005, 546). These consist of the grouping together of small barrows, occasional vehicle burials and the surrounding of individual barrows with a rectangular ditched enclosure. Individual barrows are small, usually no more than 9m across, but still more than double the size of Thanet Earth Barrow 10. Cultural links between this region and northern France have been suggested as there are clear similarities in the burial rites of the

two areas.

Whether the flat graves identified at Thanet Earth and elsewhere indicate a third distinctive burial rite, perhaps focussed along the Channel coast would seem a possibility on present evidence. If so, these characteristically flat inhumed graves, are suggestive of cross-Channel links and perhaps reflect the penetration of continental practice (Parfitt 1995, 157). Even this remains debatable, with little evidence for inhumation burial (or funerary remains more generally) in Nord Pas-de-Calais, Somme and Seine Maritime until after 250 BC despite intensive fieldwork (Bradley *et al* 2016, 250–51). In this context, the east Kent burials would remain an interesting development, but one that cannot be linked conclusively to adjacent continental developments.

Burial selection

The site chronology would seem to indicate an element of contemporaneity in several instances of non-cemetery burial across the Plateau 8 settlement. This raises questions relating to the selection of the deceased for a particular style of funeral, potentially one that excluded them from a cemetery or other non-archaeologically visible means of burial such as scattered cremation or excarnation. The reasoning behind such selection criteria remains unclear, though Madgewick (2008, 111) suggests that the treatment of the corpse perhaps relates to how the individual was viewed by society. If so, the particular nature of their life and/or death, such as death prior to maturity or death in childbirth may be reflected in the burial rite. In particular, it has been argued that many articulated Iron Age burials represent individuals who were in some way ‘unclean’ and did not receive the normal burial rite (*ibid*; Cunliffe 1995b, 78).

This may explain, therefore, the selection of skeleton (SK 8.12), an immature individual and of young female (S12969) who clearly died in childbirth and possessed other, perhaps associated health issues. Similarly, the inhumations in pits S8934 and S8833, each demonstrated evidence for ongoing health problems. In the case of the double burial contained in Barrow 10, it seems probable that both individuals died at the same time. These burials also seem to have shared an occupation and/or developmental abnormality that caused early arthritis in the lower spine, perhaps indicating that the individuals were related. However, the means of burial in a barrow has echoes of the Arras culture and probably indicates that these individuals were deemed to have a particular social or political status or standing in the community.

What seems apparent is that the cemetery was more uniform, mainly adult focused, and predominantly included what modern westerners might call people in the 'prime' of life (seventeen individuals). The exceptions amount to probably residual, or even superstitiously deposited deciduous teeth (in grave S12931), a possible adolescent (in grave S12972) of late Iron Age date (see below), and an older man (grave S12975), whose prone deposition singles him out further. The fact that the

cemetery produced only two confirmed males (S12975; S12987), the old man and another man on his side, may well be just a function of inherent difficulties in identification because of the poor survival of the bone on this site. For this reason, the larger representation of proven or probable females cannot be taken as an indicator that this was selectively a more 'female' cemetery.

Initial funerary rites

Despite the poor preservation of many burials, it has been possible to discern tentative evidence that relates to potential funerary rites, or their lack. Most obvious, is that non-cemetery corpses seem either to have been placed in pre-existing features (G8309, G8136 and G8137), or in rather hastily cut graves. The latter is perhaps suggested by the somewhat made-to-measure appearance of that containing double burial S14031. This could suggest a lack of typical preparatory rites, though the burial itself has clearly been arranged at deposition. Within the cemetery, feet are often crossed and the left arm commonly lies across the body, generally in the pelvic area, perhaps indicative of a mode of wrapping and/or binding or even standardisation in laying out. This is evidenced particularly well in graves S12972, S14019 and S14929, two of which contained brooches. These presumably related to the clothing of the deceased or represented a shroud of some sort.

Especially interesting is that both ditch burials (S8896 and S8912) and the 'childbirth' burial (S12969) appear to share the trait whereby the left arm lay over the body. Whether this represents mere coincidence, a long lived tradition, or further evidence for contemporaneity is unfortunately difficult to ascertain on present evidence. Similar placement, while occasionally evidenced at Mill Hill and East Kent Access, occurs in only a minority of graves and is not apparent at Tothill Street (Parfitt 1995 figs. 56, 59; Fitzpatrick *et al* 2015, plate 3.35).

That the heads of some of the inhumations were twisted over the shoulder (burial S12984 represents the best example), suggests that early decomposition probably occurred in a void. On other sites, particularly of Romano-British (or later) date, this might be explained by the body being placed in a coffin. However, no evidence for coffins was identified in the Iron Age graves, and the marked narrowness of many makes their presence unlikely. Instead, it is probable that the graves were relatively shallow, and dug only once the deceased had been brought to the place of burial. The fact that some of the inhumations appear to be squashed into rather constraining grave pits (cf. early burial S8896, in the enclosure ditch) also hints at a noteworthy lack of 'accommodating' grave design.

A similar apparent lack of consideration in respect to grave size was also noted at Tothill Street and Mill Hill. In both cases the graves were narrow, with the burials usually lain in an extended position and the position of the arms dictated by the width of the grave cut (Parfitt 1995, 24, 156–157). Burial may not, therefore, have been the most careful or considered aspect of the funeral process in many of these cases.

It has also been postulated that the odd configuration of the burials in Barrow 10 could be a function of such a practice. In particular, the twisted head position and fallen mandible of skeleton SK 8.47 may indicate that the corpse had at least partially decayed in a void (Duday 2009, 32–38). While probably post-depositional, there remains the possibility that these bodies had been 'staged' prior to burial, perhaps indicating an element of display; if these bodies were indeed 'staged', the display may have been of some duration.

What has become clear through the study of the Plateau 8 burial assemblage, is that both inhumation and excarnation practices were being carried out during the same period.

Location

Given the lack of any clear preparatory rites, other factors relating to the funerary process must now be considered, with the location of burial clearly significant. Most obvious at Thanet Earth is that the alignment of the earliest phase of burials in the cemetery, like those at Mill Hill, reflects an existing feature in the landscape. At Thanet Earth, they mirror the north-east to south-west orientation of ditch G8083. In the case of Mill Hill, a Bronze Age ring-ditch that lay approximately 50m to the north-east would seem to have formed the focal point at which the graves were orientated (Parfitt 1995, 155). At Tothill, while only one phase of burial was identified, ten graves appeared to lie parallel to a raised chalk 'ridge' which formed the southern boundary of the site (Gollop and Mason 2006).

Notably, the relationship between burials and ditch would again seem to indicate the use of burial as a means of ritual closure. This is unsurprising, with the use of human remains as closure deposits well known within north-west Europe (Bradley *et al* 2016, 254–255). The ditch was not the only influencing factor with north-south aligned grave group reflecting the position of nearby Barrow 10. The position of the barrow itself may not have been accidental, with suggestions made by Cunliffe (2005, 571–572) that the location burials within chalk quarries represents an element of the fertility cycle with chalk being used for the marling of fields.

That Barrow 9 was located in what would have been a distinct hollow within the top of the eastern quarry complex is therefore less surprising. Elsewhere, such practice has been recognized at nearby Cliff's End Farm, and further afield in Wessex (McKinley *et al* 2014, 228; Sharples 2010). In each of these cases the hollows are associated with enclosures.

Similar processes may have been at work in the placement of ditch burial group G8309, and pit burial S8934, with both sets of remains associated with a boundary, albeit one that may by this stage had largely gone out of use. Of these inhumations, the pit burial is perhaps of more interest given that its location in an adjacent small storage silo. As touched on above, the use of decommissioned storage pits for burial

is not uncommon. In this case it is possible that the body was placed in a position so as to be close to, and associated with the living settlement, but no longer remained an active part of it. Perhaps more convincing an argument, is that this area of the site no longer formed an active area of settlement. The location of the burial may, therefore, have indicated that this area was now defunct and a place for the dead. Such an argument is harder to maintain in respect to pit burial S8833, as the wider feature cluster remained in use, any sense of closure here was perhaps associated only with this individual pit. However, the association with, in this case an ongoing ritual associated with boundaries remains given that this pit cut through a fairly early Bronze Age trackway.

Deposition

The arrangement of individual burials within particular features is also of note in several cases at Thanet Earth. Most obvious is the apparent placement of the left arm over the pelvis that was discussed above. In the case of the pit burials, the child near the base of S8934 was arranged in a crouched position as though sleeping. The adolescent in pit S8833, perhaps less obviously so with neither possessing obvious evidence for grave goods. In contrast, one of the enclosure ditch burials (S8896) contained two pottery vessels and space within some of the cemetery burials (S12975; S12978; S14932) may once have held perishables that have not survived.

More readily recognisable evidence for the deliberate arrangement of bodies is provided by the double burial in Barrow 10 and its attendant grave. The apparent deathly intimacy of the two males may, for example, have been arranged to represent friendship in life, or some other relationship, unless this was just a fortuitous result of rather careless deposition or even exposure and collapse. Even then, it is undoubtedly significant that these bodies were 'left' so arranged. In any case the disposition of the limbs in these suggests flaccidity, but most likely secondary flaccidity, following the period of rigor mortis (up to three days; Senn and Weems 2013, 45). The possible exposure of one of the corpses perhaps indicates display prior to burial, evidenced in the Pas de Calais and Belgium. If these bodies here were indeed 'staged' such display may have been of some duration.

Similarly, the young female body and that of her baby in burial S12969 must have been carefully arranged, reflecting presumably the relationship of mother and child. An alternative suggestion in respect to these burials is that they indicate a rather hasty, if still careful burial, with interesting hints of emphasis on control and decorum in the straightening of limbs. This could be seen as a fitting ritual antidote to the traumatic scene of a failed breech birth. The fact that this very young woman's left arm rested on the pelvis, positioning the hand in the genital area, could seem especially symbolic given her circumstances. This view is perhaps supported by the placing of the rounded flint close to the hand of the burial, perhaps used as an aid (something to squeeze?) during birth. The placement of the hand over the pelvis may also be significant, with this configuration is found among a number of the burials in the enclosure ditch and nearby cemetery (see below).

Among the more obvious shared funerary aspects in the cemetery are posture and orientation, with the supine extended posture on a north-east/south-west orientation (S12931; S12972; S12975; S12978; S14019; S14022; S14929; S12952; S14016) or north-south (S14932; S14938; S12965; S12984) the most prevalent. Some of the exceptions to this appear to be simply the result of forcing the body into narrow or otherwise constrictive grave cuts. Perhaps more notable is the prone position of the older middle age man. Could such deviations in some way reflect a funerary response to a 'bad' life or death, or even an attempt to disorientate and confuse the corpse so that it cannot find a way back to the living? A more prosaic but nonetheless interesting possibility could be that the corpse, if tightly wrapped, was mistakenly placed face down!

Commemoration

'Commemoration', in the case of burials outside the cemetery, especially those associated with Barrow 10 or the pit burials, could well have been slightly 'different' from what a modern westerner would expect, the places and types of burial perhaps symbolizing offerings to the underworld or a memory of social taboo as much as remembering particular 'people'.

The most obvious example of any form of commemoration relating to Iron Age burials at Thanet Earth is the ring ditch that forms Barrow 10 (G8172). Perhaps thought necessary due to the unusual nature of the burial within, its form potentially indicates a degree of continental influence with circular barrows well known in western Germany, Wallonia, Luxembourg and France (Bradley *et al* 2016, 251). While, the French examples are generally considered to be of early La Tène date (5th–4th centuries BC), the similarity of these to Barrow 10 is certainly suggestive. The Thanet Earth example is similar to grave 123 from the south-west cemetery of Mill Hill, Deal, that contained a so called 'warrior burial' (Parfitt 1995, 156). This was of a similar diameter to Barrow 10, but contained only a single inhumation and dated to the mid-late Iron Age. While forming part of the same tradition, similar burials at Brisley Farm, Ashford, were contained in square barrows more in keeping with those identified in the north of England (Stevenson 2013, 166).

Trade, exchange and cultural contacts

Physical evidence for direct trade and exchange in the Iron Age at Thanet Earth was sparse, with the evidence largely pointing to the movement of ideas, rather than to artefacts.

A major exception was formed by the assemblage of quernstones. The Greensand rock from which these were produced is not local to Thanet, but outcrops to the south-west at Copt Point, Folkestone. During the late Iron Age and Roman periods this source became the focus of an industry producing quernstones, but this would seem to have developed out of a pre-existing settlement (Parfitt 2013, 25, 50–51).

Given their presence here it seems likely that production may have started earlier in the period, with produce making its way to sites such as Thanet Earth. Hill (2007, 21) suggests that any such trade may have been taking place across the east and south-east of England, together with other goods such as iron and salt. No evidence for these other goods was, however, produced at Thanet Earth.

In addition to the Greensand quernstones, one final find that hints at a wider network of trade was the single piece of granite recovered from pit S8670. The origin of this rock remains unknown, though it is clearly not local with the nearest potential sources in Britain located in the West Country and Leicestershire.

The pottery recovered during the course of the excavations on Plateau 8, particularly that within sub-phases 1 and 2, indicates a considerable level of contact with the continent. While there are no certain imports, as was also the case at East Kent Access (Seager Smith 2015, 198), shared pottery forms and styles of decoration demonstrate familiarity with continental traditions and indicate close ties across the channel. Given that Thanet lies in the Eastern Channel/Southern North Sea Axis zone defined by Cunliffe (2013, 313–314) similarities between east Kent and the Pas-de-Calais and Belgium should come as no surprise.

In particular, many of the decorated finewares were closely modelled on French styles. Equally, the coarser, frequently rusticated, vessels were closer to Dutch forms. For example, the deeply recessed rim, R21 (PRN 8121040001), recovered from pit S14561 is characteristic of “Kemmeware”, a pottery type that has a relatively restricted distribution on the continent, from Houplin-Ancoisne in the west across c. 200 km of Belgium (Termote 1987, 70, fig. 8, 34–36; Hurtrelle *et al* 1990, 93, figs. 6, 47 and 48; Palmer 2010).

While vessels recovered from across this area are superficially very similar, more detailed scientific analysis has demonstrated that not all of this pottery on the continent was manufactured at one location (Dimitrakopoulou *et al* 2014). Similarly, at Thanet Earth, while many of the forms are closely related to continental examples stylistically, fabric analysis suggests that they were locally made. Similar practices have been noted at Capital House, with the largely utilitarian assemblage from this site similar to that from Thanet Earth (McNee 2014), and from elsewhere in Kent and Essex.

The possibility that continental links lessened as the period progressed is perhaps indicated by the absence of continental forms from c 150 BC onwards. In particular, vessels ‘à épaulement’, are notably absent. Whether this is true reflection of the state of affairs remains obscure given that occupation had begun to shift away to a new location by this point.

The Plateau 8 settlement in context

While the regional context of early and middle Iron Age sites from central England

and northern France are generally well understood, more localised understanding of this in east Kent remains lacking (Champion 2007a, 106; 2007b). In particular, is the scarcity of field systems that can be clearly assigned an early or middle Iron Age date (Champion 2007b, 300) though one such example has recently been identified at Kemsley (Mackinder 2014, 37).

Visible more widely, is an apparent discontinuation between the landscapes of the middle to late Bronze Age and early to middle Iron Age. Generally Bronze Age field systems would appear to go out of use, with those sites containing Bronze Age features generally, though not absolutely, devoid of those attributable to the Iron Age (Yates 2001; 2007; Mackinder 2014, 299). This has been noted across the south-east of England, evidenced by numerous sites along the Thames Valley, within west Kent and along the north Kent coast (Wymer and Brown 1995; Wait and Cotton 2000; Allen 2009; 2011; Mackinder 2014). Conversely, those areas of east Kent that do not contain Bronze Age sites would seem to be where Iron Age occupation is at its greatest (Champion 2007b, 299–300, figs. 2–3). That Thanet also forms part of this wider pattern seems on present evidence likely, though there is tentative evidence for continuity between the late Bronze Age and Iron Age recorded at Monkton Court Farm (Moody 2008). However, an alternative view potentially supported by the continuity of landscape orientation over the northern plateaux of Thanet Earth from the early/middle Bronze Age to the Roman and later periods, is that although the ditches had long silted the banks and hedges of those earlier fields were sometimes retained in the Iron Age. This is apparently evidenced by the neat location of the early phases of the Plateau 8 Iron Age settlement within a small Bronze Age field and the insertion of Iron Age burials into the silted ditches.

The island is generally thought to have been dominated by large scale stock and grain production during this period (Moody 2008, 117, 116) with settlement set in a network of trade routes, formed by track/droveways. Probably dominant, was an east-west route that extended across the centre of the island from a presumed crossing point at Sarre. The Thanet Earth Iron Age settlement lies some 1.6km to the north of this route, with a second east-west track-way probably to the north, running from Sarre to Margate.

Smaller cross routes connected these, generally running along valleys toward the coast, (Moody 2008, 116) and it is possible that the line of Seamark Road reflects a similar route-way, with trackways 35 and 27 perhaps forming a similar function (see Chapter 3). The Hollow-ways that represent these tracks on parts of the Thanet Earth are well paralleled at Monkton-Mount Pleasant, where similar features were excavated on the steep slope of the central chalk ridge (Hicks 2008, 101). A more notable example of these cross routes has been recorded close to North Foreland, represented by two parallel running ditches, with a second route identified on the opposing side of the valley (Moody 2008, 120; Boast *et al* 2006).

Settlement conglomeration

The landscape system outlined above represents part of a wider stratification of Iron Age society that would seem to develop during the late Bronze Age (Champion 2007a, 105–106). In parts of eastern and northern Europe, such development is visible from around 1500 BC and would seem to represent both increased competition for resources and a falling population. Across western Europe, such changes would seem to occur slightly later though the reasoning behind these remains unclear (see below).

In much of southern and eastern Britain these changes are reflected by an increasing conglomeration of settlement. Such development is at its clearest in Wessex, being represented by the development of hillforts. Kent and much eastern England lay outside of the hillfort dominated zone that encompassed Sussex westwards to Wessex (Champion 2007b, 303). As a result, hillforts remain rare in Kent and are largely of mid to late Iron Age date, being represented by those at Bigbury near Canterbury and Oldbury near Ightham. On Thanet it is possible that one lay in the area surrounding Margate though the evidence is somewhat piecemeal (Perkins 2007, 228; 1999, 98; Gollop 2013, 40). In the latter case, the dating of the potential hillfort is suggested by recent excavations to cover a similar chronological span to the Plateau 8 settlement (McNee 2014, 12–13).

Despite the general absence of hillforts, the widespread abandonment of Bronze Age landscape features implies similar social changes were taking place in east Kent and more widely across the south-east and east of England. These would seem to be reflected by the development of moderately sized early Iron Age conglomeration sites such as Thanet Earth, Turing College and White Horse Stone in Kent. That such occupation may have been more widespread, albeit not necessarily of the same scale, is suggested by smaller areas of settlement identified at North Foreland, Downlands, Walmer and from the A2 to the east of Canterbury (Macpherson-Grant 1980).

To the north, similar development is being increasingly recognised in the Lower Thames Valley, with re-assessment of Mucking indicating a somewhat larger scale early Iron Age settlement than had previously been thought, and at Springfield Lyons (Evans *et al* 2016, 227–233; Brown and Medlycott 2013). Similar processes are known on the continent from the late Bronze Age, with fortified upland settlements, such as Etaules-le-Châtelet, Vitteaux-Myard (Côte-d’Or, eastern Burgundy; Nicolardot 1988; 1998; 2003) increasing in frequency (Milcent 2009, 466–470). During the early Iron Age nucleation of settlement can be seen at Malleville-sur-le-Bec in Normandy (Marcigny and Ghesquiere 2008).

Settlement conglomeration would seem to result in fewer, though perhaps more substantial Iron Age settlements in comparison to the many varied forms of earlier periods (Needham 1992, 57–9 and see Chapter 3). In this respect, the development of large sites such as Thanet Earth may parallel the ‘coming together’ of peoples as evidenced in Wessex and the Upper Thames valley (Cunliffe 2005, 262; 2013, 306). However, whether this view holds true for Kent generally remains slightly unclear, due in no part to the bias caused by the location of new development (see below).

Whether any regional summary reflects the true reality of settlement distribution in the early and middle Iron Age is therefore open to question.

Landscape division

Accompanying the growth of conglomerated settlements, was an apparent move to divide the landscape into larger territorial units. This is indicated at Thanet Earth by the substantial Iron Age ditch recorded to the south of the Plateau 8 site, forming the border between Plateaus 4 and 5. While this feature remains slightly enigmatic, given the amount of time that must have been invested in its construction, it is thought to have formed a territorial division. Due its discontinuous nature this feature, despite its size, cannot have been defensive. Instead it formed a highly visual means of landscape definition, perhaps fulfilling a similar symbolic role to that sometimes prescribed towards hillforts (Tilley 2010, 182–3).

Similarly sized features, sometimes referred to as cross-dykes or ranch boundaries have been encountered across much of England and into Scotland, as well as being evidenced in continental Europe (Cunliffe 2005, 420–421; Bradley *et al* 2016, 233–236). In Yorkshire and Wessex they are often found in association with pit alignments (Bradley 2007, 244). While many of those found in Britain have generally been thought of as Bronze Age, it has been suggested that some, particularly those in Yorkshire may be of Iron Age origin (Bradley 2007, 210, 242–243; Fleming 1971). As at Thanet Earth they often cut through earlier field systems while being respected by Roman period features. Interestingly, a degree of influence on the Thanet Earth example is perhaps suggested by the line of Seamark Road, represented by Trackway 33, as the ditch does not extend up to it.

As features, they define large blocks of land, often encompassing different landscape resources that can range from upland slopes to floodplains, with the resulting territories suggested by some to be similar in extent to a small modern farm (Bradley 2007, 244). It is therefore possible that the occupants of the Plateau 8 settlement were central to a territory or estate defined by this boundary and possibly by as yet undetected equivalent boundaries to the north, west and east. If so, the length of the ditch as indicated by aerial photography potentially encompassed an area about 1.3km by 1.3km, or c 164 ha). Alternatively the major ditch may have divided much larger territories extending to the north and south. In no cases have settlement sites been found to cross such boundaries, unless they had gone out of use prior to the foundation of the settlement. What is clear however, and noticeable at Thanet Earth, is that the boundaries were far more stable than any settlement that lay within them (*ibid*, 246).

Within this overall landscape system, further subdivisions were created by the growth of a pattern of stock enclosures and fields. Evidence for these was generally rare on Thanet Earth, though it may be that the tentatively identified enclosure that lies in pipeline Site 3 represents one such example. Unfortunately, in this case it is difficult to meaningfully interpret the site due to the limited area of excavation.

In some respects this system mirrors in many ways the ladder settlements of the north of England, such as those at Wetwang or Melton, that dominate the archaeology of the late Iron Age and Roman periods (Harding 2012, 143; Fenton-Thomas 2011, 43–104, figs. 201–2; Stoertz 1997). Generally spaced at regular intervals, the enclosures within these settlements formed individual households, areas of upland pasture and water sources most likely formed a communal resource. In Thanet settlement tends to be more irregularly spaced, focussed largely along the line of valley bottoms. Upland sites such as North Foreland and South Dampton would seem more obviously specialised, perhaps even being fortified (Moody 2008, 118).

Plateau 8 – some comparative sites

The Thanet Earth settlement would seem to stand apart from the pattern outlined above; the site was unenclosed with the number of pits indicative of more than one household. Iron Age settlements have been historically rare in Kent, a distinct contrast to other areas of the country such as the central southern hillfort zone defined by Cunliffe (2005, 590). In recent years the number identified has increased, with those sites that are known and contain pits, albeit in smaller numbers than at Thanet Earth including North Foreland (Boast 2003), Downlands, Walmer (Jarman 2010), the Whitfield-Eastray By-pass (Parfitt 2014), Dolland's Moor (Rady 1999b) and White Horse Stone (URS 2001). Other sites, such as Turing College (Lane 2014; CAT 2014), Highstead (Bennett *et al* 2007) and Underdown Lane, Eddington (Jarman 2005) contain fewer pits, though this is perhaps due to less suitable subsoils (for arable farming generally and possibly for the pit storage). The nature of settlement economy in Kent, as in the east of England and north central France would thus seem to be heavily influenced by the underlying geology (Davies 2009, 87; Masefield *et al* 2015, 263–282). A degree of geological determinism may also be reflected by the juxtaposition of 'aggregated settlements' represented by round-house gully clusters with a predominantly pastoral economy at east Midlands clayland sites such as Daventry International Rail Freight Terminal in Northants (Hughes and Woodward 2015), compared to the equivalent 'pit cluster' sites of the Upper Thames Valley and surrounding higher ground, with their cereal farming emphasis (Robinson and Lambrick 2009).

In many respects the longevity of the Plateau 8 settlement can be paralleled by French sites such as Osly-Courtil (Le Guen 2005) or La Croix-Saint-Ouen (Talon and Billand 1993). These have been defined by Haselgrove (2007, 410–411) as 'type three' sites, formed by densely occupied nuclei that were re-built on a number of occasions. Many 'type 2' sites, of which Gondreville is one, also provide useful parallels but are assumed to have been occupied for only two or three decades (*ibid*).

Similar themes can be seen in Wessex, though the settlement pattern is slightly different, being dominated by larger hillforts and smaller enclosed settlements such as Little Woodbury and Gussage All Saints. Traditionally this has been taken to

indicate the presence of a society dominated by elite families that held sway over larger territories of which the smaller sites formed part (Cunliffe 2003, 167). This view has been challenged, with a more hierarchical viewpoint put forward whereby the smaller sites formed self-sufficient individual settlements (Hill 1995). Cropmark evidence suggests, however, that such sites often form part of a more extensive system, with several areas occupied simultaneously with some evidence for the clustering of settlement within specific areas noted in the Severn-Cotswolds region for example (Moore 2007, 91; Davis 2014, 180–181).

Across Kent and much of the continental zone, the identification of new sites reflects the location of modern development. It is possible therefore, that the evidence for settlement has been slightly skewed (Haselgrove 2007, 401). Despite these limitations, it would seem that the east of Kent, and Thanet in particular, were the most densely populated areas of the county during this period. This complex settlement pattern is further evidenced by the many small sites that contain only scatters of pottery and a few discreet features attributable to the early and middle Iron Age throughout Thanet, such as Site 3 on the pipeline. Coastal sites may also have been lost or eclipsed by later settlement, for example, pottery recovered from beneath Dover Castle and at Richborough has led to speculation these areas were occupied during the Iron Age.

Where early to middle Iron Age settlement has been recorded in east Kent it is generally distinctive, with the best known site probably the transitional late Bronze/earliest Iron Age settlement at Highstead (Bennett *et al* 2007). Here, at least five roundhouses were indicated by the presence of penannular gullies, discovered in association with a series of post-built structures, small domestic structures and a substantial ditched and palisaded enclosure. At Turing College, Canterbury the site, while markedly different in character to that on Plateau 8 was of similar scale, covering some 4.5 hectares (Lane 2014). On Thanet, substantial evidence for settlement was present south of Ramsgate, as indicated by extensive occupational material identified during evaluations at Ebbsfleet Farm (Perkins 1992, 279). Concentrations of Early Iron Age pottery from nearby Cottington Hill further suggest a density of occupation in the area. Recently, the presence of this settlement has been confirmed during excavations along the East Kent Access road scheme (Andrews *et al* 2015a). At Underdown Lane, near Herne Bay, the investigation of some 0.35 hectares revealed between four and eight roundhouses, intermixed with a complex of enclosures and ditches of early to middle Iron Age date (Jarman 2005).

The settlement at White Horse Stone, as at Thanet Earth, would seem to be largely unenclosed (Champion 2011, 197, fig. 4.24). It has been suggested that the site bears similarities with the early hillforts, though without the substantial defences (Champion 2011, 212). Considering this, it may not be a coincidence that the discreet clusters of pits at Thanet Earth are also more typical of the hillforts of central England than of other local sites, such as Highstead. Elsewhere on Thanet, while pits have been identified at North Foreland, Margate and South Dympton they seem to lie in enclosed sites that can be more readily tied into the system of enclosures

outlined above. At Turing College what began as an enclosed settlement later expanded beyond its early limits to encompass a far larger area (Ross Lane *pers comm*).

The Plateau 8 settlement would thus seem, like White Horse Stone and the later phases of Turing College, to form a central place within a wider territory, perhaps partly defined by the large ditch located to the south between Plateau 4 and Plateau 5. At Thanet Earth it is clear that occupation was almost certainly permanent, in comparison to the suggestion of a somewhat fluctuating and transitory population at White Horse Stone.

That the site developed as a central place as storage facility for grain used in wider trading networks remain a possibility. It may indeed be suggested by the increasing size of the storage pits as the period progressed. There is also supporting evidence from elsewhere that this may have been the case (Bradley *et al* 2016, 236–237). In particular, it is clear that in the Upper Thames Valley some sites specialised in grain storage, a good example being Gravelly Guy (Lambrick and Allen 2004, 103–159, 282). However, whether the Plateau 8 settlement can be viewed in quite this way is debateable, as we cannot be certain about the numbers of silos open at any one time. Nevertheless, the density of pits of all phases is exceptional for Kent.

Grain storage need not be the only form of specialisation taking place on large Iron Age sites, with several sites in the Middle Thames Valley apparently focussed around the keeping of livestock (Lambrick and Allen 2004, 103–159). Indeed it has been suggested that the Upper Thames Valley ‘pit cluster’ sites may have formed a surplus producing ‘bread basket’ for the Middle Thames Valley (*ibid*). At a more local level and of potential relevance to Thanet Earth is the possible economic pairing of sites specialising in livestock and those with a greater emphasis on grain production. At Turing College, enclosures suggest one settlement with a pastoral focus but an industrial aspect is also apparent, with plentiful evidence for metal-working and textile production (Lane 2014). Such specialisation of sites presumably led to the development of inter-site and/or inter-regional trade and exchange, with individual settlements and households working interdependently with each other. On Plateau 8, such connections are hinted at by the potin coins and Greensand quernstones, and perhaps also some of the pottery assemblage. Taken together, the pastoral enclosures around Margate, enclosed and fortified settlements along the north and west coasts, island occupation at Ebbsfleet and emphasis on grain storage at Thanet Earth, present and emerging regional picture that echoes the site specialisation known from the more fully understood Thames Valley area and the north-western European mainland.

Why such changes in settlement pattern occurred is not clear, though the evidence is suggestive of a period of crisis developing during the late Bronze Age. This is reflected by the creation of weapons, including swords and spears, specifically for combat as seems to have occurred over much western and central Europe (Osgood *et al* 2000; Kristiansen 2002; Uckelmann and Mödinger 2011). Bronze was also treated

differently, losing its central place in the social and economic system with resulting impacts on the network of long distance contact that had characterised the second millennium (Needham 2007). Perhaps related was the period of climatic deterioration discussed above, though this does not appear to have been a primary cause as the decline in population appears to pre-date this by at least a century (Armit *et al* 2014). This would have had an effect, however, with the pits and posted structures that characterise the Plateau 8 settlement and sites elsewhere, indicative of greater concern for the storage of foodstuffs.

The middle to late Iron Age transition

Activity in the Plateau 8 settlement seems to have largely ceased by 150 BC, though occupation within the wider area continued with the cemetery continuing in use. Similarly, in pipeline Site 3 there is tentative evidence to suggest continuity in settlement from the middle to late Iron Age. Why the Plateau 8 settlement was abandoned is not clear, though wider social and economic changes seem to have affected communities across Western Europe from 150 BC (Cunliffe 2005, 138). Such processes may have begun as early as the third century BC, perhaps being reflected by the strengthening of hillforts in southern England (Cunliffe 2004, 388-89). This would seem to tie in with the diminishing quantities Iron Age pottery recovered from the Thanet Earth settlement.

Potentially, occupation shifted to the eastern side of the buried valley with a complex of cropmarks sited slightly to the east of the edge of the Plateau 8 research centre. Investigation of this area was limited however, and while likely, it cannot be definitively proved that occupation transferred directly from one site to the other. While late Iron Age and Romano-British occupation is certainly represented here, the earliest date for the occupation of this site is not known, though the brooches at the inhumation cemetery suggests a 1st century BC presence.

This is perhaps evidenced by features S3534, S8361, S8395, S12815 and S12722 that form an east-west line running parallel to Romano-British field boundary G8151. None contained any evidence that was suggestive of a Roman date, but pottery that was broadly early to middle Iron Age date was recovered from three. This evidence can be taken in three ways, the first being that the obvious linear arrangement is simply coincidence. An alternative is that they pre-date the Roman boundary, which then mirrored their alignment. Finally, these features could potentially be Roman, but there is no evidence to support this beyond their distribution. No additional Roman features were identified in this part of the site beyond the field boundary. Each suggestion presents flaws, and for the purposes of this report these features are considered to be of an Iron Age origin

Chapter 5: Late Iron Age and Romano-British

James Holman, Robert Masefield and Jake Weekes

Overview

Evidence for late Iron Age and Roman settlement at Thanet Earth was sparse, with the archaeology of these periods dominated by land boundaries and funerary remains (Fig. 126). The majority of the features of this period were located on Plateaux 1–3 and 8, in the area between Track-ways 25 and 27. Even within this area there were no clear concentrations of activity or significant evidence for settlement, with the exception of Plateau 2 where a sunken floored-building may have had both domestic and ‘agri-industrial’ functions.

Considering the scale of the Thanet Earth excavations a higher density of Roman remains might have been expected. This is not because this region was sparsely settled. A more concentrated area of late Iron Age and Roman activity, largely defined by the crop-mark complex centred around Monkton Road Farm, lay to the immediate east of the Research Centre area of Plateau 8 on the east side of the buried valley. Only the periphery of this site was impinged upon as a part of the main Thanet Earth excavations, with further features later identified during the subsequent pumping main work.

Late Iron Age occupation was largely confined to Plateau 8, with a field system and associated trackways imposed over the area of the early-middle Iron Age settlement. That the layout of this field system was influenced by the earlier prehistoric landscape was evident by the partial recutting of at least one of the earlier ditches. It is likely that track-ways 25 and 27, and thus the crop-mark complex itself, may have originated during the late Iron Age (or perhaps slightly earlier).

Three distinct hollow ways (sections of which were metalled) were in use during the Roman period. These extended across the site from east to west with one curving to the north-east and almost certainly originated as earlier features, probably of late Iron Age date. Small groups of cremation burials were associated with one of these trackways, as was the single Roman structure. The sunken-featured form of the structure is very similar to others found on Thanet, notably on the line of the A299/ A256 ‘Monkton to Mount Pleasant Road’ and ‘East Kent Access Road’ projects (see Hicks 2008; Cotton *et al* 2014) but is unique on this site.

At least one identifiable phase of Roman field system was identified in the north of the site, on Plateaux 1 and 8. Fragmentary traces of this extended as far south as the north part of Plateau 5. Associated with the northern part were two adjacent small, square enclosures set over the infilled ring-ditch of Bronze Age Barrow 6 (and apparently respecting its formerly extant mound). One of these contained three early Roman cremation burials suggesting that this at least had a funerary origin. Two other cremation burials were found further to the north-east, near a number of

inhumations that were originally considered to be of Iron Age date. Subsequent carbon dating indicates, however, that at least one of these burials was Roman in date. No occupation focus for this activity was clearly located, and it seems likely that this too relates to the crop-mark complex.

Further scattered cremation burials, of both early and late Roman date, lay in several parts of the larger Thanet Earth site, notably on Plateau 5. Unfortunately, beyond the highly fragmented field system, these remains could not be placed in a wider context – although those closest to the sunken-featured building may be associated. It is also possible that some of the cremations in the north-eastern Plateaux zones were associated with the cropmark complex, but others to the north-west and south probably relate to unlocated settlement that lay outside the investigation area, or had been removed by later ploughing. This is also intimated by the presence of residual Roman pottery in many of the medieval features in this area.

Late Iron Age

Trackways, fields and enclosures

As discussed above, the date of many of the features that defined the Iron Age landscape remains somewhat obscure. It seems likely, based largely on stratigraphic rather than artefactual associations, that the northern part of ditch system G8298 was re-cut during this period to form ditch G8273. This formed part of a wider system of landscape re-organisation with several other ditches also laid out at this time (Fig. 127). In addition, the exact chronological position of Trackway 27 is unclear. A late Iron origin seems the most likely date, though it could conceivably be earlier.

Trackways 25–27

Three of the many potential trackways located at Thanet Earth (Trackways 25–7) were in use during the Roman period but probably late Iron Age or earlier in origin. The most prominent routeway (Trackway 25) was most readily identified on the eastern side of Plateau 2, where it formed a heavily truncated, metalled hollow way (G2155), aligned approximately east-north-east to west-south-west (Plate 132). Further west, its line was marked by a number of intermittent ditch lengths (G2084–2085 and probably G2091). In this area its route appears to respect ditched elements of a prehistoric field system in the north-east part of Plateau 2. The line was continued to the east in Plateau 3 by a deeper metalled hollow way (G3026) (Plate 133) and possibly much further east still by three east-west aligned ditches found in the access road (G3032 and G3078–3079).

Hollow way G2155 extended for some 115m from the eastern limit of Plateau 2. Its eastern extent, consisted of a broad, shallow and in places flat bottomed cut that was 4.5m wide and 0.60m deep at its eastern end, becoming narrower and shallower to the west. Deposits of silt infilling the base of the cut and evidence of erosion or wear, suggest that the route formed as a hollow way with no metalling in its early lifetime.

The flint metalling was recorded in five slots excavated in Plateaux 2 and 3, and as a surface spread intermittently located along its western extent. While wheel ruts were associated with the trackway, it was not obvious whether they were earlier or later than the metalling. The metallised layers were overlain by homogenous levels that filled the bulk of the hollow, probably naturally derived through erosion. A small quantity of ceramic material was recovered from the metalling, mostly from slots excavated in Plateau 3. Clearly post-dating the feature this material suggests a broad late Iron Age to early Roman date. Preservation of the route way was better on Plateau 3, with the increased depth due largely to the slope of the land, here trending down into the shallow valley.

Trackway 26 and its associated side ditch (G8160) may well form a further continuation of Trackway 25. The hollow way, here aligned approximately north-east/south-west, became increasingly eroded before being completely removed to the north. It survived for a length of c. 59m extending across much of the Research Centre area of Plateau 8. It was formed by two parallel linear features, a ditch on the eastern, higher side (presumably to catch surface water run-off from upslope in very wet weather), and an adjacent hollow way, here unmetalled, which tapered to form a single hollow towards the south. At maximum, the hollow way measured 4.6m wide and 0.40m deep with moderately steep sides and a flattened base. Small quantities of pottery and animal bone were recovered from its fills. The track skirted elements of the crop-mark complex around Monkton Road Farm to the immediate east (Enclosure 11) and was bordered by the shallow remnants of a ditched field system (below).

Trackway 27 was located on the north-east side of Plateau 1, investigated during both the main phase of excavation and later plateau extension, with a 41m length extending from the site boundary. Formed by a hollow way that lay on a slightly curved north-west to south-east alignment, it became increasingly eroded to the west (similar to Trackway 25) before disappearing. Three slots were excavated across this feature that had an average width of 6m, with its depth ranging from 0.2–0.25m. A deposit of silt (S10186) was located at the base of the feature, later sealed by a metallised surface. The presence of the underlying silt deposit would seem to indicate that the metalling was not an original feature, with pottery from this later deposit suggestive the trackway was in use during the late first to second centuries. The base was characterised by a number of wheel ruts (G10022–10024;) approximately 0.16m wide and 0.04m to 1.12m deep, interpreted as having cut the metalling. There was some indication for a fragmentary drainage ditch (S10020; S20022) running along the south side of the feature but this was not identified along the entirety of the investigated length. The upper fill (G10025) was of clay silt would seem to have formed slowly through processes of erosion. At its western limit it was cut by two ditches, one of undoubted medieval date. Projected to the east, this trackway would extend to the northern limit of the crop-mark complex around Monkton Road Farm. Its alignment is followed by the modern field boundary that forms the northern limit of Plateau 8.

Fields IA1, IA2 and IA3

A series of intercutting ditches aligned on north–south and east–west axes were identified on Plateau 8, extending into the eastern half of Plateau 1 (Fig. 127). These formed a field system of late Iron Age date that largely superseded the early-middle Iron Age settlement.

Forming the spine of this field system was north–south aligned ditch G8166 that ran for some 144m and extended beyond the northern limit of excavation. This was approximately 0.3m deep by 0.75m wide and was noticeably shallower at its southern end. Notably, the ditch may have been deliberately backfilled in areas, especially to the north, where the fill contained a mixture of artefactual debris including residual early to middle Iron Age pottery, animal bone, daub, burnt and worked flint and quernstone fragments. A re-cut (G8297) was recorded intermittently along its length though it had been heavily truncated by ploughing. It would seem that this feature was visible as a slight depression running across the area into at least the early Anglo-Saxon period as a shallow sunken building (SFB 4) was cut into its fill.

An east–west aligned ditch (G8207) extended eastwards from the line of G8166, approximately 50m north of its southern terminal. The west end of this ditch was heavily truncated by ploughing and was traced for a distance of only 30m. Following a gap of some 35m (again caused by plough erosion), the ditch was re-identified as G8273 and ran for a distance of approximately 27.6m on an east–west alignment. Subsequently it turned to the north for some 11m, broadly mirroring the NNE–SSW alignment of the buried valley, before returning to the original east–west alignment. Here it was traced for some 48.5m before entering the colluvium filled buried valley. Only a 5.58m length of the primary ditch was located, with the feature 0.45m wide by 0.2m deep. It was filled generally filled with sterile clay silts, probably formed by eroded material originating from the sides of the ditch. Much of the east end of the ditch lay within the colluvial fills of the buried valley.

Most of the original cut had been removed by later re-cuts (G8208 and G8044), visible only in the eastern part of the boundary. The uppermost re-cut, G8044, was more substantial, on average 1.14m wide and 0.46m deep. The fills were again mostly formed by eroded material though small quantities of domestic refuse (mostly residual early–middle Iron Age pottery and animal bone) had in places been incorporated.

These ditches formed three easily distinguishable landscape units, fields IA1–IA3. Field IA1 covered the area to the east of G8166 and to the north of G8207 and G8273. It encompassed the majority of the former mid to late Iron Age settlement, covering an area of at least 96.5m north–south by 142m east–west. The northern extent of the field lay beyond the limit of excavation but it is probable that it was formed by the line of track-way 27. This is thought to follow the line of the extant field boundary

that ran to the settlement indicated by crop-marks to lie beneath Monkton Road Farm.

Field IA2 lay immediately to the south of field IA1, encompassing the southern periphery of the Iron Age settlement. The field covered a minimum area of 60m north-south by 113m east-west probably but was probably larger, with the southern part of ditch G8166 removed by ploughing. In all likelihood it probably extended into Plateau 3.

The presence of east-west aligned ditch G8190 and north-south aligned ditch G8240 within fields IA1 and IA2 remains somewhat difficult to explain, as they had been mostly removed by ploughing. They possessed no stratigraphic relationship with the other ditches but lay on identical alignments. It is conceivable that they represent internal sub-divisions, with G8240 in particular following the alignment of the northern part of ditch G8207.

Lying to the west of ditch G8166, extending into Plateau 1 was Field IA3. This was the larger of the three fields, covering a minimum area of some 88m east-west by 149m north-south. The northern boundary was formed by ditch G8186/G10028, located close to the limit of excavation in Plateau 8 and more obviously traceable in Plateau 1.

Enclosures 5 and 6

Lying in the north-east corner of Field IA1 was Enclosure 5, formed by ditch group G8189. These formed two small paddock like features, 11.48m and 10.88m wide respectively. The dating of this enclosure is difficult as any intersection between it and/or field boundary G8186 and Trackway 25 lay beyond the limit of excavation. Enclosure 6 lay to the west, defined by ditches G8186/G10028 that formed its western and southern boundaries, with its northern limit formed by Trackway 25. Much like Enclosure 5, it is assumed that this feature formed a small paddock.

Trackway 23

Trackway 23 cut across the top of the re-cut ditch G8080 and was formed by two insubstantial gullies lying 2.5m apart. It was traced for approximately 30m and lay on an east-west alignment running virtually parallel to the east-west portions of field boundary G8044 that lay only 2.2m to the north. The majority of the feature appeared to have been removed by erosion with the fills representing basal deposits formed from eroded silts.

Field IA4

Lying immediately to the north-west of Plateau 8, only a small part of field IA4 lay in the excavation area. The field lay on an approximate north-west to south-east aligned axis, mirroring that of adjacent Trackway 27.

The field was delineated by an L-shaped ditch (G10135; G10136) that ran for 12.8m from the eastern limit of excavation in Plateau 1, before turning 90 degrees and running for an additional 48m before meeting the limit of excavation. Four slots were excavated across the feature that was between 0.82–1.08m wide and 0.15–0.5m deep. Multiple deposits of mixed clay silt containing small quantities of natural flint and chalk were recorded filling the ditch, probably resulting through natural erosion. Fragments of early Roman amphora were recovered from slot S20018 but cultural material was generally scarce in this feature. The north-east to south-west section of ditch may have been discontinuous, rather than simply being ploughed out, with terminal S20005 perhaps forming part of an entrance. Unfortunately the opposing terminal was not identified when new services were installed immediately adjacent to the Plateau 1 excavation.

Burial in south-west corner of field IA4

A sub-rectangular grave (S20008) 0.95m wide, 2.06m long and 0.17m deep, aligned north-north-east to south-south-west lay in the south-west corner of Field IA4 (Fig. 128; Plate 134). Contained within the cut was the mostly articulated remains (SK1.26) of an adult of undetermined sex, aged 26+ years. A radiocarbon date of 44 BC–AD 73 cal BC at 95 per cent probability (at 95 per cent probability; Table 6, UBA-22934) was recovered from the skeleton indicating a probable late Iron Age or very early Romano-British date. Approximately 60 per cent of the skeleton had survived although the bone was poorly preserved. That the body had been placed in a coffin was indicated by the presence of three iron nails (SF 1e1–1e3).

The body lay supine with the arms positioned along the sides of the torso and the head situated at the south end of the grave. Pathology was observed in the lower right tibia, possibly representing a healed break. The skull itself did not lie in an anatomically correct position, and while damaged during machining of the area this did not fully explain the inconsistency. That three teeth were scattered around the skull, to the north, east and south is probably incidental, representing post-mortem loss. During excavation it was demonstrated that the top part of the cranium lay on its right side above the sternum with the upper jaw therefore facing the south end of the grave cut (P5.4). The lower jaw was twisted out of position by approximately 90 degrees anti-clockwise and faced the side of the grave. It could not be demonstrably proved whether this was deliberate repositioning post-mortem, or related to later disturbance.

The feature was backfilled with orange-brown clay silt with inclusions of flint and chalk and finds of burnt flint and pottery. A quantity of small mammal and amphibian remains were recovered from the grave fill. Presumably these were animals that fell into the grave and were unable to escape. These remains suggest that either the grave was cut sometime before interment of the body, or that it was left open for a period following burial.

Conquest period burials on Plateaux 1 and 8

Situated on the extreme north-west side of Plateau 1 were two isolated cremation burials, S10594 and S10688. The latter was a lavishly furnished burial that contained ten vessels (one intentionally fragmented and positioned throughout the fill), fifteen amber beads, three copper alloy brooches, two brooch pins, a lead spindlewhorl and a small quantity of animal bone (Fig. 129).

The cut for pit S10688 was sub-rectangular, 0.91m long by 0.67m wide and 0.21 m deep, lying on a north-east to south-west axis. The grave goods had been intentionally arranged in layers with the lower containing the primary burial (Plate 136). This lower layer comprised a *Terra Nigra* platter (c. 25 BC–AD 45) placed along the longitudinal axis of the cut, slightly north-east of centre. Lying in the south-east quadrant of the grave were fifteen amber beads (FN 1.143–1.157) and a copper alloy brooch pin (SF 1.159). Thirteen of the beads were clustered together with two outliers approximately 0.1m to the north. The brooch pin lay only 0.1m to the east of the outlying beads, close to the edge of the grave cut. The primary cremation deposit (SK 1.18) was formed by a concentration of burnt bone (a token deposit of just 76g) that lay in the south-east quadrant of the pit, lapping over the edge of the platter and sealing the outlying beads. This deposit was probably originally contained within a bag. Three copper alloy brooches were apparently mixed with the human remains: a pair of elaborate rosette type (FN 1.112 and FN 1.113) and a plainer example (FN 1.114) (Plate 137). These were recovered by metal detecting prior to the identification of the burial and thus their exact position within the burial was not recorded. Placed in the grave following the deposition of the cremated remains were two ceramic vessels. One, a shattered cordoned jar (c. 0 BC–AD 70) lay immediately to the south-west of the platter (virtually touching it), while a *Terra Nigra* cup placed on its side, lay to the east of (and partially overlying) the platter. Lying at the south-west end of the cut were two large fragments from a second *Terra Nigra* platter. A small quantity of animal bone, including pig's teeth had been placed on top of the southernmost of these.

The lower level of the burial was partially backfilled to a depth that approximated the top of the cordoned jar prior to the deposition of the upper layer of grave goods. The backfill material, a fine clay silt containing a lead spindlewhorl (FN 1.158) and a second brooch pin (FN 1.160), probably derived from soils removed during excavation of the grave cut. Grave goods associated with the upper layer of the burial were arrayed largely around the area of the primary cremation deposit, the top of which would seem to have protruded through the lower backfill (Plate 138). Situated at the south-west end of the grave on the longitudinal axis was a large butt beaker in Gallo-Belgic whiteware (c. AD 30–70). Only 0.04m to the north-west, a second smaller butt beaker (c. AD 30–70), in a similar fabric, stood upright though leaning slightly toward the south-west corner of the grave cut. A fragment of *Terra Nigra* platter (c. AD 20–45) had been laid upside down approximately 0.1m to the north-west of the smaller of the butt beakers. Smaller pieces, immediately to the north probably also derived from this platter, lying close to the south-east edge of

the cut. Placed in the north-west quadrant of the burial was a *Terra Nigra* cup (c. AD 10–43), positioned on its side with the top facing the north-west corner of the grave. Adjacent to this, placed on the longitudinal axis of the grave, was a lid seated beaker (c. 20 BC–AD 45) from the fill of which a small necked beaker (c. AD 43–70) was excavated. The final vessel, a butt beaker (c. AD 30–70) lay immediately adjacent to the lid seated beaker touching the side of the grave cut. The position of the cremation deposit and grave goods within the pit left an empty area some 0.2m wide at the north-east end of the grave into which perishable items (such as foodstuffs) may have been placed. No direct evidence for such goods was, however, recovered during excavation. Following the placement of grave goods the remainder of the grave had been backfilled by a layer of re-deposited natural, virtually identical to that filling the lower part of the grave.

The second burial (S10594) lay only a few metres to the east, but only survived in a highly truncated and fragmentary condition. Remnants of a jar (c. AD 40–100) were recovered from the shallow cut, along with the disturbed remains of the fill which contained calcined human bone inclusions (21g; SK 1.14) and traces of slag-like material. The presence of this feature suggests that additional burials may have originally been present but were removed by subsequent ploughing. Few other features of this or any other period were found in the area, apart from an isolated pit (S1096) about 65m south-east of the cremation burial group. Further away still, a curving fragment of ditch partially exposed on the northern limit of the area (S1089); both features are only tentatively dated to this period and the latter could well be of medieval origin.

Located 560m to the south-east of the Plateau 1 burial, a loose cluster of five burials was situated on Plateau 8 (Fig. 130). These consisted of two cremation burials (S12315 and S12355) and three inhumations (S12312, S12337 and S12386) all sited in the eastern part of field IA1 in the area of the buried valley.

The cremation burials were located approximately 1.7m apart, and both contained single vessels. Burial S12315 consisted of a sub-circular cut, 0.34m in diameter and 0.07m deep, with moderately steep sides and a flat base. The vessel within, a fragmented probable Butt beaker (c. AD 40–70), was positioned in the centre of the pit (P5.8). Filling the vessel was a deposit of dark clay silt from which just 52g of cremated adult human bone was recovered (SK 8.42).

The second cremation burial (S12355) lay to the south-west. It was contained in a square cut, 0.4m wide, 0.4m long and 0.38m deep with vertical sides. The base was flat with a small niche some 0.23m in diameter cut into the centre of the grave pit and filled by a deposit of clay. Three vessels were positioned above this with a Butt beaker (dated c. AD 40–70), positioned just to the south of centre used as the primary cremation urn (Plate 140). This contained 533g of cremated human bone (SK 8.41). Mixed in with this deposit were fragments from two highly fragmented iron bow brooches (FN 8.9022) comprising parts of two bows with a broken pin and catch plate. Closest parallels to the brooches appear to be of late La Tène *Drahtfibel* type.

Accompanying the burial were two ancillary vessels, a small Butt beaker (dated *c.* AD 40–70) and a Gallo-Belgic platter (dated *c.* AD 43–70).

Located some 5.1m to the east of the cremation burials was a sub-rectangular east-west orientated inhumation grave cut (S12312; SK 8.9) 1.18m long by 0.34m wide and 0.25m deep (Fig. 131; Plate 141). Contained within was the skeleton of a juvenile, positioned supine with the head at the south end of the grave facing west. Very little of the bone had survived but a fragmented skull and fragments of long bones and ribs were recovered. The grave was filled with clay silt from which a late Iron Age copper alloy bow brooch (SF 8.155) that accompanied the burial, perhaps fastening a shroud, was recovered.

Grave S12386 lay some 17m to the north-east of S12312. This grave was sub-rectangular with rounded ends and orientated north-south, some 1.78m long by 0.63m wide and 0.27m deep (Fig. 133). The burial, a probable adult male (SK 8.7), lay in a prone position with the head at the south end of the grave, turned to the east. The bones were moderately well preserved with the lower part of the right arm positioned beneath the pelvis and the elbow lying against the edge of the grave cut. The left arm lay along the side of the torso. The legs were fully extended with the ankles positioned tightly together, perhaps an indication that they had been bound.

Lying 2.6m to the north-east of grave S12386, grave S12337 was also orientated north-south. The cut was sub-rectangular, measuring 1.68m long, by 0.72m wide and 0.62m deep (Fig. 132). Placed in the grave was the skeleton of a juvenile (SK 8.10) that lay supine with the head positioned at the south-east end of the cut facing north-west. The body was bent slightly at the torso, suggesting that the grave was slightly too short for the body which had become slightly contorted as it was squeezed in. The right arm lay straight alongside the torso, with the left slightly bent at the elbow and the left hand positioned over the edge of the pelvis. The legs lay straight, with the ankles positioned close together and the feet pointing to the north-east.

Both graves were filled by deposits of silty clay from which small quantities of residual Iron Age domestic material were retrieved. No grave goods appear to have deposited with either burials, both of which remain largely undated. It is suggested due to their proximity to cremations burials S12315 and S12355, and burial S12312, that they are probably of Conquest period date, although given the variant rite an earlier date, in the late Iron Age (or indeed a slightly later Roman date), is quite possible.

Potential other late Iron Age features

A small number of features situated in the central part of Plateau 8 may have been of late Iron Age date but this was by no means certain. Features (G8241 and G8272) were fairly large storage/rubbish pits, of forms that typified the early to middle Iron Age settlement. Slightly to the east, the upper fills (G8326–8327) of intercutting

quarry complex (G8045–8046 etc.), may also have been late Iron Age or early Roman in date. Their dating remains little uncertain, but based on their relationship with ditch (G8166) it seems unlikely that they pre-date the late Iron Age. The presence of a small number of Roman sherds in the upper fills of these features, and the recovery of a potin coin from G8272 (SF 8.19), perhaps only indicate episodes of levelling.

The Roman period

The Romano-British farmstead

A Roman period settlement at Thanet Earth is defined by a crop-mark enclosure that lay immediately north-east of Plateau 8 (Fig. 134). While probably of late Iron Age origin, Roman occupation was proven by the excavation of ditches extending from the crop-mark site into the Thanet Earth spine road, the Research Centre at the eastern extent of Plateau 8 and later work relating to the installation of the pumping main.

Landscape features such as ditches on north-south/east-west orientations within several plateaux (notably Plateaux 3, 4, 5 and 8) while again of late prehistoric in origin, were retained during the Roman period. This was particularly evident for the hollow-ways leading toward the crop-mark complex that were excavated on Plateaux 1, 2 and 3. A sunken-floored Roman building was associated with the latter in Plateau 2.

The crop-mark complex

The crop-marks form two groups each consisting of three identifiable sub-rectangular enclosures. The larger group of enclosures is positioned centrally within the complex, though one of these is probably medieval, and the smaller to the north. They are bounded to the east and north by a curving ditch that lies on an approximate north-east to south-west axis. To the east the complex is likely to have been bounded by the track-way that would later develop into Seamark Road.

Of the central group of enclosures, the northern is (at least on its south and part of its west side) double ditched with a probable entrance located centrally along its east side. A second potential entrance lay just south of centre along the western side of the enclosure. The ditches appear to form a track-way leading to the second, rather smaller enclosure that lies slightly to the south. A potential entrance would appear to be located on the west side of the enclosure, with a second in the north-west corner. The south-west corner of this enclosure has been obscured by a large sub-circular disturbance, probably a quarry. The southern enclosure in this group is rather longer, though much of the east side is not visible.

The smaller group of enclosures lie to the north-east of the central group. They are smaller and appear to intercut. Extending south from the crop-mark complex is a probable track-way, running adjacent to the haul road that formed the east side of

Plateau 3. A second track-way can be seen extending off of this route to intercept with the line of Seamark Road. That these trackways are Roman seems likely, though the possibility that they may be medieval cannot be entirely ruled out.

Ditches adjacent to the crop-mark complex

A field system was recorded to the east of Trackway 26; this extended eastwards from the site limit into the cropmark complex. The fields in this area were quite small (about 22–25m across north to south) when compared to Fields R1–4 that lay to the south and west (below). They were formed by ditches G8154–8156 and G8164 that formed at least three paddock-like enclosures aligned at right angles to the adjacent Trackway 26 and were bounded by its side ditch. No clear stratigraphic relationship between these elements was recorded however, due to the heavily truncated nature of the remains. The ditches, all about 0.3m wide, were relatively shallow (0.15m deep, apart from G8154 which could conceivably be related to the later Enclosure 11 that cut across the system; below).

Enclosure 11

Enclosure 11 cut across the eastern visible extremity of this field system. It consisted of three or four discrete lengths of ditch (G8153) aligned north-south, both extremities of the alignment curved slightly to the east. Although considered as the western side of an enclosure, the clearly associated cropmarks do not reveal an entire circuit, and it is possible that the ditch forms a boundary delineating the western extent of the settlement, or is part of a field system. Another short section of ditch (S8034) extending to the east from the north side of the southern entrance, could be related (perhaps an internal division) or could form part of an earlier field system in this area. The ditches, 0.75m wide and 0.3m deep on average, yielded Roman pottery but few other finds apart from mussel shell.

No obviously contemporary features were observed within the enclosure (although only a small internal area was exposed). Two features close by to the west remain undated, although one (S8046), contained a small amount of early prehistoric flintwork and some animal bone, but there is some suggestion that this may have been a tree-throw.

Features excavated as part of the Wastewater Pumping Main

Also associated with the cropmark complex were a small number of features identified during excavation associated during the installation of the Thanet Earth Wastewater Pumping Main (Rady and Holman 2012, 36). Whilst every attempt had been made not to impinge upon the more obvious cropmarks in this area, several could not be avoided. As with the features excavated on the Spine Road and Research Centre area of Plateau 8, features within this section of the pipeline had been subject to a high level of truncation.

Two sub-circular pits, S31 and S62 were excavated in this part of the pipeline. The first, S31, was approximately 2.2m in diameter and 1.1m deep, consisting of a sub-circular cut with steeply sloping sides and a flat base. Pit S62 was smaller, with a diameter of 1.2m and maximum depth of 1m. The feature was also sub-circular with vertical sides that broke to a flat base. Both pits contained multiple fills with nine recorded in pit S31 and six in pit S62, in most cases they consisted of mixed clay silts and silty clays. Late first to second century AD pottery was retrieved from both fill sequences, together with associated small quantities of animal bone, and mussel shell.

A large sub-circular post-hole (S36), 0.65m in diameter by 0.24m deep lay 0.75m to the east of pit S31. Following backfilling with a deposit of sterile re-deposited natural the feature was re-cut as post-hole S34. This was of similar size but positioned slightly to the east. The wider function of either feature could not be determined due to the constricted excavation area.

Three roughly north-south aligned ditches (S13, S21 and S54) were set 22–25m with each aligned approximately north-south and c. 0.98m wide by 0.37m deep. They were filled by two deposits of clay silt with the basal layer in each formed by eroded material from the sides. The upper fill was formed by re-deposited natural containing small quantities of domestic rubbish with Roman pottery of first to late second century date recovered from S21. This was the only feature that could be equated to the surrounding cropmarks but it is likely that each ditch formed land divisions of Roman date.

A substantial 8.3m wide sub-circular cut (S52), previously identified as a crop-mark was located 4.8m to the east of ditch S54. Two slots were excavated in this feature, one by hand with the other by machine. These demonstrated that the west side of the feature was near vertical, in some places slightly undercut. The base was not identified despite excavation to a depth of approximately 1.5m. Three fills, all of mixed silty clays and clay silts containing variable quantities of chalk and flint were recorded, each probably deliberately deposited. The feature would seem to have formed a chalk quarry, similar to other identified across the main Thanet Earth site (with notable examples recorded on Plateaux 6 and 8).

The wider Romano-British Landscape in the northern half of the site

Field R1

In the central area (Plateaus 1 and 8), the north and western sides of a large field (Field R1) were located; its southern and eastern limits were not well defined. The northern part of the field was formed by ditch G8151, which extended 133m east-west (about 50m south of Trackway 27) before turning sharply to a north-south axis and heading south for 18.6m. It was on average 0.7m wide by 0.2m deep with the fill containing fragmented pottery, daub, worked and burnt flint, animal bone, and a

fragment of quernstone (SF 461). The ditch cut through a number of ditch alignments and pits relating to the mid-late Iron Age settlement.

Located 21.5m to the south, the remainder of the field's western side was delineated by north-south aligned ditch G8157. This 58.7m long linear was 0.8m wide by 0.24m deep and contained a similar corpus of artefacts to G8151, as well as a silver Anglo-Saxon *sceat* from its upper fill. The southern part of the ditch was increasingly eroded and it could not be traced further than Barrow 6, which lay about 8m west of its projected alignment. The ditch here probably formed the eastern side of an Enclosure (10), and may have abutted the same side of another (Enclosure 9; both below) that was on a similar alignment. A return eastwards was not evident, but may have lain in an unexcavated part of the site. Similarly, the eastern extent of the field was not clear. It is possible that earlier ditches forming part of field IA1 may have been re-used to form this boundary but if so there was no clear evidence for re-cutting. The topography here, on the western lip of the dry valley, indicates that it was unlikely to be much further east than these ditch alignments, and an alternative possibility is that this side of the field lay near the parish boundary. This was defined on Plateau 8 by a substantial lynchet and this may have removed all trace of an earlier ditch (or indeed been formed due to the presence of an earlier boundary). The 20m wide gap in the west side of the field would appear to be too wide to represent an entrance and was probably formed through truncation, although the well-formed northern end of G8157 suggests that there was a smaller entrance here originally.

Enclosures 9 and 10

Enclosures 9 (G3031) and 10 (G8152) were located immediately adjacent to Barrow 6 in the area between Trackways 25 and 27 (Fig. 135). The northern side of Enclosure 9 had been almost completely removed by Enclosure 10 apart from a probably associated western terminal (S12433) that was situated just within the orbit of the ditch of the barrow (by about 2m). Its western ditch also terminated 2m inside the barrow ditch, suggesting that both were respecting the position of an extant mound. The eastern side of the enclosure was not fully located in the ground on Plateau 8, (both sides collectively group G8288), but was clearly delineated to the south in Plateau 3.

The section of the enclosure within Plateau 3 (G3031), and the associated ditches on Plateau 8, thus indicated that the enclosure was exactly 15m square internally. Although no datable material was recovered from the enclosure's ditches, which were relatively small and shallow (0.4m wide by 0.2-0.4m deep), its square shape and close topographic association with Enclosure 10, albeit cut by that enclosure's southern ditch, suggest a Roman period origin (the enclosure ditch was also cut by an early Anglo-Saxon structure (SFB 2), see below) The interior of the enclosure was devoid of contemporary features.

Enclosure 10 was delineated by a ditch (G8152) with two probable terminals on the eastern side of its north and south arms. The eastern side of the enclosure was presumably formed by the western ditch of field R1 (G8157). If so, another virtually square enclosure with an internal area, in this case of c. 9.9–10.0m across, is represented. The ditch of Enclosure 10 was more substantial than that of the earlier enclosure at nearly 1m wide and c. 0.4m deep. It cut across the infilled ditch of Barrow 6, presumably again stopping just short of and thus respecting the mound. The ditch of Enclosure 10 yielded far more artefactual material than its predecessor, including animal bone, pottery of between 25 BC–AD 200 and an iron nail (FN 8.203).

Interestingly both enclosures conform closely with a Roman measurement, the *pes Drusianus* (*p.D.*: c. 0.33m), or military foot (Duncan-Jones 1980). Thus Enclosure 10 would be very close to 30 *p.D.* across internally, Enclosure 9 more exactly 45 *p.D.* across internally and 50 *p.D.* square altogether. This seems unlikely to be coincidental.

Cremation burials within Enclosure 10

A more certain date for Enclosure 10 is provided by three earlier Roman cremation burials (G8162), two fairly richly furnished, symmetrically arrayed within its orbit. The most northerly (S3614) had been mostly removed by truncation, the remaining circular cut (0.38m in diameter by 0.04m deep) barely discernible (Plate 144). It contained the base of a truncated jar and five sherds from an ancillary flagon placed in the approximate centre of the cut. No trace of the cremation burial itself had survived with the pottery suggesting a date of c. AD 50–150.

The southernmost burial (S12749) was larger and sub-rectangular, nearly 1m across but only surviving to a depth of 0.16m, with vertical sides and a flat base (Fig. 136; Plate 145). Lines of carbon within the grave formed a vaguely rectangular shape, suggesting that the burial was contained in a small box some 0.4m wide by 0.45m long. A concentration of burnt human bone (SK 8.60/62; SK 8.67) was positioned in the centre-west part of the box outline, perhaps originally deposited in a small bag (though this was not clear). The bone weighed just 67g, a token amount which nonetheless may have represented an adult as well as a juvenile, the material mixed with small pieces of carbon, as well as some unidentified cremated animal bone. Sealing the burial was a deposit of light clay silt, likely a secondary deposit following the decay of the container in situ. Contained within this deposit were three copper alloy rings (FN 8.235, FN 8.236 and FN 8.242), suggesting that the ‘box’ may have been a slightly more elaborate casket. A number of iron nails also probably formed part of the container though several hobnails were identified. A South Gaulish Samian dish (c. AD 65–95; 30) lay to the west of the container, in the south-west corner of the grave cut. Contained within the fill of the dish was an iron nail and another copper alloy ring (FN 9058a), again suggesting that that container was a casket. The burial had been disturbed by the plough, though not to the same extent as burial S3614, and it is possible that small quantities of human bone located

elsewhere in the grave cut may have been re-located in this manner. Similarly, it is possible that the small number of hobnails and fragments of a biconical beaker (29) may represent grave goods that had also been disturbed by the plough. However, based on parallels elsewhere, it is also possible that this material had been scattered across the top of the burial deposit.

The most richly furnished and best preserved cremation burial (S12813), was set almost centrally between burials S3614 and S12749, offset slightly to the west (Fig. 137). The burial was contained in a sub-rectangular cut 0.77m wide by 0.98m long with slightly rounded corners, surviving to a maximum depth of 0.2m. The base of the cut was flat with the remains of a box (or casket, although no evidence of ornate fittings was apparent), again defined by a carbon stained soil stain. This was approximately 0.82m long by 0.65m wide and placed in the centre of the grave. A concentrated token deposit of burnt human bone (SK 8.63) lay in the centre of the box.

A number of grave goods had also been deposited in the box, surrounding the cremated bone (Plate 146). Lying immediately to the south-west of, and partially sealed by the cremation deposit, was a single hobnail boot (FN 8.9004 *et al*). Two Samian platters (c. AD 70–110; 33 and 34), one slightly larger than the other, had been positioned to the south of this lying parallel to the edge of the box (Plate 147). Overlying the edge of the larger platter, in the south-west corner of the box, was a crushed small biconical beaker (c. AD 60–85, 32). A second group of grave goods were located in the north-east corner of the box. These included a large truncated flagon (c. AD 43–150; 31) positioned between the south edge of the box and the cremation deposit (Plate 148). Lying only 0.1m to the west was an unidentified iron tool (FN 8.260), parallel to the western edge of the box. Placed above the tool, and situated in the north-east corner of the box was a small jar. Both jar and flagon lay on their sides with their tops facing the cremation deposit though this may represent post-depositional movement as the box decayed. A second hobnail boot (FN 8.9005 *et al*) lay immediately to the south of the flagon and the iron tool with the heel placed close to the edge of the box. The area around the box was sealed by fine clay silt from which a relatively large quantity of human bone and carbon was retrieved (SK 8.59). The human bone and carbon within this deposit was comparatively diffuse when compared to the primary interment (although the combined weight of both was just 150g), and seemed to indicate scattered pyre material. The burial can therefore be classified as a form of *Brandschüttungsgrab*, where separate deposits of sorted and unsorted cremation deposit are present. An upper fill of relatively clean clay silt formed the grave backfill. A small quantity of fragmented blue glass was recovered from this otherwise sterile deposit, perhaps indicating the presence of additional grave goods (or commemorative objects) that had been ploughed out.

This group of Roman cremation burials, (no others were found close by) are a strong indicator that Enclosure 10 was specifically a mortuary enclosure. The pottery recovered from the burials would seem to indicate that the enclosure was in use from c AD 70–100. While Enclosure 9 contained no burials, it possibly performed the

same function, with the heavy truncation of the area (as indicated by the poor preservation of cremation S3614) perhaps having removed any additional burials.

Inhumation burials associated with field boundary G8044

Five burials (G8263), were cut into the edge of semi-backfilled field boundary G8044 (Fig. 138). Four lay in identifiable grave cuts and all were situated in the eastern stretch of the ditch as it ran toward the buried valley. Each burial lay on an east-west alignment with the skeletons in variable states of preservation.

The first, grave (S3469) measured 0.70m wide, 1.20m long and 0.50m deep and contained a single, articulated male inhumation (SK 8.2) of between 34–40 years (Fig. 139; Plate 149). The body lay supine position, with the head at the east end of the grave facing north. The right arm was folded up, alongside the torso, so that the hand would have been positioned beneath the chin, with the left laying across the chest. The posture may suggest a shroud or binding (arm locations, feet together), although the head twist could also suggest decomposition in a void.

Grave (S3513) was 0.70m wide, 1.60m long and 0.40m deep and contained a single, articulated female inhumation (SK 8.17) aged 45 years or more, so perhaps a woman who would have been considered elderly (Fig. 140; Plate 150). The body lay supine with legs flexed to the left. The head lay at the eastern end facing south, with the arms positioned to either side of the torso and the hands positioned on the pelvis; the positioning of the limbs could indicate burial during secondary flaccidity (this burial has been radiocarbon dated to the Roman period, AD 132–311 (at 95 per cent probability; Table 6, UBA- 12616).

Grave (S8930) measured 0.66 m. wide, 0.90m long and 0.40m deep and contained the remains of a young adult (SK 8.8) aged between 17–25 years (Fig. 139; Plate 151). Little remained of the skeleton, but it the body was probably crouched/contracted on its left side within a rather small burial cut, with the head to the east; one arm lay by the side with the hand in the pelvis area, the other upper arm pointing across the chest; one leg was drawn up and tightly contracted above the more complete arm, the other leg was less drawn up.

Grave (S12161) was 0.65m wide, 1.8m long and 0.29m deep and contained the remains of a middle aged adult male (SK 8.5: c 35–35 years), crouched with the head at the west end, facing south (Fig. 141; Plate 152). The left arm was positioned over the pelvis, with the right arm pulled up towards the shoulder.

In each case the graves were filled with fine clay silts, very similar to the surrounding colluvium. The fills contained pottery fragments, animal bone, and worked flint, likely re-worked material from the ditch and surrounding area.

The final inhumation (S12009) did not appear to have been placed in a grave, although it is possible that the cut was not identified given the similarity between

grave fills and surrounding colluvium in this area (Fig. 142; Plate 153). The skeleton, that of a female aged between 17–25 (SK 8.13), lay extended on the left side with the head at the east end of the grave, facing south, the arms pulled up toward the chin, and perhaps bound or shrouded into this position.

Fields R2 and R3

Extending to the west from just south of the north-west corner of Field R1 was another boundary, defined by two segmented ditches (G1138/G8158 and G8287) between 2 and 3.5m apart (a shorter segment in between (S14802) may also be related; Fig. 134). The northern ditch (G1138 *et al*) was traced for 106m to the west of Field R1 and the southern for 48m, no continuation of the ditches beyond these western points were identified. Both ditches terminated just short of Field R1 to the east, suggesting they were later additions. It is possible that the double ditch alignment formed part of a droveway, as well as a field boundary. However, the southern ditch (G8287), 0.49m wide and 0.18m deep may have been deliberately backfilled, since it contained a considerable artefactual assemblage compared to the slightly wider and deeper G1138/G8158. The fill of the latter was virtually sterile apart from some animal bone (and an intrusive medieval potsherd). In addition a north–south aligned ditch (G8159) 0.79m wide and 0.21m deep connected with ditch G8287 and was traced for 130m to its south. This sub-divided the area defined above into separate fields with ditches (G1138/G8158 and G8287) as the northern boundary to both.

Field R2 was the smaller, covering a minimum area of 42m wide by 86m (though its southern extent was not identified) and would appear to have contained Enclosures 9 and 10 within its area. It is possible therefore, that it may not have extended beyond the area encompassed by the enclosures and Barrow 6, particularly given that the barrow mound was probably still partially extant. Field R3 covered a minimum area of 62m east–west by 125.5m north–south but neither the southern or western boundaries were identified.

The Plateau 8 quarry

Cutting through north-south aligned ditch (G8159), just west of Barrow 6, was an amorphous shaped quarry (S12455) 9.4m wide, 12m long and 3.5m deep. Two slots were cut through the feature by machine with the second not fully recorded due to health and safety restrictions. The lowest fills consisted of alternating sterile bands of re-deposited chalk and silty clay, probably formed by the erosion of the sides of the feature. An interface between the lower and middle fill sequences had been formed by the collapse of part of the quarry edge. This had been caused by the excavation of an underground chamber similar to those identified on Plateau 2 in the medieval period. Erosion of the edges of the quarry continued after the collapse with a similar sequence of sterile chalk and silty clay bands building up. The fills contained within the upper 1.2m were slightly different, but initially still formed by re-deposited natural soils that contained small quantities of Roman pottery and marine shell.

These had been sealed by a substantial deposit of dumped cultural material consisting of up to 50 per cent marine shell with small amounts of burnt clay and carbon. Capping this deposit was a layer of re-deposited natural.

While the quarry was almost certainly of Roman origin, the character of the shell rich horizon was very similar to the fills of adjacent early Anglo-Saxon sunken-featured buildings (SFBs 2 and 3). This would seem to indicate that the feature was still open in the early centuries of the post-Roman period and was used as a midden. The capping represented a final deliberate backfill, though it is unclear whether this took place in the Anglo-Saxon or medieval periods.

The Romano-British landscape to the south of fields R1 to R3

SFB 1

A sunken-featured building (SFB 1) was located 6m north of Trackway 25 (in the central northern area of Plateau 2; Fig. 134) and consisted of a rectangular cut, associated post-settings and internal features (**G2020**; Plate 154). The cut was c. 8.5m long, 4.4m wide and 0.40m deep, with rounded corners, steep, slightly concave sides and a generally flat although in places, undulating base (Figs. 143–144). Aligned roughly ENE–WSW the building would seem to mirror the alignment of the trackway. The northern and southern (longitudinal sides) were straight, although slight indentations were noted toward the base indicating possible beam-slots or post settings. The worn remains of low steps were located just off-centre along its southern side, bordered by two postholes, S2588 and S2590, possibly representing a door frame. The post-holes were filled by deposits of clay silt from which small quantities of animal bone and pottery (c. AD 150–175) were recovered.

A number of internal features were also present: a shallow pit and gully (S2325), a stake-hole alignment (S9869, S9870, S9871 and S9872), seven other post-settings around the northern, eastern and southern sides (S9873, S2429, S2459, S9876, S9877, S2404 and S2406). It seems likely considering their position that these features had a structural function. Also contained in the building were three probable hearths (S2455, S2569 and S2392), each positioned around the edges of the structure. S2392 was sub-rectangular and 2.3m long by 0.6m wide, lying in the north-east corner. Hearths S2455 and S2569 lay along the south side of the building, both were smaller than S2392. It is possible that the three hearths were contemporary, but as there were no stratigraphic relationships between them this remains unclear. Three external post-settings were also present, S2592 and S9868 on the northern edge of the building (another doorway?) and S9874 towards its south-eastern corner.

The cut was backfilled with deposit sequence S2319, which yielded pottery (mostly of the mid to late second century AD), ceramic building material, a fragment of quernstone (FN 2.9017) and a honestone (FN 2.9037) together with small quantities of grain and marine shell. Some of the internal features also produced pottery (in smaller amounts than the main backfill), marine shell and animal bone. Virtually all

of the pottery assemblage from this sunken-featured building (SFB 1) was of Roman date and the location and orientation of the structure (adjacent and parallel to Trackway 25) strongly suggest a Roman origin. Further, its position does not readily correspond with the usual locations and arrangement of the prominent medieval sunken-featured buildings which tend to be aligned along ditches and associated enclosures.

Two out of three probable hearths in SFB 1 produced fairly low concentrations of cereal grains, chaff fragments and weed seeds of a very similar character to the IA rubbish deposits in the pits on Plateau 8. Spelt wheat, possible bread-type wheat and barley were represented, with spelt slightly dominating in one hearth and barley in the other. The most productive sample from hearth 2569 contained a greater proportion of chaff fragments (ratio 4:9:2 grain:chaff:weed seeds). If the samples are representative of the types of waste being burnt in the hearths they appear to have been used to de-husk grain on a small scale. A possible pea (pea-sized pulse, no hilum; cf. *Pisum sativum*) was present in hearth 2569, indicating a further crop that may have been cultivated for human or animal consumption.

Associated features

A number of other features in the vicinity of SFB 1 are probably associated with the structure, particularly a large pit (S2367, only partially excavated), longitudinally aligned with the building immediately to its east (Fig. 143). This feature, which had very steep sides and a flattish although uneven base, was 5.55m long, 2.9m wide and c. 0.70m deep. There is a slight possibility that this was also a sunken-featured structure (due to its size and position), but there was no clear evidence to support this. The various fills of this feature, mostly re-deposited natural soils, yielded some pottery sherds (c. 25 BC–AD 200) but little else.

A short length of ditch (G2076) lay perpendicular to the building, some 1.5m to the north. It was unclear whether this related to the structure or formed part of some other landscape feature. The ditch had been cut by three shallow pits, probably wear hollows (S2107, S2142/2179 and S2543) and a possible post-hole S2545. While most of the pits yielded Roman pottery (c. AD 70–AD 250), the ditch was sterile and could potentially be prehistoric though there were no other prehistoric features in the immediate area. Unusually, pit S2107 yielded a corpus of potential Mesolithic flintwork, which must be residual, though from where it derived is unclear.

Three pits (**G2078**) were located directly to the south of SFB 1. One of these cut the southern end of a short, curved gully G2079, of uncertain function. Most of these features yielded datable material, mostly of Roman date (c. AD 70–AD 250) though S2285 contained intrusive medieval pottery. The pottery was associated with small quantities of domestic rubbish (that included grain, chaff and shellfish). An outlying pit within this group (S2497) lay 7m to the east. Also in this area was a group of three post-holes (**G2080**) which formed a roughly straight east-west alignment some

3.7m long. The easternmost of these (S2312) and the central feature (S2355) cut pit S2293, the northernmost feature in group G2078.

About 43m to the north-east of SFB 1 were three intercutting pits (G2090). All were somewhat amorphous and only minimally investigated, it is likely that they formed only one feature, possibly a small quarry. The complex was *c.* 5m long, *c.* 4m wide and 0.84m deep at maximum, with various fills of mixed silt clay and clay silt that yielded a small assemblage of Roman period sherds (*c.* AD 70–AD 250) and some residual worked flint.

Perhaps associated with this area of settlement was a substantial, though fragmented, Roman millstone (SF 2.99097). Modelled from Folkestone greensand, this find is purported to be the largest such millstone recovered from Roman Britain (Chris Green pers comm to Andrew Richardson).

Fields R4 and R5

A field system, aligned on the same axis as that on Plateaux 1 and 8, was identified south of Trackway 25 on Plateaux 3–5, though the fields remain somewhat difficult to define (Fig. 134). Agricultural activity had removed a significant portion of all of these features with only the basal silty fills, largely the result of erosion, remaining extant. On Plateau 3, Field R4 was formed by a ditch (G3028) that was traced for 154m on a north–south axis before turning to the north-east just south of Trackway 25. There is some suggestion that this feature was a re-cut of an earlier boundary (G3077), which only survived for *c.* 18 metres where it had diverged from the main alignment. It is probable that G3028 formed part of a larger field system with east–west aligned ditch (G3030) to the south. This heavily truncated feature was only exposed over a short distance.

Field R5 lay to the west of ditch G3077, defined by the north–south boundary and the southern edge of Trackway 27. The south side of the field was probably formed by east–west aligned ditch G3030. Located on the southern limits of Plateau 3, only a short length of this ditch was exposed so this interpretation remains tentative. No trace of the western side of the field was identified.

Possible field system in Plateaux 4 and 5

The Roman period field system appears to have continued to the south where another shallow north–south aligned ditch (G4002) spanned Plateau 4 (Fig. 145). The southern extent was somewhat obscured where it met the substantial east to west aligned ditch (G4006) as delineated by lynchet (G4100). Ditch G4002 was offset to the east by about 75m from the alignment of ditch G3028, had an average width of 0.66m and depth of 0.22m with a homogenous fill that contained few artefacts. A small pottery assemblage, that included Roman sherds dated *c.* AD 70–250, also contained two sherds of residual medieval material. Its stratigraphic relationship to known

medieval field ditches, and its topographic relationship with similar ditches to the north however, support a likely Roman date.

The same alignment was also exposed to the south of the parish boundary (Plateau 5) where a continuation (G5146) had similar characteristics. This ditch, 77m long, was gradually eroded to the south and to the north terminating 5m short of the ranch boundary, probably due to the presence of an associated bank. A slight change in orientation at the south end of the ditch may reflect the orientation of the southern buried valley. Located c. 105m to the east of G5146 was isolated ditch segment (G5066) some 23m long and aligned roughly east to west. It yielded fragmented pottery (c AD 50–150) and was almost certainly associated with this layout of fields. A layer of mussel shell in the eastern terminal was probably a ritual deposition (similar deposits observed in other ditches, some of medieval date).

Cremation burials alongside Trackway 25

The line of Trackway 25 was bounded to the south by a number of Romano-British cremation burials. Nine were recorded near the western half of this trackway (Plateau 2), with four situated to its south and five to the north. All the interments were shallow and truncated, and usually contained within small circular pits no more than 0.65m across.

A distinct group at the far west end of the area (G2004) consisted of four separate, fairly typical early Roman burials. Their disposition, within 9m of each other (with one S2014, further apart from the others) suggests a deliberate placing in a designated area rather than a random one. Burial S2014 contained a primary cremation urn in vessel (holding approximately 290g of calcined bone from an adolescent; SK 2.3). It was accompanied by two ancillary vessels, only the lower portions of which survived (Plate 155). These consisted of a bag-shaped beaker or flagon and a bag-shaped flagon (c AD 70–100). The backfill of the pit yielded some bone fragments probably from the same interment (SK 2.18) that had probably been disturbed by ploughing.

Burials S2018 and S2022 contained single vessels, with S2018 a large jar (c AD 150–250/300) and S2022 the lower part of a Dressel 20 olive oil amphora (c AD 43–250) (Plates 156–157). Both vessels were heavily truncated and produced small but undiagnostic amounts cremated bone from adults (SK 2.6 and SK 2.15, respectively). The pit backfill again contained such material (SK 2.17 and SK 2.19).

Burial S2027 was slightly unusual – a very thin, sterile primary deposit that lay at the base of the cut was overlain by a large sherd of Samian (c AD 120–200) (Plate 158). This was sealed by a considerable spread of burnt bone (SK 2.14) and an iron nail. Lying above was a layer of friable silty clay into which the cremation vessel, a narrow necked jar (c AD 70–200), had been set. What remained of the vessel was filled by dark brown clay silt that contained frequent carbon and burnt human bone (SK 2.2). The configuration of these burial contents suggests a classic *Brandschüttgrab*

type (Pearce 1999; Weekes 2008, 154), more specifically a second-century Brandschüttungsgrab, although frequent carbon was noted from the deposit within the container as well, suggesting it too contained relatively unsorted material. The combined weight of bone from both deposits was again low, at just 151g: token remains of a cremated adolescent, which also produced an unidentifiable fragment of animal jaw.

The remaining burials (G2018) were more widely dispersed, mostly located to the south and east of SFB 1 (suggestive of an association). Of these, cremation burial S2122, just south of the trackway was sub-rectangular with steep, straight sides and a flat base, 0.94m long, 0.81m wide and 0.33m deep. The pit contained a fragmented a Dressel 20 olive oil amphora (*c* AD 43-250+) which contained at least two deposits of cremated bone (SK2.7, SK 2.8, and SK 2.13) and charcoal mixed with a silty clay (Plate 159). The burial was situated approximately centrally between two north-south aligned linear features (G2082, G2083; below), but whether these were associated is uncertain.

Cremation burial S2173 was isolated, about 38m south-east of S2122 and comprised a large storage jar (*c* AD 150-250) filled with the cremated remains of an adult (SK 2.12) (Plate 160). Further bone (SK 2.16) was recovered from the backfill of the pit, but the entire deposit produced just 161g of cremated bone.

Positioned 12.5m to the west of S2122, cremation burial S2196 was somewhat different, in that the burial pit was sub-rectangular, larger (0.92m long, 0.71m wide) and more regularly cut, though still relatively shallow (*c.* 0.4m). The pit contained a large truncated storage jar (*c* AD 70-200) that was used to hold the cremated remains and part of an East Gaulish Samian dish (*c* AD 150-230) (Plate 161). An ancillary vessel, an indented beaker of Pollard type 153 (*c* AD 150-300+) with part of a necked and girth-cordoned jar (*c* AD 150-250) acting as a lid, was also associated with the main burial. A date of *c* AD 150-200 can therefore be suggested for the deposition of this burial.

Cremation burial S2365 lay just north of Trackway 25, 44m east of SFB 1. The vessel containing human remains, a heavily truncated jar, while disturbed was apparently incomplete when buried and had possibly been sliced vertically (Plate 162). Some of the cremated remains survived (SK 2.10), with other material mixed with the general backfill (SK 2.9). There was a strong suggestion in this instance that disturbance of the grave had occurred quite recently through metal detection.

A fifth relatively well preserved cremation burial (S2003) was located 49m to the east of SFB 1, again just north of Trackway 25. The small burial pit contained a complete large necked jar (*c* AD 140-170) positioned in the centre of the cut. This had been used as the primary cremation vessel and contained both the cremated remains (SK 2.4) and a small necked jar (*c* AD 80-175). A smaller ancillary bowl of Monaghan's class 5D2 (*c* AD 120-180) lay immediately to the north. The funeral leading to this burial probably therefore took place *c* AD 140-180).

Cremation burials on Plateaus 4 and 5

One final focus of early to mid-Roman burial was located in the central area of the site, about 470m south of Trackway 25 (Plateaus 4 and 5). These burials were slightly more dispersed when compared to those on the northern half of the site, but mostly disposed to the west of field boundary ditch (G5146). The exception was (G4078), a more isolated and extremely shallow (0.08m deep) feature containing the remnants of a Samian vessel (c AD 120–150), that represent a ploughed out cremation burial.

Four other cremation burials (G5065) were excavated no further than 37m west of field boundary ditch G5146 all within a zone 28m across. Each was badly truncated, preservation depending on the depth at which they were buried. Three were sub-circular cuts of a similar size in plan (0.3 to 0.6m in diameter and from 0.15 to 0.4m deep) with steep sided 'U'-shaped profiles.

Cremation burial S5815 contained the lower part of a single Dressel 20 amphora. The contents of the vessel, which had been mixed with the backfill of the cut (probably by ploughing), yielded calcined human bone (SK 5.3), and other charred organic inclusions. A fragmented *tegula* was thought to have formed a lid, a not untypical arrangement. Just 68g of cremated bone was recovered, but this contained the skull fragments of a child.

The second interment (S5824) contained fragments from a large flagon or amphora (c AD 50–250) filled with 634g of cremated bone from a young adult female (SK 5.1) along with very fragmented copper alloy inclusions (Plate 163). The main backfill yielded an iron object and hobnails (SF5.21, SF5.22).

Feature S5848, which was un-urned, and mostly filled with black silt clay and charcoal, 13.5g of cremated adult bone, daub and burnt flint, could qualify as a deposit of pyre material rather than a 'burial', *per se*, although the latter cannot be ruled out (Plate 164). Nor should a commemorative function, even if some would regard this as 'pyre debris'.

The final feature of this group (S5821) had been very badly disturbed, firstly by ploughing then again during the topsoil strip, and comprised a jumbled smear of orange grey clay silt with a fragmented necked jar (c AD 170–250), the remains of a small flagon (c AD 150–250), fragments of iron nails and the cremation burial (SK 5.2) intermixed (Plate 165). The original form of the burial/funerary feature was indeterminable.

The settlement focus relating to this final small group of burials was not located, there being few other features of similar date in the vicinity. However, residual Roman material was present in many of the medieval features in the area, indicative perhaps of a level of activity that is not reflected in any cut features.

Quarries

Three other features are interpreted as quarries. Feature (G10017) was situated to the north of Trackway 27 near the eastern edge of the Plateau 1. It was over 4m across and 2.66m deep. The lower fills were generally sterile and suggest infilling through post-use erosion. The upper fills were more redolent of deliberate backfilling and yielded a small assemblage of animal bone and Roman pottery (*c.* AD 10–300). These could post-date the use of the quarry by a considerable period, but the feature does closely resemble at least one Roman quarry of about the same size and period on Plateau 4 (G4102).

Sub-circular pit (G4102) was over 4m in diameter and 2.19m deep and located at the extreme eastern edge of the Plateau 4, about 530m south-east of Trackway 25, where it was cut by a medieval ditch forming part of Enclosure 42. The feature contained several fills yielding Roman pottery (*c.* 25 BC–AD 200) and animal bone. Its lower fills probably accumulated during post-use erosion, while the upper fills were more suggestive of deliberate backfilling; as with G10017 the latest fill contained the majority of the artefactual evidence.

The final quarry (G6044) lay on Plateau 6 and consisted of a large pit that cut into the southern orbit of Barrow 1. This sub-circular feature was 8.6m wide and 3m deep. Its fill yielded fragmented pottery (*c.* 25 BC–AD 300), marine shell, snails, animal bone and a few iron nail inclusions. It also contained very rare fragmented human remains (SK 6.4).

The late Roman Period

Late cremation burials on Plateau 3

A cluster of four burials (G3027) was found just 8m to the south of the Trackway 25, *c.* 100m to the east of S2003, on Plateau 3 (Fig. 146). Three were disposed in a triangular formation, with one burial set further apart than the others. All were within 10m of each other, were between 0.5 to 0.75m in diameter and approximately 0.25m deep. They appeared to have been deliberately placed in the corner of a Field (R5), but had been heavily truncated by post-depositional processes.

Burial S3086 was un-urned with the cremated remains (SK 3.8) placed directly in the pit. Two of the other burials (S3037 and S3094; Plates 166–167) held heavily damaged ceramic vessels, both of which contained calcined human remains (SK 3.6 and SK 3.9/SK 3.10 respectively, the latter from two separately recorded layers). That within S3037 consisted of a necked jar in a handmade black silty Thanet Dry type fabric with internal and external polish. Interestingly, while pots in this fabric are usually dated between *c.* AD 40 to 100 this example shared similarities, not least in form, to late Roman Grog tempered jars. The vessel in grave pit S3094 was similarly late, consisting of a late Roman Grog-tempered necked jar dated to *c.* AD 250–420, and yielded 9.5g of cremated bone (plate).

The final burial in this group (S3102) was badly disturbed during the machining of the site (Plate 168). Containing some remnant cremated bone (SK 3.7) was the base of a jar dated to the late Roman period, and possibly the fifth century. The burial yielded two ancillary vessels, a jar and a beaded and flanged bowl, both of the mid third to mid fourth century. Several nails (FN 11–15, FN 9018) located within the fill suggested the presence of a decayed wooden box or similar item.

Late Roman possible cremation burial on Plateau 8

On Plateau 8 a further potentially late Roman cremation burial was identified on the eastern side of the buried valley immediately to the west of Barrow 10. It consisted of a small sub-circular pit (S14140) 0.88m wide, 1.26m long and 0.16m deep, filled with clay silt containing a small quantity of disarticulated and ?cremated human bone (SK 8.45) along with a late fourth century coin (SF8.9087).

Late Iron Age and early Roman landscape development at Thanet Earth

Late Iron Age settlement pattern

Landscape form

While no major late Iron Age settlement evidence was clearly discerned at Thanet Earth, the limited evidence uncovered indicates renewed change. Most notable is the shift in occupation away from the Plateau 8 settlement to a new site on the other (east) side of the buried valley, as indicated by the cropmark complex focused around Monkton Road Farm. This has probable late Iron Age origins, as is indicated by the dating of Trackways 25 and 27 (though in the latter case a Bronze Age origin cannot be entirely ruled out), with occupation continuing into the early Roman period. The line of trackway 27 survives into the modern period, forming the north-eastern boundary to the Thanet Earth development. Similarly, it seems probable that Seamark Road also had a late Iron Age or earlier origin.

Thanet Earth is itself situated in an area defined by routeways to the south, east and north, with the southern and eastern of probable late prehistoric date (Perkins 2001, 46–47). The southern route would be perpetuated in the post-Roman period as ‘Dunstrete’ (now the A253). To the north, a road of putative Roman origin roughly followed the line of the A28 from Sarre to Brooksend, continuing along the ridge of the escarpment north of the Acol and Shottenden Valleys (Perkins 2001, 47). Both this, and the southern route branch off of the Roman road from Canterbury (Margary Route 11) that terminates at Sarre, at a crossing point across the Wantsum Channel.

It seems probable that Trackway 25 diverged off the northern route, providing a second point of access to the cropmark complex. Associated with the ditches that mark the trackways are fields and other features suggestive of a farming economy

throughout the period. The area remained associated with death and commemoration, though generally at levels to be expected of a working rural landscape.

Increasing regularisation of settlement and development of trackway systems has been long noted in both the Thames Valley and Northern France during the late Iron Age but has been less clearly evidenced in Kent (Booth *et al* 2007; Taylor 2007, 55–72, 113–115; Haselgrove 2007, 506). A marked increase in Kentish evidence has occurred in recent years, largely due to the identification of sites of this period along the route of the East Kent Access Road, at Island Road, Hersden and sites around Ashford (Booth *et al* 2015, 345). Such activity is thought to form one aspect of a significant and rapid increase in population density during the late Iron Age (Bradley *et al* 2016, 264). The Thanet Earth cropmark settlement should thus be viewed as within a new development of the earlier landscape system that is further represented by fields IA1–4.

The nature of the cropmark settlement

Within this landscape, the Thanet Earth settlement seems to lie in a zone of lower status farms between Perkins (2001) sites 9 and 11. Both of these major villa type buildings, presumably at the centre of estates, with the cropmark settlement clearly different in form. Moderately sized non-villa settlements, containing sunken buildings, lie c. 1.7km and 2.1km to the south-east at Monkton-Mount Pleasant and Tothill Street (Hicks 2008; Cotton *et al* 2014).

In terms of overall scale, at c 300m across, the cropmark settlement is potentially of similar in size to the village or hamlet-like Monkton-Mount Pleasant and Tothill Street settlements (Hicks 2008, fig. 2/2; Cotton *et al* 2014). It would seem to have been bounded by ditches and at least semi-enclosed, as was also the case at Tothill Street (Cotton *et al* 2014). At Thanet Earth this is particularly apparent on the west side of the settlement with the westernmost enclosure ditch running along the eastern edge of Plateau 8, forming Enclosure 11. Presumably the east side of the settlement was bounded by the precursor to Seamark Road. Internally, several large amorphous features are apparent on aerial photographs, with one proved to form a quarry during the later pipeline work. However, it is not inconceivable that some of the other anomalies may form sunken buildings, as was the case at Tothill Street (Cotton *et al* 2014). It is equally possible that the large size of the cropmark-defined complex reflects the scale of attendant stock enclosures around a much smaller occupation foci than is represented at the highly characteristic sunken-featured building complexes noted above. Unfortunately, it is difficult to glean much more in terms of wider settlement form from the cropmarks without further investigation. The site was almost certainly agricultural, with arable cultivation evident from the size of fields IA 1–4.

Settlement enclosure now seems to have been fairly common in east Kent, though historically this has not been evident elsewhere in the county (Taylor 2007, 24).

Recently, several enclosed sites along High Speed 1 have been identified suggesting that they may perhaps be more common than previously thought (Booth 2011, 264–265). On the continent enclosed sites predominated in the Nord-Pas-de-Calais and Picardy from as early as 250 BC and became increasingly ordered into the late Iron Age (Bradley *et al* 2016, 267, 284). An increasing trend towards farm centre enclosure from the middle Iron Age to the Roman period is also typical of southern and central Britain generally (e.g. Hart 2014; Lambrick and Robinson 2009; Masefield *et al* 2015, 282–283, 303). This development is usually accompanied by increasing imposition or intensification of co-axial field-systems from the late Iron Age, often reflecting the enclosure of formally open pastoral landscapes.

Evidence for Continuity?

The development of the late Iron Age (to early Roman) landscape at Thanet Earth did not always demonstrate the clear break with earlier prehistoric landscapes evidenced by the High Speed 1 sites (Booth 2011, 243, 259). Most obvious was the modification of the existing late Bronze/early Iron Age ditch system within the Plateau 8 area of the early to middle Iron Age settlement. Also notable was the close proximity of Trackway 27 to barrows 7 and 8. Probably still extant landscape features, these probably formed useful navigational markers. Similarly, the position of the NNE–SSW aligned ditch forming part of fields IA1–3 seems to reflect the position of barrow 6. It is interesting to note, however, that this field system, unlike that of the Bronze Age, did not obviously skirt the barrow. Despite this, the development of this new landscape system from the late Iron Age, often after a slight gap in activity, fits in with a more general pattern noted on sites across south-east England.

In terms of settlement, discontinuity between the middle and late Iron Age was more pronounced. Little obvious trace of late Iron Age occupation was visible in the area of the early-middle Iron Age settlement, or on the western side of the buried valley more generally, after the late middle Iron Age. That the immediate area remained settled is, however, indicated by presence of late Iron Age grave goods in the nearby cemetery. A similar situation was recorded at Tothill Street with sufficient late Iron Age cultural material present on the site to suggest continuing activity in the vicinity, but no obvious focus for this (Cotton *et al* 2014). At Thanet Earth, it is tempting to suggest that the positioning of the cemetery prefigures the shift of settlement to the east side of the valley even if is not directly related to it. Such an argument is also possible at Tothill Street, albeit more tentatively given the smaller scale of early to middle Iron Age settlement, but again cannot be easily proven (Cotton *et al* 2014; Gollop and Mason 2005, 25–26).

The Romano-British landscape

Chronology, continuity and form

The late Iron Age landscape was augmented or replaced by a less fragmentary, albeit still relatively diffuse, Roman co-axial system. Occupation would again appear to have centred on the site of the cropmark complex. No new early Roman landscape elements were demonstrably imposed until at least forty years after the Conquest. A similar interpretation is indicated by many of the excavated sites in Kent and in particular Canterbury and its immediate hinterland (CAT 2015, 18–19). In each case this may simply be a reflection of the paucity of finds from this period, with later cleaning out of features removing the earliest deposits and leaving only the final lower silting. More immediate changes can also be demonstrated, such as the development of the ‘proto-villa’ settlement at Thurnham (Oxford Archaeological Unit 2001, 13). These would seem to have been an exception to the slower pace of change identified elsewhere.

Nevertheless, there are chronological problems when considering the transition from one period to another. It is clear from Thanet Earth, for example, that the use of AD 43 to signify the end of the late Iron Age period is somewhat meaningless. Instead it is suggested that whilst certain aspects of the preceding landscape, such as the main routeways, remained in use as evidence for some continuity, an identifiably co-axial Roman landscape also began to be developed from around AD 75–100. This remained in use until the gradual cessation of settlement at the known foci at the Monkton Road Farm cropmark complex and at SFB 1 around AD 300. However, late and possibly very late Roman local occupation is suggested by the small group of cremation burials from Plateau 3, though no associated settlement was identified. It is possible such occupation might have been situated within the adjacent retained unexcavated areas of Thanet Earth, whilst late Roman artefacts associated with 5th century Anglo-Saxon occupation on adjacent Plateau 8 might also derive from the elusive occupation.

Recognition of the cropmark complex as largely Roman, though with a probable late Iron Age origin, allows the sparse Roman remains across the Thanet Earth site to be placed within a wider context. It is easiest to contextualise the excavated Roman remains in relation to trackways 25 and 27 that ran into the farmstead. The line of southern trackway 25, traced for over 100m across Plateau 2 and into Plateau 3 (where it formed more of a metalled and rutted hollow way), was eroded away further to the west, but could be discerned by fragments of ditch. The track must have passed just to the north of the two prehistoric barrows (Barrows 7 and 8) at the western side of the plateau, probably skirting their then still extant mounds. Its position further west still is suggested by the small group of cremation burials near the edge of the area. To the east the route appears to have bifurcated, its southern limb (defined by ditches) intersecting with the Monkton Road Farm cropmark complex just to the east of the examined area, the northern diverging to the north-east and passing just to the west of the cropmarks (where it was excavated as Track 26).

The cropmark complex was associated with a number of Roman fields and enclosures, in addition to the track-ways that ostensibly linked it to other sites in

Thanet. One of the more notable aspects of the early Roman redevelopment of the late prehistoric landscape is its relationship with surrounding topography. The newly laid out fields were large, as would perhaps be expected given primarily agricultural surroundings. Fields R1–3 cut across the contours of the land on an almost exact north–south axis. This provides a marked contrast with the earlier field systems, particularly those in the north half of the site, that tended to flow with the lie of the land roughly following the lines of the buried valleys. Notable is that while the late prehistoric landscape went out of use, several prehistoric monuments remained landscape foci. Most obvious was the clustering of enclosures 10 and 11 around Barrow 6.

While large, and clearly regular, as far as the layout of the Roman field system at Thanet Earth can be determined, it does not readily fit into a particularly uniform rectilinear arrangement based on documented Roman land measures such as the *actus* (Campbell 2000, *liv*). Elements of this have been postulated elsewhere in the south-east, however, there remain difficulties in identifying such standard measurements in practise (Peterson 1993, 211–236; see Duncan-Jones 1980).

The Thanet Earth fields contrast dramatically those laid out c 6km to the east at Coldswood Road, where fields were only c 10–15m wide by 20–30m long (Egging Dinwiddy and Schuster 2009, 94–95). Again, they are also dissimilar to those on the claylands at Brisley Farm that dated to only slightly earlier in the period (Stevenson 2013, 182–7). Here, the Roman fields largely, though not entirely, replaced those of the late Iron Age (Stevenson 2013, 78, 182, 378). In particular, the southernmost elements of this system clearly follow the line of their precursor.

The adjustment of the Brisley Farm landscape is particularly clear, in part due to the imposition of a pastoral system of land division over what was previously a largely ‘ritual landscape’. Such a marked alteration has been suggested to perhaps indicate a change in ownership following the Roman invasion (Stevenson 2013, 209), something for which there is very little evidence across Thanet Earth. A similar conclusion was also noted on the HS1 development at Beechbrook Wood, where a late Iron Age enclosure was succeeded by early Roman ditched features, and during widening of the A2 (Booth *et al* 2011).

The sunken-featured building

The only Roman period building found during the excavations was SFB 1, located just to the north of and aligned with, Trackway 25 on Plateau 2. This sunken building form, though a rare type for the period in southern England generally, can be compared to a group of twenty-three similar structures forming a Roman village found about 1.7km to the south-east on the Monkton to Mount Pleasant A253 road (Hicks 2008, 276) and eighteen along the route of the East Kent Access Road (Booth *et al* 2015, 334). As with the Thanet Earth example, those from Monkton-Mount Pleasant dated between the first and third centuries (focussed on the second to third

centuries). The majority of those on the East Kent Access would seem to be of a later middle to late Roman date (Andrews *et al* 2015a, 335).

At around 8m long and *c.* 4m wide, SFB 1 compares well in size with SFS 11 and 19 from Monkton-Mount Pleasant (Hicks 2008, 123, 139). It forms one of the larger examples of this type of structure with those at Monkton ranging between 1.72m to 2.22m wide and 5.54m by 8.19m long. That the building possessed a timber superstructure is suggested by the beam-slots along the walls. These probably supported posts, with the frame covered by wooden boarding, wattle and daub or perhaps 'clunch'. There was no evidence for an associated porch, but the shallow steps that led into the structure echo those identified in several of the buildings at Monkton-Mount Pleasant (notably SFS 4, 8 and 10; Hicks 2008, 274). How the building was roofed remains unclear. Most likely is that a ridged roof was constructed though, as was thought to be the case at Monkton-Mount Pleasant. Clearly this was not tiled, and given the exposed position a turf rather thatch covering seems likely. It is similarly unclear as to whether the roof reached the ground, but parallels from elsewhere suggest that this was likely.

Internally, no evidence for flooring was identified suggesting that this was formed by the chalk base of the cut. That the steps reached the base of the cut would seem to make this all the more likely. The two linear depressions that lay in the corners of the building were apparently associated with burnt patches (probably hearths), suggesting use as corn-driers or ovens. The remaining burnt feature probably represented a hearth. Plant remains in SFB 1 indicate a shift away from emmer wheat, the principal Iron Age grain on Plateau 8, with the Roman samples producing mainly spelt and barley. Dominance of the cereal assemblage by hulled wheat, but with Emmer still present, was also recorded within Roman material at East Kent Access Road (Booth *et al* 2015, 329).

While the quantity of grain associated with SFB 1 was low, chaff indicates that crop processing was being undertaken in the area. Marsh vegetation may have been brought to the area for use as fodder, building materials or bedding, based on deposits within an external gully.

Although the structure produced a relatively low density of pottery the composition of the assemblage and range of other finds suggest a domestic function that is supported by the presence of contemporary cremations nearby. The evidence from Monkton-Mount Pleasant clearly supports this view, with many of the sunken buildings on that site also having a domestic function. Such activity need not have been permanent, particularly given the general absence of Roman refuse in the vicinity. In all likelihood, SFB 1 represents satellite settlement related to the cropmark complex, perhaps associated with fields R2-5. It may primarily have had an agricultural function, probably related to crop processing including drying of the harvest, with occupation perhaps seasonal. Equally a more permanent presence may reflect the year-round labour intensive nature of pre-industrial agriculture.

Seemingly there was a productivity advantage in the dispersal of the labour force across the agricultural landscape.

The particular interest of this isolated SFB occupation in relation to the Monkton to Mount Pleasant Road village, and the groups of buildings on the East Kent Access Road, is thus its confirmation of a diverse rural settlement pattern on Thanet. This included single building homesteads with attendant crop processing facilities, farms with attendant yards and stock enclosures, hamlets and village sized settlements and higher status Roman villas. It is likely that the isolated structures were those of tenant farmers, but whether they were tenants of the villas or other tiers of settlement hierarchy is unknown (although a direct association with the Monkton Farm road settlement is likely evidenced by the track between the two).

Classification and origins

Sunken-buildings of this form and date are extremely rare in Roman Britain, aside from on Thanet, where notable concentrations have been recorded in recent years. Given a comparative absence of evidence to the contrary, it is becoming increasingly clear that they formed the dominant form of structure on lower status rural sites across Thanet during the mid-later Roman period (Booth *et al* 2015, 339).

It should be noted that sunken buildings of late prehistoric date are also known from East Kent, with both middle and late Iron Age examples excavated on Thanet at Tothill Street, Cliff's End Farm and in East Kent Access Zone 13 (Gollop and Mason 2005, 25; Cotton *et al* 2014; Mason and Andrews 2012, 32; Booth *et al* 2015, 333). Similar structures have been found in and around Canterbury (Frere *et al* 1987, 50). These though, seem to form part of a different tradition to the Roman examples, being shallower and notably less well defined. The possibility that the Roman sunken buildings on Thanet develop out of this prehistoric tradition seems unlikely given the Roman features more substantial and complex forms.

The aforementioned 'Monkton village' remains the type site for Roman SFBs in Kent (Hicks 2008). Like the second-third century SFB 1 at Thanet Earth these examples probably exhibited an above ground superstructure comprising low walls of turf or chalk and clay 'cob' mixture capped by a simple roof. Though superficially similar in below-ground form to early Saxon SFBs these Roman forms are usually larger (range of 10m²–25m²), often with partitions and without end-posts. The earliest pottery derived from 'Sunken Floored Structure' (SFS) 1, a 'possible privy', *could* date as early as the late first century AD, whilst a wide late first to second century date, is appropriate for SFS 7. However, pottery from SFS 9's occupation deposit was more precisely dateable to the second half of the second century, and a mid-second to early third century date range seems appropriate for most of the pottery recovered from the excavations (Hicks 2008, 273). Despite an apparent reduction of activity after the third century, some late Roman settlement was also attested by a small quantity of late third and fourth century pottery, some specifically of late fourth to fifth century date, from upper levels of SFS 14, 15, 26 and 28 (*ibid*, 277–278).

The East Kent Access Road examples derived from several landscape zones and were of both rectangular and oval form (Booth *et al* 2015, 333–342). Depths varied, with most between 0.2m and 0.88 m deep (although a 1.34m deep example was noted), whilst ovens/heaths were present towards the corners of at least seven examples (*ibid*, 336). Despite the possible middle Iron Age example (above) there was no evidence for continuity of SFB use through the late Iron Age. Instead eight ring-gully defined circular roundhouses of late Iron Age to early Roman date were recorded (*ibid*, 333). The authors noted a probable cessation of roundhouse use not much after the second half of the first century AD, which approximately tallies with the instigation of Roman SFBs, probably within the second century AD. Although there is reference to SFBs of the East Kent Access Road being in use in the ‘early Roman period’ most were of middle Roman date, with four late Roman examples recorded (*ibid*, 334). In respect to the origins of these structures, the authors concluded that there was “*nothing obvious in the adjacent continental Late Iron Age structural repertoire that suggests direct influence from that source...*” (*ibid*, 339).

Further afield, similar structures have been found in west Kent, with three examples recorded near Gravesend (Booth 2011, 275; Allen *et al* 2012, 415–416). Two of these were early Roman in date while the third contained a sherd of fourth-century pottery.

Probably the earliest identified examples outside of Kent are those of late second century date recorded at St Albans (Verulamium) by the Silchester Road and at Colliton Park, Dorchester (Features 23, 28 and 34) (Stead and Rigby 1989; Neal *et al* 1990, 75; Drew and Collingwood Selby 1937, 12). A similar late third century example is known from only 1km away at Gorhambury, St Albans. It may be pertinent that this was interpreted as a dwelling for migrant workers (Neal *et al* 1990). The potentially strategic location of these examples is notable. In Leicestershire four late fourth century SFBs were discovered at Appleby Magna, with others from North Evington and Leicester (Gardiner 2012, 236; Clarke 2010). Further north still, a number of sunken buildings were associated with the Dalton Parlours villa in West Yorkshire and a single, somewhat innocuous example excavated near Melton, West Yorkshire (Fenton-Thomas 2011, 182). At least one of the structures from Dalton Parlours was of similar size and shape to SFB 1, though it contained more evidence for the use of structural stonework. This may though, simply reflect a different geology to that on Thanet.

It is interesting to note that in most cases such buildings would seem to have a clear association with crop processing, in addition to evidence for the occupation of many. This growing body evidence would seem to suggest that they formed a specialist dual-function building type, though why the sunken design was used remains uncertain. Of the examples cited above, the only exception would seem to be that at Melton, that contained no obvious evidence for agricultural use (Fenton-Thomas 2011, 182). The suggestion that buildings of this type developed on Thanet solely due

to the exposed landscape, therefore seems unlikely, though may have been a contributory factor.

Although adjacent areas of Gaul appear not to have been the source of this building type, Hicks (2008) discussed various other continental parallels from further afield. Of particular interest are sunken-floored buildings from Eastern Europe, for example in Szakály and elsewhere in southern Hungary (Gabler 1982, 64–65). These were located central to the associated settlements and like those on Thanet contained few signs of post-built structures. It is of interest that these included both late Iron Age and early Roman examples. Perhaps more pertinently, Hicks also drew attention to examples from the contested *limes* Germanic frontier zones of the Danube in Pannonia, Dacia and Noricum (cf Szabó 1998). These structures appear to be the most compelling from the European corpus.

Other structures at Bribacte, sited on the Mount Beuvray in Bourgogne (central eastern France) included rectangular sunken-floored buildings, also of late Iron Age origin, similar to later cellared buildings (Vitali and Zwald 1999, 35–43). However, unlike for the Germanic frontier zones there is no clear mechanism for their transfer to Britain.

A number of north-west European Roman period SFBs include 150 examples of first to fifth century date from the island of Flögel, south of Cuxhaven in lower Saxony (Zimmerman 1978; 1992a, 156–217). However, like those within Hungary, these simple cellared structures lacked evidence for partitioning shown on Thanet and have more in common with the Anglo-Saxon SFBs for which they provide the prototype (Hicks 2008).

Certainly this particular Roman form of SFB should be clearly distinguished from the later tradition of Anglo-Saxon sunken featured buildings (Gardiner 2012, 237) which are, in turn, a completely different tradition to the medieval sunken-floored building forms found on this site and Thanet more generally, as discussed in Chapter 7. The continental source of the Anglo-Saxon *grubenhäuser* is beyond dispute, whilst notably a separate area of continental association is suggested in this volume for the medieval forms found on the Thanet Earth project and elsewhere in Kent. These latter examples are in fact more akin to the Kentish Roman sunken buildings in form.

Whether the Thanet Roman SFBs also represent the arrival of a migrant population, as suggested for the Gorhambury / *Verulamium* examples, is both intriguing and problematic. Halsall (2009), Cunliffe (2013, 399) and others have put forward similar arguments highlighting the historic arrival of Germanic immigrants in Roman Britain. However, both acknowledge that any such immigrants are difficult to identify archaeologically, due in large part to a general imperative for incomers to conform (in terms of material culture) to the norms of Romanisation. Nevertheless, Halsall (*ibid*) accepted the possibility that certain sunken-floored-structures in Britain

might be a characteristic of the *barbaricum*, thus might potentially represent a Germanic presence.

If a local tradition for the emergence of Roman sunken-floored buildings is discarded in favour of its rapid introduction, what was the mechanism for the (probable) second century appearance and for their widespread presence on Thanet? Although Alison Hicks (2008) leaned towards a local origin explanation for the unusual sunken-floored design, she nevertheless introduced the possibility that these might represent a settlement of '*laeti*' situated to protect the Wantsum Channel. *Laeti* or gentiles were irregular troops raised from defeated barbarian prisoners of war and settled on abandoned land in the western provinces, which they were required to farm in return for military service (Frere 1987, 224; Halsall 2009, 147; Esmonde-Cleary 1999, 188–189).

There are recorded precedents. One important enforced migration event to Britain was associated with Marcus Aurelius' defeat of the Marcomanni, Quadi and Iazyges tribes of the Danube frontier during the Marcomannic Wars (AD 166–180). Cassius Dio (*Historia Romana*, Book LXXII.16) recorded that following the defeat of the Quadi by late AD 174 and subsequent victory over the Iazyges in AD 175, King Zanticus of the latter tribe signed a treaty with the Emperor for the delivery of 100,000 prisoners and provided a military force to him comprising 8,000 auxiliary cavalrymen. Of these Cassius Dio reports that 5,500 were sent to Britain. Where they settled is unknown but the date is of possible interest with regard to the probable second century instigation of sunken-floored buildings in Roman Britain.

The Alamanni (from the Rhine/Danube limes) appear to have been instrumental to the declaration of Constantine I as Emperor at York in AD 306, although whether these were *laeti* or regular formations, is debated. That by AD 372 considerable settlements of Alamanni were already present in Britain is also inferred by Ammianus Marcellinus' record for that year (XXIX, 4, 7); "He [Valentinian] made Fraomarius king of the Bucinobantes, a tribe of the Alamani dwelling opposite Mainz. And soon afterwards, since a recent invasion had utterly devastated that canto, he transferred him to Britain with the rank of tribune, and gave him command of a troop of Alamani [*Alamannorum praefecerent numero*] which at that time was distinguished for its numbers and strength" (see Frere 1987).

The presence of *laeti* is listed for the late Roman period by the *Notitia Dignitatum* (Occ. XLII) for Gaul and Italy, but unfortunately the extract which that may have included those stationed in Britain is missing (Esmonde-Cleary *ibid*; Cunliffe 2012). Cunliffe emphasised the implications for Britain of the settlement of Germanic *laeti* over large tracts of northern Gaul by the late third century (following disastrous incursions by the Franks and Alamanni depopulating the frontier districts). He concluded that Britain was unlikely to have been immune from these practices, especially given that the garrisoning of the adjacent Saxon shore forts was comprised largely of Germans; adding, 'that some of the coast-line between was settled by *laeti*, is a real possibility' (*ibid*, 411). In contrast to the later Anglo-Saxon colonisation of

England these settlements should not be confused with political conquest, and 'there is no difficulty, therefore, in supposing barbarian settlement in Britain before any part of Roman Britain was taken from the Empire' (Charles-Edwards 2003, 24).

Given their potentially strategic location on the island close to the continent and thus acting as a buffer zone for Canterbury and Kent, and later in the period their situation between two Roman forts (Thanet Earth SFB 1 and the Monkton Village are approximately 7km north-west of Rutupiae/Richborough and c 6km SE of Regulbium/Reculver), a state promoted settlement of Germanic farming *laeti*, with attendant military obligations, should not be discounted.

Beyond the sunken-floored buildings, there is certainly no firm material evidence from Thanet Earth to confirm such potential immigration. However, several points of interest were raised by the Monkton-Mount Pleasant finds and environmental evidence, and perhaps additionally by the findings from the East Kent Access Road, that suggest this should not be ruled out as an explanation. In particular the 'weapons' from the Monkton roadside settlement included two spearheads closely associated with two of the SFS buildings. One came from a small pit to the east of SFS 3 and the other from a small pit set within the floor of SFS 15. One of these exhibited a broad leaf-shaped blade and other features similar examples from Ickham and Verulamium and 'in some numbers from the German *limes* forts including Arnsberg, Osterburken, Pfünz, and Rheingonheim...' (MacDonald and Manning 2008, 232). The use of such types of spearhead by the Roman army along the Rhine *limes* (frontier zone) is of particular note and might, at the very least, suggest some interaction between the settlement and the Roman military. The presence of a similar example at Verulamium (where SFBs are also found), is also notable. Military equipment was also derived from the East Kent Access Road sites, including a late Roman iron socketed projectile from the late Roman filling of SFB 170132 (Booth *et al* 2015, table 4.1). It was considered quite striking that 18 pieces of military equipment were recovered but 'what they represent, however, is less clear' (*ibid*, 341–342).

Amongst the late Roman pottery from the Monkton Village was a possible import of Germanic *Eifelkeramik* – 'Mayen ware' (Savage *et al* 2008, 181). Possible associations of Mayen ware with the Roman military, or with the military supply lines, along the eastern and south-eastern Saxon Shore have been suggested (Fulford and Bird 1975; Fulford 1979). Given the dominance of Germanic recruits in the latest Roman military of the western empire, a preference for *Eifelkeramik* is plausible. This is implied to some extent by its relatively common occurrence associated with the latest use of the fort at Richborough (*ibid*). Perhaps more significantly, Hicks (2008, 276) noted a particular curiosity in the common occurrence of a distinctive and unusual variety of spelt not usually seen in Romano-British farming settlements and potentially indicative of imported grain. It was suggested the grain might have derived from military supply lines.

Late Roman settlement

Settlement activity across much of rural Kent would seem to be in decline by the mid third century AD (Bennett 2010, 342; Booth 2015, 361). On Thanet, only two of the twenty-one Roman sites identified by Perkins (2001, 46) from which useful dateable material survives, demonstrate occupation of third- or fourth-century date. To these the fourth century occupation deposits from the Monkton Village and the late Roman SFBs from the East Kent Access Road, can be added. In the remainder occupation peaked during the first to third-centuries, as was possibly the case at Thanet Earth, although the three late Roman cremations on Plateau 3 probably suggest an a nearby fourth century or later occupation.

The villa site at Minster reflects the general decline, where occupation had largely ceased by the late third century (Holman and Parfitt 2005, 210). While increased numbers of fourth-century coins indicate a resumption, this was of a different form, represented by occupation within a single room of the villa and the construction of a timber building. This could suggest that in its later history the villa was occupied by a population of a lower social standing (*ibid*), but, more subtly, it might also evidence the financial inability of a landed class to maintain a rural dwelling as a status symbol of conspicuous consumption (a situation not unheard of in other periods). The cessation of high status occupation at Minster would seem anomalous when compared to other examples in Kent, where more obvious evidence of fourth century occupation has been noted.

Elsewhere in Kent, a cessation of Roman settlement by the mid third century is indicated at several sites, notably Each End, Ash (Hicks 1998, 92), Runham's Farm, Lenham (Philp 1994, 42–43) and in the parishes of Headcorn and Ulcombe (Aldridge 1994, 42–44). At Ash, the excavated site lay adjacent to a trackway, probably on the periphery of a larger settlement that lay on higher ground. Early occupation was suggested to be quite populous, but an increasingly diminishing finds assemblage indicate rapid decline by the late third century.

The situation at Ash mirrors the limited evidence for late Roman activity at Thanet Earth. This is formed largely by a small assemblage of pottery from the Plateau 8 quarry and an Anglo-Saxon sunken-feature building on Plateau 3. These would seem to indicate continued, if somewhat diminished activity, the focus of which is not certain.

More definitive evidence for settlement in this later period is perhaps provided by the late Roman (late third to fourth century+) cremation vessels recorded on Plateau 3. These lay in the corner of the earlier field R4, close to trackway 27, and suggest that this remained a clear landscape feature even if they may not have remained in use. The burials cannot though be clearly linked to an actual settlement.

The vessels themselves are of interest as they form part of a growing corpus of late Roman pottery from east Kent cremation burials (Lyne 2016). Often such vessels were produced in grog tempered wares with such material recovered from

Richborough, Canterbury, Ickham, as well as from sites in Sussex and Hampshire. These finds coincide with the southern areas of the Saxon Shore and Malcolm Lyne has suggested their potential use by Germanic settlers in late Roman Britain (Lyne 1994, 522–539).

The possible ‘Germanic’ credentials for the instigation of the Roman sunken-floored buildings in this region of Thanet, discussed above, may be further enhanced by the presence of ‘*Brandschüttgrab*’ style cremations in the period of their use, and perhaps also the unusual conservatism of the cremation rite into the late Roman period at Thanet Earth (see below).

Cremation was still the prevalent rite in certain Germanic *limes* areas of the continent such as the Batavian zone of the Netherlands in the mid-late third century (e.g. Aarts and Heeren 2011; Willems and van Enckevort 2009). Although cremation was by then a minority rite in Britain generally, clusters of third to fourth century cremations have been excavated from certain cemetery areas of the cosmopolitan cemeteries of the southern and eastern towns of Winchester (Baldwin 1985, 93–105; Clarke 1979; Booth *et al* 2010), London (Barber and Bowsher 2000), and Colchester (Pooley *et al* 2011). Although firm associations remain inconclusive these have each been considered in terms of Germanic presence/practice (*ibid*).

The forts of northern Britain were largely manned by Germanic units by the late Roman period and that cremation remained a dominant is unsurprising (Petts 2009, 163). This was certainly the case at the fort at Brougham, Cumbria where the third century cremation cemetery (123 cremations) was probably associated with an irregular cavalry unit from the Danube frontier – from either the Roman or barbarian side of the frontier river (Cool 2004). Cremations within characteristic small barrows are also a feature of the mid-later Roman cemeteries of Hadrian’s Wall and the frontier such as at Petty Knowes, High Rochester (Charlton and Mitcheson 1984; Symonds and Mason 2009). Notably similar small cremation barrows associated with sorted (*Brandschüttgrab* style) cremations (including adjacent cremations containing jet bears with probable military/Germanic associations) have also recently been identified close to the Saxon Shore at Colchester, flanking the earlier Roman circus (Pooley *et al* 2011; Crummy 2010). Given the close similarity of this rare small barrow cremation rite in Britain (including sorted cremation deposits) to large cemeteries of Batavian small barrow cremations at Tiel-Passewaaij and Nijmegen, in the Netherlands (Aarts and Heeren, 2011), an ethnic association with Germanic peoples from the Rhine or Danube *limes* is suggestible and is most likely in the context of *laeti* or more regular units, and their families.

The funerary landscape

At Thanet Earth we have evidence of a late Iron Age/Romano-British farming landscape that was clearly also considered the province of the dead, as it had already been for millennia. The elevation of the place and its views into the Stour basin for example could well have lent it, and surely would have supported, such special

connotations. Pre-Roman and conquest period funerals terminated on this high ground as others had done before, and variously typical Romano-British styled funerals followed suit, as well as some interesting burials late in the phase. The funerary practice of the latest Iron Age and Roman periods at Thanet Earth can be broadly placed within a growing understanding of broader trends (local, regional and continental), but there are also some very interesting site level features relating to diverse treatment of possibly contemporary dead during different phases of nearby occupation.

Funerary traditions

Near the western limit of the excavations, cremation burials S10594 and S10688 were deposited after *c* AD 30, and were in many ways in a style typical among rural elites in the wider region at this time. Another group away to the east is also in many ways typical of its period, cremation burials S12315 and S12355 were deposited near inhumations S12312, S12337 and S12386, after *c* AD 40. The lone inhumation in south-west corner of field IA4, S20008, was radiocarbon dated to *c* 44 cal BC–AD 73 (at 95 per cent probability; Table 6, UBA-22934). A ‘mixed rite’ such as this is also quite typical for south-east England at this time, where a regional late Iron Age inhumation tradition, alongside the perhaps more typically Gallo-Roman cremation practice, is increasingly recognised (Booth forthcoming; Weekes 2016; 2017b). At Thanet Earth the inhumation tradition was apparently established during the middle Iron Age (*cf* that at Mill Hill, Deal; Parfitt 1995) within the cemetery located on the Plateau 8 Research Centre site. This practice continued in use beyond the cemetery into the late Iron Age and early Roman period, but is considered in detail in the foregoing chapter.

The building of rural mortuary enclosures (Enclosure 10, and possibly the earlier 9) to contain cremation burials from as early as the mid to late first century is in keeping with funerary activities of early Roman rural elites, as is the provision of boxes or caskets (Philpott 1991, 12–21). An enclosure of similar scale formed part of cemetery 126189 on the East Kent Access Scheme, albeit in this case containing only a single cremation burial and being cut by a later SFB (Booth 20015, 283; fig. 4.53). Similarly, the scatters of cremation burials alongside Trackway 25 correlate with many rural early to middle Romano-British cemeteries: these include burials S2014 (*c* AD 70–100), S2018, S2022, S2027 and S2022, all dated after *c* AD 70. The latter was housed within the lower part of a Dressel 20 olive oil amphora, a trait shared with Burials S2122, and on Plateau 5, S5815, once more fitting a recognised first- to third-century rural pattern (Philpott 1999, 22–25). The local spatial association of such burials with various ‘non-amphora’ burials (S2173, S2365 and S2003, and Plateau 5 burials S5824, S5848 (un-urned), and S5821 is also typical.¹¹

Yet alongside these wider trends there are quite distinctive regional and local funerary traits, and other interesting anomalies, such as at least one burial that

¹¹ Cf. Crundale Limeworks, near Canterbury (see Weekes 2017a), for example, and Each End, Ash (Hicks 1998), but many more examples could be drawn from south-east England especially.

deliberately incorporated sorted bone alongside unsorted pyre material (S2027, a 'Brandschüttgrab'),¹² the second- to third-century inhumations associated with ditch G8044 (S3649; S3513; S8930; S12161; S12009), and the late cremation burials on Plateaus 3 (S3086, S3037 and S3094, and S3102) and 8 (S14140).

Funerary sequences

The first concern in considering funerals is the apparent *selection* of certain individuals, or *types* of individuals, for certain *types* of mortuary ritual: in this case those late Iron Age and Romano-British funerals that seem to have culminated within the Thanet Earth landscape. The contemporary late Iron Age/conquest period inhumations and cremation burials suggest discrimination in death according to age and perhaps other factors: the fact that one of the inhumations was that of an elderly man who lay prone within the grave (S12386), for example, and that the other inhumations were children (S12312 and S12337), spatially associated cremation burials (S12315; S12355) that were probably both of adults. Another conquest period inhumation of an adult (S20008) was apparently isolated in the corner of a field: could this, as much as a probably healed fracture of the lower right tibia, relate to something that singled this person out in life, and was therefore expressed in death?

One of the early Romano-British cremation burials of Enclosure 10 was possibly a 'dual' burial, containing the cremated remains of an adult certainly, but also potentially some from a child. Dual burials are relatively common, however, and it also quite common that remains of children appear in association with those of adults in such deposits; this may not represent an actual connection between the adult and the child in life, but perhaps opportunistic cremation of a child's body, in a time and place when mortality among the young may well have been higher (*cf* Weekes 2016). Yet three of the mid-Roman period cremation burials were apparently simply those of children, and the five broadly contemporary inhumation burials in ditch G8044 were adults of various ages and sex: perhaps then the Roman period saw a partially conservative inhumation tradition alongside a group more homogenised in death through cremation? Certainly those selected for the late Romano-British cremation funerals might be representatives of what was by then a conservative practice, however.

In terms of initial funerary rites, or *Preparation*, we are generally talking about possibilities rather than any certainties with the Thanet Earth material. Very few objects that could be given a '*terminus ante quem*' within the funerary sequence itself, either by inclusion in a probably closed coffin or burning on the pyre, were recovered. For example, nothing other than a remnant of the body itself was contained within the coffin of inhumation S20008, whatever may originally may have adorned the corpse before the coffin was closed. And no staining on cremated bone or burnt artefacts like hair pin fragments or other dress accessories are recorded from the late Iron Age or Romano-British cremation burials (*cf* Weekes 2016).

¹² See Pearce 1999; also outlined in Weekes 2008.

The apparently unburnt dress accessories in late Iron Age cremation burial S10594 suggest personal adornment; the fifteen amber beads, three copper alloy brooches and two brooch pins could have been worn during laying out, then returned to the proximity of the earthly remains of the deceased following cremation. The same goes for the two fragmentary brooches recovered from association with the loose cremation deposit in conquest period burial S12355, off to the east, although these may have fastened a bag containing the deposit, a trait seen elsewhere (*cf* Mill Hill, Deal, Grave 4; Parfitt 1995, 29). The brooch perhaps associated with the conquest period child inhumation S12312 could also have related to laying out display, or may have fastened a shroud or binding of some sort, which the posture of the child in this burial, and nearby child burial S12337 suggest. Were the shoes in early Romano-British cremation burial S12813 (Enclosure 10) somehow personal to, and perhaps worn during a laying out ceremony, by the deceased? Signs of copper alloy amid the cremation deposit in the mid-Romano-British burial S5824 once again probably relate to a disturbed burial object rather than cremated one.

Modification of human remains frequently constitutes an important part of the funerary process, with cremation being the most typical method. The Thanet Earth material had been compromised by post-depositional factors and typical methods of discovery, but the scant remains nonetheless hint at what would undoubtedly have been dramatic aspect of these funerals. There were certainly offerings of animal sacrifice (species unidentified) in at least some cases but just as probably, given the accidental nature of inclusion of this material among the human remains, for many if not all of the pyres.

Despite disturbance, the proportions of skeletal elements among the human remains can provide further clues as to pyre, and collection methods. In most of the deposits analysed, for example (Table 2), the long bones are in the majority, probably indicating the collection of readily identifiable fragments from the extremities of a cooling pyre. The fact that these remnants were not always the most fully mineralised, presenting with notable colour variation and even unburnt material, could suggest that small pyres were used (*cf* McKinley 2015), for example, and certainly that full mineralisation was not considered a prerequisite for burial deposits. It is arguably of note that, generally speaking, “head”, “body” and “arms and legs” areas of the body are relatively evenly represented, particularly if the small, often “token” deposits, and post-depositional disturbance are taken into account. Unfortunately the condition of the remains did not allow further consideration of fuel (charcoal) or of preserved organic inclusions, which, particularly from unsorted pyre material, often have much to tell us about rituals that can be extrapolated to reconstruct more general profiles.

Location is in many ways appears a pre-eminent aspect of the funerary in the late Iron Age and Romano-British period at Thanet Earth. This higher ground, which affords considerable views in various directions, will have been known as a location for *tumuli* from ancient times, with a ‘spine’ of still extant round barrows across the

area. The old cemetery, beside trackways and the corners of fields were all chosen, and one (possibly two) early Roman mortuary enclosures actually focussed on Barrow 6. The focussing of inhumations on ditch G8044 also fits this overall profile.

Once the collective fact of being brought to a landscape of the dead has been established, there are some interesting factors relating to *deposition* itself that can be drawn out. One very noticeable aspect of the cremation burials already touched on is that the majority contained only very small amounts of cremated material derived from the pyre. Typically bone weights even from apparently largely undisturbed deposits would seem to represent less than 10 per cent of the amount that might be expected from an average adult cremation (*cf* McKinley 1993). Even the larger deposits, those in conquest period burial S12355 (533g), and the potentially mid-Roman S5824 (634g) only produced about a third of what we might expect had all the remains been removed from the cooled pyre.

The majority of the undisturbed deposits weighed far less, including the most richly furnished burials: late Iron Age S10594 (76g) and early Roman S12813 in Enclosure 10 (150g), for example. The possibility that two individuals were contained in burial S12749 had to be discerned from a mere 67g of bone. Such minimal and especially symbolic quantities support the idea that cremation itself could have been seen as a homogenising process, whereby a token amount of the material produced would suffice to represent the individual after the cremation was completed. In fact, this style of representation using pyre material could also equate with the construction of the *Brandschüttungsgrab* type of burial where such deposits are deliberately manipulated. We have something like this in both the richly furnished burials already highlighted (S10594 and S12813) but the best example has to be burial S2027, to the south of Trackway 25. While such burials are increasingly more widely recognised in Romano-British settings (*cf* St Dunstan's Terrace, Canterbury, burials Cr34 and Cr62, Weekes 2017b; perhaps also East Kent Access burial S126334, Booth *et al* 2015, 327), the type is more widely known in continental settings (Pearce 1999; Weekes 2008). There are also wider tropes among Romano-British inhumations evidenced in the Thanet Earth context, in particular the prone burial S12386, a recognised "type" (Philpott 1999, 75ff). The age old tradition of crouched burial also persists among some inhumations of this period, as with burial S12161 associated with ditch G8044. Other burials at this location seem to represent a straightforward continuation of the Iron Age traditions seen in the previous chapter: and of course some of the latest burials in the Iron Age cemetery may have been placed there in the Roman period.

Aside from the deposition of the human remains, particularly with the late Iron Age and Romano-British cremation burials, there are also typical accessories to note. This is characterised by a propensity in these traditions to deposit certain types of pottery and other items redolent of feasting, as well as potentially more personal objects such as dress accessories, but often alongside less typical items such as the spindlewhorl in the lavish late Iron Age burial S10594. Such general tropes continued in the succeeding burials of rural elites in enclosure 10, for example. What

is interesting, however, is the diversity of *combinations* of burial contents that persists throughout, as well as probable evidence of grave side rituals, such as the apparent layering of grave goods in the same late Iron Age/early Romano-British burial S10594, and indeed what may be the symbolic “killing” of a plate therein.

Ongoing *commemoration* of the deceased in the new place of death, perhaps long after burial, is another area of increasing interest in Romano-British funerary studies. The very deliberate locations of the burials at Thanet Earth once again comes to the fore in this regard, with the necessity for continued recognition and probably communion with the dead in the landscape strongly suggested. In this, the cremation burial enclosure focussed on Barrow 6 is evidently a very particular claim to a part of the landscape for the dead. Perhaps during commemoration ceremonies that may have followed initial burial at regular intervals, or as part of festivals that included the dead, such places will have taken on new meaning. Burial boxes/caskets in enclosure 10 could well have allowed continued access to, and even manipulation of cremated remains and other objects for a time, and amphora cists perhaps longer, as the fragmented *tegula* associated with amphora burial S5815, and others (S2196) may testify.

Meaning?

The complexity of funerary symbolism is a vexed subject (rehearsed in Weekes, 2017a). The same objects can, at any given time, have various resonances for the participants. Such synchronic polysemy is very difficult to deconstruct, although we might say that the expression and/or representation of identities is significant in all artistic acts. It is also reasonable to posit schemes of meaning associated with diachronic process: whereby the living are converted to the dead. The funeral is a liminal phase *par excellence*, when community must be alongside and recognise the dead and their transformation.

In this respect at Thanet Earth, we have seen in the late Iron Age and Roman period potential aspects of ‘lived identities’ during the preparatory phase (this may have been denoted by dress and accessories during laying out), and a homogenising of the dead, emphasised through cremation practices or not, through burial in a place of the dead, on top of high ground, in the corners of fields, etc. There is also evidence, however, of emphasis of a particular identity being retained in death, especially in the more richly furnished of the burials, and perhaps in those that incorporated different styles of manipulation and modification of objects such as the corpse itself, accessory vessels, or pyre material. It is also important to consider an ongoing relationship with the dead once initial processing and installation had taken place. Once again location was key to this commemoration, probably topographically representing an ongoing relationship with the living.

Tradition and change in a shared landscape

We have noted the impact of broader changes throughout the Roman period at

Thanet Earth, particularly in the form of settlement and land division. A tension between old ways and the new, and between local and wider cultural traits, is also evidenced here, however, which can be seen in the forms of funerary practice present. In this aspect of landscape use, both novel and existing influences seem to be apparent. In the former cases we have at Thanet Earth somewhat "typical" late Iron Age and Romano-British cremation burials which largely fit the expected profile; although the clear identification of *Brandschüttgraber* add to an only recently established form which attest to continental influence. On the other hand, there is sound evidence of adherence to a local version of the south-eastern tradition of late Iron Age and Romano-British inhumation. Late Roman cremation burials could represent a new conservatism, perhaps especially to be found in rural "backwaters", notwithstanding the possibility of Germanic influences.

Actually, the Romano-British landscape at Thanet Earth in itself defies a straightforward classification now, as it probably did then; a contextual archaeology here would ideally consider contexts such 'places for the living' and 'places for the dead' as landscape *potentialities* rather than seeking mutually exclusive areas as grounds for comparative analysis. Albeit separate from settlement in a typically "Roman" fashion as a funerary landscape, this was also a farming landscape, apparently affording processing of yields at its heart (the sunken featured building) as well as transit between, over and around where the dead, ancient and recent, lay. Yet it is where the dead lay that suggests how this "contract" between the living and the dead was possible: in an already recognisable focus for *tumuli*, on noticeably high ground in the area, in the corners of fields (and probably at more formal territorial boundaries), in enclosures focussed on *tumuli*, within no longer maintained enclosure ditches, in an old cemetery, or along trackways between settlements. Such marginal places could always be farmed, quarried or travelled through, but at any time might also be used as a threshold for the departed.

Finally, any discussion of Late Roman Thanet and the withdrawal of Roman authority over it, must be set within the wider context of the 'Saxon Shore' – the south-eastern coast a maritime frontier zone, defended by a string of forts between Brancaster in Norfolk and Portchester in Hampshire. Rutupiae/Richborough and Regulbium/Reculver provide powerful evidence of the vulnerability of Thanet and associated tracts of coastal Kent. The walled town of Canterbury is also set within the context of the Saxon Shore. In many ways it was analogous to the northern frontier zone of Hadrian's Wall. The contemporary term 'Saxon Shore' is widely thought to imply that the shore zone that was defended against ship-borne raiding by barbarians, including Saxons, Picts and Scots, although these forts were also essential centres of power during rebellion of Carausius and Allectus in the late third century.

Debate over the meaning of 'the Saxon Shore' is fundamental to our understanding of the mechanism of the arrival of 'the English'. Some have preferred to consider that the term refers to invited settlements of Saxon *laeti*/foederati to defend the coast, as a supplement the fort garrisons, and to act as a buffer against hostile raiders. The

potential for sunken-floored buildings and possibly cremations to relate to presence of laeti, is suggested above. It should be added that although the last of the regular units were probably pulled out of Britain by around AD 407, any Germanic laeti would have had a vested interest in retaining the agricultural land that they had been provided with. Some of these less formal manifestations of the Roman military may, therefore, have remained.

Interestingly the term Laets emerges in eastern England in Kent in the seventh century, although Welch (2007, 198) suggested that its interpretation is not straightforward; ‘...it is possible that semi-free peasants tied to the land they worked and referred to in the seventh century Kentish laws as læts, and also the slaves or theow, might be descendants of the former British population. Establishing a relationship between the seventh century Kentish læts and the third- or fourth-century Roman læti of Gaul and Italy remains problematic...’

However, he concluded that the restriction the term læt to Kent might instead reflect the adoption of a Frankish model for its law codes in the seventh century, given their evident influence in Kent evidenced by Frankish grave goods at this time.

Chapter 6: Anglo-Saxon

James Holman and Robert Masefield

Overview

Anglo-Saxon finds were very scarce at Thanet Earth, the only definite features consisting of two sunken-featured buildings (SFBs; one of unusual design), and three other possible buildings (Fig. 147). All of the Anglo-Saxon features lay in the south-western part of Plateau 8 and north-western corner of Plateau 3, with most clustered around prehistoric Barrow 6. A few other features in the same area may have related to the buildings with associated finds suggesting a small early Anglo-Saxon settlement in this part of the site. A putative Anglo-Saxon cemetery, has also been identified as a series of crop-marks that lie to the east of the access road adjacent to Plateau 3. It remains unclear, however, whether this cemetery related to the settlement or indeed whether it is a cemetery at all, rather than a series of geological striations.

The structures

SFB 2 (Fig. 148; Plate 169)

The larger of the two Anglo-Saxon SFBs identified on Thanet Earth was SFB 2. It was formed by a well-defined, roughly east-west aligned rectangular cut (S11222) 3.4m long, 2.9m wide by 0.8m deep with slightly rounded corners. The area of the feature, at c. 9.1m² indicates that it was smaller than average for this type of building (Hamerow 1993, 10 and fig. 6; Tipper 2004, 64). However, it should be considered that in this area of Thanet Earth up to 0.4m of the land surface may have been removed by horizontal truncation. This is perhaps of some importance as it has been suggested that erosion and truncation to the pit edges can lead to inaccuracies when estimating the original size of these structures (Tipper 2004, 65). It may be, therefore, that the basal dimension of the SFB provides a more significant guide to its original effective area. Using this measurement, which in SFB 2 was c. 7.9m², the size of the structure is similar to other SFBs on Thanet. Notable is that SFB G52 at Ellington School, Ramsgate and SFB 88 from Manston Road, Ramsgate were virtually identical in size to SFB 2 at Thanet Earth at approximately 7.8m² and 7.6m² respectively. Further afield, those at Market Way, Canterbury were generally smaller (between 2.78–5.65m²) though SFS 2138, at approximately 8.15m², was very similar. Such variations within the basal ranges of SFBs are not uncommon, with mean basal areas of 8.3m² and 5.6m² recorded at West Stow and West Heslerton respectively (Tipper 2004, 65).

Nine post-holes (S11081, S11085, S11087, S11097, S11100, S11105, S11108, S11111 and S11221) cut into the base varied between 0.25 to 0.5m wide and 0.2 to 0.5m deep. The deepest, (S11087 and S11097), were situated at each end of the longitudinal axis, a typical arrangement that has been noted elsewhere (Allen *et al* 2012, 485; Helm and

Rady 2010, 41–47; Rady *et al* forthcoming). These possessed steep, near vertical sides and flat bases, comparable to examples excavated at both Ellington School (Rady *et al* forthcoming) and West Stow (West 1985, 117).

More unusual was the location of the remaining posts that were arranged around the sides of the pit's base. Two (S11111) and (S11221) were positioned at approximately the mid-point of the longitudinal sides. The remainder were located running along the northern edge (S11005) and (11081), roughly mirrored to the south by (S11100) and (S11108). The final post-hole (S11085) was located in the south-west corner. With the exception of S11005, that had a similar profile to S11087 and S11097, these post-holes had steeply sloping sides and pointed bases. They were more typical of posts that had been driven into the ground as piles, similar to examples from West Heslerton (Tipper 2004, 70; Powesland *et al* forthcoming).

In addition to these presumably main structural posts, the base was also cut by a large number of internal features. These included 111 stake-holes and five beam-slots (S11102, 11224, 11226, 11228 and 11230. Generally the stake-holes were between 0.03–0.06m wide and 0.03–0.08m deep and lay in a dense scatter across the base of the feature. Some (perhaps as many as twenty-two) can probably be discounted, perhaps being the result of flints becoming dislodged from the natural chalk. The remainder appeared clear and convincing with stake-holes S11117, S11118, S11119 and S11141, for example, too deep and well-shaped to have been anything other than man-made features.

While the stake-holes do not appear to form any discernible pattern such a large number indicates that activity in the base of the structure was intensive. The sheer quantity clearly suggests that many of the stakes must represent the replacement of earlier features; if all were contemporary their density would have meant movement in the base of the pit was virtually impossible, as in Structure 5 at the Marlowe Car Park, Canterbury (Blockley *et al* 1995, 292 and fig. 142).

The beam-slots were located around the edges of the structure. Beam-slot S11102, some 0.18m wide, was L-shaped and positioned in the north-east corner of the pit. It ran from post-hole S11018 before terminating 0.15m to the north of post-hole S11087. Unfortunately the stratigraphic relationship between the beam-slot and post-hole S11081 could not be ascertained during the excavation. A smaller beam-slot, only 0.45m long by 0.18m deep lay immediately to the south of post-hole S11087. Beam-slot S11228, approximately 1m long by 0.2m wide was rather more irregular than S11102 and ran between post-holes S11221 and S11108. Again, it was not possible to ascertain the stratigraphic relationship between beam-slot and post-holes. The final beam-slots, S11224 and S11226, were positioned on the west side of the hut, located either side of post-hole S11097. The larger feature was S11226, measuring 0.65m long by 0.15m wide with S11224 only 0.34m long by 0.05m wide. As a group these features ranged between 0.03–0.05m in depth.

In several cases beam-slots had been cut through by stake-holes, something particularly noticeable in beam-slot (S11102). It is unclear in these cases whether the stake-holes formed part of the original support provided by the beam-slot or represented a replacement support following removal of the beam. Again this has been suggested elsewhere, for example in sunken-featured building G25.51 at Dolland's Moor (Rady 1999b, 25). Another possibility is that the stake-holes do not relate to any form of structural support at all, being cut after the removal of the beam with their positions entirely coincidental.

The features and the main postholes were sealed by a deposit of dark green-brown clay silt (S11083, S11079), some 0.1–0.2m thick that contained large quantities of domestic waste. This material appears to have been dumped within the building after it went out of use, as is the case with most features of this sort (Tipper 2004, 102). Finds associated with this deposit included pottery, animal bone and various other objects such as glass beads (FN 3.9011–3.9016), an amber bead (FN 3.1358) and a fragment of chain (FN 3.9003; Plate 171). Environmental material, principally rye and barley grains, together with mussel and oyster shell was also recovered. Interestingly, while this was probably not a primary floor layer, it was noted that there was some differentiation between the distribution of rye and barley grains. Rye tended to be found in the western half of the deposit, and where rye grains were prevalent there was a noted absence of barley. This perhaps indicates that the deposit was composed of numerous different instances of refuse disposal, all of which were formed by virtually identical soils rather than a single event. It was only through examination of the inclusions within these deposits that any form of differentiation was possible.

The main upper backfill of the SFB consisted of a sequence of dark clay silts S11090, S11082 and S11072 *c.* 0.7m thick. These deposits suggest a deliberate and probably rapid backfilling of the structure after disuse. They contained large quantities of burnt clay, daub and domestic waste. The latter included pottery (much of which was Roman and therefore either residual or re-used), a coin of Allectus (FN 3.144) and a copper alloy object that had perhaps broken off of a Roman bracelet (FN 3.148). Also recovered was a bone weaving point (FN 3.143) and four glass beads (FN 3.9010, FN 3.9011, FN 3.9012, FN 3.9016). Various iron objects included a fragmented knife blade (FN 3.134) and several spiked tools (FN 3.136, FN 3.149, FN 3.157 and FN 3.238). The pottery from this sequence included a fragment from a decorated buckelurne that is indicative of a mid to late fifth century date (Plate 171). An early date is also suggested by the late Roman pottery which may have remained in circulation in the mid-late fifth century, enabling re-use here. This conclusion is perhaps supported by an absence of any known adjacent late Roman settlement from which this material might derive. The relatively large quantities of burnt clay and daub may represent parts of the building superstructure or perhaps the remains of a re-deposited oven or hearth.

SFB 3 (Fig. 149; Plate 172)

What appears to be an ancillary sunken-featured structure (SFB 3) lay 26m to the west, no more than 10m from the ditch of Barrow 6. This building was small, consisting of a rectangular cut (S12680) 2.18m wide, 2.2m long (basal area c3.96m²) and 0.3m deep. The cut was orientated approximately north-west to south-east with the sides steeply sloped, with rounded corners and a flat base. Interestingly, the alignment mirrored that of the adjacent section of barrow ditch although this could be coincidental.

One post-hole (S12443) 0.39m in diameter and 0.5m deep was situated on the feature's longitudinal axis at the eastern end. The profile was similar to the longitudinally placed posts in SFB 2, with vertical sides and a flat base. Again it seems probable that the post-hole was excavated by hand with the post later placed in the hole. The north-west end of the structure had been heavily cut-away by a modern service trench, any opposing post-hole may have been removed by this later feature. It seems likely, however, that some trace of an opposing post-hole would have remained unless it was very much smaller than that at the south-east end of the pit or was located away from the longitudinal axis.

Eight stake-holes (S12671–12679), on average 0.06m wide and 0.05m deep, were cut into the base, distributed irregularly. While the majority of these are relatively convincing as man-made features, two (S12674 and S12678) can probably be discounted. It is notable that of the remainder, five appear to form a line across the width of the pit. This perhaps indicates that the already small interior of the building had been sub-divided into two unequal areas, presumably by way of a timber and wattle screen.

Following disuse the pit, like SFB 2, was initially backfilled with deposits of domestic refuse (S12608, S12609, and S12604). These generally consisted of clay silt fills containing small amounts of pottery with larger quantities of animal bone, daub and marine shell. Located at the base of this sequence was part of a broken late Roman snake bracelet (FN 3.211) and an associated amber bead of either late Roman or early Saxon date. It has been suggested that this arrangement had been deliberately placed with the bead positioned in the centre of a ring formed by the bracelet. The upper fills of the SFB (S12440) were very different, composed of lighter clay silts that contained only a small amount of domestic material with larger quantities of re-deposited chalk.

A group of post-holes (S12728), (S12730), (S12753) and (S12766) broadly linear in distribution, was located 3m to the north, and could plausibly be related to SFB 3, but they contained no dating evidence.

SFB 4 (Fig. 150; Plate 173)

Structure SFB 4 was found 45m north-east of SFB 2. It consisted of a shallow roughly sub-rectangular cut (S3944) with a triangular protrusion positioned at its southern

end. The feature was 3.3m wide, 7.3m long but only 0.15m deep, aligned parallel to, and cutting, north-south running Roman ditch G8166.

The flat base was covered by a metallised, flint surface (S3943). Interestingly an area containing rather less flint was visible running across the southern end of the surface. Approximately 0.5m wide, this seemed to divide the main part of the building (an area some 5.26m long by 3.27m wide) from the triangular protrusion and potentially demarcates a wall-line. Following abandonment the metallised surface was sealed by a deposit of sandy silt containing pottery fragments, daub, worked and burnt flint, animal bone and an unidentified iron object. While mostly comprising residual prehistoric material, a small quantity of the pottery was of Anglo-Saxon date, suggesting that the building went out of use by the late sixth century.

SFB 5 (Fig. 151; Plate 174)

The most enigmatic of the Anglo-Saxon buildings was SFB 5 that remains difficult to fully understand, largely due to heavy truncation by later ploughing. This potential structure was situated 35m north of SFB 3 and consisted of a subrectangular cut (S14399), aligned roughly east-west, 2.3m wide, 2.76m long and 0.25m deep. The feature possessed steep sides that broke to a flat, though slightly uneven base. Within the cut was a basal deposit of dark brown clay silt (S14281) containing rare animal bone and daub inclusions. The fine, silty nature of this material was indicative of gradual accumulation, perhaps suggesting that the base of the cut had also formed the floor of the building.

Three postholes (S14414, 14269, 14255) cut this deposit, filled with mixed clay silts and varied between approximately 0.15–0.24m in diameter and 0.1–0.17m deep. These appear to have been structural with two, S14269 and 14255, situated in the eastern end of the building immediately adjacent to the north and south sides of the cut. Together with S14255, posthole S14414, 0.16m in diameter by 0.14m deep, may have formed part of an entrance. Post-hole S12875, lay close to S14269 and is suggested to be structural.

Two stake-holes (S12876, S12877) were identified within the building. A third stake-hole, S14262, located slightly outside the area of the building was perhaps related to the SFB but separated from it due to the level of truncation. Two layers of metallising (S14226), suggested to have been deposited around post-hole (S12875) sealed this latter stake-hole. Composed largely of burnt flint, this bore a clear similarity to metallised surface S3493 in SFB 4 and is suggested to form consolidation around the possible entrance (Plate 175).

After abandonment, the posts were deliberately removed and the pit backfilled with a 0.23m thick deposit of clay silt. As in SFB 4, this deposit contained a range of domestic finds, including pottery of both Roman and Anglo-Saxon date, with the latter suggesting that the building had been abandoned during the mid-sixth

century. Also recovered from this fill was part of a simple child-sized bracelet of late Roman date.

Associated features (Fig. 147)

Various features to the immediate south and south-east of SFB 2 probably relate to this area of settlement, though not all can be accurately dated.

Curvilinear enclosure

Enclosure 12 (G3046 and G3080) was situated 33m to the south-east. It was defined by a curvilinear ditch (G3046) 16.5m long, 0.55m wide by only 0.15m deep. It lay on an approximate north-west to south-east alignment curving at the north-west to form a possible return, the majority of which had been removed by ploughing. When complete the ditch would have formed an enclosure approximately 7m wide and 16.5m long. The terminal end of an earlier ditch (S11023), possibly an earlier manifestation of the enclosure, was recorded being cut through by the later ditch.

No Anglo-Saxon pottery was recovered from this feature, however it is likely to be of this date based on parallels from elsewhere. Such features probably formed stock enclosures with parallels including examples at West Heslerton, Yorkshire (Powlesland *et al* forthcoming), Market Way, Canterbury (Helm and Rady 2010, 42, 51; fig. 22) and Wainscott near Strood (Clark *et al* 2009, 15).

The Anglo-Saxon well

About 13.5m to the west of the enclosure was S11031, a circular feature 4.6m in diameter at its top. The upper part of the feature was hand excavated with the profile sloping at a moderate angle to a vertical shaft approximately 1.25m in diameter. Such a form is typical of the profiles of wells, with the upper part of the cut formed by an erosion cone. The feature proved too deep to fully excavate with hand auguring indicating a minimum depth of 2.4m. At this point the fill became too compacted to continue, this depth does however further suggest that the feature was a well. It contained five silty backfills all suggestive of deliberate infilling.

Present in the upper backfills of the well were several fragments of medieval pottery (AD 1125–1200) together with an iron nail (FN 245). The four lower fills appear to have slumped slightly as underlying deposits decayed; subsequently the area was levelled off by a substantial, sterile, levelling horizon. Despite the presence of the medieval pottery the feature is suggested to be of Anglo-Saxon origin as all of the medieval wells found at Thanet Earth (for example those on Plateaux 1 and 2) were associated with enclosures and structures. The pottery noted in the backfills indicates that the feature remained extant into the medieval period at which point it was levelled off.

Other features

An isolated shallow pit (S11074) 1.2m wide, 1.96m long and 0.29m deep situated 2.5m to the south of SFB 2 may also be related to this period of occupation. The feature contained no dateable evidence, though the fill was very similar to those of the SFBs. It had been used for rubbish disposal with the dark silty clay containing moderate quantities of animal bone, marine shell (principally oyster) and charred grain. It has been placed in this phase due to its proximity to SFB 2 and the absence of other, similar features in the vicinity.

Two similar, though smaller sub-circular features (S12265) and (S14252) of probable Anglo-Saxon date were isolated on plateau 8. These were located 32m west of SFB 4 and 61.5m north-east of SFB 5 respectively. Sub-oval pit S12265, some 1.04m wide, 1.75m long and 0.28m deep, was the larger. The base of this feature was scorched, with the lower fill of black red silty clay potentially an *in situ* deposit of burning. This deposit contained no datable material though a collection of charred plant remains was retrieved including hulled barley, Celtic beans and 219 black mustard seeds. Also recovered was a small amount of marine shellfish and an iron object. The upper fill, a deposit of silty clay contained a small iron nail and seemed to have been dumped deliberately once the feature had gone out of use.

The smaller feature, S14252, was only 0.4m wide, 0.58m long and 0.28m deep. It contained a single deposit of clay silt from which a small quantity of charred plant remains were retrieved. As with pit S14265, Celtic beans were included in this assemblage, together with peas and hulled barley. Both features were initially assumed to be early prehistoric or Iron Age and it is only the composition of the plant remains assemblages that indicate a later, probably Anglo-Saxon, date.

The final feature that may have been associated to the Anglo-Saxon settlement was a large Roman quarry, S12455 that lay just to the west of SFB 2 and SFB 3. Significant differences existed between the lower and upper backfills of this feature indicating that it had only been partially infilled by the end of the Roman period. The upper backfills were very similar to those of the near-by sunken-featured buildings and it is suggested that the inhabitants of the adjacent settlement were using the quarry as a midden.

Discussion of the Anglo-Saxon features

The Anglo-Saxon period was only marginally represented at Thanet Earth. Virtually all settlement activity was focussed around Barrow 6 and it is possible that little other activity took place over the site as a whole, apart perhaps for agriculture. This relative absence of settlement, despite Kent being one of the earlier of the Anglo-Saxon kingdoms, is not unusual (Hamerow 2012, 2). More often than not, it is the presence of Anglo-Saxon cemeteries, as opposed to settlement, that indicates an early post-Roman presence in the landscape. On this basis the Thanet Earth SFBs are of importance as they add to a corpus of only fourteen examples that have so far been located on Thanet (Moody 2008, 170; Rady *et al* forthcoming). This is despite the

importance of the Wantsum Channel as a as an important routeway that linked the south coast to the east coast and Thames Estuary (Brookes 2007, 67).

Clearly associated with late Iron Age/Roman field divisions, landscape continuity is also evidenced by the clustering of the settlement around Barrow 6 and its attendant Roman enclosures. The fragment of buckelurne from SFB 2 suggests that settlement dates from very early in the period (mid to late fifth-century) perhaps continuing into the early sixth century¹³. Estimates for the typical lifespan of Anglo-Saxon SFBs varies enormously from ten to fifty years (Hamerow 2004, 31; Schmidt 1994, 160). That Anglo-Saxon activity continued beyond this period is indicated only by the presence of a late seventh- to eight-century *sceat* that was retrieved from ditch G8157 (Plate 176).

Settlement form

The Anglo-Saxon features would appear to form a small settlement, probably a farmstead with the sunken-featured buildings the only definitive evidence for buildings. The four SFBs effectively flanked the barrow on its south-west, south-east and north-east sides, and illustrate the significance of the barrow in the siting of the settlement. It is interesting to note that SFB 2 just cut the backfill of ditch G8166, suggesting perhaps that the ditch (or an associated hedge line) was still visible when the SFB was cut.

Interestingly no evidence was recorded for post-built structures, such as the two identified at Church Whitfield (Parfitt 2014, 120–125). Other sites with significant groups of sunken-featured buildings, such as Northfleet and Dover, rarely provide evidence for associated post-built halls, although a number have been postulated on other sites (Welch 2007, 203–205). Hamerow (1993) has suggested that, where halls are found, as at Mucking, there was normally a ratio of one hall per three SFBs.

At Thanet Earth it is considered that additional structures must have been present due to the large quantity of domestic and other debris deposited within the backfilled sunken-featured structures. This is similar to the situation at near-by Ellington, where there was also a lack of identified post-built structures. In both cases it is probable that their absence is due to the truncation of the archaeological horizon by erosion caused by ploughing. In all it is estimated that at least 0.3–0.4m of the ridge that formed much of plateaus 1, 3 and 8 has been removed in this way. On the East Kent Access Scheme four SFBs were identified, three of which lay within

¹³ Its presence stands in contrast to the Frankish/North Sea Coastal zone cultural influences that dominate in Kent during this period, that it perhaps predates (Millett 2007, 220–223). It need not necessarily indicate a north Germanic cultural link, as the population of Kent, and particularly those close to the Wantsum sea way had access to a wide range of cultural material, including north German Anglian and Saxon as well as insular British (e.g. Quoit Brooch style) metalwork (McLean and Richardson 2010; Richardson 2011, 249–254). Most likely that this sherd represents trade between the emerging kingdoms of Kent and East Anglia, or with north Germany.

150m of each other on Zones 10 and 11 (Andrews *et al* 2015a, 385). Again no associated post-built structures were identified, but in this case it was thought unlikely that such features would have been entirely removed by truncation, they were simply never constructed.

The sunken-featured buildings

Two posted structures are the most common form of SFB in both England and on the continent (Tipper 2004, 68). There is, however, considerable variation within the shape size and layout of SFBs, particularly in southern Germany and northern France (Thomas 2010, 2; Tipper 2004, 69; Hamerow 1993, 10; 2004, 30; West 1985, 114). Interestingly such variation is not as common in England and two posted structures were previously ubiquitous on Thanet. Generally it is accepted that these main longitudinal posts would have formed part of the main superstructure of the building. They were used to construct a ridged pole roof over the pit forming an almost tent-like structure (Lucy 2006, 176; Tipper 2004, 68; Hamerow 2004, 31). In comparison, some have suggested that where an SFB has four or six posts a more substantial building is represented (Hamerow 2004, 31; West 1985, fig. 285).

The buildings excavated at Thanet Earth do not at first glance appear to fit in with these more commonly identified structures. Despite this variation from the norm, it is debatable whether this is in itself of major consequence to any study of Anglo-Saxon sunken-featured buildings. The Thanet Earth buildings may simply represent a variation on a theme, particularly evident with SFB 2, which seems to have possessed nine structural posts. No identical form of SFB has been recorded anywhere in Kent, though an eight-posted example was excavated at Lyminge in 2011 (Thomas 2011, 2–3) and another at Ringlemere near Woodnesborough in 2003 (Parfitt and Needham 2007, fig. 6). In both cases, the pair of primary posts located on the longitudinal axis were added to by three posts sites along either side of the pit. These were evenly spaced, unlike in Thanet Earth SFB 2, and positioned in the corners of the pit and at the mid-point of each longitudinal side. West Stow SFB 12 also compares well with Thanet Earth SFB 2 in that it had nine post-holes with three along each end, two centrally along the sides and with one additional corner post (West 1985, fig. 7). The only variation is that in Thanet Earth SFB 2 the end corner posts were not positioned as tightly into the corners as at West Stow.

Two possibilities can be raised regarding this arrangement of post-holes. The first is that they do indeed represent an unusual form of sunken-featured building. The possibility that the nine posted form of SFB 2 was due to a particular status, specialised function, or the early date cannot on current evidence be elucidated further. The position of the post-holes implies not only a much more robust superstructure, but that the building had high sides, rather than a low pitched roof approaching ground level, as is usually reconstructed for two post-hole SFB's. This building, although sunken floored, may therefore have appeared superficially similar to simple higher walled Roman buildings or contemporary though much

larger halls. This could have allowed a habitable space with the potential for windows set into the walls allowing in daytime light.

An alternative is that the SFB was constructed in traditional, two posted form, with the additional posts added later to increase internal capacity. In this case, it seems probable that the roof of the structure would have had to be removed prior to their insertion, as it would have been difficult to ram timber piles into the natural chalk with the roof in place. Even if these extra postholes are secondary additions, SFB 2 would appear to possess the highest number of structural post-holes recorded from a building of this type and date in Kent. It is not until later in the Anglo-Saxon period that cellared buildings develop and are often associated with large numbers of post-holes (for example at Canterbury; Bennett 1981, 409).

The function of the beam-slots cut into the base of the pit remains ambiguous, particularly as only S11102 and S11228 were of any significant size. One suggestion is that they indicate the presence of a raised floor, as suggested for slots cut on the longitudinal axis of the base of SFB 137083 on the East Kent Access Scheme (Andrews *et al* 2015a, 386). Predicating against this is their generally small size. Alternatively, they may relate to activity taking place in the hut, as has been suggested for examples in Denmark and northern France, where a shallow rectangular pit was recorded running longitudinally along the base of the pit, beneath the probable area of a loom (Hamerow 2004, 34; Zimmermann 1982). While such examples are similar in form to the above EKA example, those in SFB 2 are in the wrong location, being positioned along the edges of the pit rather than dividing it longitudinally.

Perhaps the most likely explanation is that they related to the superstructure of the building and the surrounding natural subsoil. The natural on this part of Thanet Earth was very mixed, and in the area of SFB 2 consisted of weathered chalk that was sealed by a mix of chalk and silty clay. While relatively solid this material tended to fracture when dry, crumbling into open features. The beam-slots may have provided an element of support to the sides of the pit, perhaps by way of a timber plank revetment. This is not unprecedented with the similar use of a wattle retaining wall suggested in sunken featured-building G15.1 at Long Pepper Field, near Folkestone (Rady 1999a, 10). Here a slot had been cut along the north edge of the SFB, probably to provide support to the friable chalky landslip deposits into which the feature had been cut. A similar explanation, whereby revetted 'side walls' have been identified in the base of a sunken featured building has been made by Welch (1992, 23) in relation to SFB 15 at West Stow.

SFB 3 was possibly constructed with only one post, again a form not unknown in Kent, with a local examples excavated at Manston Road, Ramsgate (Hutcheson and Andrews 2009, 207–211, 243). At Barrow Hills, Oxfordshire sunken-featured buildings of this form were virtually identical to SFB 3 at Thanet Earth (Chambers and McAdam 2007, 119–120, 152–153; figs. 3.30 and 3.66).

Both structures require further consideration in the light of the long, ongoing debate on the structure, form and use of such buildings (Tipper 2004, *passim*). In particular, this focusses on the above ground form of these buildings, and whether the sunken area represents the floor or if there was a suspended floor (probably planked) over the pit, arguments perhaps still not yet fully resolved. The evidence has been extensively discussed elsewhere with the nature of backfills and associated cultural assemblages now largely discounted as they were largely deposited following disuse as deliberate acts of infilling (Tipper 2004, 184; Zimmermann 1992a, 212).

Tipper (2004, 64 and 182–185) suggests that *Grubenhäuser* were largely suspended-floored structures with the pit forming only one component of a larger ground-level building. However, this is an argument that is not widely accepted on the continent, where evidence for wear on the base of many SFBs is taken to indicate that the base of the pit formed the primary floor surface (Hamerow 2004, 31). The raised floor evidence was brought to the fore by SFB 15 at West Stow which exhibited the burnt remains of the floor-boards themselves along with numerous burnt loom-weights resting upon them. Welch (1992, 23) disagreed with the excavator who had indicated that the floor had been suspended over the pit (partly based on silt accumulation beneath the floorboards which the excavator suggested had fallen between cracks in the floorboards). He considered that a floor suspended above the pit would be too ‘springy’ to support the weight above.

Nevertheless there is little evidence for primary occupation deposits on the base of the pits in most Anglo-Saxon sunken-featured structures excavated in England (Tipper 2004, 184; Hamerow 2004, 32). Considerable evidence for cut features, such as stake-holes and beam-slots does though exist from sites in both England and continental Europe. In SFB 2, the presence of such a large number of features cut into the base of the pit indicates that it probably represented a working floor. Suggestions that stake-holes identified in the base of chalk cut SFBs may have been wholly natural in origin, perhaps caused by tree roots, erosion or burrowing rodents (Tipper 2004, 88) seem in this case highly unlikely. This evidence seems somewhat contradictory, however, given that none of the Thanet Earth structures contained deposits consistent with trample layers (although the ‘floor’ may have been kept clean). SFBs 2 and 3 do not, therefore, add significantly to this debate given the now more commonly held view that such buildings probably served a variety of functions at the same or different times (Tipper 2004, 185). The only definitive suggestion that can be made, in relation to SFB 3, is that it was probably too small for any use beyond storage.

Disuse

There was no evidence for the structural dismantlement of either SFB 2 or SFB 3, it being assumed that posts were left to rot *in situ*. Elsewhere, the extraction of posts has been noted, with evidence for the ‘rocking’ of posts back and forth, as recorded at Dolland’s Moor. It is generally accepted that the fills in the main pit were mostly deposited after structures fell into disuse, often with a deliberate deposition of

domestic rubbish (presumably from ongoing occupation in the vicinity, the clearance of middens etc.; Tipper 2004, 102–103). Such depositional sequences nearly always form a bi- or tri-partite sequence of layers.

At Thanet Earth the backfills of both definite SFBs indicated little sign of the protracted erosion of pit edges. This is similar to the Ellington example, and is taken to imply that the pits (or at least their lower profile) were quickly backfilled after the building went out of use (Tipper 2004, 105–106). Both SFB 2 and SFB 3 appear to have been deliberately backfilled following disuse, generally with domestic refuse indicating their use as middens. In each case backfilling seems to have followed the bipartite process that was also identified at Ellington (Rady *et al*, forthcoming) and Lyminge (Maslin 2015, 215–6). Interestingly, a large quantity of butchered animal bone was recovered from the backfills of SFB 3 indicating that animals were being slaughtered and processed in the near vicinity after the building had gone out of use.

Quantities of small animal remains from SFB 2, including common frog and common toad suggest that this structure was left open slightly longer than SFB 3. Both species would have been attracted to damp, dark areas in search of food with the midden deposits providing a good breeding ground for flies and other insects. It may be that these animals inhabited and died within voids in the gradually accumulating loose backfill. That the building was probably not backfilled in a single episode following disuse is also suggested by the dichotomy between barley and rye remains.

Contained within the backfills of SFB 3 was what can be termed a termination, or ‘special’ deposit. A relatively common find within Anglo-Saxon sunken featured buildings, such deposits are usually represented by deliberate depositions of animal or human bone, and less commonly, ceramic vessels or other domestic items (Hamerow 2006, 27). At Thanet Earth, while the fills of SFB 3 were composed primarily of domestic rubbish a fragment from a late Roman snake bracelet that was associated with an amber bead (FN 211) appeared to have been deliberately placed. Originally assumed to form a single item, the bracelet fragment (that included the original pointed head) had been had been twisted over itself to form a loop. The bead had then been placed in the centre of the ring produced by the twisted bracelet fragment. Both items are of possible ritual significance with snakes symbolising ‘healing, the underworld, regeneration and rebirth’ in classical mythology and beads sometimes viewed as amuletic in function (Johns 1996, 45; Meaney 1981).

SFBs 4 and 5

The form of SFB 4 was very different to SFBs 2 and 3, in that it was comparatively shallow with the majority of any structural elements removed by truncation. The building was perhaps constructed using a timber ground-beam into which vertical posts could have been set to support the roof, in comparison to the gable-end posts present in SFBs 2 and 3. If this were the case the location of the division in the metalled surface is suggested to form the trace remnants of a wall line. The

triangular patch of metalling to the south would have lain outside the main body of the structure, presumably at the entrance, forming a small porch. An alternate possibility is that the walls of this structure were constructed from clunch/clay, much like the preceding Roman SFB 1 and the medieval examples (Chapters 5 and 7).

That the building may have had a non-domestic function is suggested by the more hard-wearing floor surface. There was no clear evidence for its purpose, though it may have formed a small work area, a small barn or a storage area. Examples of small roughly metalled rectangular floors of late Roman date, for example at Great Western Park, Didcot, Oxfordshire, may represent similar structures (Hayden *et al* 2014). Lightweight timber structures, albeit of twelfth to thirteenth century date, have also been identified on two sites in New Romney, Kent where they were thought to form somewhat makeshift working areas (Holman, forthcoming). Another possibility is that SFB 4 formed a small byre (a shelter for cows). Examples of such structures have been located on the continent, notably at Odoorn and Wijster in Drenthe and at Dalem in The Netherlands (Hamerow 2004, 35; Waterbolk 1992, 86; Zimmermann 1986, 76).

SFB 5 was similarly shallow and in keeping with SFB 4, does not readily conform as a typical Anglo-Saxon sunken-featured structure, though the pottery clearly indicates that it of this period. While it appears to have been somewhat unusual, interpretation is difficult due to the extent of the damage caused by modern ploughing, with only the base of the pit surviving extant.

Local economy

Finds and environmental remains, mostly recovered from SFBs 2 and 3, would seem to indicate that the inhabitants of the Anglo-Saxon settlement would have been largely self-sufficient. The economy at this site and across Anglo-Saxon England was largely agricultural, based on mixed farming. At Thanet Earth the nearby well was excavated to provide a source of water. As at Manston Road, it is clear from the variety of animal and plant remains, together with the shellfish that several different landscape zones were being exploited during this period (Hutcheson and Andrews 2011, 243–244).

Cereals were the dominant crop, though Celtic beans and possible peas were recovered from the fills of both SFB 2 and SFB 3 seemingly forming an increasing part of the diet when compared to the preceding Roman period. Crops were presumably being grown in the immediate vicinity of the settlement, with large numbers of stinking chamomile seeds suggesting that damper, heavier soils, perhaps those in the dry river valley to the east, were also under cultivation. Alternatively, this slightly wetter area may have provided useful summer grazing.

Wheat would seem to have formed a smaller proportion of the Anglo-Saxon diet when compared to the Roman, being largely replaced by barley and rye. Such a

change in diet has been noted on sites elsewhere in Anglo-Saxon England, including St Mary's Stadium, Southampton (Carruthers 2005). What little wheat was identified at Thanet Earth, suggested that bread-type and spelt were most common. This suggests that hulled wheat had not yet been replaced by the more free-threshing varieties that predominated in the medieval period. The Anglo-Saxon activity at Thanet Earth may, therefore, have been taking place during a period of transition between the two types. Unfortunately a radiocarbon determination obtained from a cereal glume base from SFB 2 indicated a date of AD 73–224 (at 95 per cent probability; Table 6, UBA-22935), suggesting that at least some of the cereal assemblage was residual. The presence of small quantities of oats (possibly grown for human consumption) perhaps indicates that the two crops were being grown as winter sown maslin (Stone 2006, 13).

It may be that the replacement of wheat by barley as the dominant cereal can in part be explained by the light and calcareous soils that are prevalent in this part of Kent. Barley is more tolerant of poor conditions than wheat and has a relatively short growing season, an ideal crop for a relatively exposed spot such as that of Thanet Earth. An alternative explanation is perhaps suggested by the presence of a single deformed wheat grain recovered from the basal deposit of SFB 2. This appeared to have been parasitized by the wheat gall nematode, a parasite that can cause severe loss of yield perhaps necessitating a change in crop.

The frequency of rye as the second most common cereal was again illustrated by the cereal assemblage recovered from SFB 2. Like barley, rye is a species that is relatively tolerant of poor conditions, it is winter hardy and can be grown in areas where other cereal crops would not flourish. It was thought to be for this reason that it was the dominant species at West Stow, where the sandy soil is acidic and relatively free draining (Murphy 1985). An alternative suggestion is that the increased consumption of rye forms part of a cultural shift with rye reflecting an increased Anglo-Saxon population. Rye was certainly the staple grain for bread during the medieval period on the continent.

Each of the main domesticate species (sheep/goat, cattle and pig) was represented in the animal bone assemblage recovered from SFBs 2 and 3. The majority of the assemblage (54 per cent) was formed by sheep/goat bone, a slight increase on the preceding period that perhaps represents an increased demand for wool. Similar increases have been noted on other sites of this date such as at Barton Court Grammar School, Canterbury (Jones 2010), Yarnton, Oxfordshire (Mulville and Ayers 2004), Mucking, Essex (Done 1993) and West Stow, Suffolk (Crabtree 1989). The slaughter pattern at Thanet Earth would seem to support this view, with a proportion of younger animals (probably weaker animals and excess males) culled at between 6–9 months with a second cull at between 2–4 years. This would seem to indicate consumption of young animals as lamb, with older animals kept to provide wool and milk. That lambing was undertaken close to the settlement was indicated by the presence of neo-natal bones in the upper backfills of SFB 2.

Cattle remains, the majority of which were recovered from SFB 2, indicate a similar culling strategy to that of sheep. A proportion of animals, mostly younger males, were eaten as veal with the remainder kept for secondary products and for use as traction animals. Together with the sheep/goat remains all elements of the skeleton were recovered, suggesting that slaughter and butchery of carcasses was being undertaken close to the settlement. Much of the cattle bone was highly fragmented, suggesting marrow extraction.

The culling strategy relating to pigs was slightly different, with the majority of animals slaughtered before they reached full skeletal maturity. A slaughter pattern such as this is not uncommon, as they are primarily kept for meat production and there is little point in keeping them beyond the age of optimum weight.

Populations of wild animals were also being exploited in the Anglo-Saxon period with deer represented by a number of antler fragments from SFB 2. This contrasts with both earlier and later periods, where there seems to be little use made of wild resources, and perhaps indicates some localised regeneration of woodland. The remains of four hare were also identified. These animals may have been skinned and filleted with the bones removed and disposed of with other waste.

Refuse disposal

Refuse was apparently produced in large quantities by the inhabitants of the Anglo-Saxon settlement with the near-by Roman quarry used to dump midden material, perhaps explaining the lack of refuse pits. Much Roman material was intermixed with the midden material, this was perhaps derived from a nearby Roman settlement but this remains unlocated unless it lay to the south-east in the unstripped area of Plateau 2. Alternatively, and as noted above, the 'Anglo-Saxon' settlement itself may have continued to use surviving Roman-British vessels alongside Germanic types, particularly in the fifth century. Latterly, following the abandonment of the SFBs these too were used for rubbish disposal; both fly pupae and probable rodent droppings were recovered from backfills. Approximately 1 per cent of the animal bone assemblage from this phase had been gnawed with both scavenging animals (including domesticated dogs) and insects being attracted to deposits of refuse. Henbane, a plant that favours a nutrient rich environment, is suggested to have been growing on the midden material, being represented by a single seed.

Longevity

The pottery recovered from the sunken featured buildings, particularly the fragment of bossed urn from SFB 2 would seem to indicate that the settlement was occupied from at least the mid-to late fifth century and it is likely that activity ceased during the sixth century. That the settlement was quite short-lived is emphasized by the lack of pits or other features, and minimal recovery of later cultural and

environmental material. Despite this the fifth century origin places the Thanet Earth settlement amongst the earliest known Anglo-Saxon sites in Kent.

Despite this apparent lack of later Anglo-Saxon activity the presence of such large quantities of refuse within the backfills of the SFB 2 and SFB 3 suggest that occupation must have continued in the general area once the sunken-featured buildings been abandoned. This was further attested to by the silver *sceat* recovered from plateau 8, and residual late Anglo-Saxon pot sherds that were retrieved from several medieval sunken buildings. That no more definite middle or late Anglo-Saxon settlement was identified remains something of an enigma, though is not unusual in the case of Thanet. It is possible that the absence of post built structures can be explained by later truncation. However, perhaps more likely is that settlement shifted elsewhere, perhaps to a more amenable or sheltered location.

Continuity in land use and settlement chronology (James Holman and Rob Masefield)

The Anglo-Saxon settlement pattern within Kent is imperfectly understood, despite a considerable accumulation of new evidence in recent years (Welch 2007, 201–209). Notable in this respect is an increasing quantity of data relating to rural settlement, such as that at Manston Road, Church Whitfield and Lyminge (Hutcheson and Andrews 2011, 243–245; Parfitt 2014, 108–126, 177–180; Thomas 2011, Thomas and Knox 2015). Previously, evidence for Anglo-Saxon occupation was dominated by cemeteries and settlement within larger urban centres such as Canterbury and Dover (Bennett *et al* 2003, 194; Hicks and Houliston 2004, 6; 2004, 5; Blockley *et al* 1995, 280–294; Philp 2003; Welch 2007, 202–203). Tied in with this has been an increased study in landscape continuity between the late Roman and Anglo-Saxon periods (Reynolds 2011, 342; Welch 2007, 194).

Thanet Earth lies in an area defined by Everitt (1986, 69–70) as subject to primary Anglo-Saxon settlement whereby the richer, more easily worked soils were colonised at an early date. Unfortunately, our somewhat limited understanding of landscape use in the late fourth- to mid-fifth-centuries in Thanet and across Kent more generally (Millett 2007, 184), makes it hard to assess claims of genuine continuity of land-use between the late Roman and early Anglo-Saxon periods.

The rural evidence is often ambiguous, as apart from the sites at Whitfield (Parfitt *et al* 1997, 29–31), Manston (Hutcheson and Andrews 2009, 207–212), extra-mural Canterbury (Helm and Rady 2010, 41–51) and perhaps a few others (such as the Darenth Roman Villa; Philp 1984, 92–3), evidence for earlier Anglo-Saxon rural settlement in Kent has often been characterised by single, isolated sunken-featured structures without clear evidence for the associated landscape. Instances of these apparently isolated sunken-featured buildings, apart from the numerous Thanet examples, have been found at Keston (Philp *et al* 1991, 133–135), St. Mary Cray (Hart 1984), Folkestone (Bennett *et al* 1989, 58–59), Farningham near Sevenoaks (HER Ref. TQ 56 NE 73), the West Malling and Leybourne Bypass (Ellis 2009, 11), Ellington (Rady *et al*, forthcoming) and elsewhere (Welch 2007, 207).

Perhaps more importantly, evidence for the earliest Anglo-Saxon settlement – that of the early- to mid-fifth century, is almost entirely absent from Kent (Moody 2008, 160; Parfitt and Needham 2007, 53). Chronologically, the buckelurne sherd recovered from Thanet Earth SFB 2 is of some significance. The prototype is found in fifth century north Germany, and it is the principle form of cremation urn at the fifth century Anglian cemetery at Spong Hill. The stamp on this sherd is of a type known from both the late Roman and early Anglo-Saxon periods, and is suggested in this instance to date to between c. AD 420–490 (Diana Briscoe *pers comm*).

On this basis, that there is evidence for late Roman occupation (in the form of cremations) within 200m of the Thanet Earth settlement is, at first glance, of potential significance. Certainly, the proximity of late Roman settlement is thought to form an (albeit tentative) factor in the positioning of early Anglo-Saxon settlement on several sites identified as part of the Channel Tunnel Rail Link development (Booth 2011, 338). However, at Thanet Earth, no additional evidence for late Roman activity was forthcoming and it seems unlikely that the location of the cremations may would have been clear by the mid-late fifth century. Any link between the cremations, and early Anglo-Saxon settlement would on this basis seem to be a misnomer with settlement probably originating no earlier than c. AD 450.

The presence of the cremation burials and the few sherds of late Roman pottery in the backfill of SFB 2 do allow an alternate, albeit rather more controversial, explanation for the origin of settlement. Here, it is suggested that the ‘fresh’ late Roman pottery found in SFB 2 site is unlikely to have remained in circulation for more than a few decades (at most). This may imply more definitive evidence for landscape continuity, particularly when it is remembered that the specifically ‘Anglo-Saxon’ finds from the SFBs represent the final *disuse* backfilling of the structures. Such deposits may, therefore, post-date by some decades the original use of the buildings.

More contentious, is the possibility that the settlement represents that of late Roman *laeti* (settlements of defeated rent paying farmers with military obligations) or *foederati* (free barbarians supplying military services in return for pay and land). While well recorded historically, particularly in regard to the former in analogous areas across the channel (see Halsall 2009), the presence of either within the British archaeological record remains controversial. Should such settlement have taken place in the late Roman period, it is perhaps easiest to recognise along the Thames where distinctive early Germanic inhumation burials have been found (Cunliffe 2012, 419). Nevertheless, the vulnerable nature of coastal farmland at Thanet, highlighted by the Shore forts at Reculver or Richborough and the sensitivity of Roman Canterbury to raiding would, in theory, make this potentially under-populated landscape a prime candidate to bolster with settled *laeti*.

Documentary sources, represented by the Anglo-Saxon Chronicle that builds on the earlier works of Gildas, suggest that the quasi-historical British ruler Vortigern first

invited Saxons to Kent in AD 449. These dates vary, with a similar story from the ninth century *Historia Brittonum* offering a slightly earlier date of AD 431 for their arrival (Welch 2007). Famously the Kentish Chronicle, attributed to Nennius, names Thanet as the island first given over to Saxon federates, although the reliability of all these later accounts has been consistently questioned. Nevertheless historians increasingly recognise the role of utilising Germanic warriors to bolster the dwindling late Roman military (itself increasingly comprised of Germanic recruits) along the vulnerable channel coasts, and consider that 'Vortigern', or equivalent sub-Roman leaders, might simply have continued the supply of Germanic federates to England (e.g. Halsall 2009).

In Kent, federate settlement, if present, is thought to have been rather different, undertaken by people who remained largely unwelcome but were allowed to stay by the late Roman/early post-Roman authorities (Cunliffe 2012, 421). These people were equipped very differently to those that settled further north who served formally within the late Roman army. Their presence is perhaps testified to by the early cemetery evidence from Sarre (Richardson 2011, 70–71) and similar evidence recorded at Milton Creek, near Sittingbourne (Welch 1993; 2007; Kent HER). At both sites federate settlements have been claimed on the basis of an early Anglo-Saxon cemetery with two chip carved belt sets at Sarre and similar graves with chip carved belt sets, a fourth century glass vessel and Anglian style bossed urn pottery from Milton Creek.

At Thanet Earth, it is possible that the late Roman cremation vessels with possible Germanic affinities identified to the south-west of the settlement and the late Roman sherds in the nearby quarry and the SFBs, relate to late Roman/early post-Roman arrivals. The evidence remains too slight and ambiguous however, for this to be viewed as much more than a tentative possibility at present. While it is likely that there were some Germanic soldiers in Kent prior to the mid-fifth century, there is similarly no firm evidence to connect them with the rapid cultural change that took place in the later fifth and early sixth centuries. On balance the intriguing Thanet Earth settlement would seem most likely to represent an early settlement that demonstrates all the signs of Anglo-Saxon cultural identity but does not *necessarily* imply new migrants. Given Thanet's geographical location, and the concentration of fifth century Germanic material culture around the Wantsum, this should come as no surprise.

More widely, by far the clearest evidence for Anglo-Saxon occupation in association with late Roman settlement in Kent is found in Canterbury. Even here, however, it is difficult to argue for direct continuity, as current evidence indicates a gap of a least a generation with Anglo-Saxon settlement within the walled town known from only the mid-fifth century (Brooks 1984, 21; Blockley *et al* 1995, 18–20, Hicks 2015, 115; Houliston in preparation). The Occupation within Canterbury is characterised by a number of SFBs that indicate a shifting settlement (like Mucking) in the fifth to sixth century (Welch 2007, 202). Unfortunately, given their location in a former urban

centre, the validity of such settlement as a comparison to the rural evidence remains open to question.

Perhaps as likely (if not more so) as the potential Roman influence, is that the Thanet Earth Anglo-Saxon settlement was sited in this position due to the proximity of Barrow 6. Forming a prominent landscape feature during the Roman period, a common association of Anglo-Saxon cemeteries with prehistoric funerary monuments is well known. That settlements were also focussed on barrows (and other prehistoric features) is not unheard of, but this latter form of secondary use has been far less studied (Crewe 2008). Such settlement seems reasonably widespread in central England with a major example being that of Barrow Hills, Oxfordshire (Chambers and Allen 2007, fig. 7.11). It may be that early Anglo-Saxon settlement at Thanet Earth is a reflection of such behaviour, and more common in Kent than had previously been realised. A single SFB was, for example, identified cut into the mound of Barrow M1 at Ringlemere (Parfitt and Needham 2007, 52) with recent geophysical survey undertaken at Lyminge identifying a substantial ring-ditch adjacent to the fifth- to seventh-century settlement (Thomas and Knox 2014, 4–5). Subsequent excavation demonstrated that part of a sixth century hall overlay the backfilled ditch, but it is unclear whether any of the mound remained extant.

It is possible that the large number of prehistoric and Roman trackways that cut across the Thanet Earth site, as well as the Bronze Age barrow, may also have been a factor in the siting of the settlement. It has been noted by Brookes, for example, that some 85 per cent of Anglo-Saxon cemeteries lie within 1.2km of a Roman road, a navigable river or the coast (Brookes 2003, 87; see also Reynolds 2011, 350–1; Allen *et al* 2012, 491). The remaining 15 per cent occur close to ancient trackways that allowed the easy movement of stock. Similarly, at Saltwood three of the early Anglo-Saxon burial plots were associated with both barrows and adjacent Iron Age trackways (Reynolds 2011, 350).

The current dataset would seem then to indicate that the period *c.* 410–450 cannot be characterised as culturally ‘Anglo-Saxon’, at least in Kent. A more appropriate term is perhaps sub-Roman (Andrew Richardson *pers comm*). Identifiable ‘Germanic’ settlement is recognisable only from the period *c.* AD 450–500, as indicated by the Canterbury evidence. This is demonstrated elsewhere by burials of mid-to late-fifth century date that have been identified at Sarre, Ozengell and Cliff’s End Farm on the Isle of Thanet (Richardson 2005, 65; McKinley and Stoodley 2014, 239), at Ringlemere and elsewhere along the southern shores of the Wantsum. The Thanet Earth settlement most likely falls into this period.

Moving away from the chronology of early settlement, the prime question is whether the apparent isolation of so many of the SFBs truly reflects the overall settlement level. In many examples, particularly from the earlier years of discovery, it is likely that the investigated areas did not allow a full picture of the Anglo-Saxon settlement evidence to be perceived. The majority of sites were rescue excavations primarily aimed at known Roman remains, with the discovery of sunken-featured

structures largely fortuitous. Even on larger stripped areas, such as the Channel Tunnel Terminal and CTRL excavations, the A2 road scheme or the Leybourne Bypass, a wider examination may have provided a different or less ambiguous picture (see also Tipper 2004, 162–163). On East Kent Access the presence of two identifiable settlement areas, set some 500m apart but probably not contemporary, should be viewed as highly fortuitous (Andrews *et al* 2015a, 386).

At Thanet Earth, the settlement was identified in a much more widely stripped area than was the case in many of the sites listed above. This would seem to prove that settlement on this site was indeed small scale, with activity focussed in only a small part of the landscape. Such small-scale, dispersed settlement presumably relates to a generally smaller overall population at the beginning of the Anglo-Saxon period, with the landscape used less intensively as a result.

This evidence would seem to reflect continuity in land use, if not in necessarily in population, during the early Anglo-Saxon period. As noted landscape continuity is further indicated by the association of the sunken buildings with semi-extant late Iron Age and Roman field divisions on Plateaus 1, 3 and 8. It seems clear that no new field system (or one that has survived) was laid out to replace these earlier field boundaries in the Anglo-Saxon period. Instead, this small Anglo-Saxon settlement would seem to have utilised existing field boundaries that were in the most part semi-backfilled. The level of Anglo-Saxon exploitation of the wider post-Roman landscape at Thanet Earth, and in Kent more widely, is therefore difficult to fully quantify. What is clear is that while the wider landscape would appear to remain largely unchanged, there is a distinct shift in settlement away from earlier settlements and burial sites.

Chapter 7: The medieval period

Jon Rady

Overview

The medieval features on Thanet Earth, dated to between the mid-eleventh century to the early part of the fourteenth (possibly extending to AD 1350) dominate the archaeological record, taking up about a third of the recorded archaeological contexts. A surge of activity, predominantly agricultural in context, though with significant elements of domestic occupation, appears after a long period of apparent inactivity on the site, or at least not any that has left a discernible trace. The earliest features were a sequence of drove roads or trackways, defined by either hollow ways or pairs of ditch (Trackways 28–32 and 35; Fig. 152). Trackway 30 was probably the most important of these routes, the forerunner of Seamark Road, part of an ancient, probably prehistoric way between Monkton and Birchington along the eastern margin of the site. Other routes were mostly aligned north-south across the site the exception being a putative track (Trackway 35) that extended east-west across the centre of the site, partly following the course of the parish boundary between Monkton and St Nicholas-at-Wade. This line, which developed from a much older prehistoric boundary partly defined by a substantial ditch (probably banked on the south), was not observed as a track in the ground, but may have been obscured or erased by a later negative lynchet that formed on the north, down slope side of the boundary. The boundary appears to have separated a significant difference in land management to north (Fig. 153) and south, the southern area, possibly mainly pasture being much more open in aspect (Fig. 154).

To the north, at least five large rectilinear fields, also defined by ditches, were arranged between the two central droveways. A number of ditched enclosures were established within these fields or to the side, extending off the routes, often with entrances onto the droves themselves. These were either coeval with the droves or formed slightly afterwards. These enclosures were mostly bare of features internally, at least initially. Subsequently, considerable modifications of this system took place. This involved the emplacement of numerous additional enclosures and sometimes alterations to the extant ones. Over 50 of these enclosures were recorded in whole or in part. They varied considerably, some virtually devoid of features, others containing dense scatters of pits, wells and other features suggesting more protracted occupation; virtually all of the medieval features found on the site were related to them in some way. Some of the enclosures underwent further alteration, expansion and internal subdivision. In addition, nearly all of the enclosures were associated with structures, mostly of sunken-featured form, an apparently rather unique concentration of these buildings in the medieval landscape of Kent, as currently understood.

Over 70 of these varied sunken-featured structures were recorded and seem to be restricted mostly to Kent, particularly the northern littoral zone. One of the main

types (here defined as Type 1 with Type 2 variants), the most frequently observed form elsewhere, contain a large oven in one corner and an adjacent compartment that also shows evidence for burning and is usually interpreted as a bakery (Schuster and Stevens 2009). There is compelling evidence that this form of structure originated on the continent, specifically eastern Europe and Scandinavia, where they have a long pedigree, apparently Slavic in origin. There are variations on this pattern, which in some cases appear to be uniquely Kentish. Thus at Thanet Earth, an equally predominant form (Type 3) was more difficult to recognise and to interpret. This often consisted of a simple sub-rectangular sunken area, usually featureless internally and without any obvious structural characteristics. Other, more obvious structures were more specialised, probably used for various functions, some agro-industrial, while others appear to be domestic in nature, even if only intermittently occupied (Type 4). All however, seem to derive from this probably continental structural kernel.

The variation in the nature of the enclosures and structures and their often protracted development, is highly suggestive of a considerably varied and complex, predominantly agricultural regime in the area. Chronologically, the earliest activity appears to concentrate in the northern part of the site, particularly on Plateau 1, with the complexes to the south showing evidence for more intense development later in the sequence, although activity seems to have occurred across the site during the entire period. Three medieval sub-phases, somewhat overlapping, can be discerned from the pottery, although the primary phase of drove roads and trackways has been considered as Phase 1 on topographic and stratigraphic grounds. The medieval occupation, all undoubtedly representing the farmsteads and plots of tenant peasant farmers, seems to cease completely at some time in the mid-fourteenth century, most of the field and enclosure ditches and their associated banks or hedge lines disappearing from the landscape. There was virtually no sign of settlement or agricultural features of any note during the following centuries across most of the site apart from a post-medieval windmill (the last of perhaps a succession of earlier windmills and possibly associated settlement in the area of Plateau 6).

For the purposes of this report, the medieval sub-phases from Phase 2 onward, have been divided into twenty or so separate sites, in some cases rather arbitrarily, so these should perhaps be best regarded as zones (see Table 3). Some consist of more than one focus of activity, or spreads of enclosures along the trackways, others of more discrete occupation within individual enclosures. Due to the complex chronological developments of some of these, each is discussed concurrently by phase, rather than each phase discussed site-wide in turn. The overall development is summarised in the discussion.

A note on the term 'clunch'

However, the term probably needs some overall definition, since it is not in common usage archaeologically and can vary in meaning. The Shorter Oxford English dictionary defines clunch, rather generically as 'any of various stiff clays' or 'a soft

limestone forming one of the beds of the Lower Chalk'. More specialist reference works allude to its use in buildings more specifically, where it is often described as hard chalk or marl used in the construction of the walls of agricultural buildings or cottages (although it was also used internally in churches and other buildings) during the medieval and post-medieval periods; Scott (1964) refers specifically to medieval usage. This is the more common definition, but it is mainly confined to East Anglia and some surrounding counties (although even here there is some variation as to precise meaning). In more southerly counties however, there seems to be an alternative definition, basically a mixture of broken up chalk, clay and sometimes straw, formed into a stiff paste (or puddled), from which walls can be constructed either in dried blocks or *en masse* in timber formers or moulds (this is very much like the definition of 'cob', usually clay, marl or chalk mixed with straw). Such materials and methods for building walls have been used until fairly recently in rural areas (Newbold 1923, 75–77).

In the following descriptions the term 'clunch' has often been used to describe structural elements (such as oven walls) found in many of the medieval sunken-featured structures, rather than separate matrix descriptions of each deposit occurrence. This is mostly for convenience and to avoid repetition, since the material was usually of very similar composition, basically a mixture of natural chalk and clay. The term is used here specifically for a material with no obvious straw added where it could quite properly be described as cob, although flints and larger pieces of chalk are often found within the matrix. There was no certain evidence for the addition of straw or other organic materials within the various clunch walls found at Thanet Earth and although such materials would not necessarily survive, some evidence for straw or similar material would be expected, particularly in the fired walls of the ovens, as burnt out voids. That this was never observed strongly suggests that the clunch mixture did not include straw, although other organic additives, acting as 'binders' cannot be ruled out. Here the 'clunch' mixture was probably made from the material directly excavated from the immediate vicinity, probably the sunken areas of the various structures in which it was mostly used and, as this varies over the locality, with some parts of the chalk subsoil more disturbed by clay filled periglacial features or spreads, the composition of the material varies slightly in its ratio of chalk to clay content, but there is nearly always an appreciable, if not predominant amount of chalk present in the Thanet Earth examples.

Phase 1: Trackways and fields (c. 1050–1175)

The earliest features of this period consist of a number of mainly north-south aligned trackways and associated fields. A main east-west boundary, partially forming the parish boundary was also an important route. This alignment (Trackway 35; Fig. 152) almost certainly survived because it was based in part on a large underlying prehistoric ditch (G4006; see Chapter 4) and associated bank, the latter at least probably still present in the landscape by this time (see Site 19 below). Most, if not all of these routes appeared to be drove roads, sometimes forming hollow ways, or defined by two closely set ditches.

Trackway 28

In the northern part of the site, the westernmost excavated route (Trackway 28) extended northwards from the likely route of Trackway 35 (another trackway was probably similarly aligned to the west of this but was outside the examined area). Trackway 28, generally defined by two parallel ditches forming a drove road, extended for 175m across Plateau 2, continued on the same course across Plateau 1 (Plate 177) for 200m, and was also located in the pond area to the extreme north of the site where it may have diverged into two separate paths (c. 665m altogether). In these northern areas, the track extended down the spine of the shallow valley and cut through the colluvial deposit (Fig. 153). In these zones, most of its course was only defined by the westernmost ditch, but there was undoubtedly a slighter corresponding feature, probably mostly removed during machine reduction or removed by later recuts of enclosure ditches. In the pond area, the two ditches were more evident but again somewhat masked by recutting.

At the extreme north of the Thanet Earth site, the droveway was probably represented by fragments of ditch, G10102 representing the western side, G10104 and a recut the eastern side where the ditch remnants, although not adjacent, would have been about 2.5m apart (Fig. 157). The ditches yielded both prehistoric and medieval pottery (c. 1075–1175) and animal bone which included head and foot bones of a dog and a frog bone, whilst one terminal end of G10104 yielded animal bone, prehistoric pottery, burnt flint and marine shell. This also contained a fragment of human bone (SK 1.12, a juvenile finger phalanx epiphysis) which probably derived from colluvial material with the other prehistoric material. The bone probably represents a disturbed burial.

The line of the trackway here, turning slightly to the west along the base of the valley from its more northerly alignment further south, was considerably disturbed by later features consisting of adjacent enclosure ditches reinstating the boundary, mostly on the western side, while the eastern side was less well defined, suggesting that the latter ditch was not cut so deep. One of these later features (G10091) reinstated the west side of the drove at the north end of the site, but its relation with a probably contiguous east-west ditch (G10089) was uncertain, but both were probably part of a later enclosure to the north. In any event, ditch G10091 yielded a larger proportion of material, but not obviously of later date than the main ditch alignments. Feature G10089 yielded an assemblage of earlier prehistoric flintwork almost certainly residually derived from the colluvium, as did many other medieval features in this area.

To the east of this line, another pair of ditches (G10062–10064) on a diverging, more north-easterly, alignment may represent a different branch of the track. Another set of ditches further east were undated but probably prehistoric. These features, slightly wider apart, may represent a divergent track as medieval pottery recovered from them is of similar date to that from the main trackway ditches and is unlikely

to be intrusive. The emplacement of an enclosure (Enclosure 60) across its line does not necessarily rule this interpretation out since the trackway definitely went out of use as such during later developments to the south.

To the south (in Plateau 1), the alignment was mainly represented by ditch G1223 (200m long), representing the west side of the driveway (Fig. 7.9). The east side was mostly removed by truncation, but did survive to the south of the area (G1192). This 13m length of ditch was situated 1.5–1.7m to the east of G1223. As with the pond area, much of the driveway line was reinstated by later enclosure ditches (here to both east and west), which more often than not completely excised the earlier ditches. This fairly intensive later activity and recutting probably accounts for the presence of thirteenth century potsherds in the backfill of some sections of ditch G1223.

The most southerly stretch of Trackway 28 in Plateau 2 consisted of clearly defined parallel ditches (G2014–2017), with occasional gaps forming entrances into either adjacent enclosures, such as Enclosure 37, or fields. The line was only significantly interrupted in its central length by the imposition of a mostly later enclosure complex and other features (Enclosures 33–36; Site 4; Fig. 174). G2014 formed the southern extent of the eastern side of the driveway, was 56m long and terminated on the southern side of the enclosure complex, where there was probably an entrance into an enclosure extending to the east (Enclosure 33 below). G2015 was its continuation northwards, but had been recut at its southern end by various ditches of Site 4.

G2016 formed the southern extent of the western side of the track. This was separated by the northern part of the alignment (G2017) by an entrance way 2.5m across that opened into Enclosure 33 to the east. The northern alignment (G2017) consisted of two main sections: a southern section c. 96m long; and its southern third heavily cut by later features relating to the enclosures. The northern terminal of this southern segment was separated from its northernmost alignment by a probable entrance 2.08m wide which later served as access into Enclosure 37 (below).

Generally, these ditches were relatively shallow, particularly in the colluvial areas where they had to be machine truncated before becoming visible. The western ditch tended to be deeper and more substantial, though not always and none was ever more than 0.5m deep at maximum. Width varied also, being wider in the colluvial areas, due to greater erosion of the sides, but was mostly between 0.6 and 1.3m, with the western ditch being noticeably wider in the southern part of Plateau 2. The distance between the eastern and western side ditches was also variable, being about 2.5m at the extreme north end of the site, 1.75m where measurable on Plateau 1, due to the width of the western ditch here at over 2.2m, and about 2.3–2.5m at the northern side of Plateau 2. South of the enclosure complex (Enclosures 33–36), the width was wider however, mostly between 3 and 3.5m.

Finds retrieved from the ditch fills, even though extensively sampled were relatively few, and often residual, as perhaps might be expected. Small quantities of pottery were quite common (although G2016 had none), with animal bone and residual prehistoric flints (and a late Iron Age potin from G2017). Assemblages of Mesolithic and early Neolithic flintwork from a number of interventions in G1223 (S580, S785) were probably derived from the colluvium in the area. Roman pottery was quite common from the northern sections of ditch on Plateau 2 and undoubtedly originated from occupation of that date in this area. There was, however, more contemporary artefactual evidence from near areas of settlement, such as the enclosure complex on Plateau 2. At the extreme northern end of the site there was even evidence for special artefact rich depositions in ditch termini, often accompanied by concentrated dumps of marine shell (G10104; S10664), also noted in some of the other medieval ditch terminals. Ditch G10091 (Fig. 157) was perhaps an exception to the norm, containing much larger quantities of deliberately dumped artefactual material, but this was in any event a later recut of the line. Most of the original drove road ditches appeared to have infilled naturally until some were recut, but more artefact rich fills may have been to level the ditches as it was notable that they were normally in areas of more concentrated later activity or where later enclosure ditches cut across the line of the track, such as G2017.

Trackway 29

Trackway 29 was situated about 350m east of and near parallel to Trackway 28, where it followed or delineated the north-south section of the parish boundary. It was only seen as a double ditched drove road in Plateau 4 over a distance of 134m, so it may not have continued as far north as Trackway 28. However, in the more northerly areas, its course was mostly obscured by another colluvial deposit, and at the very northern limit of the area (Plateau 8) a lynchet had also formed along its line, which may have completely removed all evidence for the ditches.

At their southernmost extent, on Plateau 4, the ditches (G4019–4020) possessed an uncertain relationship with the large Iron Age ditch delineating the east-west line of the parish boundary. Although one short, shallow segment was recorded to the south of this line approximately in line with the main eastern ditch of the drove road, its western companion was not located and neither ditches were seen in Plateau 5 to the immediate south. It seems likely that the drove formed a junction here with an east-west aligned track (Trackway 35) along the parish boundary. No physical evidence for this was ever located, but cartographic and other evidence suggests its presence.

The western ditch (G4019, c. 134m long) was between 0.4m to 1.5m wide and about 0.18m deep. The eastern ditch was about the same width but slightly deeper on average 0.37m. The western side of the drove was probably contiguous with Enclosure 47, and formed its eastern side. An east-west aligned ditch at the north end of the plateau (G4034) may represent part of a similar enclosure to the east. Very little artefactual material was recovered from either ditch, although the few medieval

sherds are of similar provenance to those from Trackway 28, which in most other respects these ditches resembled.

Further north, it seems likely the line of this trackway (Fig. 153) was defined by a very shallow ditch G3039, 1.2m wide, becoming narrower towards the southern end, and traced over a distance of 75m. There was evidence for recutting here. Further north still, on Plateau 8, the ditch was less evident, perhaps because of its location within the colluvially filled valley and the presence of a lynchet. However, a possible ditch at the base of the lynchet (G8323) aligned north-south, 0.9m wide and 0.25m possibly represents one side of the drove road, but could be a much later feature. Few or no finds were recovered from the interventions in these latter features.

Trackway 30

Trackway 30 (Plate 178) was mainly located at the extreme southern end of the site (Plateau 7 pond), where it formed a rutted hollow way with associated side ditches (Fig. 155). This was undoubtedly the forerunner of Seamark Road and was aligned with that section of the modern road just to the north. The hollow-way (G7023) comprised a linear feature on a north-east to south-west alignment, visible for an unbroken 37m with a further 2m long segment observed to the north-east. The cut had an average width of 3.8m, and was 0.04–0.64m deep becoming shallower to the south-west, with a shallow sloping profile and a wide, generally uneven base. Seven wheel-ruts (G7024), all in similar stratigraphic position and with very shallow, 'U' shaped profiles were recorded for at least 12.5m in length, aligned with the hollow-way in its base (Plate 179). The wheel-ruts had been heavily affected by patches of wear that distorted the widths of these features in places, but on average they were 0.31m wide with depth averaging 0.1m

There was another larger linear feature (G7026) on the eastern side of, and parallel with, the hollow-way cut. This U-shaped gully had an average width of 0.77m with a maximum depth of 0.2m. The disposition and size of this feature strongly suggest that it was a drainage ditch. The sterile fills of all these cuts varied slightly but were indicative of gradual infilling of the feature by eroded deposits, presumably once this section of the route had been replaced by a more modern alignment. A ditch (G6045) aligned north-east to south-west, was located a further 230m to the north-east in the side of the access road easement terminating on the south and extending 20m to the site edge. The ditch was 1m wide and 0.3m deep with a flat based 'U'-shaped profile. Although this contained no datable artefacts and was cut by SFB 69, it was similarly aligned with the trackway, and it might represent part of another medieval enclosure along the route.

Further north, along the eastern edge of Plateau 5, another large linear feature (G5083) probably delineates the original course of the route. This extended for 60m on a parallel alignment to Seamark Road (north-east/south-west) between 3m and 6.5m from its present day verge and was about 4m wide and 0.82m deep with a flat bottomed 'U'-shaped profile (Fig. 203). It contained a fill of clay silt with some

weathered chalk, tile and probably residual pottery (AD 1200–1275) deposited after it had gone out of use. Although the purpose of the feature remains enigmatic, its relation to other features and the course of Seamark Road indicate that it was a fragment of hollow way delineating the original course of the track. Despite sparse dating evidence, there is no reason to doubt that it was at least in use at the same time as the other trackways and could originally have been more ancient.

Trackways 31 and 32

Trackways 31 and 32 were two separate phases of the same route, both hollow ways that traversed the western side of Barrow 2 on Plateau 7 on slightly different but near north-south alignments. They are both described more fully under site 21 below. The destination of the track itself, to both north and south is uncertain, but to the north could have joined with Trackway 35.

Trackway 35

Although there was no direct evidence in the ground for this lateral trackway, the disposition of other medieval boundaries and features certainly suggest its presence. In addition aerial photographs indicate crop marks of rectangular enclosures similar to the medieval ones recorded on site, adjacent to its course. Its alignment is probably shown on Andrew, Drury and Herbert's map of 1769 (PLATE), albeit in the wrong position in relation to other features, although of a similar shape to what is presented by later boundaries. More clearly, its course is shown as a trackway in the correct position on the early nineteenth century tithe maps. To the west it was a route to St Nicholas-at-Wade, on Thanet Earth following the line of the earlier prehistoric ditch and its adjacent bank (G4006/G5047) along the parish boundary. To the east it is shown as extending to Plumbstone and ultimately, Cleve Court, where other medieval enclosures have been found (Perkins *et al* 1998).

Fields M1 to M5

A number of rectangular fields, delineated by ditches, sometimes contiguous with those of the drove roads, are evident in the northern part of the Thanet Earth site (Figs. 153, 154, 156). They primarily spanned Trackways 28 and 29 and although this grid was not found in the areas to east and west, it could have extended in truncated or unexposed form as far east as Seamark Road (Trackway 30).

The fields, as far as they could be delineated, were arrayed on either side of a generally straight north-south aligned ditch that spanned the entire northern part of the site, from the south edge of Plateau 2 to the site's northern limit, a distance of over 720m. This feature (G1002, G2011 and G10057; Fig. 153) was located about 140m to the east of Trackway 28 and around 210m west of the parish boundary (Trackway 29), which diverged slightly to the east further north, perhaps mirrored in the alignment of the ditch in the northern part of the site. The ditch was between 0.6m and 1.9m wide and was generally shallow, no more than 0.3m. Its fill was suggestive of gradual backfilling due to erosion like most other ditches of this network, and

produced very few finds, virtually all of which were residual. No medieval pottery was recovered, but the stratigraphy and topography indicate a medieval date for the ditch which cut the late Iron Age/Roman Trackway 27; Chapter 5). There were a number of gaps in this ditch, some of which were probably caused by subsequent truncation, but some may well have been entrances between adjacent fields

The most south-westerly field (Field M1) occupied much of the eastern side of Plateau 2 to the east of Trackway 28. The southern side was delineated by ditch G2012, its northern side by a more fragmentary feature G2094. With ditch G1002 these formed a field about 195m by 135m in area (26245m², about 6.5 acres). Ditch G2012 comprised two sections separated by a 3.5m wide gap or causeway, situated about midway across the field and therefore probably representing an entrance from the south. The ditch had a maximum width of about 1m and a maximum depth of 0.25m. Its western terminal (S2077) cut across the eastern ditch (G2014) of Trackway 28, terminating almost halfway across the driveway. Its eastern terminal stopped short of the side of the field by about 4m, possibly representing another entrance. These relationships alone suggest that the driveway was the earlier feature and that the fields were set out at a later date.

The northern boundary consisted of two separate ditches (G2094 and G2095) extending from the northern limit of the Plateau 2 area to the north-south aligned ditch G2012. The two segments were separated by a gap or entrance 1.64m wide. The eastern extent of the boundary terminated in a rather pointed, irregular terminal, where it was recorded as being cut by the north-south ditch G2011. The ditch was of variable width, about 0.57m at maximum and usually shallow (0.23m maximum). Apart from some residual Roman pottery, finds from these field ditches were few. No features were contemporary, although a complex of medieval enclosures (Enclosures 33–36) intruded into the western side.

Field M2 (Figs. 153, 156) was immediately to the north, bounded on its north side by a well-defined ditch G1030, which formed an area of c. 160 by 130m (20190m², about 5.0 acres). Ditch G1030, extended west from ditch G1002 and extended to within 11m of Trackway 28 where it petered out, although its possible continuation across the line of the track might be represented by a small fragment of curving ditch. The feature varied in width between 0.60–1.85m and was about 0.25m deep. Its fill yielded more early medieval pot than most of the other ditches of the system although its nature was similarly indicative of gradual infilling by erosion. There were few features in this field apart from a sequence of probably later enclosures and partitions on its western side (Enclosures 13–15, 18–20 and 24). Only the putative Enclosure 14 (see below) is likely to be more or less contemporary.

Field M3 was directly north of Field M2, probably bounded on the north by ditch G10067 and a parallel feature a few metres to the north (G10066) which together may have formed a lateral trackway (Trackway 33). The field enclosed an area of c. 215 by 125m (26170m², just under 6.5 acres). Few directly contemporary features were located in this field, a large quarry (G1183) in its north-east quadrant probably

originating later in the medieval period, but there was an undated structure (SFB 23) in its south-west corner while a single pit (G1115) seems to derive from later in the period. Presumably there was a field to the north of Field M3, but its full bounds were not revealed.

East of ditch G1002, and adjoining Field M1 was field M4, encompassing most of Plateau 3. The south side of this enclosed area was formed by east-west aligned ditch G2010, and its equivalent on Plateau 3, G3029, continuing the line of the south side of Field M1, but slightly to the south, the east side by Trackway 29 and the north side by an eastward continuation of the northern side of Field M1, here defined by a segment of ditch, G2096. The northern and southern ditches were similar to those of Field M1 and had sterile fills. This trapezoid shaped field was about 220 by 200m in area (44150m² or about 10.9 acres). No fields to the north of this could be discerned, but it is likely that there was a similar field to the south (M5), delimited by the parish boundary and there were two gaps in ditch G1002 on the western side. The southern gap spanned the course of the earlier, Roman hollow-way (Trackway 25). This could be a coincidence as the ditch was very shallow at this point, but is still rather suggestive. The hollow of Trackway 25 may still have been just evident by this time and perhaps used as a way into the field. Another gap, nearly 4m wide, in the ditch just to the north may also represent an entrance, or may be due to truncation. This field may have been extended to the north at some time, as another east-west aligned ditch about 30m to its north (G2115-2116) could also be of medieval date, although as with most of the other ditches of this system, the bulk of the recovered pottery was of Romano-British origin.

A few other field boundaries can perhaps be related to this system. Two parallel and adjacent lines of discontinuous ditch, aligned north-south down the western side of the northern part of the site, were located on Plateau 1 and perhaps in its pond area to the north (Fig. 153). These may have bounded a trackway to the west, just outside the site limits, possibly a northward continuation of Trackways 31 or 32, which were minimally exposed south of the parish boundary. These ditches undoubtedly preceded the laying out of medieval enclosures and other activity in the area.

The easternmost ditch (G1022, G1025, G1029, G1297) was situated about 167-185m west of Trackway 28 and consisted of four discontinuous but aligned sections of ditch of various length and width, mostly between 0.5 and 0.8m wide with a greatest depth of about 0.66m. In the pond area the equivalent alignment was probably ditch G10052, 27m long and of similar dimension. The other boundary was located 11-14m to the west of and near parallel to this line and consisted of three discontinuous lengths of ditch (G1024, G1028, G1246), the northernmost two segments exhibiting signs of recutting, resulting in an overall width of 1.4m. These ditch segments were otherwise very similar to the eastern alignment, and all contained near sterile fills, but with some early medieval pottery (c. 1050-1250) and some residual material. Morphologically they compare with the other field boundaries of the period.

Enclosure 14 (Fig. 156)

This possible enclosure was formed from a curvilinear ditch (G1005) which extended for c. 30m on an approximately north-south alignment from the northern ditch of Field M2 (G1030) to the northern ditch of another enclosure to the south (the later Enclosure 13; below). The enclosure so formed, with its western side delimited by the side ditch of Trackway 28 (G1223), enclosed a space c. 38m x 30m. Ditch G1005 was about 1.20m wide and 0.24m deep at maximum, with a uniform near sterile fill apart from a few scraps of prehistoric pottery. Stratigraphic relationships with its interconnecting ditches to the north and south were uncertain, particularly at the south end. To the north the ditch was recorded as cutting the ditch of Field M2, but it seems more likely that they were near coeval. To the south, the enclosure may have been unbounded by a ditch (like some others) or was perhaps excised by the later enclosure ditch in the same position.

Apart from a curvilinear arrangement of postholes near the north-west corner adjacent to Enclosure 19 (below) the interior of which can best be seen perhaps as a subdivision of Field M2, was devoid of features apart from one undated small pit. The postholes may have represented a fenced subdivision within the enclosure. Also in the north-west corner, ditch G1030 was cut by a rectangular shaped pit (G1135) 1.94m wide, 2.32m long and 0.34m deep. The pit, which appeared to be aligned with the ditch, had steep cut sides and a flat base. Centrally located in its base was a smaller rectangular cut 0.88m wide, 1.22m long and 0.19m deep, with steep sides and a flat base. The various fills of this feature yielded a considerable and varied assemblage of finds, including pottery, the majority dated to 1075–1175, animal bone, a copper alloy object, iron nails and other objects including a blade. Charcoal rich deposits and marine shell were also present, all suggesting that this feature was a refuse pit. The dating of this feature would again suggest that this putative enclosure was part of Phase 1.

Phases 2 to 4: The medieval sites

A site wide system of enclosures appears to be intimately related to the various trackways described above, but in most instances these would appear to be later, if only slightly in some cases, hung upon the scaffolding that the trackways provided. Virtually all of the remaining medieval features at Thanet Earth appear to be related to or within these enclosures, apart from a few stray or isolated features and some of the large quarries, most of which could post-date the main period of activity.

The period overall has been divided into three main phases, each divided into a number of structural sub-phases, based almost entirely on the ceramic chronology. The dating is not robust enough for an exact correlation of dating of sub-phases between individual sites. After the development of the trackways (Phase 1), at the northern part of the site there was a system of enclosures (Phase 2) mainly of similar or slightly later date to the fields. Pottery assemblages suggest dates of 1050/75 to 1150/75, with most of the features probably post-Conquest. Phase 3 spans 1150–1225/1250, but there is some overlap due to the nature of ceramic development.

There is little other than pottery to date these sites, coin or other dating evidence being virtually absent.¹⁴ The final Phase 4, predominantly involving features to the south, covers the period 1225 to c.1350.

Site 1

A complex of features including three enclosures and three definite and two possible sunken-featured structures was located at the extreme north end of the site in the Pond 1 area, part of a string of enclosures and associated features along Trackway 28 (Fig. 157). However, only a slice through the site was exposed and it is likely that this type of arrangement continued to both north and south.

Most of the features along this trackway on Plateau 1 were cut through a spread of colluvium that had accumulated in the base of the shallow valley and only fragments of the layout could initially be seen, bioturbation and perhaps weathering having obscured most of the features, although traces were visible and occasional areas of significantly different fills were evident. Reduction of the colluvium by further machine stripping was the only way of exposing the features clearly and this resulted in some truncation of the remains. Features in this area were often very indistinct and backfilled with eroded or weathered colluvial material. In the Site 1 area particularly, the similarity of many ditch fills made the determination of stratigraphic relationships difficult and sometimes impossible. In some cases this may have been due to new ditch alignments being cut when previous ones were still open or only partially silted.

Phase 2 (c. 1075–1175)

Sub-phase 2a: Early enclosures (Enclosures 60, 63 and 64) and their associated features

Pottery from Enclosures 60, 63 and 64 suggests they were amongst the earliest medieval enclosures on the site. Enclosure 64 (Fig. 157) was located immediately west of Trackway 28 and was possibly coeval with it or slightly later, although there was no relationship between the track and enclosure ditches (and few clear relationships to other features were established). The east side of this rectangular enclosure was formed by the ditched line of the droveway, the remainder delineated by three ditch alignments. On the north side a c. 19m length of ditch (G10095) extended eastward from the line of the trackway and a gap of 7m represents an area where the ditch could not be defined but was probably continuous. Its eastward end was cut away by a later ditch on the line of the drove and its west extent ended in a clear terminal. On the west a north-south alignment (G10073) comprised a 22m span

¹⁴ As occupation in a number of the enclosures continues into the High Medieval period without a break the division of groups of the first two quarters of the 13th century is often difficult. This is principally due to the appearance of M1 glazed jugs from the late 12th century and the gradual evolution of the late EM1 fabric into M1.

of discontinuous ditch segments, the gaps in the central length probably the result of truncation, but there was a more definite terminal to the south. The southern side was defined by a 19.4m long ditch segment (G10074), terminating on the line of G10073 on the west and about 0.7m short of the driveway on the east. This formed an enclosure with an internal area of about 21 by 25m, aligned north-south longitudinally with apparently intentional gaps or entrances, 3–4m across on its western corners. The ditches had a shallow 'U' shaped profile and were 0.4–0.7m wide and 0.1–0.24m deep. They were mostly sterile apart from small quantities of pottery (*c.* 1050–1125), animal bone and residual flintwork, indicative of a mixture of deliberate backfilling towards the east or gradual infilling with eroded colluvial material. No contemporary features could be positively identified, but a number of features in the vicinity (described below) yielded pottery of this early phase, mostly cooking pot sherds. However, the lack of any concentrated activity suggests this enclosure was primarily related to stock management.

A further enclosure (Enclosure 63), or possibly a subdivision of Enclosure 64, was represented by an inverted 'L' shaped ditch (G10070), partially recutting the line of the western driveway ditch over a length of 15m north-south with a westward turn at its north end. The ditch terminated to the south just north of the southern ditch of Enclosure 64, suggesting that the otherwise unrepresented south side was formed by the earlier alignment. The ditch forming the north side of the enclosure extended for 10m westward where it was cut by a later ditch (G10110). The relation between the two was not established, but ditch G10070 did not extend beyond this line, and the western side of the enclosure can therefore be placed at this point, the western side either delineated by ditch G10110, or originally open. The enclosed area was 14.4m north-south, *c.* 8.5m east-west.

Ditch G10070 had an average width of 0.8m and depth of 0.2m with steep to gradual sloping sides, occasionally uneven, and a flattish base. The fill yielded medieval pottery of the primary ceramic phase, animal bone and shell. Although the artefactual assemblage was larger than in the earlier enclosure ditches, much of the material was residual and although an element of deliberate backfilling may be present, most of the fills probably originated from the erosion of the ditch sides and adjacent ground surfaces. The feature could therefore be slightly later than Enclosure 64, but it is quite possible that both functioned at the same time and the enclosure, if not a completely new identity can perhaps be seen as a modification or internal addition to Enclosure 64, and perhaps therefore still primarily relating to stock management. In this respect, the disposition of the eastern side of the new cut is probably significant, reinstating the western driveway ditch which must have been partially infilled by this time, but leaving a gap or perhaps entrance onto the drove to the north, suggesting that this part of the driveway was still in use. The southern end of the enclosure ditch was later cut by a sunken-featured structure (SFB 75), which also extended across the inside of the driveway, indicating that the drove probably then went out of use, a situation seen more predominantly to the south on Plateaus 1 and 2.

Enclosure 60 was one of the few of this phase found east of the driveway here and consisted of a relatively small corral-type layout defined by curvilinear and fragmented ditches which formed an extended horseshoe shape open on the west or drove side, 9m across east-west and about 6.5m wide (c. 46m² internally) and situated less than 4m east of Trackway 28. The ditches forming the enclosure varied between 0.42–0.9m wide with an average depth of 0.15m and an uneven, irregular profile implying the ditch sides eroded before it had been backfilled. This yielded medieval pottery, again 'EM1 cooking pots totally dominating the assemblages', plus worked flint and an unidentified copper alloy object. No features were found within the enclosure suggesting that it was probably a small corral.

Features associated with the enclosures

Few features within these enclosures could be discerned. A sequence of linear features, some recuts, was found within Enclosure 64 and although probably later than both enclosures, it seems likely that the system was still intact and in use. These shallow gullies contained varying concentrations of domestic waste including early medieval pottery, cooking pots, animal bone, marine shell and part of a loom weight, not only suggesting deliberate backfilling but that the material was derived from nearby occupation, represented by features in the immediate area and to the west. Apart from dividing the earlier enclosure into smaller areas, these are probably drainage gullies as they lay at the base of the valley and were aligned with it. Two short lengths of gulley running into the alignment from the east, both of which provided smaller artefactual assemblages of similar date support this theory.

Apart from the activity later represented by a group of sunken-featured structures, there are strong indications that there may have been domestic occupation near or within these enclosures. As with many other enclosures, a relatively large corpus of rubbish pits was dug in the area, but unfortunately cannot be ascribed accurately to any particular sub-phase of activity. Most of the features were situated to the west of the enclosures and yielded shellfish and large sherds of early medieval cooking pots, but most were very shallow (>0.2m). Pit (G10086) in the same area was more substantial (1.84m wide, 2.2m long and 0.75m deep) with steep sloping sides and a flat base and containing several fills, of dark brown and black silty clay with charcoal and pottery, animal bone and shell indicative of deliberate backfilling of waste. Fourteen other pits were also recorded here, many yielding similar deposits and artefacts, but these were mostly in an intercutting complex adjacent to G10086. Most of these features could have been cut and backfilled quite quickly. There were a few smaller features in Enclosure 63 cut by ditch G10110 and were of similar shape and size in plan, 0.9m wide, 1.8m long and 0.17–0.26m deep with gradual sloping sides and concave bases. The fills yielded a small assemblage of domestic waste including cooking pots, animal bone, quernstone and shell, as well as the usual residual prehistoric material. A few other features, mostly pits no more than 1m across or 0.28m deep, which may be contemporary, were located near the east side of Enclosure 60, and yielded medieval pottery sherds and concentrations of shellfish.

Structural remains were slight, but a few groups of postholes could represent small buildings. Apart from a small scatter in the northwest corner, most were again situated to the west (G10056), suggesting that the core of the occupation was here, but none can be dated by artefactual material. Some of the postholes may have formed elements of a small rectangular building, aligned east-west. Evidence of subsequent developments suggests either a long-lived or an intense sequence of occupation occurred. There were four scattered pits to the east (G10099) varying up to 2.72m across and 0.6m deep, one of which cut the ditch of Enclosure 63 within the droveway. The fills varied, but some contained a significant amount of domestic waste including pottery, shell-fish and carbon. One pit yielded foot bones from a sheep or goat, probably derived from fleecing. A worked bone spindle whorl (SF 1.55) and quernstone fragment were also found, the former not out of place in an eleventh/twelfth century context. It was notable that in most of the pits an initial layer of grey and greenish brown silt was identified followed by further incremental deposition of sediments and artefactual material suggesting a cess pit function.

In the same area was a slightly unusual group of features (G10097) a potential structure (Structure 56) consisting of a linear slot 1.7m Long, 0.42m wide, and 0.22m deep, aligned east-west by the droveway, flanked by two pits. The linear had steep sloping sides down to a flat base and extended to both pits, but with no visible relationship to either. The pits were sub-rectangular, 0.68–0.7m wide, 0.66–1.2m long and 0.36–0.5m deep. Both were vertical sided with flat bases, and one was cut by a recut of the droveway ditch. Traces of mineralised seed and faecal concretions were indicative of cess and the presence of medieval pottery confirms the backfilling of waste material. The exact function of the structure remains uncertain. Further east, beyond the enclosures five similar pits up to 10.5m apart and up to 1.24m wide and 0.71m deep, had fills of shell-fish, carbon, animal bone, medieval pottery and burnt material indicative of disposal of domestic waste, occasionally capped by further backfilled material that levelled the features. One of these cut a ditch of Enclosure 64.

Sub-Phase 2b: Later enclosures or field boundaries

A later set of wider but generally shallow ditches overlay and may have replaced the previous arrangement still extending at near right angles from the western side of the earlier droveway but ranging further west. It is unclear therefore whether they represent later field boundaries or enclosure ditches and are therefore described here individually.

On the southern side of the area, an irregular linear feature (G10071) was set at 90 degrees to the droveway and extended for 42.5m, from the southern edge of excavation, probably stopping just short of the droveway, with its easternmost extent a discrete segment 3.3m long, providing a possible access point from the south. This ditch was 0.52–1.82m wide with a depth range of 0.05–0.46m and had gradual to steep sloping sides and a concave to flat base. The basal deposits tended to be quite sterile, whilst the uppermost fills frequently contained artefacts such as early medieval pottery, daub, animal bone, shell-fish and carbon traces. Two

fragmented dog heads were found in the eastern terminus of the main section. A few iron objects including a large key (FN 1.115), datable to the eleventh or twelfth century were also recovered as well as residual burnt and worked flint. This ditch was cut by a number of sunken-featured structures (below) and may have formed a drove road with a parallel ditch (G10069) no more than 4m to the south. This ditch 0.94–1.32m wide and 0.23–0.3m deep, and traced for about 30m was cut away at the drove road end by SFB 75. It had a varying profile and yielded a contemporary assemblage of material.

Sub-phase 2c: Sunken-featured structures (Fig. 157)

Five possible sunken-featured structures were found in this area, four cutting the northern ditch (G10071) and mostly aligned with it, one (SFB 75) the southern ditch and the drove road itself. One of the features (SFB 76) can be considered slightly doubtful as its edges were extremely difficult to locate, while another (SFB 79) was very badly disturbed. SFB 77 had also suffered inadvertent damage during works by one of the drainage subcontractors. A few other features may possibly relate to this phase of activity.

SFB 76 (Fig. 158)

A trapezoid sunken-featured structure with slightly rounded corners (G10080) was located 21.5m from the drove road. It was 3.75m long and about 3.4m wide and 0.3m deep, aligned east-west with its south side on the underlying southern ditch edge. It had been heavily truncated leaving shallow sloping sides and a flattish base. A single posthole within the south-western corner may have been integral to the structure, but no other associated features were identified. It contained a near sterile fill with a few sherds of residual material and some animal bone indicating mostly localised redeposition from the colluvium following abandonment.

The location and general shape, size and profile of this feature suggest a sunken-featured building but there was no other structural evidence, indicating that it was probably of Type 3.

SFB 77 (Fig. 158)

Sub-rectangular structure G10081, 6.7m to the west of SFB 76, was 4.1m long, 2.5m wide and 0.5m deep with a steep sided and flat based profile and slightly rounded corners (Plates 180 and 181). Its south-west side, including at least two hearths or ovens, had been damaged by uncontrolled machine activity which confused certain details of its arrangement.

The oven bases or hearths (G10116) were within, or immediately adjacent to this feature. In the south-west corner one structure (S10514) was in the usual position in the main cut with two overlapping external structures (S10401, S10744,) immediately to the south-east in a niche protruding through a section of the southern edge about

half way along the building.

Within the main cut, structure S10514 consisted of a sub-circular bowl-profiled cut 0.45m wide, 0.55m long and 0.10m deep that contained two deposits. The first formed a foundation deposit 0.05m deep of compacted, heat-hardened clay with common carbon inclusions. The secondary layer, 0.07m deep, consisted of dark brown and orange silty fired clay with very abundant carbon; several stake-holes may have truncated this hearth, but identification was not secure. These deposits were probably the remnants of an oven that had been badly disturbed by modern truncation and no apparent superstructure to this oven survived.

The primary feature of the oven on the south side (S10401) consisted of a sub-circular cut about 1.00m in diameter and 0.06m deep containing three deposits. The disposition of the edge on its north indicated that this was the entrance from within the main structure. The primary deposit was orange brown silty clay with common flint and chalk inclusions, 0.02m thick representing bedding for the upper hearth layers and above this a deposit of compacted angular flint, 0.04m thick, all noticeably burnt. Similar deposits have been recorded in most other examples and seem to represent a foundation and heat retaining layer for the overlying oven floor. Here they were of very dark brown and red brown silty clay with abundant carbon and fired clay inclusions, 0.05m deep and sealed by a carbon layer, 0.01m thick, representing the final residues of its last firing. However, the oven seems to have been renovated or possibly rebuilt as this charcoal was sealed by a layer of redeposited natural clay with some carbon, flint and chalk, 0.05m deep, representing the remnants of a further foundation deposit. On the north side, apparently forming the eastern side of the oven mouth, there were traces of a superstructure to this oven (S10744), formed of a very short length of slightly curved clunch walling with chalk lumps and flint. Four post-holes (G10100), in no discernible pattern in, or just beyond, the eastern extent of the structure are unlikely to be contemporary to one another, especially as one (C10265) cut the backfill of the SFB, although this was in the north-east corner. One post-hole (S10670), probably relating to roof support, was on the longitudinal axis in the eastern side of the structure.

A series of deposits formed the backfill to the structure. The initial layers (G10123) were suggestive of an occupational deposit and subsequent demolition fill or collapsed structural hearth material following the abandonment of the structure. Burnt clay inclusions were frequent and finds included animal bone, pottery (*c.* 1125–1200), quernstone (FN 1.9071) and some iron objects (FN 1.107, FN 1.108, FN 1.109). Sampling from the deposits covering the base produced grains dominated by barley and to a lesser extent rye with small amounts of chaff, mustard and stinking chamomile seeds. The upper deposits (G10122) may have derived from a mixture of structural collapse and deliberate infilling to level the ground. Both these layers produced a large assemblage of material, including pottery (*c.* 1075–1150), animal bone, burnt clay, an iron object (FN 1.106) and quern fragments indicating the disposal of domestic refuse. Two medium-sized pits (G10083), containing domestic waste immediately to the south suggested a refuse function directly relating to this

structure.

This structure is a variant of the normal Type 1 (Type 2) sunken-featured building, with a possible primary oven in one corner of the main cut, although this did not survive enough to ascertain its upper form. However, on the south side, was another definite, although badly damaged and truncated oven that was external to the main cut of the building on its long side. This is not precisely paralleled by any of the other Thanet Earths sunken-featured buildings, although in some structures (both here and elsewhere) the main oven does protrude slightly beyond the hollow, but could still have been encapsulated within the superstructure. It is possible that this structure was an early variant of the type.

SFB 78 (Fig. 159)

On the edge of excavation, 5.7m west of SFB 77 was SFB 78 (G10082). A sub-rectangular cut with slightly rounded corners, 3.8m long, *c.* 3.14m wide and 0.33m deep fairly steep sloping sides and a flat base, its longitudinal axis exactly in line with underlying ditch G10071 (Plates 182–184).

Within the south-west quadrant of the structure the dominant feature of the building was a sub-circular oven (G10085) 1.82m long, 1.64m wide and 0.33m deep (Plate 185). It was constructed in a shallow flat-bottomed scoop cut into the base of the structure, directly over a very thin layer of carbon thought to represent a patch of pre-existing hearth which had been sealed by a clunch-built wall around the perimeter, part of which incorporated a fragmented quern (FN 1.9033). The wall, 0.16m high, 0.16–0.36m wide, represented only the very base of the oven dome. On the eastern side of the feature was an opening and immediately below it were several thin layers of rake-out, consisting of alternating patches of chalk and silty carbon banked-up against the oven wall. The chalk may have been used to create a solid surface to reduce the wear of the entrance. Set within the clunch wall a succession of deposits 0.16m thick in total created basal foundations for the oven floor consisting of alternating layers of very abundant angular or rounded, compacted flints and stones, sealed by red orange and very dark grey clay, with more grey and black ashy silt around the edges. Traces of grain and charcoal and a flint scraper (FN 1.9137) were recovered from this sequence which appears to represent a sequence of new oven floors replacing worn out predecessors.

A new oven dome appeared to have been constructed, a re-build, with the former wall which had been reduced to a foundation. This new clunch-built wall also partially sealed the edge of the upper oven floor surfaces. It consisted of mid brown grey silty clay with flint nodules and quern fragments, 0.16m high, 0.14–0.22m wide, of an identical size to the earlier structure. A thin layer of marine shell, 0.01m thick, covered the final flint deposit of the primary floor sequence, and was in turn sealed by orange red-fired clay, with grey and black ashy silt around the edge representing the associated second phase oven floor and was the final working surface of the oven before abandonment and collapse.

There were also two 'hearths' of varying shape and size within the sunken area. Feature S10471 on the north, was adjacent to the main oven and consisted of a sub-circular depression 1.17m wide, 1.20m long and 0.23m deep containing two fills (Plate 186). The primary deposit, 0.05m thick of very dark brown and black silt indicated burning activity and was sealed by clay with orange discolouration from heat, 0.23m deep. Two fragments of quern (FN 1.9051, FN 1.9052), positioned upright were laid in order to demarcate the boundary of this feature. An elongated pit (S10445), in the south-east quadrant of the building, 0.50m wide, 0.90m long and 0.17m deep, had a single fill of black grey brown silt with very abundant carbon and common daub inclusions. This was probably material derived from the adjacent oven, but could have been a small hearth in its own right. Two internal postholes (S10155, S10162) may have been integral to the structure. One was situated partially external on its north-east corner, the other in the base at its southern edge, adjacent to the hearth. The postholes were 0.23–0.4m in diameter and 0.07–0.14m deep with evidence of post-packing and *in situ* rotting of posts. A sample taken from posthole, S10155, produced small quantities of grain but was otherwise devoid of material. In contrast, only traces of grain were present in S10162 although it did contain marine shell and animal bone.

The initial layers (G10124, G10126) of the backfill comprised patchy dark silt containing carbonised material almost certainly representative of the accumulation of deposits during the occupation of the structure. Most of these deposits were near the oven and hearths, suggesting they formed during their operation. Animal bones (including disarticulated cow bones), a fragment of worked structural stone (FN 1.9040) and metal working residue were retrieved from the fill. Samples yielded shell-fish, small mammals, and pulses. Barley was well-represented and was accompanied by other wheat grains and pulses along with relatively small quantities of chaff and weed seeds such as stinking chamomile and corn cockle capsule valves. Such waste was possibly formed through a combination of the deliberate removal of contaminants during preparation of foodstuffs or accidental burning of food items. A few scraps of medieval pottery were rather mixed in date, but tentatively suggest a later twelfth/early thirteenth century origin.

These deposits were sealed by a series of clay silt layers (G10125) that formed the bulk fill of the structure. One (C10163) was similar to the construction fabric of the oven and was suggestive of wall collapse, directly from the domed structure and completely sealed the oven deposits. The remaining layers were indicative of ongoing deposition of material from structural collapse with an element of deliberate backfilling to level the feature. Large quantities of artefactual material were recovered, including pottery (1100–1200), residual worked flint, tile, shell, an iron chisel or punch (FN 1.100), a quern fragment (FN 1.9049), a copper alloy object (FN 1.101) and fragments of worked stone (FN 1.9039) possibly of a structural origin. Animal bone included the partially articulated remnants of a horse, the head, mandibles, vertebrae and back legs being present. Depositions of various animal skeletons, usually incomplete or even mutilated, appear to be a common occurrence

in the backfills with some such as the bisected dog in SFB 24 (below) almost certainly having some ritualistic intention. Similar environmental evidence to the earlier deposits was found albeit in smaller quantities presumably mixed into the backfills as they were deposited.

Although truncated, this structure, was a good example of a Type 1 medieval sunken-featured building, its main oven showing signs of protracted use and multiple replacement of its constituent parts. The other internal features, such as the post-settings near the oven frontage have been recorded in other buildings of this type and undoubtedly represent significant structural elements. Post settings near the opposite corner have also been observed (as here and in SFBs 76–77), often singly and may represent door posts, as more obvious examples have been recorded in other structures of this type. The environmental remains are indicative of food preparation, but were quite varied, so more than one function seems probable. As with some of the other structures in this area (below) the considerable quantities of refuse within the later backfills of the feature, although possibly suggesting further occupation once the structure had gone out of use, are more probably derived from the clearance of the site on abandonment.

SFB 79 (Fig. 160)

About 14m east of SFB 76, SFB 79 (G10084) had been heavily truncated, partially during machine-stripping and its shape and size remained although it survived to 0.19m deep with a remnant shallow sided and flat based profile. A number of additional features were identified that may have related to this structure, but secure identification was not possible. A ditch (S10196), on the same alignment, appeared to cut the structure although it was backfilled with similar deposits and artefactual material. It could have represented the truncated remains of the structure rather than a ditch as no further evidence of a linear on this alignment could be traced. Immediately to the south of the 'ditch' was an irregularly shaped remnant of a hearth or oven of burnt clay and flint (S10222), supporting a structural interpretation. The structure appeared to have been deliberately backfilled with a silty clay and domestic waste following disuse and abandonment and was on a similar alignment to the other more definite structures in the same area. Material recovered from the features included animal bone, worked flint, oyster shell, and an iron nail (FN 1.111). Some sherds of residual prehistoric pottery were present, others dated to between 1050 and 1175.

SFB 75 (Fig. 160)

Structure G10079) was at the conjunction of the drove road and ditch G10069, on the south-east corner of the earlier Enclosures 63 and 64, all of which it cut. It was irregular though roughly sub-rectangular in plan with slightly rounded corners, 3.8m long (east–west), and between 2.5 and 3.7m wide (wider on the east) and 0.66m deep with steep sloping to vertical sides and a slightly sloping base (Plates 187 and 188). At the north-west and south-east ends two roughly rectangular-shaped sunken

areas may have represented work areas. However, a raised ledge, also at the north-west corner, may have occurred during over-cutting and there was a slightly stepped area to the west. Both were indications of an entrance-way; the former is the most likely due to its position in relation to the enclosures which were still evident in the ground. Two small sub-circular post-holes (S10587 and S10674) were located within the central area and it is unclear whether they were integral to the structure, but they were the only post-holes within the locale.

A series of dark silty clay layers (G10120) formed the occupation deposits within the structure containing high concentrations of carbon and chalk, small amounts of marine shell and traces of grain, plus artefactual material. Several objects of note, located solely within the south-east sunken area, were associated with these deposits: a carved chalk object (FN 1.131) which sat directly on top of a quern fragment (FN1.128), a structural stone object (FN 1.132) immediately adjacent to a quern fragment (FN 1.129) and a further quern (FN1.130) to the south-west. The chalk cup-shaped object, decorated with incised lines on the interior has similarities to Neolithic chalk objects, but in this context is more likely to be a medieval artefact. It was not just discarded but appears to have been deliberately left in place on the quern fragment, base-side up prior to the backfilling, suggesting that it had ritual or personal significance (Plate 189).

Elements of these layers, such as a more chalky deposit, may have been laid in order to create an improved and level floor surface. The occupation layers were sealed by a series of backfilled deposits (G10119) that contained an abundance of domestic artefactual material including burnt and worked flint, animal bone, pottery (AD 1075–1150), a quernstone (FN 1.133), iron nails (FN 1.139. FN 1.140), and a collection of iron objects (FN 1.138. FN 1.141, FN 1.142). Sampling showed the deposits were rich in charcoal and also produced small amounts of grain and pulses, charred thorns, fish bone and common marine shell. These deposits were representative of infilling following the abandonment of the structure and may have been used to level the area. The general size, shape and profile of this feature as well as its location are strongly indicative of a sunken-featured building with associated dating evidence indicating the medieval date. Its function is less certain as there were no signs of associated hearths or ovens and it is presently designated a Type 3.

A number of other features may relate to this later phase of activity. Ditch G10105 was on a similar alignment, but slightly further west than the earlier drainage ditches that spanned Enclosure 64 and cut one of them (Fig. 157). It also spanned most of Enclosure 64, petering out further to its north, while its south end seemed to terminate at the southern side of the enclosure. It also cut the northern of the two sub-phase 2b field boundary ditches. With an average width of 0.62m and 0.08–0.4m deep, it yielded shellfish, medieval pottery dating up to c. 1200, worked flint, iron artefacts, and animal bone. This ditch had a recut forming a discrete segment at its mid-way point, suggesting an original break along its length about 8m long which had been backfilled with redeposited natural chalk, indicating that the original ditch must have silted considerably prior to this recut and the resultant segment backfilled

at a much later date. The ditch, which appears to have divided Enclosure 64 into two slightly unequal segments, had been cut at its southern end by another later feature (S10344 described below).

Two other features may relate to the occupation of the sunken-featured structures. A well (S10277) about 9m north of SFB 77 and a well or cess pit (S10344) in the south-west corner of Enclosure 64. Sub-rectangular pit (S10344) cut ditch G10105 to the south and was 1.12m wide, 1.32m long and over 2.70m deep. The pit was augured but a true measurement of depth was never attained. The feature had a near vertical profile and contained at least two fills which yielded early medieval pot, animal bone and shellfish. This feature was possibly a well, although the lack of an erosion cone and its squarer shape and quantity of fish bones recovered could indicate that it was a deep cess-pit. Well (S10277) which appeared as a 3m deep vertical sided round void just after the topsoil strip was bored to about 14m depth prior to excavation. Its upper erosion cone was later excavated and yielded medieval pot possibly dating to c. 1100–1200, shell, chalk, worked flint and iron nails.

Phase 3: Later enclosure (c. 1150–1250)

To the north a substantial ditch alignment (G10089) traced for approximately 59m in length on a near east-west alignment and became more north-east to south-west aligned at its western extent where it was eroded on the slightly higher ground (Fig. 157). To the east it turned north at the line of the driveway and could represent the south side of an enclosure. It was on average 1.16m wide and 0.3m in depth with a varied profile, steep to gradual sloping sides and a concave to flattish base undulating in places. It was filled by grey, yellow and orange brown silty clay with artefactual and environmental material, including shell-fish, grain, burnt quernstone, worked bone and iron artefacts. Some of the pottery from this ditch dated to c. 1150–1250 and such a later phase is supported by the stratigraphy as the ditch cut all of the other features that it traversed.

Site 2

The next array of enclosures and associated features (Site 2; Figs. 161, 162) was situated along both sides of Trackway 28 in the main area of Plateau 1 about 200m south of Site 1 (Plate 190). It consisted primarily of a multi-phase agglomeration of enclosures at the south, with a string of three individual early enclosures (21–23) to the north, all the latter situated west of the track. A much smaller enclosure (19) was situated at the southern end of this string to the east of the track.

Sub-phase 2a: Early enclosures and associated features

Enclosures 21, 22 and 23

Virtually dead centre to the plateau, Enclosure 21 was directly contiguous with Enclosure 22 to the north (see below), extending westward from the side ditch

(G1223) of Trackway 28 which formed its eastward side. It was defined by two individual linear cuts, forming the northern and southern sides. Both ditches turned through 90 degrees at their western extent to form the western limit, terminating in rounded butt ends that left a definite entrance into the enclosure nearly 2.5m wide roughly in the middle of the side. The southern edge of the enclosure was aligned with the south side of Field M3 (above) indicating an element of rigid planning. The enclosed area was *c.* 27m x 20m but as the enclosure was aligned slightly askew to the track (a more WSW-ENE alignment) it was not exactly rectangular, being longer on its north side. The enclosure ditches were 0.50–1.30m wide (average 0.80m) with a depth of 0.15–0.70m (average 0.33m) and, where excavated, the profile of the ditch generally had gradually sloped sides and a concave base. The generally homogenous fills contained concentrations of marine shell in places that suggest deliberate deposition. The ditches provided more, although still minimal, artefactual material than the enclosures directly to the north, which included daub, medieval pottery of *c.* 1075–1175, animal bone and marine shell. An assemblage of Mesolithic and early Neolithic flintwork is undoubtedly residual and probably derived from the colluvium in the area, which suggests that much of the backfill was naturally derived from erosion.

The ditches had a complex relationship with the side ditch of Trackway 28, itself considerably recut in this zone. Two ditch segments to the south are thought to be recuts of both the enclosure ditch and the trackway ditch at this point. Their disposition, turning northward at the point of intersection suggests that possible recutting of the enclosure ditch was carried out in tandem with that section of the trackway ditch forming its eastern side. Further recuts along the line of G1233 on the eastern side of the enclosure probably relate to these recuts.¹⁵ This indicates that the enclosure, which was probably later than the trackway, was the more important entity by this time, as the trackway itself, cut across by numerous medieval features to the south, had probably gone out of use. A further recut in the north-west corner of the enclosure yielded no dating evidence, and irregularities in the ditch terminal of the southern arm also suggest recutting caused by erosion of the soft colluvium in this area.

Few features were found within the enclosure. A relatively insubstantial undated ditch segment in its north-east corner and respecting the position of its ditches was *c.* 6.70m long on a north-west to south-east alignment. It does not appear to relate to any other features in the area, but could represent a partition, possibly an animal pen, within the enclosure. Another short length of ditch (G1098) contiguous with the drove ditch was also undated and may represent a drainage gully. Two pits (G1136) were located approximately 5.5m apart either side of the southern ditch of the enclosure. They were of a similar shape and size, with a diameter of *c.* 0.65m and depth of 0.23–0.32m and contained very small quantities of artefactual material, but are probably of medieval origin.

¹⁵ One of these possible recuts yielded some later twelfth/thirteenth century pottery suggesting this enclosure at least was still in use into later phases.

Enclosure 22 was conjoined with Enclosure 21 on the north, its west and north sides defined by a ditch (G1093) c.18m long on a north to south alignment which turned east to west for a further c.16m. The east side of the enclosure was formed by the side ditch of Trackway 28, while the southern side must have been formed by the northern ditch of the contiguous and parallel Enclosure 21. The arrangement suggests that Enclosure 22 was added later, although the conjunction of the ditches had been removed by a later, but otherwise undated, pit or water-hole (G1144). The east-west section of G1093 stopped short of the trackway ditch (G1223) leaving a gap about 4m wide. Together, these elements enclosed an area between 17m and 19m square. The enclosure ditch was 0.48–1.14m wide and varied in depth between 0.17–0.61m. Where excavated the profile of the ditch was found to have gradually sloped sides and a concave base. Few finds were retrieved from the fills apart from residual worked flint and two prehistoric sherds of pot. An interesting facet to this enclosure is the position of its westernmost extent, which correlated exactly with the line of an earlier, Bronze Age ditch. If not coincidental, which seems unlikely, this would imply that some of the prehistoric ditch alignments were still visible at this time, either in the form of banks/depressions, or even as ancient hedge lines. Enclosure 21 however, cut across this alignment, but even this may have respected earlier boundaries in some way as it was aligned perpendicular to the prehistoric ditches.

Just over 40m to the north of Enclosure 22 was Enclosure 23, a ditch forming two sides of a sub-rectangular enclosure, apparently open ended on the north side and with the ditch of Trackway 28 (G1223) as the eastern boundary. The ditch comprised a north-south linear, 12.5m long that turned at a 90 degree angle to an east-west cut, 9.5m long which stopped short of Trackway 28 leaving a gap just under 2m wide. These elements enclosed an area about 13m square. The northern boundary was not obvious, but an east to west aligned Bronze Age field ditch (G1107) at its northern extent could have still been evident, perhaps as a bank or even a hedge (as with Enclosure 22 above). Alternatively the northern boundary may have lain beyond the limit of excavation and so was not observed, but this seems unlikely as other medieval enclosures at Thanet Earth also seem to have been open ended, or otherwise enclosed by some feature such as a fence or hedge line that has not survived (see Enclosure 52 for example). Where excavated the ditch width varied from 0.19–0.82m, depth from 0.09–0.27m. It had gradual sloping sides and an irregular base and contained a relatively sterile fill generally indicative of gradual infilling, with residual prehistoric flints and pottery. There was no associated medieval pottery from Enclosures 22–23, but their layout in relation to Trackway 28 (and Enclosure 21) indicates that they were coeval or slightly later than the track itself. The lack of contemporary occupation material and absence of internal features strongly suggest that all of these features were paddocks and entirely given over to stock management or the storage of agricultural produce, manure or compost.

Enclosure 19

This further subdivision of Field M2, but extending slightly through its northern side, was situated in the north-west corner (enclosed by Enclosure 14) and seemed to be related to at least one, if not two sunken-featured buildings (SFB 7 and SFB 23). The enclosure, no more than about 8 or 9m square was formed by a slightly curvilinear and insubstantial ditch segment (G1061; 0.7m wide and 0.16m deep at maximum), aligned north-south, with its western side presumably defined by Trackway 28. The north and south sides did not seem to be enclosed. Ditch G1061, which had a shallow sided and machine truncated, flat based profile, contained inclusions of marine shell and a few early medieval pottery sherds from its southern terminal. Whereas the structures relating to the other enclosures may be slightly later, the two relating to this enclosure appear precisely coeval, particularly SFB 7 to the south as the enclosure and buildings give the spatial impression of having been formed as one.

Enclosures 18 and 24

Sub-rectangular Enclosures 18 and 24 formed part of a more discrete and complex focus of multi-phased activity, situated entirely to the east of Trackway 28 (and aligned with it), in the southern part of the plateau.

Enclosure 24

Enclosure 24 was possibly the earliest and was only partly exposed at the south end of Plateau 1 and delineated by a linear cut (G1128) forming its north and eastern sides. On the line of the eastern side ditch of Trackway 28 was a short length of the western side, near the north-west corner, but was mostly cut away by a later sunken structure that appears to belong to a later phase (SFB 21 below). The enclosed area was c. 25m east to west and visible for 11m north to south. A break near the centre of the northern ditch indicated an entrance to the enclosure. A posthole immediately adjacent to the east side suggests the location for a pivotal post for a gate, whilst two ditch termini extending northwards may define the width of the entrance-way (about 2.5m). The ditch had a width range of 0.40–1.0m and depth of 0.20–0.27m with fairly steep sides and a flat base. The fill yielded a few sherds of early medieval pottery. No features were located within the exposed interior of the enclosure, and it is likely that the feature functioned in a similar fashion to Enclosures 21–23 to the north.

Enclosure 18

The north side of Enclosure 18 was 52m north of Enclosure 24, but its extent southward was not clear as various arrangements are possible. Although it appears to be the earliest enclosure in the north part of this zone, it was stratigraphically unrelated to Enclosure 24 and may not be contemporary.

The enclosure was outlined by a continuous linear cut which formed its north side and all or part of its east and west sides. The enclosed area was c. 16m x 13m to the

open southern end. It is perhaps no coincidence that this point also corresponds roughly with the position of a lateral prehistoric ditch, although the conjunction was not as evident as those mentioned above). The west ditch was immediately adjacent to the western side ditch of Trackway 28 (G1223), but the relation between the two was indeterminable. It was 0.45–1.06m wide and 0.17–0.42m deep, had a steep sided and a near flat base but yielded a negligible assemblage of a few pottery sherds of medieval date, daub, burnt flint and some marine shell. No other features could be definitely associated, and the feature can be seen as yet another stock enclosure.

A linear cut (G1045) to the south may be related to, or an extension of, this enclosure, but its function was uncertain, mainly because its southern extent had been completely removed by later enclosure ditches (Enclosures 13, 15 and 20). The ditch, which had a northern terminal just to the south-east of the supposed terminal of the eastern arm of Enclosure 18, was visible for c. 20m on a north to south alignment. The feature was 1.30m wide and 0.20m deep with gradual sloping sides and a fairly flat base. The primary fill, indicative of erosion of the sides was sterile; the upper fill contained a few sherds of slightly mixed medieval pottery, half of the primary phase, the remainder somewhat later. It is quite likely that this later assemblage is intrusive from numerous subsequently traversing ditch cuts, or if not, that this somewhat incongruous feature is of a later phase. It is possible that the ditch originally extended down the position of the east side of ditched Enclosure 20 (below) which was abnormally wide at this point, perhaps where the original softer fill of the earlier ditch had been re-dug, and it could have turned west under the same enclosure's south side, where at least one recut was visible. It could therefore represent a fragment of a mostly excised enclosure in its own right.

Sub phase 2b: Sunken-featured structures relating to the early enclosures

Many of the enclosures described above were associated with sunken-featured buildings which, in most cases, cut through the probably semi-backfilled ditches of Trackway 28, but not usually through the enclosure ditches, suggesting that these were still functional. The dating evidence for these structures was similar to that from the enclosure ditches, but they may still have been a slightly later development.

SFB 10

What has been interpreted as a sunken-featured structure (SFB 10; Fig. 163) was cut into the western ditch of Trackway 28 (G1223) near the south-eastern corner of Enclosure 23, just 1.5m north of the possible entrance in its south side. The main sub-rectangular cut for the structure (G1109) was 3.78m long, c. 2.4m wide and 0.26m deep, aligned north-south, with steep cut sides and a flattish base. The significantly more curved northern edge sloped more gradually and may indicate the entrance-way, but there were no obvious structural elements. A sub-rectangular feature (S919) 0.56m wide, 0.97m long and 0.3m deep was within the base of the south-eastern quadrant. It contained large quernstone fragments laid flat and a layer of orange clay sealed by a thin deposit of dark grey black silty clay and carbon. Relatively few

grains were present in samples of this context despite the high proportion of weed seeds identified. Many of these belonged to species of *Brassica/Sinapis* sp. indicating ovens and hearths were being used to process such seeds or that these plants were being added to prepared foods. This feature appears to have been a small hearth, although there was no substantial scorching, so it may represent a transient episode of burning on the floor, or an elevated heating element such as a brazier. An elongated, shallow pit (S994), 0.42m wide and 1.18m long, was in the north-eastern edge of the main cut. The function of this is unclear and it did not appear to represent a structural component

A series of patchy deposits (G1110), up to 0.16m thick, formed the primary layers within the structure. They consisted predominantly of dark greyish black carbon rich clay silts containing quern fragments (FN 1.86–1.87), mussel shell and small quantities of grain, and can be confidently interpreted as trample or tread deposits within the building during its occupation. The subsequent deposits of generally sterile clay silts (G1111) up to 0.17m thick represent its backfilling after abandonment. The only finds from these deposits were worked flints (FN 88, FN 89) redeposited from colluvium during backfilling. Although there is a lack of dating evidence for this structure, there is no reason to indicate that it was of a different phase to the buildings in similar positions in relation to the trackway to the south.

This type of sunken-featured structure, with no obvious internal ovens or hearths, or typically, little or no other clear evidence of either structure or internal activity (Type 3) is fairly common at Thanet Earth. Such features might be interpreted purely as large pits if encountered in isolation, but here, where their positions correspond with the typical location of more obvious buildings, at the corners of enclosures etc., they can be more confidently assumed to be sunken-featured structures. In this case, this interpretation is also supported by the occupation deposits on the base and the feature's relation within the relatively even-spaced string of structures that align with Trackway 28 to the immediate south (see below). The superstructure of these buildings may have been similar to those that contained ovens, but they were obviously used for different, if not unrelated purposes.

SFB 8

Another sunken-featured structure (SFB 8; Fig. 164) in the north-east corner of Enclosure 22, in a position just south of the entrance into the enclosure and again cutting the side ditch of Trackway 28, exactly mirroring SFB 10. This building was formed by a sub-rectangular cut (G1085) 3.3m wide, 3.94m long and 0.9m deep aligned north-south which had near vertical sloping sides and a flat base (Plates 191, 192, 193, and 197). An additional vertical break of slope within the base in the south-west quadrant formed a further depressed area, sub-rectangular in shape and 0.16m deep and was probably the working area for an oven situated directly to the north (see below). A 'ledge' was observed at the north end and was 0.32m wide and 0.24m deep. Its function remains unknown other than as an obvious low shelf. A possible

entrance-way consisting of two fairly sharp descending breaks of slope was observed in the south-east corner.

A sub-circular oven (G1086) 1.6m wide, 1.7m long and 0.16m deep, was in the north-west quadrant of the building was a dominant feature occupying almost a quarter of the internal area (Plates 194 and 195). The oven sat within a very shallow flat-bottomed scoop cut into the base of the main cut. A 0.16m thick layer of small flints, mussel shell and brown silt formed the foundation layer for the oven and was sealed by a bed of flint nodules and mussel shells with an outer wall construction of compacted chalk clunch 0.17m thick, 1.6m wide, 1.7m long, and 0.29m high (c. 1.3m wide internally). The oven structure would therefore originally have been much larger and dome shaped, but had been heavily truncated. A thin layer of compacted grey to pink-red, silty clay with chalk and ash abutted the walls and extended over the area within indicative of a burnt working surface.

A sub-circular 'hearth' (G1087) 1.14m wide, 1.18m long within the north-east quadrant of the building was immediately adjacent to oven G1086 (Plate 196). It sat within a very shallow slightly concave scoop cut into the base of the main cut and was constructed from a mixture of compacted chalk clunch with grey black silt, the latter indicative of burning activity directly on top of the clunch. This foundation material was up to 0.25m deep and had been formed into a sub-circular bowl shape directly sitting on the chalk bedrock and had been heavily truncated. Although in many examples there is only evidence for heating in this position such as a brazier, here the structure resembles the smaller ground-based side-ovens found in such structures elsewhere (e.g. Fulston Manor and Leybourne). A substantial posthole (S1895) 0.4m wide, 0.3m long and 0.6m deep, was just north of the central point of the building, between oven and 'hearth', and may have been integral to the structure as additional support for the roof. However, in other buildings of this type, this is a common post setting, usually paired with another, and may be related to the oven. It was filled by brown clay silt with an abundant charcoal content, suggestive of *in situ* burning of the post.

The initial deposit within the building was a thin layer of very dark grey ash and dark brown silt (G1088) with a significant quantity of charcoal, and artefactual material including quern fragments (FN 1.74). Traces of grain, chaff, seeds, pulses and shell-fish were also recovered from this deposit deriving almost certainly from the use of the structure and probably incorporated elements of oven rake-out. Barley was the dominant cereal followed by bread-type wheat, rye and oats. In this respect, the environmental assemblage recovered was typical of that in other sunken buildings of this period although slightly more chaff was present in this case. A series of deposits, (G1089), 0.12–0.88m deep formed the main backfill comprising a lower fill of light brown silty clay, representative of gradual accumulation of deposits after the initial disuse of the structure. This was sealed by a layer of clunch debris and flint, derived from demolition of the oven. The upper layers consisted of dark brown silty clay with a heavy presence of carbon, indicative of a backfilled deposit that accumulated post-abandonment. Artefactual material recovered from

the backfill sequence included medieval pottery dated to AD 1075–1175, animal bone, worked flint and iron nails. This structure is a relatively well-preserved and a classic example of the typical ‘bakery’, or Type 1 structure in our classification.

SFB 24

Another Type 3 sunken-featured structure was located 14.65m to the south of SFB 10, on the same alignment and position with Trackway 28, i.e. cutting its side ditch (G1233; Fig. 165). Although one of the few buildings not directly associated with any enclosure it was set almost halfway between Enclosure 23 to the north and Enclosure 22 to the south. SFB 24 was a large sub-rectangular cut (G1261) 2.64m wide, 4.3m long and 0.34m deep with steep near vertical sides and a flat uneven base (Plate 198). A flat area about 0.9m by 0.7m was raised 0.2m above the main floor level in the north-west corner and represents a step down from an entrance. The cut contained a single fill of light brown silt clay with animal bone, worked flint and rare carbon inclusions indicative of deliberate backfilling. Situated centrally, near the base of the cut and aligned with the long axis of the structure was an articulated dog skeleton that had been bisected laterally and buried with one of its ends the wrong way around, with head to north (Plate 199). This unusual deposition is highly suggestive of a ritual act during the backfilling of the building. No datable artefacts were retrieved from the fill, but its relationship with other medieval features clearly suggests its origin. It was one of a number of similar structures to north and south, and perhaps similar in function to the nearby SFB 10 which it resembles.

SFB 7

SFB 7 was a sunken-featured structure in the southern open end of Enclosure 19, nearly midway between its ditch (G1061) and the western side ditch of Trackway 28 (G1223; Fig. 166), where it would have cut the opposing ditch of the trackway, although this was not evident because of truncation. The structure was also fairly heavily truncated so its full limits were not clear (Plate 200). The building survived as an irregular but roughly sub-rectangular cut (G1075) 2.60m wide (north to south), 3.34m long and 0.18m deep, with steep cut sides more gradual on the east side, and a flat base. In the south-west corner was a slightly deeper sub-circular cut that housed an oven (G1076) about 1.60m across and 0.16m deep (Plate 201). The structure had been considerably eroded in places and was not as well preserved as most examples. The primary deposit of grey brown clay silt with very abundant mussel shell inclusions did not survive over the whole area of the cut and lipped up the sides in places. This foundation deposit was superseded by a compacted clunch wall forming a sub-circular arrangement about 1.2m in diameter internally, with a gap on the east side. The wall was 0.2m thick and survived to 0.15m high and represented the remains of the oven superstructure. Abutting the wall in the entrance were various thin deposits mostly of black clay silt with very abundant carbon inclusions, representing rake out material from firing. Similar deposits (G1090) containing daub and pottery (AD 1075–1175) were found on the base of the main cut, one yielding significant quantities of grain. These were dominated by barley but also contained a

high proportion of bread-type wheat and were accompanied by small amounts of chaff and other cereal waste. Other species represented include several fragments of pulses, cultivated vetch and cherry along with weeds seeds typical of a medieval context. In this sequence the oven, was sealed by uneven deposits of light grey white silt with abundant chalk inclusions measuring 0.14m thick at maximum, indicative of the collapsed superstructure of the oven. Above this was a deposit of grey brown clay silt with rare oyster shell, fragmented pottery (again dated AD 1075–1175), mussel shell and burnt flint inclusions indicative of rapid backfilling.

Just north-east of the oven a posthole (S532, 0.28m wide, 0.34m long and 0.30m deep) cut into the floor may have been related to the roof structure, but a number of buildings have a posthole or other feature in similar positions and it is more likely that this related to the operation of the oven. A shallow sub-circular cut (S198) approximately 0.43m diameter and 0.04m deep was 0.50m to the north-west of the post-hole and contained a dark grey silt with a high charcoal content. This may have been the base of a hearth, but there was no *in situ* burning, and it might have been the position of a brazier or other above ground heated structure.

The main cut of the structure was backfilled with two fills, the lower (G1077) 0.10m thick, included three sherds of medieval pottery Phase 3, 1150–1200, oyster and mussel shell. The upper fill consisted of a light yellowish white chalk/clunch mix 0.21m thick, indicative of the collapsed oven or more likely, the superstructure of the building itself. Significantly, this also filled the upper part of the central posthole, suggesting that its post had been removed during a deliberate phase of demolition. The pottery dating suggests therefore that the building remained in a dilapidated state for some time, surviving as a hollow into Phase 3 before it was levelled and the remnant hollow backfilled. Although truncated, this structure, appears to conform to the common configuration containing an adjacent oven and hearth (Type 1). Unusually, the building appears to have been aligned east-west, unlike the majority of other structures to the north which were aligned longitudinally with Trackway 28. A further structural difference was the use of seashell in the oven foundation, rather than the more common flint/clunch mixture possibly due to its early provenance in the sequence of medieval buildings, as a precursor to the more developed standard type.

A sub-circular cut (G1148) about 4m north-west of the building, where it just cut the side ditch of Trackway 28, was possibly related. It had a diameter of c. 1.20m with a vertical sided profile excavated to a depth of 0.70m and was augured to a depth of 3m, but still not based, suggesting that it was a well. It contained two excavated fills, both sterile and indicative of gradual backfilling through weathering. A shallow scoop (G1101) was also located just west of the structure, cutting across the line of the drove ditch, but contained no dating evidence. Its shape and profile are suggestive of an area of wear caused by movement from SFB 7 to the well over a protracted period.

This structure was situated just to the north of Enclosure 19, in the extreme south-west corner of Field M3, where it had probably cut the eastern ditch of Trackway 28, not evident in this area. The complex structure (Fig. 167) was relatively badly preserved and consisted of a large sub-rectangular cut (G1251) 4.5m long, 3.2m wide and 0.28 m deep aligned near north-south, with steep near vertical sides and a flat uneven base that sloped gently down from south to north. A sub-oval cut (S586) 1.43m wide, 1.57m long and 0.47m deep in the north-west corner had steep near vertical sides and a flat base, with evidence of scorching, having been baked a reddish colour. This cut housed elements of two separate oven structures, one replacing the other. Cut into the natural subsoil within the oven-cut were 23 stake-holes forming a circular shape about 1.3m in diameter, spaced between 0.09 and 0.29m apart, although the wider gaps could be indicative of missing settings, suggesting an original spacing of about 0.1m (Plate 202). A gap of about 0.44m on the eastern side of this ring suggests a stoke-hole, but this would be in an anomalous position and a nearly equivalent gap on the south side is a more likely contender. These stake-holes would appear to be the remnant of a wooden frame, arranged like a 'bender' for the original oven superstructure, which was presumably a clunch-like matrix formed around the stakes, although the colluvial clay in the area may well have been used. This superstructure seems to have failed and the stakeholes were sealed by a light grey clay silt with very abundant chalk inclusions and charcoal lumps, 0.07m thick (C796). This deposit, which was similar to the fill of the stakeholes, was possibly a remnant of the demolished primary oven, the charcoal, including some quite large pieces possibly representing the charred remains of the stakes. The similarity of the stake-hole fills suggests that their stubs had also been pulled out.

A subsequent circular clunch-built oven wall (G1252) was built partly on this deposit shifted slightly to the north, but of roughly similar size internally to the primary structure (Plates 203 and 204). The oven wall was rather fragmentary compared to other examples and cut away on the west by a later pit (G1285) and was about 0.2m thick surviving to no more than 0.3m in height. Within this oven the earlier deposit was sealed by compact fired clay with common carbon inclusions, 0.12m thick forming the oven floor. Over this was a grey and yellowish brown sandy silt with abundant mussel shell, burnt flint, a few fragmented and residual pottery sherds. This rather mixed deposit contained only small proportions of grains of indeterminate variety with a typical weed assemblage consisting of *Brassica/Sinapis* sp and stinking chamomile. This may represent a foundation layer as it was in turn sealed by a reddish brown burnt clay layer with charcoal inclusions 0.05m thick, indicative of another floor surface. The secondary oven floor was partially sealed by compacted dark brown/black burnt clay with common carbon inclusions, 0.1m thick (G1253). This appears to be a new base to the oven since it was sealed by a very thin (0.01m) level (G1254, C791) of grey black clay silt with abundant burnt chalk and carbon inclusions, probably surviving residue from the final firing of the oven. A similar deposit was also observed in patches across the base of the main body of the structure, (G1256, 0.06m thick at maximum).

Layer G1256 was sealed by deposit G12580, 0.7m thick, of very firm brown yellow silt clay with common carbon inclusions, possibly a secondary occupation phase to the structure coeval with the reconstruction of the oven, and may represent a beaten earth floor since it showed signs of wear in the centre and was covered by a very thin layer of carbon material which may have originated from the oven if it was still functioning (Plate 203). The floor was also cut by a number of post- or stake-holes (G1259) forming a reverse C-shape, close to each other, (approx. 0.18–0.33m) in the south-west corner of the structure, which indicates a secondary phase of occupation.¹⁶ No datable finds were retrieved from the floor level or the features cutting it.

This structure, probably of Type 1 although there was no evidence for the usual side-hearth, had an interesting variation in the construction of its oven which was of two phases. The earlier, only surviving as a circle of stakeholes, was probably built on a wattle frame, presumably with a clunch-built dome formed around the framework. Only one other oven on the site exhibited any evidence for this form of construction, so perhaps it was an early experiment or variation in the form of oven construction that failed in this instance, to be replaced by the more conventional form of oven construction at Thanet Earth. Another variation in the secondary phase oven is the lack of the flint based ‘hotplate’ although some other ovens are of similar build. This suggests that the flint raft was a design improvement. At least two replacement oven floors in this second oven suggest protracted use. Another variation with SFB 23 is the probable secondary phase of use represented by the floor and occupation levels over the primary backfill, a development that does not appear in any other of the sunken structures investigated, although noted in some structures elsewhere.

A sub-circular pit appears to cut the structure (G1285; S486) with gradual sloping sides and a flat base, 0.64m wide, 0.94m long and 0.35m deep. It contained yellowish brown silt clay with residual Roman pottery, animal bone, burnt flint, daub, mussel and traces of grain, charcoal, seeds, fish bone, an iron nail (FN 1.84) and quernstone (FN 1.9065). Some fragments of possible human bone (SK 1.10) were also recovered.

Sub-phase 3a: Later developments to the south (1150–1225/50)

The southern part of Plateau 1, in the area of the earlier enclosures 18 and 24, on the eastern side of Field M2, witnessed a complex development that included the emplacement of new enclosures with associated sunken structures as well as a timber framed building (Figs. 161–162). This would appear to represent the growth of an occupation site, probably a small farmstead.

¹⁶Another, larger posthole (C588) adjacent to the oven near the buildings longitudinal axis may be in a similar stratigraphic position, but the records are unclear – it is possible that this feature belongs with the primary phase, where it would be in an analogous position to other post settings adjacent to the oven entrances found in some of the other structures.

Enclosure 13

Enclosure 13 was the largest enclosure in the area, enveloping Enclosure 18 within its north-west quadrant and extending the size of the earlier layout to the east and north. Most of the features appeared to be primarily related to the development of this enclosure apart from two structures to the south (SFBs 11 and 21), but all can probably be considered part of the same settlement focus (Plates 206 and 207). The enclosure was represented by a continuous linear cut (G1001) forming three sides of a trapezium, about 38m across internally. The western side of the enclosure was represented by one or other of the side ditches of Trackway 28, probably ditch G1223, as the enclosure ditches extended to its line, but the relation between the two was not determined. The ditch was on average 1.25m wide and 0.36m deep, with a steep sided flat based profile. The fills, probably mostly deposited through erosion, were generally sterile with a few pottery sherds dated 1150–1225, amongst earlier medieval material, and rare marine shell recovered in a couple of interventions, whilst residual early prehistoric worked flints were also present.

A number of linear cuts, about the same size as the enclosure ditches but sometimes smaller and of flatter profile, appeared to divide the enclosure internally. Ditch G1032 extended west from its eastern side for c. 9.50m and yielded iron nails, medieval pottery and traces of daub. This alignment was continued after a break of 6m, possibly representing a causeway, by a curvilinear cut, c. 16 m long which turned to the south-west and then continued southwards after a short break by a segment which was about 5.6 m long. Small assemblages of early medieval and residual prehistoric pottery and seashell were retrieved from the cuts. A further linear cut adjoined the curved ditch and extended for c. 13m to the north west where it terminated about 2.5m from the western border of the enclosure, probably about the width of the drove at this point. The dating of the enclosure is slightly insecure, and it may have its origins closer to the previous Phase 2 enclosures than the subsequent Phase 3. The ground was relatively unstable in this area, and the colluvium would have been easily eroded. Ditches will have filled in relatively rapidly if vegetative ground cover was removed either by animal herds or man, and the above sequences of features could have been laid down over a relatively short time span.

Structures relating to Enclosure 13

One sunken-featured building (SFB 12) and another structure can be confidently related to Enclosure 13 by their positions in relation to it. Other sunken featured buildings in the vicinity appear to be later additions.

SFB 12 (Fig. 168)

Located in the south-eastern corner of Enclosure 13 the structure consisted of a sub-rectangular cut (G1164), aligned with, and about 2m within, the enclosure ditch which was c. 3.20m wide, 4.6m long and 0.71m deep with steep sides and a mostly

flat base, although much of the eastern side was at a lower level, about 0.1m deeper than the base to the west (Plates 208 and 209). In the north-west corner a contiguous extension to the cut about 0.7m long, with a three-stage stepped base descended to the main body of the structure and undoubtedly representing the entrance. In the south-east quadrant on the base of the lower part of the cut was a circular spread of charcoal (S1442) 0.40m in diameter, suggesting a short-lived fire, perhaps in a brazier rather than a hearth proper. There were no other internal or structural features.

The lower backfill of the structure consisted of a series of patchy deposits (G1166), 0.2–0.55m thick of brown and yellowish brown silty clay with chalk inclusions. Samples of artefactual material of residual Roman pottery, worked and burnt flint produced a trace of grain and shell. Unusually, these primary contexts produced an assemblage of what has been recorded as Mesolithic flintwork, which must be residual and presumably derived from inwash from the surrounding colluvium suggesting the cut was gradually and partly backfilled with eroded material following abandonment or disuse. An additional upper fill of the cut (G1165), 0.4m thick was observed in section consisting of yellowish white silt with common chalk content, but produced no finds and may represent deliberate backfilling of the hollow with sterile material.

In its lack of internal detail this structure is similar to a number of others on the site designated as Type 3, although in this case the feature's position in relation to its surrounding enclosure and the obvious entrance ramp on its north-western corner, are more clearly indicative of a sunken-featured building than some of the others of this type posited on the site. Otherwise, its function is uncertain, possibly storage or a temporary shelter being two possibilities.

Structure 47 (Fig. 169)

Aligned east-west in the south-western quadrant of Enclosure 13 Structure 47 was delineated by a trench (G1140), 0.3–0.8m wide and 0.3m deep, with generally near vertical sides and a flat base outlining an area 7.9m long by 4.6m wide (Plates 210 and 211). On the north side of the foundation trench was a 0.2m wide break in the otherwise continuous trench, about 2.5m from its west end, the gap flanked by two postholes (S396 and S291), representing a rather narrow doorway. A third posthole (S289) suggests that this entrance was widened to about 0.6m. Two other postholes (S369 and S378) directly opposed on the southern side of the structure almost certainly represent another doorway. The foundation trench was recorded as cut in all four corners by postholes S321, S344, S336 and S310. However, the relationship was never very clear, the postholes only being defined by the more silty nature of their fill. The trench fill yielded a few sherds of twelfth- or early-thirteenth century pottery but no datable finds were recovered from the posthole fills. The north-west and north-east corner postholes (S321 and S344) were subsequently recut by later repositioned postholes, S298 and S302 respectively. The fills of these contained an appreciably greater amount of flint, perhaps to augment the packing of the posts in the rather soft colluvial soil here.

Internally the structure was relatively featureless with no trace of floor or occupation deposits. Two shallow and sterile pits (G1134) were roughly central on the eastern side, but it is unclear whether they were contemporary with the structure; one at least (S360) showed some evidence of burning and charcoal and may have been a heavily truncated hearth. Three close-set postholes (G1084) on an east to west alignment were also located 0.30m from the southern half of the eastern side of the structure, and are probably related.

This was one of the few medieval structures at Thanet Earth that was not of the sunken-featured form. The trench (G1140) delineating the perimeter of the structure probably held the timber uprights for the building, known as post in trench construction. This is a quite common form of arrangement, although as no remains of post-settings were discerned, except at the corners and at two discrete locations on the long sides, it is possible that the trench originally contained some form of sill beam. The corner settings and the post-holes representing the possible door positions did however appear more discrete and may have been directly emplaced in the trench. The quite large corner post-settings presumably held the principal structural uprights, which seem to have rotted *in situ*, although the impressions or 'ghosts' of the original timbers were barely discernible. The postholes in the long sides almost certainly represent opposed doorways, a common arrangement in Anglo-Saxon and early medieval buildings, although the trench was continuous at this point on the south side. The structure, quite clearly of a domestic character is further discussed below.

There were only a few other features in Enclosure 13. A further small partitioned area was defined by a gulley c. 7.6m long on a north west to south east alignment in the north-western quadrant of the enclosure which was cut away by a later feature at its eastern end, but then appeared to continue for a further 9m on a north to south alignment. The ditch was extremely shallow, maximum 0.10m, and 0.68m wide with a sterile fill. The feature may have been cut by a sub-circular pit (G1060) 2.51m wide, 2.67m long and hand excavated to a depth of 0.84m (not bottomed). In profile the cut had a gradual slope at the top with a steep, near vertical side further down. The fill yielded several sherds of medieval pottery (c. AD 1150–1225) and animal bone, and was suggestive of deliberate backfilling. The profile of this feature with its clear erosion cone indicates that it was a well. Adjacent to the south edge of the enclosure was circular pit (G1069) 1.30m wide, 1.40m long and 0.62m deep containing two fills which contained small quantities of medieval pottery, of similar date to the well and marine shell, suggesting it was used for rubbish disposal.

Sub-phase 3b: Enclosure 20 and related sunken-featured structures

Enclosure 20 to the south of Enclosure 13 and just intruding into its south-west corner is considered to be the second last enclosure in this area, based on its recorded relation with the ditch of Enclosure 13 where there were a number of other cuts confusing the exact situation. Its position in the sequence is therefore not completely

certain. The pottery recovered from both enclosures was very similar (see Enclosure 13 above).

Enclosure 20 was defined by a continuous ditch forming the north, south and east sides of a sub-rectangular area at least 17m x 15m. The western side appears to have been formed from the western ditch of Trackway 28, which the northern side-ditch extended to. The ditch had a width range of 0.88–2.00m and depth of 0.24–0.50m with steep sides and a near flat base. Its southern arm was wider to the east (about 1.8m) apparently due to recutting or the presence of an earlier enclosure ditch on the same line (See above, Enclosure 18, G1045). Various fills of the ditch contained sparse amounts of pottery and some mussel shell.

In the south-east corner of the enclosure where the wider section of the ditch terminated on the eastern side of Trackway 28, the ditch fills seemed to be contiguous with those of adjacent structure SFB 21 (see below), suggesting both were in use at the same time. The deposits suggested deliberate backfill characterised by compact primary layers of dark grey clay silt with abundant carbon and a clay silt with large quantities of mussel shell, possibly relating to activities or occupation within the building. However, the deposition of shell in the terminus of the ditch is also seen in the backfills of other enclosure ditch termini of medieval date and may not be related to actual occupation of the building. Two structures (SFB 6 and 21) were constructed on the line of the ditches of Enclosures 13 and 20 respectively, and are probably somewhat later in the sequence of development.

SFB 6 (Fig. 170)

SFB 6 was a sunken-featured structure, placed centrally over, and cutting, the north-east corner of Enclosure 13 and drove ditch G1223. It was a near square cut (G1070) 3.70m wide, *c.* 3.9m long and 0.60m deep, with steep cut sides and a flat base (Plates 212 and 213). The western half of the sunken area was slightly more irregular in shape. At the south-east corner of the main cut was a southwards aligned extension, 1.10m wide and 1.40m long, with two postholes (S159 and S161), 0.76m apart flanking its base in line with the south side of the main sunken area. The extension sloped upwards from the base of the main cut and, in combination with the post settings, indicates the entrance, with the posts representing the door frame. The entrance ramp was aligned exactly with, but cut, the west-side ditch of Enclosure 18, suggesting this was still visible and used as part of the access. The alignment of the entrance reflects the overall orientation of the building although its sunken area was more east-west aligned longitudinally. Nearly central on the western edge was an alcove 0.50m wide, 1.10m long and 0.32m deep, cut into the edge and extending from the main body of the cut for about 0.5m. Its function was unknown, but may have provided storage space. On the base on the eastern side was an area approximately 0.10m deeper than the main floor, *c.* 3m long and 1.8m wide at its southern extent narrowing to 0.50m to the north. A sub-circular feature cut into this depression at the centre of the eastern side and was possibly a storage area similar to the subterranean 'larder' in SFB 21 (below). A circular post-hole (S367) with a

diameter of 0.20m and 0.29m deep was also cut into the base at its centre. This is similar to such settings in some other examples of these buildings to provide additional support for the roof.

Although there was no definite evidence for a hearth within the structure, there was a thin deposit of black ash, charcoal and daub (G1072), 0.49m wide, 0.55m long and 0.02m thick near the southern end just west of the entrance. Rather than representing a hearth, this may mark the position of a brazier or some other above ground heated structure. The deposit provided no biological material or food residues, indicating that only timber was being burnt, either for heating or boiling liquid. There were also twenty stake-holes cut into the base of the main floor area distributed in four distinct areas. The largest group in the north-east corner was of eight stake-holes on an approximately east-west alignment alongside the north side of the sunken area. Just 0.30m south of this concentration was a further line of four on a similar alignment within the shallow depression. Another concentration lay against the western side, on a north-south alignment just north of the alcove, with the last cluster of three on a north-east/south-west alignment, also located in the depression between the central post hole and the eastern side of the structure. Although some of the stake-holes appeared to line the edge of the cut area (similar features are sometimes found in Anglo-Saxon sunken-featured buildings), they did not appear to circle its entire sunken area and were not regularly spaced. They were therefore probably not integral to the structure, but some may have been inserted to strengthen the edges in places. However, they are more likely to represent temporary partitioned areas or some form of internal structures.

The primary backfill of the sunken structure was two relatively thin deposits suggestive of occupation tread (G1073). The main bulk of the cut contained a sequence of slightly varied dark brown silty clays (G1074) occasionally containing charcoal. Otherwise all of the fills including the possible occupation layers were sterile, indicating filling by natural erosion. The structure's function remains uncertain as there is no evidence for an oven. However, the possible presence of a brazier or other above ground heat source and the other internal elements suggest that a domestic function was the most likely use, albeit on a temporary or short lived basis.

SFB 21 (Fig. 171)

SFB 21 was one of the more unusual, and deep, sunken-featured structures on the site, because of rather peculiar internal features, but in size and shape it was very similar to SFB 6 to the north. This sub-rectangular feature was aligned east-west, just cutting across the line of the eastern drove ditch and was set in the north-west corner of Enclosure 24, cutting its ditch (G1128). The feature (G1232) was c. 4.2m long, 3.2m wide and relatively deep at 1.16m and had steep or vertical edges and a flat base (Plates 214–216). A linear extension near the north-east corner merged and was contiguous with the ditch of Enclosure 20, 0.95m to the north, its base sloping down from the ditch to the base of the main cut and represented the ramped entrance way.

Extending from the south-east corner of the main cut was a circular underground chamber (S1447), about 1.25m in diameter and 0.7m deep, domed at the apex with its base just below (0.1m) the main floor level. At the pit's entrance was a gouge or groove visible down the eastern side of the main cut. This slot may have held a wooden plank to partition off the chamber from the main body of the structure. Finds from within this chamber were fairly limited consisting of worked flint and marine shell while samples taken produced small quantities of grain and pulses. One interpretation for this chamber is that it was a larder for keeping perishable goods cool.

The south-west corner of the sunken area was occupied by a free-standing clunch-built structure (S1396), formed against the edge of the main cut for the building and surviving to the stripped ground level (Plates 218 and 219). It was built on a thin deposit of ash and charcoal that only really survived under the structure which indicates a secondary insertion replacing some other internal fitting, perhaps an original oven or hearth. Small amounts of barley and an otherwise characteristic assemblage of weed taxa, dominated by stinking chamomile and long-seeded grass are indicative of this original function. The structure itself was of a roughly oval-shaped hollow build, about 1.9m across, with clunch walls between 0.2 and 0.4m thick about the same size of some of the ovens in Type 1 structures. A rectangular access slot, 0.30m wide and 0.62m high was formed in the wall at the base of the structure's east side and there was a shelf-like recess (S1517) at the back, 0.08m above the base and 0.34m wide, 0.57m deep with a height of 0.38m. Although this internal structure was in an analogous position to the ovens found in many other buildings, there was no significant evidence of burning on any faces of the walls or on the base. Even low firing temperatures usually leave some evidence (usually a reddening of exposed surfaces) although it is possible a lower heat was applied in some fashion that has left no trace apart from some possible soot deposits at the rear.

The primary layers in the rest of the building (G1233) consisted of patches of thin dark greyish charcoal rich silt, with some daub and mussel shell, representing occupation tread within the structure. Unfortunately these produced little environmental evidence. These deposits were sealed by the main bulk backfill, contiguous with fills of the adjacent ditch of Enclosure 20, a varied sequence of levels (G1234–1235) indicative of deliberate backfilling of the structure although some residual Mesolithic flintwork suggests that at least some of the material was eroded from the colluvium in the area. Although environmental evidence was meagre, one of the larger assemblages of medieval pottery from a sunken building comprised four different pots dated 1100–1175AD.

This structure may have originally been of Type 1, as suggested by the evidence for an earlier but completely removed structure, possibly an oven, in the south-west corner. Although in its secondary phase, it may have been used for domestic purposes or had some specialist agricultural function, involving the smoking of fish or other comestibles, or drying of agricultural produce. The deposits within and related to its use do not however throw much light on this, although the potential

larder in the south-east corner would suggest that processed items were originally quite perishable.

SFB 9/11 (Fig. 172)

This building was originally considered to be one structure (SFB 11) but it seems likely that it was two separate buildings, the earlier (SFB 9) almost completely cut away by a later sunken structure over the same footprint (Plate 220). The sequence described should be treated with some caution as it was very difficult to separate fills in this area and the relationship of both structures to the intervening enclosure ditches is sometimes slightly ambiguous. It is likely however, that SFB 11 at least was constructed later than SFB 21 since it may have cut the ditch of Enclosure 20 at its north-west corner and it also cut the ditch of Enclosure 13.

SFB 9 (G1298) at the southern end of the structure complex, set over the line of the eastern ditch (G1192) of Trackway 28 in the north-west corner of Enclosure 15 was at first thought to be a shallower (0.12m deep), extension (S1187) to the cut of SFB 11 (G1153). However, S1187 cut with steep sides curving to a flat base and extending south from G1153 for a further 0.9m slightly wider had a different fill of a sterile mid-brown silty clay. It was directly bounded to the south by an east-west aligned linear cut (S1275) 0.35m wide, 2.85m long and 0.32m deep, which formed the southern side of the structure; in all, these elements were about 1.1m long. The profile and position of the cut suggest it was a beam slot for a surface structural element at the end of the building. There was no obvious position for a doorway, but it could well have been through this timber construction. No other internal features were seen within.

SFB 11, aligned north to south with Trackway 28 was situated about 0.77m from its western ditch and consisted of a sub-rectangular cut (G1153) *c.* 4.28m long, 3.36m wide at maximum and 0.90m deep with steep sides and a flat base. There was a suggestion of a narrow ledge 1.40m long, 0.20m wide and 0.12m in height along the western edge of the cut at its southern end, although this is likely to be a remnant of the shallower earlier structure. There were no hearths, ovens or any other evidence for heating within this building but its northern end was divided into two compartments by a clunch-built structure consisting of a north-south aligned wall (S1182), slightly offset to east of centre and extending about 2.2m from the northern cut edge, with a maximum width of 0.4m. This survived to the full depth of the sunken area and was contiguous with a clunch lining extended mostly around the north-east edge of the sunken area forming a narrow compartment with a slightly closed entrance on the east side. This was about 0.65m wide and *c.* 1.95m long, while the space on the west, only lined on its northern side, was just over 1m across.

Two areas of fill (S1277 and S1279) appeared to relate to the initial deterioration of the structure. Deposit S1277, at the southern end of the cut consisted of redeposited clunch-like material with common large flints, daub and a quernstone fragment (FN 1.2). Deposit S1279 was very similar but concentrated around the northern half of the

sunken area and abutted the clunch wall (S1182). The physical disposition suggested lumps and fragments had collapsed into the pit. These levels were otherwise sterile apart from two Mesolithic bladelet fragments, residual from colluvium. Their composition suggests that they may have originally been part of a clunch wall that formed part of the superstructure of the building, supporting the roof. The bulk fill (G1155) sealing these initial deposits yielded medieval pottery dated to AD 1175–1225, animal bone and common shell, and suggested deliberate backfilling. Taken together the two deposits may suggest that the structure was deliberately demolished and levelled prior to the emplacement of Enclosure 15 (below).

Assuming that there were two successive buildings represented here, not enough of the earlier (SFB 9) survives for its form to be ascertained. However, the linear feature at its southern end is unusual and not seen in any other of the sunken-featured structures apart perhaps from SFB 81 on the pipeline; it was also very shallow compared to most. The later structure (SFB 11) was also unusual due to the compartmentalisation of its northern end, rather similar to the common type having an oven and adjacent hearth at one end, but here with no indication of any burning or residual elements of a hearth. Furthermore, the larger western compartment was probably too narrow to accommodate ovens of the size typically seen in these structures, generally 1.6–2m+ rather than the *c.* 1m. It seems plausible therefore that either this structure was never intended to hold an oven of the standard size, or if it was, it was badly constructed and abandoned leading its demolition. However, it seems unlikely that this would be the case, as the internal arrangements could easily be modified after the expenditure and effort of constructing the sunken part of the building or its superstructure. Although it may be relevant that this was one of the latest of the buildings in this area and could have been abandoned at the end of this phase of settlement activity on the site, it seems possible that it was another variant of the miscellaneous type, and presently of uncertain function.

Sub-phase 3c: Enclosure 15

The ditches of Enclosure 15 formed three sides of an area of about 30m x 19m, overlapping Enclosure 24 at the southern end of the area extending slightly further northward; its southern side was south of the excavated area (Plate 205). The northern section of ditch G1020 was 0.75 to 1.65m wide and 0.31m to 0.90m deep with steep sides and a flat base. The western ditch of the enclosure recut ditch G1192, representing the eastern ditch of Trackway 28, along its projected line to the south where both features were eventually eroded away. Although relationships were difficult to determine, the ditch undoubtedly cut the backfill of SFB 11 and the ditches of Enclosures 13 and 18 (G1001 and G1045 respectively (Fig. 172)). The enclosure would therefore seem to be the latest in the area. Three fills were recorded but little artefactual material was present although some pottery of mixed date was recovered from the upper and basal deposits. The latest elements were of 1175–1250 probably mixed due to the incorporation of residual pottery and the overall date is compatible with this being the latest enclosure. The southern part of the enclosure was probably represented by ditch G1079 on the same alignment as the remainder of

the eastern side of the enclosure to the north. A gap of c. 1.8m between the two features suggests a possible entrance. The ditch, visible for c. 15m and extending outside the excavated area was 0.60m wide and 0.30m deep with a U-shaped profile and a sterile uniform fill. No features were found within the limits of the enclosure and it was probably placed after the end of settlement activity, indicating that the site reverted to a purely agricultural role.

Site 3

In the northern area of Plateau 2, Site 3 (Fig. 173), comprised an isolated enclosure and its possibly much later replacement (Enclosures 40 and 41) representing a continuation of the string of early phase enclosures (Sites 1 and 2) on either side of Trackway 28. Two separate sites to the south (Sites 4 and 5) appear to be distinct entities in a more complex area (Plate 221).

Phase 2: Early Enclosure 40

Enclosure 40 on Plateau 2 c. 100m south of the complex of Site 2 (above), to the west of Trackway 28 could be contemporary with the adjacent earliest medieval phase droveway. However, it was mostly excised by the superimposed Enclosure 41 and only remained as two separate ditch segments and little dating evidence was recovered. A short segment G2071 consisted of a ditch aligned roughly ENE-WSW in the north-eastern corner where it ended just south of a terminal of the western ditch of the droveway (G2017) which here formed an entrance. This feature was 9.4m long, increasingly cut away by the ditch of Enclosure 41 to the west and averaged 0.8m wide and 0.4m deep. The second, parallel, ditch (G2072) was 24m to the south of G2071 and survived for 29m. It had a well formed rounded terminal at the eastern end about 3m from the trackway, presumably forming an entrance into the enclosure, while its western end, where it appeared to be turning north, was cut away by the similarly aligned ditch of Enclosure 41. This section of ditch was 1.2m wide and 0.55m deep. Both ditches had a shallow concave profile and contained a fill of clay silt with animal bone and small quantities of pottery (AD 1150-1250). The pot was recovered from a very small segment of ditch cut away by the later ditch of Enclosure 41 and may be intrusive as no other interventions produced any pottery at all.

The later enclosure ditch, which must have cut along the same line, indicates the remaining extent and arrangement of the enclosure. An entrance mid-way along the western side of the later enclosure indicates that Enclosure 40 must have had an entrance in the same position, as the earlier ditch was not present at this point either. The enclosure was therefore c.31 x 24m internally, very similar in size, layout and skewed angle to the droveway, as Enclosure 21 on Plateau 1 (above). Virtually no features can be confidently associated with this enclosure suggesting that it may have been related to stock keeping.

Phase 3: Enclosure 41 and associated features

Enclosure 41 was an almost exact remodelling of the earlier layout of Enclosure 40, except that its southern side was extended slightly south with its ditch swung to the south, so that it was perpendicular to the droveway. This increased its internal area to c. 33m wide north-south at its eastern end. It was delineated by two separate sections of ditch which formed its north, east and south sides with its terminal at the north-east just to the north of the earlier enclosure terminal, just touching the western droveway ditch at this point. The southern ditch, however, cut across the droveway ditch and terminated within the track. Similar incursions across the droveway are evident in some of the Plateau 1 enclosures (above). A 2.2m wide entrance roughly at the midpoint on the western side was formed from well-cut, rounded terminals, wider (1.5 and 1.4m wide and from 0.39m to 0.49m deep) than the rest of the ditch circuit, where the feature had an irregular steep sided concave profile and averaged 1.22m wide and 0.36m deep. The ditch mostly contained a uniform fill which yielded a small assemblage of pottery of the eleventh to early thirteenth century as well as animal bone, mussel shell, grain, seed and hazelnut. The two terminals at the entrance however contained a fill with a large concentration of mussel, cockle and winkle shell. Such concentrated deposits of marine shell have been noticed in a number of other ditch termini, specifically of this period. There were few features within the enclosure, although some probably related features were situated just outside its south-western side, but the most significant feature was another sunken-featured structure (SFB 34) over and cutting the western droveway ditch in the south-east corner of the enclosed area, within the entrance in this corner of earlier Enclosure 40.

SFB 34 (Fig. 176)

SFB 34 consisted of a sub-square cut (G2073) c. 3.2m long, 3.07m wide and 1.4m deep with rounded corners, very steep and in places slightly undercut sides and a flattish base with a slightly higher 'plinth' in its south-western corner (Plate 222). It was aligned with and cut the western ditch of Trackway 28 G2017 with its eastern side directly over the eastern ditch edge. A narrow gully on the basal edge (S9347), was most evident on the south and eastern sides of the main cut, but may have originally extended around most of the circuit, although minimal on the west. Along the eastern side it widened to form an undercut hollow at the base of the north-eastern corner. In this quadrant the base sloped down considerably towards the corner as well as to the northern edge. These features may have had a drainage function, not evidenced in other examples to the same degree. There was no obvious sign of an access point, although a shallow depression (S0133) on the north-west corner, in a comparable position to other examples, may be erosion by the entrance.

Slightly intruding into the base in the south-western corner was a sub-circular 'clunch' built oven, at a surviving height of 0.9m (S9349), with an exterior diameter of c. 1.6 and walls (S9348) some 0.3–0.4m thick forming a domed structure, truncated at the top. A wide entrance or stoke-hole was situated at the north side, with a ramp from the main floor area down to the interior. The possible vertical ghosts of a wattle

frame were evident on the inner face of the wall. The disposition of the wattles, exposed on the inner face, suggest they were a construction aid for the dome and not an integral part of its superstructure as they would have been completely burnt away during the first firing (Plate 223). Within the walls, the irregular base consisted of heat-reddened clunch, c. 0.06m thick extending across the full interior of the oven. This was overlain by a thin layer (c. 0.01m) of very dark sandy silt with streaks of a white, calcified material, further sealed by a 0.40m thick deposit (9351) of chalk lumps and silty clay, interpreted as the collapsed, upper extent of the oven. Samples of this material yielded traces of marine and avian shell and grain. The rest of the structure was primarily filled by a mid to dark yellowish brown, sandy, clayey silt with occasional, small to medium flint fragments and charcoal flecking (9350). The oven and the remaining extent of the cut was overlain and filled by a sequence of deposits (including 9344) of various composition, some representing collapsed clunch walling. The bottom-most of these was sampled and produced a small amount of grain mostly of bread-type wheat and rye. Small amounts of chaff associated with a variety of wheat types were present as were frequent stinking chamomile seeds. Most of the deposits in this structure were sterile although an iron nail (SF 2.161) was found on the base of the oven and a few sherds of residual Roman pottery and animal bone were recovered from the bulk fill of the main cut. The structure is assumed to have been contemporary with Enclosure 41 because of its position, mostly blocking the entrance to the earlier enclosure.

This structure was a particularly well preserved example showing much of the superstructure of the oven, which in other examples has been lost and clearly exhibiting its domed nature. However, there were a number of unusual variants particularly the apparent lack of an adjacent side hearth, although the area next to the oven could have held a brazier or other heating structure. The oven did not seem to have the thick flint-founded base plate seen in other examples. Apart from the possible drainage gully around its circumference and the unusual undercut corner, it was also unusual in its size, being slightly smaller than the other Type 1 structures. Thus the oven took up an inordinate proportion of the internal space and certainly there would have been little room for other domestic activities. A small, oval shaped pit (S9296) adjacent to the south-eastern corner may have been related to the structure. This bowl-profiled feature was 1.35m across and 0.4m deep and mostly contained a very dark, clayey silt with frequent, small charcoal fragments indicative of rake-out material from an oven.

Other features within the enclosure/s

The only features within the Enclosures 40/41 (Fig. 173) were four small pits or post-holes in the south-western quadrant, which were not datable and may not be related. A group of three pits (G2068) and a well (S9111), immediately to the west of the south-western corner of the enclosures, were all generally sub-rectangular in shape, some more irregular and between 1–3m long and wide, but did not produce any dating evidence. Feature S9111 consisted of a circular, funnel shaped cut, 3m in diameter at the top, narrowing to 0.80m across at a depth of 1m (the limit of

excavation). Subsequent bore sampling proved this to be a well as suggested by the erosion cone at the surface. No dating evidence was recovered, but the feature was almost certainly medieval and related to one or other, or both of the enclosures

SFB 33 (not illustrated)

Fifteen metres to the south of Enclosure 41 and set immediately adjacent to the west side of the driveway was feature G2066 (SFB 33) which remains undated. Described here for convenience, It potentially represents a medieval sunken-featured structure and consisted of a heavily truncated sub-rectangular cut aligned roughly east-west, 3.4m long, 3m wide and just 0.2m deep with irregular sides that gradually led to a flat, uneven base. The base was cut on its northern side by a small post-hole (S9006) 0.3m across, 0.31m deep, filled by a silty clay with frequent, small abraded chalk inclusions. Above this was a layer of flint pebble metalling that in turn was cut to the west by a sub-circular pit (S2956) 1m long, 0.85m wide with steep, concave sides and a rounded base. The natural sides of this cut had been stained black from the contents of the pit, a silty clay with small fragments of calcined flint and charcoal. The pit was overlain by what may have been a sub-circular hearth cut (S2952) 0.63m long, 0.45m wide and 0.12m deep with a shallow, concave profile which contained a fill of black charcoal rich, soft, friable clayey silt overlain by a layer of small to medium, angular calcined flint fragments in a very dark greyish brown, charcoal rich matrix. This remains rather enigmatic and undatable, originally considered to be a sunken-featured structure, but as no finds were retrieved the evidence is inconclusive. Although adjacent to the medieval drove road it was also located less than 10m to the north of the projected line of Roman Trackway 25. The presence of other scattered Roman features in this corridor along the Roman route indicates that it could be of Roman origin, rather than medieval. Although situated longitudinally at the western end of the main cut, pit S2956 appears to be later and may be unrelated.

Site 4

The concentrated area of activity of Site 4 (Fig. 174) was situated on either side of Trackway 28, 25m to the south of Enclosure 41 and appeared to encapsulate prehistoric Barrow 8, while Site 5 (below), which oddly enough also enclosed a much earlier ring-ditch (Barrow 7), was situated no more than 8m to its west (Plates 224 and 225). All these features appear to represent two adjacent settlement complexes or farmsteads and were almost completely contained within a convoluted development of ditched enclosures. The earliest (Enclosure 33) was in use and contemporary with the driveway and therefore belonged to the earlier medieval phase, although finds from its backfill were of a later phase (see below). Dating generally suggests that both these settlements originated, and were in use, somewhat later than Sites 1, 2 and 3. The enclosures were perpendicular to the driveway unlike Enclosure 40/41 to the north, this alignment influenced by the position of the prehistoric barrows which may have still been evident in the ground and both covered a rectangular area, 93m across east to west and about 45m north-

south at maximum. Both areas showed a complex and protracted development, the eastern settlement (Site 4) perhaps more so, and were originally partially sealed by a deposit of old topsoil or colluvium, that had aggraded in two shallow depressions defining the extent of more concentrated activity. These extensive depressions and their fill had undoubtedly been caused by prolonged or intensive occupation of the area eroding the relatively soft subsoil in the zone of settlement. Apart from their alignment and juxtaposition, which suggests a contemporary lifespan, the two settlements appear to be quite separate. Many of the associated structures and features cannot be assigned confidently to particular enclosures, but a logical progression, based on the sometimes meagre dating evidence has been attempted here. However, with Site 4 in particular, the complex sequence of enclosure ditches and other features formed something of a palimpsest where the extents and disposition of earlier elements were often obscured or excised by later activity. In some cases therefore the precise arrangements are unclear, ambiguous or are open to alternative interpretation.

Sub-Phase 2a: Early enclosure (Enclosures 33 and 35)

Possibly the earliest enclosure (Enclosure 33) consisted of three ditches G2023, G2029 and G2030, the first aligned north-south and over 28m long and consisting of a large feature that averaged 2m wide and 0.8m deep, with a rounded terminus at the north. The ditch was not straight, its northern section bent slightly to the west. The southern end of the ditch was much smaller (average 0.5m wide and 0.2m deep) and was progressively cut away to the south by later ditch alignments. The southern side of the enclosure (G2029) was composed of three separate ditch segments, originally one ditch, that were relatively insubstantial. The western end of this alignment ended in a rounded terminus that cut into the eastern ditch of Trackway 28, although the fills appeared to be contiguous at this point. This was a common occurrence with some of the earlier ditches cutting the droveway ditches, suggesting that the enclosure ditch here was secondary but not cut much later than the droveway ditch and almost certainly while it was still open.

The western ditch of Trackway 28 appeared to form the western side of the enclosure. The eastern ditch not present within the enclosure, although it may have been truncated in the eroded area. The eastern droveway ditch (G2014) extended slightly north beyond the enclosures southern limit but may well have terminated at this point. The northern side of Enclosure 33 was not evident, perhaps never having been cut as a ditch, or open-sided like some of the other enclosures on the site, which may be indicated by the just surviving rounded northern terminal of ditch G2023. Or it had been completely removed by a later ditch (of Enclosure 70), but its extent must be marked by the northern terminal and a laterally corresponding southern terminal of the eastern droveway ditch G2015. Interestingly, this latter feature terminated at the precise position of the underlying ditch of Barrow 8, strongly suggesting that this was still evident. If these dispositions have been correctly identified the enclosed area was 34m by 19m maximum.

There were three dividing ditches within the enclosure. The first (G2027) was aligned east-west, 8.7m long, 0.9m wide and 0.3m deep extending from the eastern side of the enclosure to about the mid-way point north to south. Although described as cut by G2023, the fills may have been contiguous and it is probably significant that G2023 widened northward from this point as well as changing direction slightly. A ditch near the eastern end of G2027 was 4.5m long with steep sides, a rounded base and rounded terminal at either end, and was of similar alignment to the eastern side ditch of the enclosure. The contemporary nature of these ditches and the extent of this northern part of the enclosure are also suggested by the limits of the overlying topsoil/colluvial layer and its underlying depression, which appeared to be constrained within these elements. Thus the internal area of this northern half of the enclosure must have been significantly eroded to a lower level than the surrounding ground further indicating that these elements were all contemporary. Another partition ditch, although possibly later from the date of the recovered pottery, was aligned roughly north-west to south-east, 6.9m long and 0.73m wide. Its western extent had been completely excised by later features and its function may have been related to stock management. All the ditches had a moderately steep concave profile and contained a similar fill with mixed pottery (1050–1150), animal bone and oyster shell inclusions although G2029 and the smaller partition ditches were sterile. Much of the pottery dating suggests a later date for the enclosure which must relate to its possible deliberate infilling. No features precisely contemporary with the enclosure could be positively identified, similar to some of the other enclosures ascribed to the secondary phase of medieval activity (See Enclosure 40 above). It is possible that the northern half of the enclosure was specifically for stock, perhaps explaining the much greater erosion of its interior.

Enclosure 35

Enclosure 35 was situated west of the driveway and consisted of two L-shaped ditches (G2050 and G2051) forming a near square enclosure about 25m across. Internally its eastern side was bounded by driveway ditch G2017. The northern ditch (G2050) cut across the driveway ditch extending into the track by about 1m, with the southern ditch terminating just short (1.6m). On the west side, the ditches were separated by a 2.6m wide entrance located about 4m north of the south-west corner. The ditches averaged 1.05m wide and 0.52m deep with steep, straight sides, a flattish base and rounded terminals, widening slightly at the western entrance. They contained a uniform fill, the northern ditch being relatively sterile, possibly due to fewer interventions being cut across it, while the southern yielded a small assemblage of pottery, again of slightly mixed date (AD 1050–1200) and animal bone as well as trace remains of mussel, oyster and grain. Of interest, is the slight kink in alignment of the northern side of the enclosure as it approached the drove road where it aligned with a ditch of Roman Trackway 25 (G2084) which was eroded a few metres to the east. This is unlikely to be coincidental, and suggests that a facet of the earlier feature still survived and was respected when this ditch was made. Although this enclosure could be roughly coeval with Enclosure 33, its relation to the trackway ditches suggests a slightly later provenance. In shape and form it

resembles the early enclosures to the north, and slightly later pottery notwithstanding, it is considered to be of the earlier phase but probably in use for some time (into Phase 3). Apart from encapsulating two thirds of Barrow 8 (the southern extents of the barrow and enclosure corresponding closely), the enclosure contained a single building (SFB 32) that was located in the north-eastern corner and a roughly north-south aligned ditch segment which formed an internal division located 16m from the western boundary in the north-eastern quadrant. This was 9.2m long averaging 0.82m wide and 0.5m deep and yielded a small assemblage of medieval pottery and worked and burnt flint. No other definitely contemporary features were identified within the enclosure (some postholes/pits on its eastern side were undated), suggesting that it was again related to stock management.

Sub-Phase 2b: SFB 32 (Fig. 177)

SFB 32 consisted of a sub-rectangular cut (G2065) in the north-eastern corner of Enclosure 35, set parallel to the northern enclosure ditch and less than 1m from it. Its east end extended across the line of the driveway (cutting ditch G2017) as did the enclosure ditch itself. The main cut had very steep, slightly concave sides and a flattish base and was about 4.2m long, 3m wide at maximum and 0.5m deep at its eastern end. At the south-western corner a 0.6m long extension was cut with two very badly eroded or worn steps. Two small post-holes or settings 0.7m apart may have formed part of an entrance, on the upper edge in the south-western corner above the steps, although only one seems likely to have formed part of any possible doorframe, unless this was askew. They were of a similar size and shape, between 0.28 and 0.2m wide and from 0.05 to 0.28m deep. The eastern end of the structure contained the remnants of the oven and side hearth typically found in these medieval buildings, here cut through and disturbed by the ditch of Enclosure 36 (below) on the east. A sub-circular oven (S2909) c. 1.65m in diameter had been constructed on the base of the main cut in the north-eastern corner of the building (Plate 226). The superstructure was formed by a clunch wall c. 0.2m thick and a surviving height of 0.4m, its slightly incurving profile suggesting an originally domed form. A gap, c 0.25m wide on the west side, undoubtedly represented the entrance or stoke-hole. Within the oven wall, a burnt clunch floor and lining up to 0.1m thick extended to a height of some 0.35m around the inside of the structure. Above this was a deposit of degraded clunch with charcoal fragments and small fragments of fired clay, possibly from an internal lining, presumably derived from collapse of the superstructure, which had filled the remainder of the void. Immediately to the south was a 'hearth' (S9233) occupying the south-eastern corner of the building and set in a compartment partly constructed of clunch (on the north) and partly carved out from the underlying chalk natural. This had internal dimensions of 1.2 by 0.9m, with its wall up to 0.3m thick and c. 0.3m high. The burnt edges and base of this feature were sealed by a deposit of charcoal with burnt and degraded clunch perhaps partly derived from the oven superstructure. The material contained small fragments of pottery dated to AD 1175–1250 and sampling produced a trace of marine and avian shell, charcoal and small quantities of grain and pulses.

On the base of the main cut, two near-square post- or stake-holes (S9228 and S9230) were located about 0.3m apart and immediately to the south-west of the oven entrance; such post settings in this position have been noted in other buildings of this type. They were similar in shape and size between 0.18 and 0.2m wide and 0.2m deep, with steep sides and a flat base and contained a similar fill. To the west of the oven and overlying the postholes was a dump of demolition material (S9050) which consisted of a spread of charcoal and burnt material to the south by a dump of flint pebbles and nodule fragments, which yielded a large fragment of quernstone (FN 2.9028). Immediately in front of the oven a deposit of weathered clunch lumps (perhaps degraded blocks) and silt (S9233) almost certainly came from the oven superstructure, the condition of the material possibly indicating that it had been exposed to the elements suggesting, tentatively, in turn that there was no roof or superstructure of the building left (Plates 227 and 228). The remainder of the cut was backfilled by deposit sequence S2914 which consisted of clayey silts with small chalk and flint fragments. Pottery recovered from the fill (1 sherd) was dated to AD 1175–1250; small quantities of daub and a small collection of worked flint including a flint scraper (FN 2.145) were also recovered.

This building was a fairly typical example of a Type 1 structure (Plate 229), its position and alignment strongly suggesting it was contemporary with the use of Enclosure 35, although there was little dating evidence from any primary contexts. It could therefore possibly have originated later in Phase 2 (denoted here Sub-phase 2b; also see below). The oven was less sophisticated than in some other examples, perhaps another indication of its earlier provenance, with no sign of the heat retaining flint ‘hotplate’ often seen, but there was some suggestion that it had been constructed from clunch ‘blocks’. Noticeable fragments of quern are suggestive of a connection with baking, but it seems likely that the use of the structure was short-lived as it was abandoned, possibly dismantled and superseded by subsequent developments (Enclosure 36).

Sub-phase 3a: Enclosure 36 and associated features

Enclosure 36, which appeared to replace and extend Enclosure 33 consisted of a single ditch (G2022) forming a rectangular area aligned north-south opening to the south. Its eastern side was 48m long extending north beyond the earlier enclosure, from the corner of Enclosure 33. It turned west to the north cutting the eastern drove ditch and turning south on the line of the western drove ditch (G2017), forming a 22m long northern side. The western ditch partially recut the line of G2017 and was 28m long, turning eastwards slightly at its southern terminal end. Notably it was in alignment, slightly to the south, with the internal dividing ditch of Enclosure 33 to the east. The ditch had rounded right-angled corners and rounded termini to the south and was irregular in width and depth throughout, but averaged 1.2m wide and 0.6m deep. It had a varied profile that included steep 'V'-shaped sides through to moderately steep sides with a rounded base. The western side was heavily truncated by later features, but it quite clearly cut the fills, including the oven, of SFB

32 just south of the north-west corner of the enclosure. The ditch contained a uniform fill with pottery (AD 1075–1250), animal bone, and sea shell. Although the pottery assemblage from the ditch is very similar to that recovered from Enclosure 33, it was clearly of a later phase. Some of the earlier pottery might be residual, although it was not particularly worn. This enclosure was undoubtedly of the tertiary medieval occupation phase here, extending the earlier enclosure to the north where it aligned with the north side of Enclosure 35, though presumably later due to its relation with SFB 32, and cutting across the line of the driveway. It was open on the south, but here might still have been demarked by the southern side of Enclosure 33, and could have been accessed via the driveway to the south. The enclosure probably represents the peak of activity as it was associated with at least three buildings, SFB 29, 30 and 31 as well as two areas of underground chambers (G2055 to the east and G2040 to the west), their entrances located near each southern terminus.

SFB 26 (Fig. 178)

This potential structure (G2031) was in the extreme south-eastern corner of the enclosure where it possibly just cut ditch G2023 of earlier Enclosure 33, and was aligned north-south, similar to the immediately adjacent ditch of Enclosure 36 (G2022) s. The feature consisted of a large, rather irregular sub-rectangular cut 10.3m long with rounded corners, particularly the north-eastern corner. It was 6.2m wide towards its northern end and c. 5m wide at its southern end with a steep, concave profile with and a very uneven. The base had probably subsided into some partly underlying subterranean features (G2055; see below) which was 0.3m deep at its north-western and south-eastern corners and c. 0.45m deep at its north-eastern and south-western corners. Extending from the north-west corner, an irregular cut with steep sides, concave profile and uneven base (S9275) was probably contiguous. It was 2.3m long, 2.17m wide at maximum and 0.35m deep, filled by a well sorted and obviously laid deposit of medium to large, rounded and sub angular flints suggesting some form of foundation deposit, but there was no sign of burning to indicate an oven and its position suggests that it may have represented the threshold for an entrance. Two pottery sherds from this deposit dated to the twelfth or thirteenth centuries. The south-eastern corner of the structure contained a badly disturbed hearth or oven base (S9339), a shallow cut 1.1m long, 0.45m wide and 0.25m deep with a lining of medium to large rounded flint pebbles overlain by a mid to dark greyish brown, silty clay with charcoal fragments. More centrally, to the south, the base of the structure was scorched and associated with a deposit of very dark greyish brown/black silty clay (9240) containing much charcoal and small fragments of calcined flint and burnt chalk. It was 0.50m long, 0.40m wide and just 0.04m deep. The scorching suggests an *in situ* fire or brazier, with 9240 the residue. The fill of the main cut consisted of various levels of compacted chalky rubble and silt with small chalk fragments which showed some evidence of bedding floors or more likely trodden surfaces, towards its southern end. Some of the deposits yielded medieval pottery (AD 1200–1275) with other finds including iron nails (FN 2.152, FN 2.153, FN 2.158), quernstone (FN 2.159) and an iron fitting (FN 2.165).

The building appears to be contemporary with Enclosure 36; the ceramics are broadly comparable, earlier sherds being small and worn and probably residual) although it partially overlay a cave complex and was affected by collapse events within this feature. A subsidiary entrance to the caves (G2054 below) cut the upper fill of the structure to the east. It is possible that the feature represented two adjacent structures, but there was no definite evidence for this. This structure was clearly unlike the typical Type 1 'bakeries', being considerably larger and generally more irregular. It could conceivably have had a domestic function, although there was no great evidence for associated occupation, although the strengthened entrance way and hearth are suggestive. Certainly, the pottery from this feature, and the adjacent SFB 29, would suggest domestic activity with some sooted cooking pots, but these vessels cannot be related to the use of the building, most having derived from backfill after it had gone out of use.

SFB 29 (Fig. 179)

SFB 29 was a large, sub-rectangular cut (G2058) with curved corners on the north and a slightly tapered southern end (Plate 230). The feature was aligned north-south in the south-western corner of the enclosure where it was set centrally across the projected line of the eastern driveway ditch (G2014 of Trackway 28). The cut, 6.68m long, c. 4.4m wide at maximum and 1.87m deep at its northern end had very steep and in places, considerably undercut sides and a stepped and pitted base. Near its south-eastern side where there was some evidence for a ledge within a sizeable undercut, the base of the cut was scorched which may indicate a hearth (S9191). Adjacent to this on the south-western corner, an extensive ledge or plinth with a flat upper surface and curved front (S9093), had been left uncut out of the solid chalk. This was 3.5m long 1.2m wide and about 0.4m deep and formed the setting for a possible raised oven or hearth structure, although the solid chalk was initially sealed by two very thin layers of firm clayey chalk and chalk dust 0.04m thick at maximum, probably the result of trample. What was left of the oven structure (S9546) sealed these deposits, its basal level consisting of a roughly circular and flat foundation or bedding layer of unburnt compact clay which was overlain by a deposit of very dark friable, ashy clayey silt. These irregular levels were about 1.5m in diameter and were, in turn, sealed by compacted chalky clay with charcoal, fragments of daub and other burnt material. These were overlain by a layer or dump of small to large rounded flint pebbles and nodules set in a very dark ashy, matrix (Plate 231). This latter level would normally correlate with the flint foundation of the ovens found in the more typical Type 1 structures, but here no further structural elements of the hearth or more likely, oven survived. No other structural elements relating to this feature were observed apart from an unrecorded post-hole shown on plan, and how it was accessed was unclear. Although some slight ledges in the north-west corner could have provided a very steep mode of access, it is more likely that the pit was entered via a ladder.

The bulk of the structure was backfilled by at least 16 dumps of clayey silts with chalk rubble and flint fragments in varying quantities (S9089). Pottery (AD 1150–1250), animal bone, some quernstone fragments (FN 2.9014) and an iron nail (FN 2.149) were also recovered. Interestingly, one deposit (9190) yielded a potential earlier Neolithic assemblage of worked flint. This undoubtedly residual material must have been redeposited from elsewhere. Sampling of the lower deposits, particularly a charcoal rich level that might have derived from the firing of an oven (9193) revealed a concentration of charred remains with a high proportion of bread-type wheat grains also with free-threshing wheat rachis fragments and a limited weed assemblage. Higher in the sequence one of the deposits was considerably compacted, perhaps trampled, suggesting a temporary floor. Perhaps the semi-infilled remains of the structure were used as a temporary shelter.

This unusual feature had some of the elements of a Type 1 sunken-featured building, with the disturbed remnants of a large hearth or oven, probably about 1.7m in diameter in the south-west corner, and the usual adjacent evidence for burning on the floor, but it was much deeper than any others of this type. The oven appears to have been reconstructed at least once, but the overall form of its superstructure had been destroyed. Although considered a structure here it remains possible that the pit was never covered by a roof, its depth presumably keeping out any strong winds. However, it was not just a large deep pit or quarry that had been utilised for a secondary function, as the plinth on which the hearth or oven was erected was undoubtedly a deliberate part of the design. The concentrations of bread type wheat in lower deposits suggest that it was an extreme variant of a Type 1 structure and basically used for the same purposes.

SFB 30 and SFB 31 (Fig. 180)

SFB 30 about 9m from the north end of the enclosure, almost central to its longitudinal axis was a rectangular cut (G2061) 4.75m long, 3.25m wide and 0.16m deep towards its eastern end, aligned east-west with steep, concave sides and a flattish base. It was filled by a moderately compacted rammed chalk in a light silty clay matrix. A large area of compacted chalk surface (S9055) directly to the east may have provided access to SFB 31, situated just to the north-east. A small assemblage of pottery within the fill has been dated to AD 1175–1250. The lack of internal features suggests that it was used for storage, possibly of grain, flour or other materials used for baking or cooking in the clearly associated SFB 31.

SFB 31 was located in the north-east corner of the enclosure, obviously respecting the position of its ditch which was 2–3m distant and was a large sub-rectangular cut with steep sides and flat base (G2062), aligned north-south, 5.8m long at maximum, 4.3m wide, again at maximum as it bulged considerably towards the centre, and 1m deep towards its northern end (Plates 232 and 233). Both southern corners had extensions to the main cut (Plates 234 and 235), projecting south, the western extension 1.3m long and up to 2m wide. Its base had three steps cut into the chalk leading to the base of the structure (. The smaller eastern extension, about 0.8m long

and 0.9m wide cut with five steps in its base extending into the main area of the cut. The north-western corner of the cut had been left about 0.4m above the general floor level. The basal remnant of a sub-circular oven (S9553) was located on this plinth within a sub-rectangular depression, 2.2m long, 2.05m wide and 0.55m deep, with moderately steep, slightly concave sides and a flattish base (Plates 236 and 237). The oven consisted of a basal layer (9553) of small to medium rounded and sub-angular flint, 1.2m long, 1m wide and 0.12m thick overlain by a very hard, burnt and 'cemented' layer of clunch (9552) and just 0.04m thick, which formed the working floor of the oven. A thinner extension of the deposits to the south probably represented the entrance through the superstructure, which had not survived. A mass of clunch on the north-east side could either represent part of the superstructure or have formed a wall between the oven and the side compartment to the west, as seen in some other structures of this type, such as SFB 46. A similar band of material was also present in the north-western corner adhering to the eastern side of the main cut and may have originally lined a rectangular slot cut into the subsoil immediately adjacent to the remnants of the oven. The slot was 1.5m long, 1m wide and 0.8m deep with steep, concave sides and a rounded base which sloped towards the south. There was evidence of burning at the southern end of the chalk base. Two small post-settings (S9691–9692) were set 1.5m apart and immediately to the south of the oven, more post-pads constructed of clunch within slight depressions rather than actual postholes. The structure was backfilled by a sequence of deposits (S9520) of several similar layers of light friable, clayey silt with frequent chalk fragments and flints and a small assemblage of animal bone and pottery dated to AD 1150–1225 was recovered. This was a fairly typical example of a Type 1 building, although little remained of the actual oven superstructure. Its main variation was the presence of two clear access points at the southern end; mostly there is only one if any are evident at all. The eastern access point was less than 2m from the nearby SFB 30, which is likely to have a related storage function. Of note are the two post pad settings in front of the oven that are evident in many structures of this type.

Western underground chambers (G2040, G2161; Fig. 181)

This complex of interconnected features was situated on the western side of the enclosure, 2.5m north of SFB 29 at the southern end of the western enclosure ditch, and extending north for about 16.3m. As with the eastern group of chambers it was only partially investigated due to safety considerations as parts of the system were over 3m deep, with still extant underground sections, and some areas were primarily examined with machine cut slot (Plate 241). The complex of six collapsed or partially extant chambers (G2040) were connected by a collapsed passage or tunnel (G2161). The features seem to have been accessed from a large sub-rectangular chamber or quarry (S9861) at the southern end of the passage which had vertical and in places undercut sides and a flattish base about 5m long, 4.50m wide and 1.60m deep. Both the profile of this feature and the position of a later overlying pit (G2043 below), interpreted as a collapse or subsidence cone, suggests that this pit was partially underground and accessed from the east. To its west was another

partially investigated subterranean chamber (S9304), oval shaped in plan and about 2.7m across.

The collapsed tunnel (G2161) extended approximately northwards from S9618, was about 11m long with a maximum width of 2.50m and depth of c. 2m towards its southern end, but became deeper towards the north. It had steep near vertical sides with a flat base. Three underground chambers extended from this passage at roughly regular intervals, two on the east and one on the west. Chamber S9785 on the east was sub-circular in plan with undercut sides and a flat base and was 2.2m long, 1.5m wide and 1.85m deep. Chamber S9250 on the western side of the passage was a sub-circular cut with undercut sides which had probably continued upwards to form a domed roof; the upper, eastern side contained a large, collapsed 'chunk' of natural chalk with flints in the backfills. This chamber was 2.5m long and 1.8m wide and was excavated to a depth of 1.60m. Chamber S9335 was on the eastern side of the passage, some 3.6m north of chamber S9785 and was only partially excavated although a sub-circular or oval shaped 'cave' or chamber with a length of c. 3m, a width of 1.6m and a height of c. 2m was suggested. A final chamber, aligned near north-south (S9857) was situated at the northern end of the passage. This was not fully investigated due to its depth, but was again sub-oval in shape and about 5m long and 2m wide. It lay immediately below a surface pit (S9499) and subsequent partial collapse of the roof had caused part of the lower pit fill, a large dump of mussel shell, to slump and collapse into the void below.

These features, discussed in more detail below, were filled with numerous different levels of chalky fills, many probably representing collapse of the roof and sometimes, confusingly, the fills of overlying features. These were mostly sterile although a few pottery sherds, some residual, and animal bone were recovered. The pottery was broadly of similar date to that recovered from the other features of this phase, AD 1100–1275. The northern chamber contained a larger assemblage of material from its final infill, some of which was possibly intrusive from the collapsed features above. Many of the chambers, when not collapsed contained voids above their final infill.

A large sub-oval pit or depression (G2043) 7.31m long and about 3.5m wide at the southern end of and partially overlying the larger pit at the southern end of the complex was this was only partially excavated. This feature was difficult to interpret and may in fact be more than one pit, or even the remains of an additional chamber extending off the south-east corner of the system. However, it appeared to be considerably disturbed by collapse and subsidence to which it may partially be due. It was also probably where the system was accessed, although no obvious signs for an access point were observed. It contained similarly dated pottery as that from the rest of the system.

Eastern underground chambers (G2055; Fig. 181)

A similar group of features was situated at the extreme south-east corner of the enclosure, with an entrance in the enclosure and the system extending south-eastwards under the enclosure ditches, about 9.4m overall. It consisted of a group of collapsed and partially intact chambers and passages (G2055), that were part machine, part hand excavated under difficult conditions, with areas of collapse and subsidence complicating the presented stratigraphy (Plates 238, 239, 240 and 242).¹⁷ Various uncertainties were observed at the time of excavation and are reflected in the following account. As with the underground system to the west, it seems likely that access was from a large pit or quarry, or even a collapsed chamber (S9479). This was a sub-circular cut with very steep sides and a flat base c. 3.4m wide and 1.14m deep, situated just inside and to the north of the corner of the enclosure. A partially collapsed and very irregular shaped passage was cut into the base of this pit, extending under its side to the south-east for about 3.3m and was between 1m–1.40m wide. At this point was a funnel shaped collapse cone, or additional access shaft (S9734), the base of the shaft and the chamber being void here. The feature had very steep to vertical and, in places, undercut sides and measured some 3.6m long, 2.7m wide at the surface which narrowed then expanded out to form an extension to the underlying passage, some 0.82m high and 0.5m wide on its south-eastern side. This was possibly the beginning of an abandoned chamber. The narrow passage continued south-east beyond this feature for a short distance where three, lobate and virtually intact chambers formed a rather irregular clover-leaf pattern. The northern chamber (S9515) was 3.40m long, 1.40m wide and was 1.72m from floor to highest point of its domed roof. Chamber S9517 lay at the far eastern end of and in line with the passage and was 1.80m long, 1.44m wide and measured c. 1.60m from its flattish floor to the highest point of its domed roof. The southern chamber (S9519) was ovoid in shape with a very narrow entrance and was 2.66m long and c. 2m high to the apex of its domed roof. The uppermost points of these chambers were just under the stripped surface and it is perhaps surprising that these had not collapsed after decades of ploughing with modern farm equipment, as well as being traversed with heavy plant during the topsoil strip.

Most of the chambers and the passage contained complex fills, often with substantial voids, high enough to crawl through, to the east where there had been less subsidence. Fragments of two candles set on a niche in the eastern wall of the southern chamber suggested that the chambers had been accessed in the post-medieval period as does the presence of a possibly seventeenth-century knife (FN 2.169), probably from the central funnel shaped access point. This may have been a secondary entrance formed after a collapse. A further wide feature or cut overlay this feature and probably represents erosion of the entrance and final infilling, cut by a relatively modern (nineteenth century) animal burial and small pit. Deposits within the system overall varied, but were mostly loosely compacted chalky, flinty rubble and silty clays, sloping downwards from the points of collapse and were mostly sterile. The exception was a fill of S9485, which yielded pottery dating to AD

¹⁷ A sequence of contexts defined as G2150 was to all intents and purposes a duplication of the G2055 contexts and represents fills of the chambers

1150–1225, animal bone and iron objects suggesting that this had been deliberately dumped. A few iron objects were also found in S5917.

Other features within Enclosure 36

An east-west ditch segment at the northern end of the enclosure (G2024) was aligned with the northern end of SFB 31 and appeared to respect its position. This feature was 10.80m long with a rather irregular, shallow profile and was cut with rounded terminals at each end. Its eastern extent was roughly 0.85m wide and 0.29m deep, the western 0.55m wide and 0.17m deep. The feature which seems to be some form of internal partition had a sterile fill. Towards the south-east corner of the enclosure and just north of SFB 26, to which it is probably related), was a well (G2059) which consisted of a vertical cut with a maximum diameter of 1.70m and with a 0.25m wide ledge or step c. 1m from the surface. Above the step, the cut was lined with a 0.25–0.30m wide flint cobble wall around the full circumference. Above this, the cut was lined with two deposits of compacted chalk clunch, 0.20–0.25m thick which extended up the sides to ground level. This well was later bored to a depth of 25.77m, with a few sherds of medieval pottery (AD 1150–1250) near the base. Significant environmental indicators, primarily insect remains were also recovered from the basal deposits of this and other wells and are more fully discussed below and in the detailed report (Allison 2014).

A number of other features were situated within the complex of enclosures, many with sterile fills, but although some appear to be quite late features due to their stratigraphic position and pottery dating, they can only tentatively be ascribed to activity within this particular enclosure and some could relate to later Enclosure 70 (below). An internal gulley or drain (G2025) was aligned north-south adjacent to the eastern edge of the enclosure system. It was 10.5m long and was between 0.26 and 0.3m wide and some 0.2m deep along most of its length although becoming shallower at its southern end. Its fill was sterile. Over a dozen pits were also located, mostly near the north-west corner of the enclosure system, the majority being shallow and with sterile or relatively sterile fills. Some however yielded pottery dating to AD 1150–1225 or AD 1200–1250. One small pit contained a very large dump of marine shell (mostly mussel) which had slumped into a void created by a collapsed part of the western group of underground chambers.

Sub-Phase 3b: Enclosure 70 and associated features

A final enclosure (Enclosure 70) indicated a contraction of the area by a single east-west aligned ditch (G2021) 6.7m south of the north side of Enclosure 36, and 16m long with a curved butt end on the west positioned over the eastern side of Enclosure 36. Elements of Enclosure 36 must still have been evident, open and acting as boundaries. The ditch turned gradually towards the south-east at its eastern end for a further 4m and cut the upper fills of SFB 31 and the ditch of Enclosure 33 where it terminated. The area of heavy erosion bounded to the north by the ditch suggests it may have cut along the same line of original north side of the enclosure and that

SFB 30 may still have been present at this stage, although SFB 31 must have been backfilled. The ditch averaged 1.2m wide and 0.3m deep, contained a fill of clay silt with a small quantity of pottery of similar date to the earlier features of Phase 3a. Stratigraphically, this enclosure ditch represents the final phase of activity of the settlement and may be related to Structure 64 located directly to the south.

Structure 64 (Fig. 174)

Structure 64 was primarily represented by an extensive cut (G2039), aligned north-south over the western drove road ditch and the numerous recuts along its line. It was 20m long with a turn to the east at the northern end extending for a further 4.5m and a similar turn to the south, only traced for a short distance. The cut averaged 0.78m wide and 0.36m deep with a steep sided and flat based profile and contained a fill of compacted chalk fragments in a silty clay matrix. A possible beam slot was cut into the northern east-west arm with straight sides and squared ends, 1.49m long, 0.25m wide and 0.13–0.2m deep. A second beam slot, 3m long, was 2.8m to the south. Only the western and northern sides of the structure survived with later activity and the collapse of the underlying chamber system (G2040) masking or removing its southern and eastern sides. However, these features remain ambiguous, and were originally thought to be some form of sunken-featured structure. There are certain similarities with SFB 53 which had clunch filled benches around its perimeter and was of a comparable size, but given the nature of the cut and associated beam slots, it is more likely that the cuts represent foundation trenches for an above ground structure. This must remain tentative due to the potential lack of the full plan and the absence of any related floor or occupation deposits.

Site 5

The western settlement area (Fig. 175) was situated no more than 8m west of Enclosure 35 and clustered around Barrow 7, suggesting some remnants of the original mound survived. The primary feature (Enclosure 37) appears to be a stock enclosure similar to those on Plateau 1 to the north. Chronologically, the settlement activity may have originated in the tertiary medieval phase, probably coeval with the burgeoning of occupation represented by Enclosure 36 on Site 4, that is later than the original stock enclosures (33 and 35). Many of the features within the enclosed area cannot be precisely allocated to any particular one of the many recuttings and realignments of the enclosure sequence, and are therefore described separately.

Phase 2: Enclosure 37

This enclosure is the primary feature comprising an extensive ditch forming an inverted L-shape with its western extent aligned roughly north-south, 23.9 m long and cut away by a later 'quarry' (G2131) west of Barrow 8, as well as by a ditch of Enclosure 38 of Phase 3. On the north the ditch turned east for a further 19.7m, ending in a well formed rounded terminal, possibly one side of an entrance, and

delineating most of the north side. The ditch was about 1m wide and 0.4m deep at maximum. The north-eastern corner of the enclosure, probably formed by a curvilinear cut (S2853) aligned with the main ditch and about 7m to the east. This was 2.95m long, 1.10m wide and 0.22m deep, curving southwards and suggesting an eastern side to the enclosed area, though no further evidence was discerned. The arrangement would have been about 28m across east-west and 24m north-south, although no clear southern side to the arrangement was located. The unenclosed side is also a feature of some of the enclosures on Plateaus 1 and 5.

No features can be positively ascribed to this enclosure, suggesting that it was similar in function to other enclosures of this type and primarily utilised for stock control. Compared to the later enclosure ditches however, the feature yielded a relatively large corpus of pottery and of broadly similar date (AD 1150–1225/50). Most of the subsequent features cannot be put in any sequence due to the similarity of dating because of the relatively short-lived nature of the settlement, that is less than 100 years. With the onset of more concentrated occupation, the ditch was backfilled with domestic waste of Phase 3 including pottery and relatively large quantities of sea shell.

Sub-Phase 3a: The primary farmstead (Enclosure 34)

The first enclosure relating to the settlement activity (Enclosure 34) was fragmentary, consisting of two parallel ditch segments (G2123 and G2124) aligned east-west, the latter set about 1.5m to the north of the former and G2123 only surviving to the east. Both were cut away by later features. The northern ditch was 22.5m long, with erosion to the west fixing its apparent terminal, while its eastern extent appeared to terminate at the limit of the complex. However, any continuation southward may have been removed by later enclosure ditches. A further ditch to the west, originally thought to represent a separate enclosure (Enclosure 39), possibly delineated the westward limit of the same enclosure which comprised an 'L'-shaped ditch, extending westwards from a discrete terminal on the same line as ditch G2124. Ditch G2127 extended for 4.5m before curving gradually south for another 5.6m. The southern ditch was 7.6m long with a rounded eastern terminal, its course westward completely removed by a combination of later cut features and erosion. These ditches, all with a moderately steep concave profile, contained a similar fill of silty clay with mussel shell inclusions, and small assemblages of medieval pottery dated AD 1150–1250 with residual prehistoric material. Ditch G2127 was relatively insubstantial compared to the others, 0.38m wide and 0.15m deep, but comparable to G2124 at its western end. No southern side of the enclosure was identified. A segment of ditch (G2133) 9.6m south of G2124 was roughly parallel, but was not far enough south to represent the full enclosure suggested by the other features. This ditch was c. 7m long, 0.70m wide and 0.35m deep, both east and west ends being cut away by later features, containing a basal fill of medium to large rounded and sub-angular flints. This may have been a deliberate infill or drain, but no finds were recovered. The north-eastern part of the primary enclosure was remodelled by the cutting of a later L-shaped ditch (G2122), its eastern section aligned north-south and

11.8m long, which turned to the west for a further 8.5m just south of and cutting G2124. It was cut away on the west and traced no further, although its southern extent formed a distinct terminal. Although cut away by later ditch alignments on the east, the ditch was 0.73m wide and 0.29m deep yielding a small assemblage of similarly dated pottery. The pottery, from this and both earlier and later enclosures was similar, generally consisting of sooted cooking pots or storage jars, but did suggest that this enclosure was a little earlier in the sequence. The assemblages from all these features indicate a relatively short lived period of activity from the onset of more intense occupation, with ditches cut and recut on a regular basis.

Sub-Phase 3b: The secondary farmstead (Enclosure 38)

The primary ditches of Enclosure 34 were recut on slightly different lines to produce Enclosure 38, which extended slightly further north than the original arrangement, but not, so far west. This and later phases may well represent the time of most concentrated activity given the number of potentially associated features. Three ditches outlined a slightly irregular inverted 'U'-shaped enclosure mostly open on the south side. The north-western side of the enclosure was ditch G2126, aligned east-west and extending west for 10m from a slightly in-turned terminal and gradually turned to the south at its western end for a further 1.5m before it was cut away completely by quarry pit G2131. On the same east-west alignment and after wide gap of at least 8.4m, ditch G2125 extended for 8.7m and curved to a right-angle and continued for a further 2m to the south, where it abutted the north-east corner of ditch G2122 (Enclosure 34 above), suggesting the feature was still extant in some form. This section of ditch, just north of earlier ditch alignments formed the north-east corner of the enclosure. The third ditch (G2119) was a slightly later addition, reinforcing the eastern side of the earlier enclosures by recutting earlier ditches. It abutted the terminal of the north-south alignment of G2125, and extended south slightly to the east for 12.5m, its southern terminus removed by even later recuts. All the ditches had steep concave profiles with rounded termini, and averaged 0.7m wide and 0.3m deep, the western side being the widest. All contained similar fills with small pottery assemblages (AD 1125–1250), carbon and mussel shell.

Features within Enclosure 38

Various structures and other features, including two wells, often associated with settlement relate to this phase, although some belong to later or even earlier phases of the sequence. In most cases they were on the periphery of the enclosed space, near the ditches, respecting the position of a central courtyard.

SFB 25 (Fig. 182)

SFB 25 in the south-west quadrant was an irregular but generally sub-rectangular cut with rounded corners (G2009) aligned east-west, 3.16m long, c. 2.94m wide and just 0.11m deep at maximum with steep sides and an uneven flat base. The irregular northern edge was difficult to define, the section suggesting that the base sloped up

to the north with any significant edge eroded. On the southern edge, just west of the axis was a posthole, 0.08m deep, but only shown on plan and not otherwise recorded and should be treated with caution. The shape and size of a small rectangular shaped deposit of charcoal (2815) on the base in the south-eastern corner (0.25m long, 0.1m wide and 0.04m thick) suggested it was a fragment of burnt timber introduced into the cut during infilling. A few other fragments of charcoal were found in this area. To the north, a thin deposit (10mm) of charcoal was sealed by a 0.1m thick deposit of compacted chalk (2814) containing pottery (AD 1175–1250) infilling the northern 1.76m of the cut. This is the remnant of a secondary floor surface and similar chalk floors have been discerned in other buildings of this complex. This floor was overlain by a bulk fill of friable clayey silt containing small fragments of chalk, pottery (AD 1200–1250) and marine shell (mussel and oyster) and an iron nail (FN 2.134) filling the entire cut to ground level. No other structural features were observed. The feature was significantly truncated and may relate to structural elements just to the north (Structures 51 and 52) conceivably forming part of a much larger building. Otherwise it can be defined as a Type 3.

SFB 27 (Fig. 182)

Feature G2138 was just over 1m to the west of SFB 25, close to the corner of the enclosed area and consisted of an irregular sub-rectangular depression or hollow 4.7m long and *c.* 1.8m wide with a shallow profile 0.16m deep. Its fill was sterile but contained thin lenses of compacted chalk dust that could have been floor surfaces. The feature cut across the infilled ditch G2128 of Enclosure 37. Its position, and the beaten earth floor and occupation deposits, suggest a very severely truncated sunken building, probably of Type 3. In a comparable position to the north, another feature (G2138) also showed traces of a sunken structure. This feature (SFB 28 not illustrated) consisted of an area of possible erosion, sub-circular or sub-rectangular in shape and mostly disturbed on the east, with a shallow, concave profile *c.* 1m long, 0.80m wide and 0.14m deep containing a sterile fill. It is now considered rather dubious as a structure.

SFB 36 (Fig. 183)

SFB 36 was a rectangular cut (G2136) aligned east-west, 6.15m long, 3.50m wide and 0.46m deep at its centre, in the extreme south-east corner of the enclosed area. The cut had steep sides and a base that sloped gently down from the western end and levelled out adjacent to the eastern end (Plate 243). The eastern end was not so deeply cut but had been formed into two shallow sub-rectangular chambers separated by a spur of natural chalk. The northern chamber contained the base of an oven (S2833) set some 0.40m higher than the floor level consisting of a sub-circular layer, about 1.8m wide and 0.05m thick, of small to medium, rounded flint pebbles pressed into the natural chalk (Plate 244). This was overlain by a thin layer of heat reddened, greyish brown silty clay (2732) 0.02–0.03m thick which respected the outside edges of the underlying flint base, originally contained within a domed superstructure. Above this was a deposit of very chalky clay silt 0.10m thick, 2.12m

long and 1.80m wide north-south with a central, sub-circular space 1.5m long and 1.10 wide at its centre forming a foundation layer for a secondary oven superstructure. The internal space was covered by another oven floor of dark, charcoal and ash rich silty clay 0.02m thick (neither shown on section). Directly above the floor was a second sub-circular layer of light greyish/yellowish brown clayey silt, 0.06m thick that also appeared to respect the edges of the oven interior and could represent a final repair to the oven floor. No evidence for the oven superstructure survived. A few potsherds dated to AD 1150–1250 were recovered from one deposit in this sequence.

The linear slot to the south was 1.7m long, 1.04m wide at the western end and 0.7m wide at the eastern end and had steep sides and a squared eastern end that led to a flat, uneven base, slightly deeper than the main floor area of the building. This lower area extended further west into the structure. Remains of burning (S2947) 1.2m from the eastern end, a layer of ash and charcoal containing a large fragment of worked stone (FN 2.9021) were deposited directly onto the natural chalk base representing the position of an upstanding brazier or other similar structure, as there was no evidence for concentrated heat on the surface. The main base of the building cut contained a layer of rammed chalk and subsequent occupation deposit of ashy/charcoal and chalk dust 0.08m (S2748). A small pit (S2746) near the north-eastern corner consisted of a small, sub-circular feature 1.1m long, 0.7m wide and 0.4m deep containing a fill of charcoal and ash overlain by silty clay. The main backfill deposit sequence within the structure (S2743) consisted of three deposits of light yellowish, greyish brown, friable clayey silt with frequent chalk inclusions, but otherwise sterile. Three other features may be related to the structure and included two postholes (S2836 and S2995) to the west and south of the main cut respectively. A linear gully or foundation slot (S2987) 1.94m long, 0.41m parallel to the structure was situated just 0.2m to the north with a sterile fill. Although badly truncated this was a typical example of a Type 1 building, conforming in internal layout and position within the corner of the enclosed area. There was no clear evidence for an entrance, but is likely that it was at the western end, which was very shallow.

Cellar G2144 and SFB 39 (Fig. 184)

On the north side of the enclosures, a deep, sub-circular pit (G2144) cut through a ditch of Enclosure 34 and was in turn cut on its western side by a subsequent structure (SFB 38 and another possible building SFB 39). It is therefore unclear which enclosure the pit relates to. It was aligned east-west with an elongated, sub-circular and flattish based cut and very steep eastern, northern and southern sides and a stepped western side. It was 3.7m long along its axis with the deeper, eastern extent c. 1.65m wide. The stepped western side contained a structural basal deposit of hard, compacted chalk which represents strengthened steps, suggesting a storage facility or cellar, possibly covered in use. It was backfilled by a sterile mixed deposit of silty clays, chalk and flint with many individual tip lines. Another structure (SFB 39; G2143) cut across the top of the cellar, and was in turn completely cut away to the west by a later structure (SFB 38). This remained as a somewhat enigmatic cut, 3.35m

long, irregular and roughly north-south aligned, 1m wide and 0.4m deep. The cut contained three deposits of compacted chalk with occasional flint fragments. It cut the eastern end of ditch G2124 of Enclosure 34 and was in turn cut at its northern end by a ditch of Enclosure 38. The full extent and function of the feature remains unclear, but other better preserved examples of sunken structures nearby also contained chalk layers that have been interpreted as compacted floors. No other associated structural evidence was discerned.

SFB 38 (Fig. 1848)

Just within the northern side of Enclosure 38, south of the gap or entrance way into the enclosure SFB 38 was a large, sub-rectangular cut (G2142) aligned east-west. Its positioning was undoubtedly deliberate. One of the latest structures it cut through earlier ditches and features as well as the north-eastern quadrant of Barrow 7. It was 6.3m long, 3m wide and about 0.20m deep at maximum with fairly straight western, northern and eastern sides with steep edges and a flattish sometimes undulating base (Plates 245 and 246). The southern side, more shallow and, eroded by use, imperceptible in places. The base was overlain by a patchy rammed chalk floor surface (2752) up to 0.2m thick (Plate 247), which was overlain by a homogenous infill yielding pottery dated to AD 1150–1250, mussel shell, with traces of grain and pulses. No other structural features were identified. This structure can be defined as a Type 3, with few if any structural elements and little in the way of internal detail. Its function is therefore difficult to determine. Its size and position, near central to the north side of the enclosure and overlooking the possibly open courtyard area within, suggests that it was of some importance, and probably a domestic building, but there was little evidence for any protracted occupation. However the presence of the rammed chalk floor, heavily worn, indicates it saw a lot of use.

SFB 35 (not illustrated)

The badly disturbed remains of another sunken feature (SFB 35) was found in the extreme south-western area of the complex. It was mostly cut away by a later quarry (G2131) and consisted of the corner of a sub-rectangular cut (G2132) surviving to 1.70m long, 1.64m wide, 0.29m deep with steep sides with a fissured base collapsing into the quarry. The cut contained four fills. The primary fill of crushed chalk in a clayey silt matrix extended around the inner edges of the cut and across the base forming a floor with a maximum thickness of 0.29m. This was overlain by a succession of three dump deposits which yielded a few sherds of medieval pottery (AD 1150–1250). Although very tentatively identified as another sunken structure, the feature would have been in a common position, close to the corner of Enclosure 34/39 with which it could have been associated.

Structures 51 and 52 (Fig. 185)

These two overlapping groups of structural features may belong to this phase, elements cut into an earlier ditch G2133, and were immediately south of, and slightly

overlapping Barrow 7, in the south-west quadrant of the enclosure. Structure 51 was a roughly rectangular area (G2006) 4.1m long, 3.5m wide of small patches of thin beaten chalk (S9879) and clay layers, some exhibiting burnt surfaces or with high ash and charcoal content no more than 0.04m thick. The patches had a maximum area of 0.7 by 0.3m. Some of these sterile spreads were cut by elements of a posthole structure (Structure 52), and two associated pit groups G2007 and G2008.

Structure 52 consisted of a group of eight post-holes (G2005) seven of which formed an irregular sub-rectangular arrangement aligned north-south and about c. 4.2m long and c. 3m wide which may have replaced earlier Structure 51. An eighth post-hole (S2961), a little north of the main arrangement was in line with the western side and has been included here. All the post-holes were sub-circular in shape and of a similar size, between 0.48 and 0.21m wide and from 0.24 to 0.12m deep with steep 'U'-shaped profiles. The pits are only tentatively identified with these structural remains and one may even be much earlier (S2903 which contained Roman ceramics). All were relatively small, no more than 1m across and shallow (max 0.5m) and had sterile fills, apart from one which contained a few medieval pot sherds.

Structure 51 was probably a short-lived and relatively inconsequential structure. Apart from a roughly rectangular shape and its size, little more about it can be deduced. Structure 52 was quite irregular, but of similar size and probably a replacement. Both may be related to SFB 25 immediately to the south, as all are within a rectangular space, aligned north-south, 8.8m long and 3.1m wide. Little of the function of either building can be deduced however, but some small scale agricultural or domestic use seems likely.

Other features within the enclosures

There was a large, irregular/sub-circular pit (G2134; Fig. 185) immediately to the east of Structures 51 and 52 partially overlain by the floor surfaces of the former, which had slumped into the western side of the feature. This pit had very steep and in places undercut sides, but was not bottomed. It was 3.34m long (E-W), 2.96m wide and excavated to a depth of 1.50m on its western side. Various deposits were excavated including a large collapsed chunk of natural chalk, suggesting the feature was partly a subterranean storage area. A relatively large assemblage of pottery (AD 1150–1225/50) and animal bone from some of the deposits suggest that the feature had later been used for refuse disposal. Three metres to the south-east was a well (G2135), a large, near circular cut about 2.9m in diameter, with moderately steep, sides c. 0.20m deep which surrounded a centrally placed, near-circular shaft with vertical sides c. 1m in diameter (Plate 248). The shaft was lined with large, angular and sub-angular flint nodules which formed a 0.20m thick lining to a depth of 1m. This shaft was not fully excavated but was later bored to a depth of over 25m and significant environmental remains recovered. Medieval pottery, iron objects and residual worked flint were recovered from the hand-dug fills.

Other features consisted mostly of variously sized pits, one group of three at the eastern end of Enclosure 38 and to the north of SFB 36 (Fig. 175). They were mostly sub-rectangular and of various profiles, the biggest 1.9m long and 1.6m wide with a flattish base. A few potsherds comparable to that from the other features and animal bone fragments were recovered. A spread of compacted chalk, 1.34m long, 1.22m wide and just 0.03m thick immediately to the west of these pits could represent the extreme basal remains of a heavily truncated structure but there was no further indication of this. Immediately north-west of Barrow 7 to the north another group of features consisted of a possible well (S2802) and three remnants of a beaten chalk surface in irregular shallow cuts. The surfaces appeared to be truncated and worn but may have originally represented a discrete layer, rectangular in shape, 4.4m long east-west and 2.8m wide with the well located within the eastern half of the spreads. This material and its position close to the enclosure ditch is strongly suggestive of another sunken-featured structure similar to SFB 38 just 5m to the east. Two sherds of medieval pot were recovered from one of the deposits. The well (S2802) was a sub-circular, somewhat irregular cut 2.06m long, 1.35m wide and, where excavated on its eastern side, in excess of 1m deep. The upper extent of the cut had moderately steep sides and may represent the erosion cone around the top of the feature. The main shaft was near circular with vertical sides and was only excavated to a depth of c. 1m and the base was not seen. Four fills were recorded which provided a small assemblage of pottery, the lowest fill being very loose and may have overlain a void as recorded in other wells during bore holing.

Sub-Phase 3c: Later features

A late phase of activity is suggested by a number of features and the recutting of the south-eastern extremity of the Enclosure 38 ditch G2119 at its southern end which may be related to the occupation and use of SFB 36 immediately adjacent on the west (Fig. 175). However, as far as dating is concerned, the features are similar to those of earlier phases. A large quarry G2131, cut through the ditch of Enclosure 38 on the western side of the site and is therefore late in the period of activity. The pottery recovered from it could all be residual, although the assemblage is very similar to those recovered from Phase 3b features. This substantial feature was only partially excavated in a number of machine and hand dug slots (not bottomed). It appeared to be enclosed by ditch G2127 of Enclosure 34/9, suggesting the ditch was still visible during its initial excavation. The nature of the infilling and profiles of the edges suggest an area of quarrying with undercut underground partially collapsed chambers leading from it, though not as extensive as the underground systems to the east. At the surface, the cut was irregularly shaped like some of the other quarries examined and about 9.5m across overall east-west, with an irregularly shaped extension on the south-east which may have been the location of the original ramped entrance. At a lower level were two separate cuts into the natural, one on the west with a fairly shallow sloping upper western side which broke sharply to vertical and became undercut towards the base. This cut was in excess of 3m across and excavated to a depth of 1.60m. The majority of its backfill consisted of dumps of mid yellowish brown silty clay with chalk and flint fragments although a few burnt

layers with ash and charcoal formed thin lenses between the more extensive dumps, and possibly represented rubbish disposal from ongoing settlement to the east. The western side showed evidence of collapse or slumping, with large lumps of natural chalk overlying some of the basal layers, suggesting the collapse of an overlying roof. The eastern cut was 3.5m long and in excess of 1.6m deep had a steep western side and was also undercut towards its base. The eastern side had an 'hour-glass' shaped profile with a deep niche or undercut extending for about 1m eastwards beyond the pit's eastern edge. This had similar fills as the cut to the west, both yielding an assemblage of medieval pottery but little else.

To the north-east of the quarry another structure similar to SFB 38 was delineated by the remains of a rectangular shaped beaten chalk surface no more than 0.05m thick, 1.40m long and 1.2m wide (SFB 37: G2140; Fig. 184) which overlay ditches G2124 and G2126. No distinct cut was observed but the surface was thicker where it slumped into the top of the underlying ditches. Two intercutting pits (G2141: S2830 and S2869) in a similar stratigraphic position were found immediately to the east. These were no more than 2.4m across and 0.35m deep with sterile fills. The relation of these features with the ditch of Enclosure 38 suggests these features were very late in the sequence of activity, but little more can be said about them.

Site 6

A north-south aligned string of adjacent enclosures, all rectilinear, along the extreme western edge of the northern part of the site (Plateau 1 and its pond area), c. 160–190m west of Trackway 28, overlay the earlier field boundaries of Medieval Phase 1 described above. The rigid arrangement of these enclosures, all only partially exposed within the excavated area, suggests they were associated with a trackway to their west, much like the enclosures positioned along the other north-south aligned trackways, and possibly a continuation of Trackways 31 or 32 in the southern part of the site. Most of the enclosures, not exposed in their entirety, cannot be reliably or closely dated, but the fact they contained relatively few features, and no definite structural evidence suggests that they were all paddocks relating to stock management and therefore originally contemporary with similar enclosures (Enclosures 21–23 to the east) and it is therefore possible that later activity, such as the emplacement of sunken-featured structures, took place to the west of the exposed area, closer to the putative trackway. This may be confirmed by some later Phase 3 pottery in some of the ditches, as well as the rather complicated development, re-cutting and realignment of multiple overlapping features, resembling similar complexes elsewhere on the site. As virtually all the evidence for Site 6 is in the form of ditches, they will only be very briefly described here.

Phase 2: The earlier enclosures (Enclosures 61, 62, 27 and 29)

Enclosures 61 and 62

The northernmost enclosure (61) was only partially revealed and was defined by a ditch aligned roughly north-south and recorded over a length of about 11m to the south turning westward out of the site area. Only minimally investigated, the ditch was 3m wide and 0.69m deep with gradual sloping sides and a flat base and contained a virtually sterile fill. Immediately to the south was Enclosure 62, delineated by ditches on its north, east and south sides, enclosing an area 38m from north to south, and aligned NNW-SSE. The ditches, averaged width 0.78m wide with a depth of c. 0.17m. It yielded no datable artefacts and no features internal to the enclosure were observed.

A sequence of overlapping enclosures the extreme north-west corner of the main area of Plateau 1 extended out to the north and west of the site (Fig. 186). Only part of the earliest enclosure's (29) south side was exposed or survived and was represented by ditch G1263, aligned near east-west and exposed for 12.3m. Any turn and continuation to the north had been completely removed by later enclosure ditch G1249 of Enclosure 27. As no ditch equating to the north side of the enclosure was visible it must have been outside the excavation. The enclosure ditch was 0.85m wide and 0.23m deep with a uniform sterile fill. Enclosure 27 was an 'L'-shaped ditch (G1249) aligned roughly north-south, (24.4m long) turning west for a further 13.4m where it extended beyond the western limit of excavation. The ditch averaged 1m wide and 0.22m deep and contained a uniform, virtually sterile fill. The north side of the enclosure was not located and it is possible that its ditch had been completely removed by a later enclosure (Enclosure 32) or was much further north). In effect, this feature extended the area of Enclosure 29 to the south. An east-west aligned ditch (G1268), located about 14m north of the southern side of the enclosure may represent an internal partition although it could relate to the later Enclosure 26 of the sequence. The ditch was 11.2m long, averaging 0.75m wide and 0.14m deep. It contained a uniform fill which yielded some medieval pottery, dated 1100-1200, not incompatible with a Phase 2 date.

Sub-Phase 3a: Later enclosures (Enclosures 65 and 26)

To the north, Enclosure 65, very minimally exposed in the south-west corner of the pond area as an 'L' shaped ditch extending into the site by about 16m and forming the northern extent of the enclosure, which was 18.3m south of Enclosure 62 and on an identical alignment. The ditch had an average width of 1.18m and depth of 0.37m. Tile and a few medieval pottery sherds (AD 1175-1250) were retrieved from the fills. No internal features were observed in the small area of its interior exposed. On the main area of the plateau (Fig. 186), a later complex of intercutting enclosure ditches replaced the earlier features (Enclosures 27 and 29) and probably began with Enclosure 26 which comprised three ditch lengths:¹⁸ G1247 which extended from the site edge for 16m before turning north, G1266 and G1274 for a further 42m overall. The ditch had a width of 0.80-1m and depth of 0.26-0.4m and contained a uniform

¹⁸ There was some stratigraphic uncertainty due to the odd location of an undated isolated pit (G1245), at the point of intersection between the ditches of this enclosure and probably later Enclosure 28 towards the southern part of the area

fill of clay with marine shell, animal bone and small amounts of medieval pottery dated AD 1100–1250. A gap of 1.7 m on the east side between G1266 and G1274 may represent an entrance into the enclosure.

Sub-Phase 3b: Additional enclosures (Enclosures 28 and 30)

Enclosure 28 (Fig. 186) was represented by a much more substantial L-shaped ditch (G1250) at the southern end of the complex extended into the site by 14m east-west. Its ditch then turned to the north for a further 11.8m cutting the ditch of Enclosures 27 and 26, ending in a clear rounded terminal. The ditch averaged 1.4m wide and 0.74m deep with steep sides and a rounded base. A deeper section at the corner initially may have been a regularly cleaned out water catch-point, with potsherds dated to 1125–1225. The presence of occupational debris suggests that there was a period of deliberate infill followed by abandonment and gradual backfill through weathering action. However, the function of the ditch in relation to the other enclosures is difficult to determine. There was no north side, although such arrangements of open ended enclosures are not uncommon across the site (see Enclosure 23). It may have been contemporary, and function, with Enclosure 30 to the north. The ditch of Enclosure 30 (G1264) cut the east side of Enclosure 26 although its north-south aligned segment was on a near identical line. The feature was an 'L'-shaped ditch 12.9m long north-south, turning for a further 7m on an east to west alignment where it terminated. It averaged 0.65m wide and 0.3m deep and contained a uniform fill yielding animal bone, and marine shell inclusions. A small amount of pottery was rather broadly dated to 1075–1250. A similar aligned length of ditch located c. 5m to the west probably represents a continuation of the southern side of the enclosure, although this was less substantial (0.5m wide and 0.8m deep). The gap is indicative of an entrance way. This feature and Enclosure 28 may have been co-extant and used together which would explain the unusual disposition of the latter. The eastern side of the entrance on the south side of Enclosure 30, aligns with the eastern side of Enclosure 28. The north side of Enclosure 30 was similarly ill-defined, but it is possible that it extended further north, perhaps utilizing the northern ditch segment of Enclosure 26.

Another possible enclosure (Enclosure 31) represented by an enigmatic linear feature (G1276) was partially exposed on the very edge of the site. This was a large ditch-like feature aligned north-north-west to south-south-east, 18.6m long, 2.25m wide and 0.8m deep with steep near vertical irregular sides that led to a sharp break and a flat uneven base. It contained an initial fill of laminated chalky erosion deposits sealed by a mixed dumped fill of clay silt with oyster shell and medieval pottery (AD 1150–1250), 0.92m thick. This feature was investigated minimally, and although its southern limit terminated on the line of G1268 within Enclosure 27, it was not clear whether its northern end consisted of a terminal or a turn to the west. Although more massive than most of the other enclosure ditches in the area (apart Enclosure 32 below), and with an unusual profile, it seems likely that this was part of another enclosure mostly situated to the west. The unusual nature of the ditch profile is similar to some of the other more definite enclosure ditches located at Thanet Earth

(on Plateau 5 particularly) where chalk quarrying may have taken place during the formation of the enclosure, resulting in typically steep-sided flat-based ditch profiles.

Sub-Phase 3c: Final enclosure (Enclosure 32)

Enclosure 32 was defined by a large 'L'-shaped ditch that extended 11.02m north-south and 13m to the west in the extreme north-west corner of the area, where it cut all of the other ditches in this area (Fig. 186). This ditch was more substantial than most of the others and averaged 2.55m wide and 0.75m deep with a mostly sterile fill which yielded small amounts of animal bone, marine shell, possibly residual pottery (AD 1075–1225) and iron nail inclusions. The near sterile nature of the fill suggests that the feature was gradually backfilled through weathering action probably after occupation of the area had ceased. Only a few rather amorphous features were found within these enclosures and cannot be dated or reliably associated with any particular phase. Pottery dating, where available, suggests that some at least originated in Phase 3.

Site 7 (Phase 4)

Site 7 was located just over 15m south of Enclosures 26–32 (Fig. 186), and comprised an unusual enclosed area (Enclosure 25) and associated features highly suggestive of an occupation site (Plates 249 and 250). The enclosure comprised a complex of ditch segments set within or just outside an area of erosion or quarrying (G1280). The area was about 26m across north to south and extended into the excavation by 13m at maximum, with a steep edge on the north side. The other sides were less steep and graded into a more shallow eroded area of the same width north to south, but extended for a further 10m into the excavated area. The majority of features were only located after the removal of a general backfill, although a few were just to its south and therefore most of the features were cut from the base of the quarried area.

A number of linear ditch-like segments on the north and eastern sides may represent elements of an enclosure of some form (Plate 251), although some post-dated other medieval features in the complex, in particular a sunken structure (SFB 22) situated in the extreme north-east corner of the area. Rather than being the remnants of a ditch delineating an entire enclosure they may have demarked only certain parts and some (such as G1241 below) may have had different functions.

The site produced the latest pottery assemblages from Plateau 1 (Phase 4) and suggests settlement activity originated in the later twelfth or more probably the early thirteenth century. Although there was some earlier medieval pottery, in most cases this appears to be residual. It might derive from the original quarrying or from the peripheral structures at least one of which (SFB 22) may belong to an earlier part of the sequence. However, due to the lack of finds from many of the features in the stratigraphic sequences, and the generally similar nature of the pottery assemblages, most of the activity has been considered to be of Phase 4.

SFB 22 (Fig. 187)

SFB 22 was aligned near north-south in the extreme north-east part of the area and consisted of a large sub-rectangular cut (G1236), 3.4m long, c. 2.6m wide, and 0.28m deep that had been truncated to the west by later features, (enclosure ditch segments G1239–1240). The cut consisted of very steep sides and a flat but uneven base. A large sub-circular cut (G1237), 1.8m wide, 2m long and 0.1m deep with a steep sides and a flat base was situated externally, immediately on the north-west of the main cuts axis. It contained an initial fill of silt clay with a concentration of small medium and large flint inclusions, 0.07m thick. Above this, located along the edge of the cut was a shallow sub-circular ring of compacted chalk clunch about 0.25m wide with a gap about 0.4m wide to the south. These structural deposits were sealed by various later fills. This feature formed a large oven that was external from, but just cut across, the north-east corner of the sunken area (G1236) with its ‘stoke-hole’ between the two. The sunken area and initial oven fills were subsequently filled with mostly sterile deposits (G1238) although the initial level did yield some medieval pottery of 1150–1225. Considering later developments these levels were probably deliberately laid once the superstructure of *SFB 22* had been dismantled.

Although this building appears to be earlier than the main phase of activity on this site, at least some of the other features and potential structures in the area may have been contemporary. However, this sort of building has been found in isolation, at the corner of enclosures elsewhere on the site. It conforms to one of the more common Type 1 structure, although generally the ovens are situated within the main sunken part of the structure, unlike here. However, the oven is still likely to have been within the encompassing building, any cut for this having been eroded away, perhaps only slightly below ground level, thus equating with Type 1 structures where the oven is raised on a plinth of bedrock to facilitate its use. Alternatively, the oven may have been close to original ground level, but encompassed by the superstructure which must have been external to both main cut and oven. This latter interpretation is perhaps more likely considering the regularity of the sunken area. The flint layer within the oven is a ubiquitous feature within these structures, which both formed a foundation for the ovens floor and superstructure and also probably helped retain heat. In most cases this basal deposit was covered with a layer of burnt clay forming the actual floor of the oven, but this had been eroded away, except for a small patch.

Enclosure ditches

A complex sequence of intercutting ditch segments defined the north-east corner of the enclosure (Fig. 187). Ditch G1239 cut the west side of *SFB 22*, turning west for a short distance at its north end and was in turn superseded by G1240, a 6.5m long segment on the east side. Ditch G1242 aligned roughly east-west to the west had an uncertain relationship with G1239 and may well be the primary feature. It was 15.6m long extending further beyond the edge of excavation to the west and averaged 1.3m

wide and 0.8m deep with a gradual slope from west to east with steep sides and a flat base. At the eastern end a sharp break in the base led to a deeper (1m) eastern terminus of sub-rectangular shape. Together with the slope of the main section of ditch to the west this suggests it was a sump for surface run off and rainwater. These features yielded small quantities of thirteenth century pottery. Immediately south of and parallel to G1242 was a more enigmatic ditch or gully (G1241) that was devoid of artefacts. 4.3m long it probably originally extended further west and was only 0.65m wide, 0.17m wide at its base and 0.8m deep with a steep V-shaped profile becoming near vertical and a flat narrow base that gently sloped from east to west. The purpose of this feature remains unclear, but its odd profile and size suggests that it was for a very specific function, perhaps a drainage channel for water or other waste material. Two further possible fragments of enclosing ditch were located in the south-east corner of the area (Fig. 186).

Other possible sunken-featured structures

SFB 20 was situated in the south-east corner of the area and possibly the earliest feature here. It consisted of a large irregular shaped cut (G1212) 4.1m long, 3.5m wide and 0.32m deep aligned north-south with gently sloped sides that led to a gradual break and a flat uneven base. It contained a sterile fill of clay silt with chalk inclusions. It is considered a highly dubious structure, originally included because of its position in the corner of the area, and apart from its size, there is little to compare it to the other Type 3 structures although these often display no evidence for structural features. If not a structure, it may represent small-scale quarrying activity in the corner of the area. SFB 15 (Fig. 188) was situated in the extreme south-west corner of the exposed area, 0.6m south of the quarried area and consisted of a sub-rectangular cut (G1204) 3.2m wide, 3.7m long and 0.13m deep aligned north-south. The profile had steep near vertical sides that led to a sharp break and a flat uneven base. The feature was probably heavily truncated from ploughing and erosion. No obvious structural features were located in association, but on the longitudinal axis of the base, a patch of burnt pink natural chalk was sealed by a spread of black silt with grey ash and carbon (C735), 0.5m wide, 1m long and 0.02m thick, indicating a fire, hearth or brazier on the floor. This was sealed by the sterile bulk fill of the main cut.

SFB 16 just within the shallow quarried area, 9m east of SFB 15, was not fully excavated and its exact extents were only tentatively identified. The feature consisted of a large sub-rectangular cut (G1207), aligned north-south, c. 5m long, 3m wide and 0.8m deep with steep edges and a flat base. It contained a fill of light brown silty clay with snail shell, mussel shell, an iron ring (FN 1.90) and two copper alloy objects (FN 1.91, FN 1.92). No structural features were observed, and it is quite possible that this was merely a large pit, although its size, profile and location was quite similar to many other features designated as Type 3 sunken-featured structures. Finds suggest deliberate backfilling. SFB 17 was immediately west of SFB 16, just cutting its backfill and consisted of a large sub-rectangular cut (G1208) about 6m long and 4.9m wide, aligned north-south with steep slightly curved sides and a

flat, uneven base 0.5m deep. There was a possible extension of the cut from its north-west corner, resulting in a rather irregular shape overall. No obvious structural features were observed and the same comments apply as for SFB 16. The single backfill contained oyster and mussel shell. SFB 18 was just outside the quarried area abutting SFB 17 on the south and consisted of a sub-rectangular cut (G1209) 4.5m long and in excess of 1.25m wide. It was partially cut away on the south by G1210, possibly a later enclosure ditch fragment, but the remnant base suggests an original width of about 1.6–1.7m, aligned east-west. The profile, 0.4m deep, had steep sides and a flat, uneven base. No structural details were noted. The single backfill contained a relatively large assemblage of medieval pottery (AD 1225–1325), various types of sea shell and worked stone (FN 1.9083), indicative of deliberate backfilling. The potential size and regular shape of this feature, as well as its location at the corner of the area suggests it was a sunken-featured structure of Type 3.

Underground chambers (Plate 252)

Partially excavated to the south of SFB 22 a large linear feature (G1221), aligned roughly north-south, defined the eastern extent of the area. It was 10.2m long, 1.8m wide on average, 1.27m deep at its southern terminus and 2.9m deep at the northern terminus with steep near vertical sides, undercutting by up to 0.2m at the southern end. The flat base sloped gradually to the south becoming steeper with depth and containing relatively sterile chalky fills. An associated circular chamber (G1219) adjacent on the west near the north end was 1.6m wide and 0.95m deep with steep near vertical sides and a flat base, undercutting up to 0.2m to the west and south. This was truncated by a later cut of uncertain function (G1228), but possibly another boundary ditch, appeared to be contiguous with the main bulk of G1221, although separated from it by a baulk of natural chalk about 0.2m thick with a slightly higher floor level and containing similar fills. The depth and sloped base of the main cut suggests it served for storage, and at 2.9m deep it seems it originally formed a tunnel with a roof cut from the natural chalk bedrock, and which had subsequently collapsed, compatible with the nature of the later fills. The undercutting could represent the curved form of the remnant arched roof. This interpretation is supported by the presence of the chamber, also underground, as both together, in simpler form, closely resemble the underground systems found on Plateau 2 (above).

At the southern terminus of G1221, and recorded as cutting its backfill was a sub-oval pit (G1218) 1.7m long, 1.2m wide and 0.49m deep with vertical sides that undercut up to 0.3m to the south-east. It contained an initial deposit 0.3m thick which yielded pottery, mussel shell, barnacles, egg shell, grain, pulses, charcoal, snails and small fragments of fish and mammal bones sealed by a fill of clay silt with much chalk. The profile also suggests an underground storage pit, the chalky later fills indicating collapse of the sides and the roof. The complex domestic nature of the initial fills may reflect some of the materials being stored or alternatively represents domestic waste backfilled into the feature. These features were cut by a further ditch segment (G1228), 7.7m long, between 2.5 and 2.1m wide and 1.25m deep, with steep

near vertical sides and a flat base, continuing the alignment of the ditches to the north.

Structure 50 (Fig. 189)

Apart from the sunken-featured buildings, a number of other structures and potential structures were found in this area. Structure 50 just west of ditch G1228 consisted of eight sub-oval post-holes (G1216) of a similar shape and size, between 0.23 and 0.58m in diameter and from 0.09 to 0.17m deep with steep sided edges (Plate 253). Six of the postholes formed a lozenge shaped arrangement 2.8m across that were evenly distributed around the edge of a sub-rectangular cut containing a raft of densely laid sub-angular flints, possible worked stone and medieval potsherds (G1215), 1.78m long, 1.15m wide and 0.42m deep. These were undoubtedly associated, the raft of flints possibly the foundation for a raised platform or hearth, although there was no evidence for burning. Alternatively it could have supported a brazier or some other structure. The disposition of the postholes suggests some form of supporting arrangement like a spit, above the raft, with two larger postholes set longitudinally north-south and four smaller ones in a rectangular arrangement on the corners. Two subsidiary postholes on the south may relate to an associated structural element.

Although there was no evidence it is possible that this feature was internal to a larger enclosing building, the bulk of which would have lain to the west where all evidence may have been cut away by later activity.

Other features in Enclosure 25

The lower basal area of the quarry was peppered with irregular cuts of similar nature, found in the central, mostly deeper part of the enclosed area (Fig. 186). The features were between 0.7 and 5m wide and from 0.04 to 0.2m deep with gradually sloping sides and flat bases. All contained a fill of sterile clay silt. Together the features appeared to form individual areas of erosion, caused by activity in the area. Some were of a size that could potentially represent sunken-featured structures, although apart from one there was no direct evidence for this, while others of smaller size resembled the bases of truncated pits. One of these was cut by two sub-circular features 0.2m apart (east-west) (G1230) that were of a similar shape and size, between 0.38 and 0.43m in diameter and 0.24m deep. Each contained the base of a large intact and upright pottery vessel, with sherds from other vessels also present (Plates 254 and 255). This assemblage is perhaps one of the latest from this enclosure with a suggested date of between 1250 and 1325. All of the 302 sherds were from just seven vessels. The six cooking pots are oxidised with green glazing on their interior bases and exterior sooting. The *in situ* pieces were packed tightly into the cut with a surrounding fill of clay silt. The vessels contained a fill of silt clay with chalk and small flint inclusions. Similar features have been found elsewhere on Thanet Earth, also in pairs and of similar date (G5079 on Site 13), and on other medieval settlements in Kent, often potentially within buildings. Various functions for these

have been proposed, including ritualistic purposes, but here the vessels were probably used for storing liquids. Just to the south two cuts of similar size and in a comparable stratigraphic position may also have held vessels. If these features were for storage, then it is possible that they were in a structure otherwise only represented by the area of wear. This would be quite possible as there were no other features in the vicinity and any such structure would align with the enclosure. The similar features on Plateau 5 were also likely to have been within a partially sunken building.

A few metres to the south-west, a large sub-circular cut (G1213) 2.2m in diameter was excavated to a depth of 0.7m. Its profile, with gradually sloping sides descending to a near vertical sided shaft about 1.5m in diameter suggested the typical erosion cone of a well; the full depth of the feature was not determined. A considerable assemblage of medieval pottery, some animal bone and an iron object were recovered from the upper fill suggesting the feature had been used for rubbish disposal. The artefactual richness of this feature can be compared with the general sterile nature of many others in this area, suggesting the latter gradually filled by erosion after occupation had ceased, whereas the well may have gone out of use while the site was still occupied. Adjacent on the west but only partially exposed was (G1214), a sub-rectangular cut 2.4m long, 0.6m wide and 0.39m deep which contained laminated fills of clay with carbon and daub inclusions sealed by a lens of carbon 0.05m thick, suggesting redeposition from an oven or hearth that may have been further to the west. A few metres to the north and also partly exposed, a large irregular sub-rectangular cut (G1244) 4.2m wide, at least 4.4m long and 0.7m deep with steep sides and a flattish base contained a mixed fill of silt clay with chalk wash, with thirteenth century pottery, animal bone and snail and mussel. Its purpose is unclear but it may have formed a deeper part of the quarried area. Its size and profile suggest it was yet another sunken-featured structure and the mixed nature of the fill indicates that it was deliberately backfilled.

Most of the features in the eroded or quarried (G1280) parts of the area were sealed by a uniform deposit of clay silt with chalky wash and lenses (removed by machine) that appears to have accumulated naturally. However significant quantities of animal bone and peg tile fragments indicate an element of rubbish disposal, whilst the pottery was much the same as that from the rest of the features here.

Site 8

Site 8 was about 17m south of the Enclosure 25 complex and consisted of an enclosure (Enclosure 17; Fig. 186) defined by a few segmented linear features, partially quarried away at a later date. Most original internal features had been completely removed, although a few pits survived on the north side, and two large post-pits to the south (G1119) may be all that remained of a large structure (Plate 256). However, these appear to be earlier than the main phase of activity and are more likely to relate to Site 9 (below). The area bordering the quarry was also eroded, suggesting a previous concentration of activity, similar to the enclosure

complexes on Plateau 2 to the south. Extensively disturbed remains, well below formation level for the plateau meant the base of the quarry (G1288) was not completely exposed, but its fill was mostly excavated by machine. Negligible dating evidence was recovered from this particular site, compared with Site 7, due to the later truncation, although the pottery assemblages are mostly similar, of thirteenth century date.

Phase 3: Early Structure?

Two sub-circular pits (G1119) about 4.7m apart, just south of the quarry edge and sealed by the erosion hollow infill had a similar shape and dimensions, c. 0.90m in diameter and 0.58–0.64m deep, with steep cut sides to a flat base. They contained similar fills, one yielding a relatively substantial assemblage of 43 pottery sherds datable to AD 1125–1200. These pits are likely to be large postholes since they bear a striking resemblance to the two main postholes of Structure 53 on Plateau 4, (Site 11 below), but no evidence for post-pipes was discernible. The features were in alignment with the enclosure and a similar distance apart, c. 5.2m or almost exactly 17ft, to the posts of Structure 53. This may, therefore, have been a type of barn or other agricultural structure. The features appear to be earlier than the bulk of activity on Site 8 and could relate to the similarly dated Site 9 just to the south. Both features were truncated by the erosion element of quarry G1228

Phase 4: The quarry and associated features

The irregular erosion hollow (G1228) surrounding the quarry was about 25m across north-south and extended into the area by 28m at maximum with its fill sealing most of the surviving features on the margins of the area. At its north-eastern corner were two adjacent, but offset and parallel, ditch segments aligned east-west (G1047 and G1063), representing traces of the original enclosure. G1063 was extremely shallow showing considerable truncation and may have been more extensive originally. Near the opposing corner two further linear cut segments (G1290–1291), the latter mostly removed by a later feature (G1055; below) were aligned near north-south and may have a similar origin. Ditch G1047, c. 8m long had a width of 0.93–1.20m and depth of 0.16–0.28m, while G1063 immediately to the north-east was c.4.50m long, about 0.50m wide but only 0.03m deep. North-south aligned ditch segment G1290 was 4.3m long and 0.20m deep and just to its west G1291 survived only as a ditch terminus, with a possible extension recorded in section about 4m to the north, beyond which it could not be separated from a later feature (G1055). The excavated remnant was 1m wide and 0.60m deep. The fills of these features were a mix of silty clays with some having abundant chalk inclusions, suggesting deliberate or casual backfill during the subsequent quarrying activity. The fills were mostly sterile, although thirteenth century pottery was recovered from G1291 and G1047.

Features associated with the enclosure

A small group of very shallow pits also survived on the north side of the area, all no more than 2m across or 0.2m deep. Their function is uncertain, but they may have been rubbish disposal, although only one contained any medieval pottery, of later thirteenth century date. Two very deep linear features extending roughly north-south at the base of the quarry on its east side were investigated by machine and partially hand cut slots. To the east G1055 was visible for c. 5.50m from its southern terminal, curving to the west following the quarry base to the north but its full extent was not exposed. At its terminal it was 1.55m wide and 1.25m deep, becoming wider and deeper to the north (2.80m and 1.30m), with a very steep sided sometimes stepped profile and a flat base. No datable material was recovered. It appeared to cut G1184, a linear cut at least 6m long situated directly to the west, but as with G1055, its full extent was not determined. It curved around the south-west corner of the quarry extending to both north and west and was 2m wide and 2.20m deep with steep sides and a flat base. The cut contained numerous mostly sterile fills, laminated layers of chalk and brown silt deposits, or chalky rubble, indicative of erosion of the edges and perhaps deliberate backfill. These may have simply been deeper extensions to the quarry, but their location is rather similar to G1221 in Enclosure 25 which was interpreted as a collapsed tunnel. The depth, profile and chalky infills of these features would not seem to contradict such an interpretation. The quarry itself was at least 20m wide and mostly of a depth of 0.95m, with gradual sloping sides and an undulating base. A few deeper areas were not fully investigated. The fills consisted of layers of chalk and greyish brown silty clay; the uppermost layers of uniform silty clay, which also filled the eroded area around the margins, which was probably naturally accumulated colluvium. A few medieval thirteenth century pottery sherds were recovered from the upper deposits.

Site 9

Site 9 bore more resemblance to settlement sites elsewhere on Thanet Earth than Site 8, with a definite enclosed area (Enclosure 16; Fig. 186) encircling a variety of structures and other settlement features such as pits and a well (Plate 257). Datable finds however were remarkably sparse: 'the few sherds of pottery associated with this enclosure span the later twelfth to mid thirteenth centuries but the groups are never large'. A radiocarbon date from a well in the complex returned a value of AD 894–1117 (at 95 per cent probability; Table 6, UBA-22213), so it is quite possible that the entire settlement was actually earlier (of Phase 2, AD 1075–1175) with the recovered pottery introduced during rubbish disposal after its abandonment. As with Site 8, the central and exposed southern part of the enclosed area was truncated, rather more shallowly, by an extensive zone of erosion (G1161). Whether this was due to protracted activity within or by deliberate reduction was not certain, but some features had been completely eroded or heavily truncated as a result. One possibility was that the enclosure was used for keeping stock once settlement activities had ceased, which may have necessitated the backfilling of any residual open features.

Phase 2–3: The enclosure and its associated features

The northern side of Enclosure 16 was 5.5m south of the structure represented by pits G1119, on a similar but not identical alignment (NNW–SSE) to the enclosures to the north and delineated by a continuous ditch (G1023) forming a sub-rectangular enclosure in excess of 25m by 22m internally. The ditch was 0.90 to 2.2m wide with a depth range of 0.37–1.60m with vertical sides to a flat base. Its northern section was noticeably deeper to the west. Where excavated it had one or more primary fills of a very light brown clay silt with a high chalk content sealed typically by one or more slanted deposits consisting of a mottled mid-light brown silty clay with chalk flecks and blocks with inclusions of occasional mussel shell and medieval pottery. The uppermost fill yielded sparse quantities of peg tile and pottery fragments, all in negligible amounts, but is likely to represent deliberate backfilling. An east-west aligned ditch (G1027) indicated an internal partition of the enclosure and was set nearly 15m from its northern edge. This ditch, contiguous with G1023 from which it extended, had similar fills and a U-shaped profile with fairly steep sides and flat base (0.50–2.20m and 0.14–0.75m deep), becoming wider and deeper to the west in similar manner to G1023. A considerable number of features were found within this enclosure, including the remains of two sunken-featured structures, a well and numerous pits, many truncated towards the south-west by the erosion event G1161, but this did not affect all the internal area.

SFB 13 (Figs. 190–191)

SFB 13 (G1174) was a particularly unusual structure consisting of two main sunken components linked by a short passageway (Plates 258 and 259). It was set square to Enclosure 16 at its north end, a few metres south of the enclosure ditch. Its main compartment was a somewhat irregular but generally sub-rectangular cut (S1369) 3.20m wide, 7.66m long and 0.32m deep with steep sides and a flat base. Immediately adjacent and connected to the western side was a further irregular but approximately sub-rectangular cut (S1368) 1.10m wide, 1.20m long and 0.21m deep, similarly aligned and forming what appeared to be a raised passageway connecting the chamber (S1369) with a further chamber or compartment (S1399) to the west. The floor of this 'passageway' lay above the two adjoining cuts by 0.15m. In general, finds were absent from within these chambers but pottery was recovered from S1368 and dated to AD 1150–1225.

The western chamber (S1399) was an irregular but generally sub-rectangular cut, slightly offset to the north from the eastern chamber's axis. It was 2.10m wide, 2.95m long and 0.32m deep, with steep edges and flattish base. On the western side was a raised platform extending 0.75m from the end of the cut and 0.08m in height, possibly a step and if so, the likely entrance way. The main chamber (S1369) contained four east to west aligned postholes, unevenly spaced (1.20–2.00m apart) down its length, and set just south of its longitudinal axis. The postholes (S1500, S1491, S1486 and S1387) were all a similar sub-circular shape and size with a diameter of c.0.45–0.60m and depth of c.0.63–0.70m, most with steep cut sides and a flat base. None provided any evidence for post-pipes and their fills were sterile. The

easternmost feature (S1387) was external to the sunken area of the chamber, and may not have been a structural posthole, its extremely undercut profile suggesting storage similar perhaps to the side chamber in SFB 21. There were also three other postholes (S1503, S1495, S1493) in the base of the cut, about 1.10–1.60m apart. All were all of a similar size and shape, *c.* 0.30–0.40 m in diameter with steep sided profiles and flat bases of depths *c.* 0.10–0.45m and, with sterile fills, no trace of post-pipes. In addition, a sub-rectangular pit, 0.42m deep (S1382) was situated just east of centre on the south side of the structure with a similar profile and fill as the other internal features. Two pits (S1403 and S1539) a short distance apart (0.50m) within the western chamber were sub-circular, 0.6–0.7m in diameter with depths of 0.3 and 0.18m respectively and steep cut sides and flat bases. Pit (S1403) was filled by a dark brown silty clay with large sub angular flints, marine shell and charcoal. Pit S1539 contained dark brown silty clay with inclusions of oyster shell, daub and a quern fragment (FN 1.9053). The function of these pits is unclear although the fills suggest they were deliberately backfilled with undatable refuse material. The main elements of SFB 13 were filled with generally similar deposits of silty clay which yielded two quern fragments (FN 1.6, FN1. 7), worked flint, medieval pot sherds dated to between AD 1125 and AD 1225, animal bone, grain and traces of pulses and marine shell.

This structure is unique at Thanet Earth and difficult to interpret, although at least some of the postholes within the eastern chamber may have supported a pitched roof. The irregularity of the arrangement however, may indicate that the plan of the superstructure is not represented; the internal postholes for example are not on the longitudinal axis of the sunken area suggesting, if they do represent ridge supports, that the superstructure was offset south slightly from its below ground components. Therefore the above ground walls of the building, whether timber framed or such as may have rested on a surface ground beam, were further outside the sunken elements. If so, the two compartments might be equivalent to the hall and smaller service area arrangement, commonly found in early medieval timber structures (see also Structure 47). In this respect it is notable that the western chamber and passage way are exactly one third the length of the structure (Fig. 7.35), a ratio that is common in this arrangement, in turn suggesting it was a crude form of domestic dwelling. However, it contained no evidence of any hearths or other clear evidence for domestic occupation, yet its overall size, in excess of 11m by 3.2m would be large enough to represent a dwelling or shelter.

SFB 14 (Fig. 190)

What remained of structure SFB 14 was less than 2m south of the west end of SFB 13, suggesting it was an ancillary building. All that had survived later truncation was a sub-circular oven (G1182) 1.30m wide, 1.90m long and 0.20m deep formed of three deposits set in a shallow cut. The primary deposit consisted of a layer of sub-angular flints with a bonding material of light brown silt 0.11m thick. On and around the limits of this was a lining, U-shaped in plan, composed of clunch 0.15m thick and 0.25m wide at maximum and undoubtedly forming part of the main oven wall

structure. At its south side an opening was left representing the entrance to the oven. The oven wall was abutted internally by a deposit consisting of a clunch mixture, 0.03m thick, forming the beaten floor for the oven. There were no significant finds. The similarity of this oven to those found in sunken-featured buildings elsewhere strongly suggests that this feature was originally within, or associated with a structure of similar type, most of which had been removed on the south side by subsequent erosion (G1161), which would tally with the position of the aperture on the south side of the oven indicating that the structure was longitudinally, on a similar alignment to its surrounding enclosure. There was no evidence for the side hearth sometimes seen in these structures.

Other features within the enclosure

Most of the other features within the enclosure were located to the south-east of SFB 14 and consisted of heavily truncated pits clustered in the southern part of the exposed area, south of dividing ditch G1027. The pits were all of a similar shape and size, generally sub-circular between 0.92 and 2.30m across. All were shallow (depths of 0.08–0.30m) due to later truncation, and all had flat bases. The fill of the pits was fairly consistent, a light brown silty clay with abundant chalk flecks. Three produced marine shell and medieval pottery sherds. The likely function of the pits was for refuse disposal, possibly associated with the structures in the enclosure.

One well (G1143) was also investigated and consisted of a sub-circular cut 2.65m in diameter at the surface and 21m deep (1.3m hand excavated the rest of the depth bore sampled). It had a gradual sloped cut from the surface to steep near vertical sides, the lower part of the cut being 1.8m in diameter (Plate 260). The depth and profile of this feature, with its erosion cone at the surface, were similar to the wells encountered on Plateau 2. Seven main fills were recorded, the upper three excavated by hand. The lower fills consisted mostly of various silty chalk deposits, mostly naturally accumulated through in-wash. They were sealed by chalky clay deposits containing flints, possibly representing deliberate infill. They also contained abundant mussel shell and some medieval pottery as well as preserved assemblages of biological remains. A radiocarbon date from a beetle fragment from a lower fill provided a date of AD 894–1117 (at 95 per cent probability; Table 6, UBA-22213). Adjacent to the well to the south was a sub-circular post-hole (S1714) 0.40m in diameter and 0.50m deep that may have had a functional association.

The subsequent erosion bowl (G1161) covered an area about 18m x 18m with gradual sloping sides and was generally 0.20–0.32m deep although more than this to the extreme south-west. It contained light to dark brown silty clay with chalk flecks and yielded nine sherds of late twelfth or early thirteenth century pottery. The deposit probably accumulated naturally within the depression.

Site 10 (Phase 3)

Further medieval structures and enclosures were linked with Trackway 29 to the east of the feature. The northernmost was an isolated medieval building (SFB 40) just north of the centre of the overall site on Plateau 3 (Fig. 192). Some aspects of this structure were never clearly resolved because it had been cut away to the east by a Second World War pit (G3045). There was also some indication that the original trackway ditch had been recut after the building had been backfilled, disturbing its internal structural components.

Structure G3040 was cut into the north-south aligned parish boundary or trackway ditch G3039. It was square cut with slightly rounded corners, 3.1m long and 2.95m wide and c. 0.5m deep aligned east-west, with its western edge aligned closely with the western edge of the underlying boundary ditch (Plate 261). The sides were vertical with a single posthole (S3357) cutting into the centre of the flat base, although there were some other amorphous depressions that might have been post-settings. A substantial oven (G3041) within a cut approximately 1.4m in diameter, 0.1m deep with near vertical sides and a flat base in the north-west corner of the building, extended slightly beyond the limit of the main cut. The oven was a platform of scorched compacted chalk with the remnants of a clay-walled dome approximately 0.5m high. The dome was clay rather than clunch due to the nature of the subsoil in the area and was about 0.2m thick, with a gap or entrance on the east opening into the main bulk of the structure. The interior was filled by a deposit of silty material containing large quantities of chalk and redeposited burnt clay from the collapse of the dome. Lying 1.3m to the south was a small sub-rectangular depression (S3355), about 0.5m long and 0.4m wide, but only 0.05m deep containing a deposit of reddish, burnt sandy silt mixed with ash.

The building was a small example of a Type 1 structure and, following abandonment, was filled by mixed deposits of clay silts but with few finds apart from a few sherds of pottery dated to AD 1250–1325 and some animal bone. Much of the fill could have occurred naturally or over a long period, so that the date of the structure is uncertain, but it was most likely Phase 3. Only two other medieval features were found in the vicinity, at some distance and probably unrelated. One was a small pit (G3043) containing pottery dated to AD 1100–1200. The other was a very short segment of east-west aligned ditch mostly removed by ploughing, possibly fragmentary remains of an associated enclosure, but this was not identified anywhere else.

Site 11

There were three medieval enclosures west of Trackway 29 on Plateau 4 (Fig. 193) and another situated on the eastern side to the north which was only very minimally exposed, represented by a single east-west aligned ditch (G4034). This complex would appear to be predominantly agricultural originally, with few related features. This is reflected in the much smaller corpus of pottery recovered than from some of those sites already described (and from sites to the south), which also suggest that there was less settlement activity, apart perhaps from one or two sunken structures

to the south. The field system terminated at the south on the line of the parish boundary, represented here by a buried Iron Age ditch, a slighted bank to the south, and an overlying post-medieval lynchet (G4100). During the medieval period this line was almost certainly a trackway (Trackway 35), which passed to the east between two medieval enclosures along Seamark Road (Enclosures 42 and 44). The route probably formed a crossroads with Seamark Road and extended further east, as suggested by other rectangular enclosures along the line, known from cropmarks.

Sub-Phase 2a: Early Enclosures

Enclosure 47

The north side of rectangular Enclosure 47 was about 211m to the south of SFB 40 and was formed by a continuous ditch (G4015) which enclosed the northern and western sides of an area about 112m x 25m in extent, aligned north-south with the adjacent trackway ditch (G4019) which formed its eastern side. The southern side was delineated by the parish boundary, but no contemporary ditch was seen in this position. The enclosure was divided into two unequal areas by an east to west aligned ditch (G4108) with the northern part about 43m x 25m internally. The relationship between all these ditches, including the western side ditch of Trackway 29, was very difficult to discern in the ground and it seems likely that the whole system was contemporary, or if the enclosure was later, its ditches were cut very soon after those of the trackway, so that the fills were essentially contiguous. The enclosure ditches were about 1.05m wide on average and generally shallow, about 0.30m with gradually sloping sides and a fairly flat base. The fills were homogeneous and only yielded a few sherds of pottery (AD 1050–1175) and the occasional burnt flint or roof tile fragment.

Various features, including two structures (SFB 73 and SFB 47), were located in the northern part of the enclosure (below). On the eastern side, a pair of approximately east to west aligned ditch segments (G4021) c. 5m long, 0.60 to 0.70m wide and about 0.20m deep, extended into the enclosure from the droveway. These converged as they entered the enclosure, leaving a gap at the west end about 1.7m across. The ditches were about mid-way down the northern part of the enclosure suggesting they formed an entrance. Another linear feature 1.15m to the south may also be related, but yielded no dating evidence. A further division of the northern part of the enclosure appears to be represented by (G4026) a linear cut c. 22.50m long and arrayed north to south along the longitudinal axis of the enclosure. Its northern terminal stopped just short of the northern ditch of the enclosure, the southern end was directly opposite the eastern entrance represented by G4021. The feature, ranging from 0.68m to 1.30m in width and 0.25m deep contained a near sterile fill, but its position in relation to the remainder of the enclosure certainly suggests that it was related and is confirmed by the recovery of one sherd of pottery of similar date to the other ceramics.

Enclosures 45 and 46

Two successive, conjoined enclosures (Enclosures 45–46) and various associated features were situated to the west of Enclosure 47, within Field M5 and roughly centrally to the field at its southern end, the parish boundary (Fig. 193). Enclosure 45 was the earlier, and it was essentially contemporary with Enclosure 47. The ditch of Enclosure 46 cut that of the earlier feature, although the pottery from both was of similar date and there is nothing to suggest that all three were not in use at the same time. Enclosure 45 was a continuous ditch (G4007), broken on the south side by a gap of 3m and enclosing a near square area c. 56m x 50m internally. The enclosure was about 50m west of Enclosure 47 central to the north-south axis of Field M5 and slightly askew to the north-east/south-west. The southern side was also about 50m north of the parish boundary, but not parallel to it. The gap in the southern side of the circuit was well formed and provided a clear entrance into the enclosure. The enclosure ditch had an average width of c. 1.50m and depth of 0.55m with a steep sided profile and flat base, somewhat larger at the enclosure corners (Plate 262). The generally uniform fills, accumulated mainly through erosion, contained very few finds, a few medieval potsherds (AD 1050–1175), an iron object (SF 4.6) and hook (SF 4.7) together with some seashell.¹⁹

The interior of the enclosure was divided into three separate areas by linear features. Two sections contained individual contemporary buildings, and the third a quarry which may have been later in date. A ditch segment (G4008) 12.60m long, was aligned parallel to and 20.7m from the south side of the enclosure. An L-shaped linear ditch segment (G4010) with its north-south section 33m long was c. 18m from the enclosures western side; its east-west aligned segment, 17m long was contiguous and in line with G4008. Neither ditch connected with the main enclosure stopping short by 1.5–2.0m. Both ditches were comparable with U-shaped profiles on average c. 1 m wide and 0.30m deep with gradually sloped sides and slightly curved base. The fills were similar and mostly sterile.

The internal layout of the enclosure was carefully closely planned, so that the 3.3m entrance between the eastern terminal of G4008 and the corner of G4010, undoubtedly lined up precisely with the entrance on the south side. The southern and north-eastern internal areas were also connected by a considerably larger gap east of the terminal end of G4010. The overall effect was to create a near square subdivision in the north-east corner about 30m across, a rectangular sub-enclosure aligned north-south at the north-west and an east-west aligned compartment spanning the south side. This may have been further subdivided by two short ditch segments (G4090) near the south-east corner, but these could not be reliably dated.

¹⁹ A re-cut (G4009) of the ditch was recorded but almost certainly just represents a slightly different upper fill of the ditch. Near the north-west corner an additional linear cut (G4105) 2.5m long cut across the enclosure ditch at a skewed angle; at this point there was some evidence (mainly in the shape of the ditch profiles) for another a break in the ditch, although this was never very clear, and this linear appears to have removed most of this gap

Two significant, slightly later, features were found within these subsidiary enclosures, SFB 46 and Structure 53 (below).

The ditch of Enclosure 46 (G4011) apparently cut the south-eastern corner of the Enclosure 45 ditch. This continuous ditch formed a near square enclosure about 32m across internally and was obviously designed to be contiguous with Enclosure 45 to the west, although on a slightly more north to southerly alignment, exactly parallel with Enclosure 47, 18m to the east. The ditch was 1.15m wide on average, 0.30m deep with a U-shaped profile, filled with a homogeneous deposit of silty clay with chalk inclusions which yielded a somewhat larger assemblage of medieval potter, again dated 1050–1175, with little else apart from residual worked and burnt flint and some seashell. Internally, the enclosure was featureless apart from a ditch (G4016) that partitioned it north to south. The southern 15m of this ditch was parallel to and 5.6m from the western side of the enclosure, diverging north-east/south-west for a further c. 20m in a north-westerly centred arc. It terminated about 2m short of the enclosure ditch at both ends. The partition ditch was relatively insubstantial, 0.62m wide 0.16m deep, with U-shaped, slightly flat-based profile. The fill was similar to that of the enclosure ditch, producing a comparable, but slightly later, artefactual assemblage. 4m north of the enclosure a solitary sub-circular pit (G4082) 1.20m in diameter and 0.26m deep was steep sided with a flat base may be contemporary. A cow skull and iron nail were found at its base, while the bulk fill yielded a few sherds of medieval pottery of similar phase to the rest of the enclosure.

This enclosure was comparable to others nearby in its lack of internal features suggesting they were originally related to a pastoral economy, although this particular enclosure showed no signs of an entrance. However, by analogy with dispositions of such structures elsewhere, it is quite likely this had been located in the extreme south-west corner which had been cut through by a later sunken-featured building (SFB 43 below). Although this would have been very close to the corner, it would have corresponded with the position of the space formed by the internal partition ditch. Topographical factors indicate that the enclosure, although recorded as cutting the ditch of Enclosure 45, was probably contemporary with those on each side, or at least these must have still been extant in some form when it was emplaced.

Another small, isolated enclosure (Enclosure 72) about 43m to the east, formed from an inverted L-shaped ditch G4029 and partly enclosed an area 11m long (north-south) by 9m wide. The ditch was undated, yielding only small quantities of worked flint and various marine shells, but it did cut the upper fills of the underlying large prehistoric ditch (G4006), which considering its close alignment with the medieval features strongly suggests a medieval date. The enclosure may have been related to stock management or containment.

Sub-phase 2b: Features related to the enclosures

Some, of the related features appear to belong to a later phase. The sunken structures in particular, tended to cut the enclosure or driveway ditches, or at least sever their line; some of the ditches were probably at least partially silted up by this stage. Unfortunately the dating evidence cannot refine the sequence any further, so all the features are described in this sub-phase.

SFB 47 (Fig. 194)

This building in the extreme south-eastern corner of the northern part of Enclosure 47 cut the western ditch of Trackway 29 (G4019) which must have been at least partially backfilled by this time, but its eastern end was in line with that side of the ditch suggesting some element of the earlier feature still survived. The structure consisted of a slightly irregular sub-rectangular cut (G4109) about 2.9m wide, 3.8m long and 0.73m deep, with steep sides and a mostly flat base apart from a small raised area south-east of centre (Plate 263). This platform was 0.70m wide, 1.20m long and approximately 0.10m in height, and had two postholes cut into it, about 0.4m apart to their centres and set at about 45 degrees to the axes of the structure. These could represent a door frame for the entrance, with the platform representing a step down into the interior. Three other postholes were located along the top edge of the main cut on the west (S4729), east (S4506) and north (S4727) sides, but they were offset from the axes of the structure. They were of a similar oval shape and size (0.13–0.20m wide by 0.30–0.45m long) with a depth of 0.22–0.25m (0.60m in the case of S4727), aligned with their long axis perpendicular to the edges. One of these (S4729) produced large quantities of wheat grain, principally barley, as well as several cultivated vetch seeds with small quantities of weed seeds from plants such as knotgrass and stinking chamomile. These features were integral to the superstructure representing earth-fast elements of its side walls (see discussion). There was no trace of an equivalent post position on the southern side however. One other internal feature, a sub-oval cut (S4451), was recorded, 0.35m wide, 0.92m long and 0.09 m deep offset from the centre of the structure. It contained many burnt flints in very dark brown silty clay and charcoal representing the basal remains of a small internal hearth. It was too small to represent a domed oven such as those seen in Type 1 buildings. Ten fills (G4110) were recorded within the structure, thin primary levels of redeposited chalk and silty clay sealed by mostly sterile silty clays with the upper fills indicative of backfilling. Few finds were recovered however, apart from a small assemblage of animal bone, an iron nail (FN 4.45) and residual Roman material including a piece of Roman tile and one pottery sherd presumably derived from the apparently insubstantial Roman activity in the area.

This structure is rather different to many of the other medieval sunken-featured buildings, in that its internal hearth was centrally located and there was some evidence for a timber superstructure. It could represent a temporary or intermittently occupied agricultural building, possibly a shepherd's hut which would explain the lack of occupation detritus of any significance. However, some other structures are similar in this respect. This structure did not cut across the associated driveway, common in many of the other buildings, indicating that the

drove was still in use as the entrance on the drove side suggests. As a more complex example of a basic Type 3 structure (thus designated a Type 4), the likelihood is that it was related to animal husbandry rather than production; a similar sunken-featured structure near Lydd has been given a similar interpretation; Barber and Priestly-Bell 2008, but the quantity of barley from some of its contexts might indicate that food processing was also being carried out.

Other features within Enclosure 47

Feature G4087 was 8m north of SFB 47. At the surface it was a shallow irregular, sub-circular depression, funnel shaped in profile and about 2.40m in diameter and 0.10m deep (Fig. 193). The lower part of the cut was circular and vertical sided, excavated to a depth of 1.10m but not bottomed. The cut was filled by dark brown silty clay which yielded medieval pottery (1050–1175), animal bone, a honestone, a copper button and seashell including oyster. The typical profile of erosion cone and lower circular, potentially deep shaft indicate a well. A posthole just south of the main shaft may be related, forming one side of a crude frame to aid drawing water. The well may be related to SFB 47 to provide water for animals in enclosures or fields in the area, but could also have served other structures to the south and west, but apart from SFB 73 (below) these were at some distance (over 60m). Its upper fill contained domestic refuse which suggests deliberate backfilling.

Three pits and an isolated posthole of uncertain function, all within the southern half of this part of the enclosure and not far from SFB 47, probably relate to activities within. A large, irregular but roughly sub-rectangular cut with a constricted northern end, set a few metres to the west of the well was 5.7m long, 3.20m wide and 0.22m deep with shallow-sloped sides and flat base, set roughly parallel to the enclosure. It yielded a small assemblage of medieval pottery mostly of similar date to the other assemblages here, plus one later sherd, suggesting rubbish disposal but the content was otherwise unremarkable. This may have represented the highly truncated remains of another sunken-featured structure (designated SFB 73) with its entrance on the north side, in which case this would be yet another example of Type 3. Apart from a scatter of a few other undatable features, a more unusual, elongated sub-rectangular cut (S4557) 1m wide, 4.90m long and 0.50m deep was aligned with the enclosure just north of the partition ditch. Its steep sided and concave based profile indicate a fragmentary ditch segment. It contained a high density of flints, some quite large within its backfill as well as a few medieval pottery sherds. The flinty fills of both these features might suggest stone clearance from fields. Further to the north-west was an isolated post-hole again dated to this period by ceramic evidence.

The southern area contained few features, suggesting a field or paddock. Located about 8.5m south of the partition ditch (G4108) and adjacent to the eastern boundary of the enclosure was a steep-sided refuse pit (G4091), 1.10m in diameter and 0.25m deep. Its fill with abundant amounts of various shell (mainly mussel, oyster, cockle and winkle) indicated rubbish disposal, and although there was no pottery, a

fragment of ceramic tile suggested a medieval origin. Although there was little evidence for domestic occupation, this feature is certainly indicative of food consumption, if only on a relatively small scale.

SFB 46 (Fig. 195)

This building was located in the south-western corner of Enclosure 45 and its southern subdivision about 3m from the enclosure ditch and respecting its orientation. The structure consisted of a sub-rectangular cut (G4063) 5.80m long, 3.40m wide and 0.58m deep defining the main area of the building and was considerably more rounded at its northern end (Plate 264). The profile was steep sided and flat based. A contiguous cut 2.30m wide at maximum on the north-eastern corner extended eastwards for 4.40m rising upwards from the base of the main area and terminating in a curved end. Its constricted western end was flanked by two north-south aligned postholes, about 0.30m–0.40m in diameter (S4377 and S4379), set about 1.8m apart at the base of the cut. All these features undoubtedly represented the entrance ramp and doorway to the building. Adjacent to the northernmost posthole was a sub-rectangular pit (S4421) 0.60m wide, 1.18m long and 0.30m deep. The arrangement of postholes, ramp and pit, the latter possibly cut for drainage purposes, is very similar to SFB 44 (below). Two postholes (S4381 and 4409) were also located in the floor of the structure at its northern end, one on its longitudinal axis about 0.75m from the north end (S4381) being *c.* 0.40m in diameter and 0.32m deep, whilst (S4409) smaller and very shallow, was located just inside the edge of the cut on its north-west side. Both post-holes were circular with a profile of steep sides and a flat to concave base. The former was probably used for additional support for the roof.

A large circular oven had been constructed in the south-east corner of the sunken area (Plate 265). It was enclosed within a clunch-built wall and its footing (G4064) erected on a purposely left raised area of the base of the cut forming a plinth. The footing enclosed the corner, its north-south section being 0.26m wide, 1.90m long and 0.07m in height, contiguous with its east-west section, only 0.08m wide, 1.46m long and 0.04m high. The overlying wall only extended along the north-south section of foundation and was formed of chalk blocks cemented with clunch. It was 0.25m wide, 1.60m long and 0.24m in height. The wall functioned as a partition between the oven and a smaller chamber on the west (see below). The oven deposits sat within the cavity created by foundation G4064. The oven itself (G4066) was sub-circular *c.* 1.90m wide and 2.20m long (north-south) and survived to 0.25m in height. The primary deposit was a very thin layer of dark blackish brown silty ash with abundant baked clay inclusions, possibly the remnant of an earlier oven structure. This was sealed by a layer of densely laid flints, with some surrounding mid brown silt 0.23m thick, which formed the main foundation for the oven (Plate 266). On this was laid a clunch deposit with flint nodules, 0.15m thick around the perimeter, which undoubtedly formed the main wall of the oven but did not survive to a great height. There was a gap in this material to the north indicating the oven entrance or stoke-hole. Internally the material was lined with clay which had been baked to an

orange/red colour. The lining leaned inward suggesting a domed structure built on top of the flint foundation. The dome was abutted, or possibly contiguous with, a very dark grey – brown/red baked clay forming the oven floor on top of the flint layer. The darker grey part was localised closest to the clay lining, whilst the central hottest part was dark brownish red. Grain and weed seeds were found particularly *Brassica/Sinapis* sp and stinking chamomile, in part derived from re-used materials from the primary oven. A single flax seed was present while several sprouted barley could tentatively suggest the earlier oven had been used for malting. The only finds were fragments of pottery dated to AD 1050–1175.

The smaller compartment to the east contained a discrete deposit (G4065), 0.80m wide, 1m long and 0.04m thick of burnt ash with a high percentage of charcoal. The underlying chalk subsoil was burnt in places but not excessively, similar to the location of a smaller side hearth or some other heating element in other examples. The sample from this deposit produced no artefacts or biological remains which suggests that it derived entirely from the fuel element of any concomitant process similar to other deposits in this situation from other structures, such as SFB 6. This may be relevant to any interpretation of this side compartment as cooking, heating or ‘raising the dough’ in any bread making activity might not produce any biological remains (see discussion).

Covering the majority of the base of the building was a layer (G4067; not shown on section) of dark greyish brown ash with a high percentage of charcoal, 0.06m thick representing remnant rake-out from the oven. Above this was a sequence of backfills (G4068) consisting of a light yellowish brown chalky clay mixed with silt, 0.21m thick, with inclusions of baked clay debris. The deposit slumped down from the oven towards the centre of the structure and almost certainly represents collapse of the oven superstructure and associated deposits. Subsequent fills were varied but yielded animal bone, burnt flint, a hammerstone, an iron bolt (FN 4.14), shell, small quantities of medieval pottery also dated to AD 1050–1175 with traces of grain. These suggest deliberate backfilling of the structure, partially with domestic refuse.

This structure, the first to be found at Thanet Earth, is one of the largest examples of the common form of medieval sunken-featured building with their corner ovens and side hearth (Type 1), in this case with a very pronounced access point. It also has structural differences in the mode of forming the two compartments at the end, often formed as part of the main cut, but here fashioned by ‘masonry’ bonded with a clunch mixture; the oven itself was also larger than most and relatively sophisticated with an appreciable clay lining on the inside (apparently contiguous with the clay floor). However, these variations may be due to later remodelling, since the deposit underlying the main flint foundation of the oven appears to be derived from broken fragments of an earlier oven, which strongly suggests that the surviving oven was a replacement for an earlier structure of similar form. Even so, there is nothing in the dating evidence to suggest that this quite developed example of the genre was particularly late in the medieval occupation sequence at Thanet Earth. Environmental evidence from the structure is comparable to the common

assemblages from other buildings, a prevalence of barley and bread grain suggesting that the baking of a certain type of bread was the predominant function, although there was some rather tenuous evidence for malting.

Structure 53 (Fig. 196)

This was a post-built structure located in the north-western subdivision of Enclosure 45, set east-west within the subdivided area, just north of its centre and aligned with respect to its orientation. The main elements were two massive postholes (G4041), set about 5m apart centre to centre, of a similar shape and size, about 1m in diameter, steep sided and flat based. The western posthole narrowed in profile to a central shaft diameter of c. 0.35m, which in the absence of any post voids within the fill may indicate the size of the post. The western posthole was deepest at 1m, the eastern 0.54m deep. The fills were unremarkable, showing no post-pipe. Approximately 2.5m to the south on a parallel alignment was a row of four post-holes which were complemented by an additional two at a similar distance to the north, forming an opposed row of which the two western examples did not survive. The postholes, set approximately the same distance apart (1.4m–2.0m) were a similar shape and size, about 0.40m in diameter but only about 0.16m deep, truncation therefore probably accounting for the missing settings. The fills were sterile and showed no evidence of post-pipes.

Although there was no dating evidence for this structure, its location and disposition within the enclosure are clear indicators that it was contemporary. The postholes seem to represent an earth-fast timber building about 5m square, with the massive end posts the main load-bearing structural elements, presumably supporting a gabled roof, with the more flimsy outer posts representing the walls. No internal elements of the building survived and no other features in the locality gave an indication of its function, although some form of agricultural building, such as a small barn or animal shelter seems probable. The building bears some resemblance to a setting of two similarly massive postholes just north of Enclosure 16 (Site 9) on Plateau 1.

Other features in Enclosure 45

As with many of the medieval enclosures in this area, there were few other related features to indicate possible functions or use of the enclosure, which suggests an original relation with animal husbandry. Scattered post-holes yielded a few medieval potsherds, while a substantial quarry pit (G4113) approximately 10m in diameter and 2.48m deep was situated just south of centre in the north-east subdivision. This vertical sided, flat based feature was only investigated with a machine cut trench, but did yield one sherd of medieval pottery from the uppermost fill, which might be residual. The quarry would appear, from a comparison with others found on site, to be of medieval or late medieval date, but it could post-date the life of the enclosure.

Buildings (SFB 44 and SFB 45) to the south of the enclosures (Phases 2–3)

There were two sunken-featured structures and some related features in the southern part of the area, which may have been more closely related to putative Trackway 35 than Enclosure 47, although SFB 45 was towards the southern part of it. SFB 44 was slightly outside to the east. The location of both structures would indicate that the track was just to the south (Fig. 193). The closeness and disposition of the two buildings suggests that they were contemporary and related.

Structure SFB 45 was a substantial feature and consisted of a sub-rectangular cut (G4059; Fig. 197) c. 10.8m long, 3.2m wide and 0.56m deep aligned near north-south (Plates 267–269). This alignment was askew to the adjacent enclosure to the north, but perpendicular to Trackway 35. The cut intruded into the upper fills of the major east-west aligned prehistoric ditch (G4006) that underlay the trackway at this point. This unequivocally indicates that the ditch must have been nearly fully backfilled by the time the building was constructed, but a postulated bank to the south may well have still survived in slighted form, perhaps surmounted by trees and bushes. The cut had steeply incised sides with a flat base; a portion of the central western side of the structure had been removed by machine excavation of an exploratory trench but this did not seriously affect its integrity. In the south-east corner was a steep-cut step, L-shape in plan and 0.20m deep, 0.30m wide, 1.70m long (east-west) and 2.30m long (north-south). A further step 0.20m wide, 1.50m long and 0.13m deep, on the east to west axis only, descended again to the flat base of the main cut.

Two post-holes were cut into the base, a sub-circular feature (S4804) located south and west of centre, and an oval-shaped cut (S4784) located near central to the northern side that contained a worked stone fragment (FN 4.9004). Another (S4806) was at the northern end on the east side and external to the main cut. Postholes S4804 and S4806 had a diameter of c. 0.50m whilst the elongated shape of S4784 is suggestive of a smaller diameter post that had either been rocked to prise free or alternatively collapsed inward. Immediately adjacent to the stepped corner was a circular scorch mark or burnt patch with two smaller circular patches just to the north (S4810). The larger patch was 1m wide and 1.40m long with the smaller patches having a diameter of c. 0.20m

The primary layer (G4061) within the structure consisted of a dark brown compact silty clay with abundant chalk flecks containing pottery dated AD 1050–1150, fragments of quernstone, slag, oyster and mussel shell, grain, seeds, pulses, snails, and charcoal. This composition suggests that it was an occupation deposit within the building. Other primary deposits forming part of the same sequence comprised ashy lenses and burnt chalk and clay (S4840–4841) and were directly sealed by a later oven.

The oven structure (G4060) was roughly central on the base of the main cut and was 1.10m wide, 1.20m long and c. 0.03m deep (Plates 270 and 271). It appeared to be erected directly on the floor level over at least some of the primary occupation

deposits and was therefore a later addition to the building. The primary oven deposit consisted of a raft of flints 0.10m thick with inclusions of mussel and oyster shell fragments (Plate 272). A 'clunch' wall of the oven was erected on, and encapsulating, the edge of this flint spread and formed the well-preserved remains of a truncated, domed casing 1.60m in diameter and 0.41m in height. The walls were 0.30m wide with a gap on the southern side indicating the position of the entrance or stoke-hole. A blackish-orange burnt clay lining 0.03m thick also adhered to the interior of the oven wall. Internally, a deposit of orange compact baked clay and chalk, 0.02m thick was laid directly on the foundation flint layer and formed the primary oven floor, succeeded by a secondary floor of black compact burnt chalk and clay 0.02m thick. Medieval pottery dated to AD 1200–1250 was recovered from the primary oven deposit indicating its later phase of construction (of Phase 3).

The subsequent fills of the structure (G4062) were varied, and included chalky deposits often remaining in lumps that appeared to be the result of demolition of parts of the superstructure. Localised to the oven interior was a mixed fill of burnt reddish clay and dark brown silty clay, with abundant chalk flecks, large flint nodules and two quern stone fragments. Some of this deposit may represent collapse of the upper dome of the oven. The uppermost sealing deposits up to 0.50m thick, consisted of more uniform dark brown silty clay with inclusions of flints, pottery, grains, pulses and marine shell. All the pottery recovered from these later deposits was similar in date and fabrics to the primary fills, presumably residual in nature. These fills can be interpreted as the deliberate backfilling of the structure after abandonment, possibly with waste material from the clearance of middens or waste dumps in the nearby fields.

This sunken-featured structure is unique on the site, both in its size and the central position of the oven, in most other structures located in the corner, but this was almost certainly a later addition to a building that did not originally contain one. Access was probably from the trackway, by the steps in the south-east corner, although a patch of burning on the floor was immediately in front of this. This was probably formed from a short *ad hoc* episode of burning rather than being a hearth proper, so may not have impeded access. Little other structural evidence apart from the oven was discernible, the postholes being rather randomly disposed. The oven itself was similar in construction to those found in other buildings, suggesting a similar function, with the working area in the southern half of the sunken area. Why the oven was set centrally to the structure, rather in one corner is uncertain. Another variation was the apparent lack of the side hearth, found adjacent to the oven in most Type 1 structures. Unusually, for what would appear to be a unique structure, it is remarkably similar to one excavated near Gravesend (see discussion).

Building SFB 44 (Fig. 198) was situated 12.5m east of SFB 45 and in an analogous stratigraphic position with respect to the underlying prehistoric ditch (G4006). It was situated at the far southern end of Trackway 29, its east end aligned with the projected alignment of its eastern ditch (G4020), but this was never clearly identified this far south and no exact relationship was determined. The structure consisted of a

steep-sided sub-rectangular cut (G4056) 5.50–5.9m long, 3.7m wide at maximum and 1.10m deep, with a flat base and aligned perpendicular to Trackway 35 (Plates 273–277). A contiguous linear cut extended south from near the south-east corner of the main cut, its western side virtually halfway along the length of the building (Plates 278 and 280). This north-south aligned section was *c.* 2m wide, its eastern side about 1.4m long, the western side much less. It then turned south-west, becoming progressively narrower and terminating in a rounded end about 2.3m further on. The base of this cut formed a stepped descent, with at least 5 steps present, towards the base of the main area, where it was flanked by two flint packed postholes (S4843 and S4845 about 0.3m in diameter) aligned with the southern edge of the main cut. At the base of the steps was deeper area (S4904) and the threshold between this pit and the postholes was a raised lip of natural subsoil before a final narrow step that dropped to the main floor of the building. Pottery recovered from this area was dated to AD 1075–1175 along with an unidentified iron object (FN 4.42). The western side of the structure had a shallow ledge along its base (unfortunately not recorded but observable in photographs) about 0.50m wide and of shallow depth while at the base of the eastern side of the main cut, at its northern corner, there was a small recess. It was unclear whether this was part of the structure or a natural variation in the subsoil. A similar recess was recorded near the south-western corner. The north side of the cut had been lined with a clunch-built wall (S4851) 0.29m wide, 4.80m long and 0.40m in height. Abutting this to the south was a possible bench (S4848) 0.40m wide, 1.78m long and 0.31m in height consisting of clunch embedded with large flint nodules (Plate 279).

Apart from four variously sized patches of burnt or scorched chalk on the floor in the western half, 47 stakeholes, two postholes and a pit (S4847) were cut into the base, all internal features that were not integral the superstructure. There were twenty-one stakeholes (S4854–S4875) on the west side of the floor area with the majority forming a band in an east to west alignment from the western side of the structure to the position of a posthole (S4846) representing an internal partition. A second cluster of twenty four stakeholes (S4876–S4900) situated 1.36m east of this posthole were more randomly distributed near the north-east corner of the building, the majority confined as a 1m diameter cluster just south of another, smaller posthole (S4820). The postholes themselves appeared to be randomly located within the interior and were otherwise unremarkable. The pit (S4847) *c.* 0.50m in diameter and 0.23m deep, with a steep sided profile and flat base located in the north-west corner and containing a dark blackish brown ash which spilled out on to the base of the structure. It yielded a fruitful assemblage of oyster and mussel shell, avian shell and snail shell, but no datable material. Unusually high concentrations of cereal were found in this deposit indicating food preparation. These were mainly of barley though oat, rye and threshing wheat were also present as well as a variety of weed taxa. This deposit can be presumed to derive from occupation within the structure (see below).

The backfills (G4058) within the structure (1.10m thick) consisted of a primary fill of a mottled mix of mid and very light yellowish brown clay silt up to 0.30m thick with

chalk lumps; this might represent a collapsed clunch wall. This deposit was derived from the north side of the building where it had been in-filled, indicated by the steep tip line. Three variously coloured deposits of clay silt formed the remainder of the backfill. A relatively large assemblage of medieval pottery sherds, animal bone, tile and a copper alloy stud (FN 4.35) and iron nail (FN 4.44) were recovered from these deposits. Small quantities of daub, grain, mussel and avian eggshell were found in samples. The material, which is indicative of deliberate backfill probably dates to the later twelfth century, at the end of Phase 2 or early into Phase 3.

This is another relatively unusual structure, of greater depth than many, with a very obvious stepped access ramp descending to the floor on the south side, with two posts marking the doorframe at the base. There was no evidence for the form of the superstructure, but the position of the posts correlated with the edge of the main sunken area, suggesting that the above ground wall, probably constructed of clunch, was near this line. The access ramp would therefore have been external to the structure and uncovered, explaining the pit at the base of the steps acting as a sump or soakaway to drain rainwater. This and the adjacent raised threshold would have prevented flooding of the structure. Similar raised or inserted thresholds are indicated in some of the other structures including the underground storage chambers on Plateau 6 (G6048).

Unlike SFB 46 there were no ovens or obvious hearths within the building although the burnt floor areas may represent the location of braziers or simple fires on the base. Residues in the pit may derive partly from these fires. Activity within is demonstrated by the stakeholes and associated postholes, while the bench on the north side indicates internal furniture for the inhabitants. The clunch wall against the north face was probably found necessary as support for the relatively un-compacted nature of the fill of the pre-existing ditch cut through by the long exposed face. Although there were no obvious occupation deposits across the entire floor area, the fill of pit S4847 suggests habitation; the presence of eggshells is a common indicator. The fill which spilled out of the pit onto the floor may have been more extensive. These factors, as well as associated refuse pits, give a strong impression that this building was partly used for habitation, or at least was occupied for protracted periods. It is unclear whether the obviously domestic nature of the refuse within its main backfill derives from its occupation, or from elsewhere in the vicinity (see discussion). If, as seems probable, the structure was related to SFB 45, then it also may have been used for food processing/storage, perhaps preparing grain, found in relative abundance in pit S4847, dough or other material to be baked in SFB 45, which was obviously primarily related to production, at least in its second phase of use.

Six other features within 7m of the structure were probably related but not all could be dated. Three pits and a possible post-hole were situated to the west, the pits mostly of circular or sub-rectangular shape no more than 2m across and very shallow, although the full extent of one was not determined. Two of these features contained medieval pot sherds dated to AD 1050–1175 and apart from the posthole

were probably the truncated bases of refuse pits. Just to the south-east of SFB 44 were two post-holes 1.2m apart from their centres aligned north-south. Both were of a similar shape and size; circular and about 0.30m diameter, with sterile fills.

Sub-phase 2c: SFB 43 (Fig. 199)

This structure cut the ditch of Enclosure 46 at its extreme south-west corner, may be of a slightly later sub-phase though this was not evident in the pottery dating. The building consisted of a sub-rectangular cut (G4053), 3.40m wide at maximum and 0.75m deep with steep sides and flat base (Plates 281 and 282). The cut, which was squarely shaped at its western end was somewhat bulbous on its southern edge to the east, but this may be exaggerated due to overcutting in the field as its upper edge was particularly difficult to define. The cut was precisely aligned longitudinally with the southern side of the enclosure with its north edge just inside the circuit. An extension to the cut in its north-east corner, 1m wide and 0.75m long northward had a triple stepped base leading down to the floor level, and represented the entrance.

The western edge of the structure had a shallow ledge c. 2.40m long, with a width of 0.50m and depth of 0.20m. The function of this ledge is uncertain, although in places it was covered with a clunch lining (below). Adjacent to this internally, two distinct sub-rectangular, steep sided, flat-based cuts had been made into the base of the main cut. The southern basal cut, just inset from the southern side was 0.80m wide, 1.08m long and 0.20m deep. To the north was another rectangular cut 1m wide, 1.50m long and 0.10m deep. The space produced by the southern cut was lined up to ground level by a clunch-built wall (S4853) 0.23–0.45m thick, erected off the natural subsoil and lining the south and west end of the main sunken area. It turned east to form a partition between the two basal cuts. An additional clunch-built wall along the edge of the northern basal cut created a further partition between the central cut and the northern side of the structure forming a narrow space 0.24m wide that extended out from the west end about the same distance. Three slightly deeper compartments were thus formed at the western end of the building.

The central compartment (S4901) contained a pad of burnt flints interspersed with seashell, silt and powdered chalk forming the base of a heavily worn hearth or oven contained within the clunch walls and directly overlying the natural subsoil base. This 0.1m thick deposit may have been partially sealed by the clunch walls. One sherd of medieval pottery dated to AD 1100–1200 and a quern stone fragment (FN 4.29) were also recovered as well as large quantities of marine shell predominately mussel, but also oyster, cockle and winkle. The southern compartment (S4368) exhibited no sign of burning on its base, but initial fills within it were of silty clay rich in charcoal. No other artefactual or biological material was present however, and it seems likely that this compartment held a brazier or similar above the ground heated element. The only other feature recorded internally was an isolated posthole (S4800), located west of centre in the base of the structure with a diameter of approximately 0.55m and a depth of 0.40m.

A very dark brown silt layer with abundant charcoal (G4054) 0.04m thick covered some of the base of the cut and is likely to partially represent rake-out from the hearth/oven and other occupation residue. Mixed in with the deposit were fragments of daub and pottery dated to AD 1050–1175. Marine shell including *scrobicularia* (Peppery Furrow Shell, not normally considered edible), seeds and grain were also recovered from environmental samples. A sequence of variously composed fills (G4055) 0.75m thick filled the remainder of the structure and yielded a relatively substantial assemblage of medieval pottery of the same date range as that from the lower fills, degraded iron fragments (FN 4.15, FN 4.9006–4.9008), an iron knife (FN 4.21) and nail (FN 4.23), a copper fitting (FN 4.49), a fragment of worked stone (FN 4.22), marine shell and metalworking residues all suggestive of refuse disposal.

This Type 2 structure is redolent of the Type 1 structures, with their compartmentalised end containing round oven and adjacent hearth, but in this case, there were three compartments, although one was relatively minor, and no circular oven was obviously present, although there was a smaller hearth or rectangular oven in the central compartment. The posthole (S4800) on the longitudinal axis may have been a roof support but was very close to the front of the hearth, and may compare with those found in some of the Type 1 structures. The building may be a variant or perhaps an early example of the more common form and probably performed the same functions, although a more specialised use is perhaps possible.

Site 12

Site 12 comprised the northernmost of a string of enclosures forming ribbon-development along the west side of Trackway 30 (Fig. 200), now defined by Seamark Road, from Plateau 4 southward to the southern area of Plateau 6. Evidence recorded during the cutting of the pipeline trench suggests that some of the rectangular features in the cropmark complex at Monkton Road Farm were of similar date (Site 21 below) and it seems likely that such development extended all the way along this route to the medieval settlement glimpsed at Brooksend. Site 12 was similar to the enclosures to the east, with relatively minimal signs of activity or occupation and consisted of two associated enclosures and two sunken-featured structures (Plate 283). There were few, if any other features.

Sub-phase 2a: Enclosure 43 and SFB 41

Probably the earliest enclosure, to the north, was delineated by two discontinuous ditch segments (Enclosure 43), which partially defined an area about 33m north-south, extending into the site by about 33.6m at maximum. The northern ditch segment, 23.7m long was about 1.20m wide and 0.12m deep, the western 1.30m wide, 0.21m deep and 33m long; profiles were similar with gradually sloping sides and flat base. The south terminal of the latter was bulbous, 1.86m wide. The segments were separated by a gap of just over 1m at the north-west corner. The southern side may originally have been open, but was bounded by Enclosure 42; the

sequence of the two enclosures is open to debate and further discussed below. The fills of the ditches consisted of an orange brown clay silt, completely sterile apart from a few residual prehistoric sherds. Virtually no features were found within the enclosed area, apart from an east-west aligned linear feature in the north-eastern quadrant (G4003). This was 5.35m long with an irregular shallow profile 0.34m wide and only 0.07m deep. The fill was similar to the main ditches. In addition, the western ditch segment was cut by an isolated pit (G4101), just over 1m in diameter and 0.18m deep. Neither feature produced any dating evidence.

Near the southern end of the space within Enclosure 43, about 20m east of its western ditch was a sub-rectangular sunken-featured structure (SFB 41; G4046), aligned closely but not exactly with the enclosure (Fig. 201). This comprised a cut 3.80m wide (but slightly wider at the northern end (4.2m), 5.80m long and 0.76m deep with steep cut sides and flat base (Plates 284–286). The feature was very cleanly cut into solid chalk with sharp corners. Off the western side of this cut, about 1m from its north side, was a 2.80m long and shallow (0.18m) scoop (S4535), slightly bulbous in plan, 1.30m wide at maximum, with gradually sloping sides and a regular even base. Two postholes (S4539 and S4541) were at the base of this scoop on its northern and southern edges, just over 1m apart from their centres. They were set about 0.5m out from the edge of the main cut. At the eastern extent of this scoop, just beyond the postholes, the base rose to form a narrow ledge or threshold, c. 0.40m wide. Beyond the ledge a sequence of two steep steps cut into the chalk subsoil descended down to the structure's flat base. A protruding bench had been carved as part of the main cut, extending from the chalk edge immediately south of the steps along the western side of the cut; this was 1.70m long and 0.50m wide and about 0.5m high. The bench appeared to have arm rests carved on its ends, giving it an uncanny resemblance to a modern day sofa (Plate 287). Three distinct areas of burning were located on the base of the cut, two consisting of burnt patches, one located just east of the southern end of the bench whilst the other patch was 1.75m to its east. The third consisted of a deposit of ash and charcoal containing grain (S4562), 0.54m wide, 0.80m long and 0.02m thick, located in the north-west corner of the structure. Immediately north of the steps was an east to west aligned clunch-built wall (G4049), 1m long and 0.3m wide, extending from the edge of the cut. A similar but shorter wall extended from the north leaving a gap 0.25m wide between the ends of the two, suggesting an entrance, thus forming a small compartment in the corner, sealing the burnt deposit and indicating the walls were a later insertion (Plate 288). Both walls, which were intact up to a height of between 0.32m and 0.52m, consisted of a clunch and flint mix, with evidence that the faces had been rendered smooth with a clunch solution or wash. Four additional postholes which had no obvious structural function were located on the base. Three may have had some relation to the scorch marks as they were located in the southern half of the structure. The fourth posthole (S4483) was in the north-east corner but some way in from the edge.

A sequence of deposits (G4050) filled the main cut of the structure, with generally brown silty clays, fairly uniform but with abundant chalk flecking, yielding a few sherds of residual Roman pottery and some medieval sherds dated to between AD

1050 and 1225. These fills have been interpreted as the deliberate backfilling of the structure after its abandonment, particularly as the structure was subsequently cut by the later ditch of Enclosure 42 (below).

This structure, with its clear entrance way, possible storage compartment and bench would seem to be domestic in function, but there was little evidence for occupation residues apart from some ash from a fire or brazier. An alternative agricultural function therefore remains a possibility, but seems unlikely with the clearly domestic accoutrements such as the bench. The position of the doorframe postholes clearly suggests that the walls of the superstructure were set at least 0.5m out from the edge of the sunken area, at least along that side. The raised threshold, probably to help keep out rainwater has also been recorded in some other buildings.

Sub-phase 2b: Enclosure 42 and SFB 42

Enclosure 42 (Fig. 200) was defined by a continuous ditch enclosing an area 46m north-south and extending into the area by about 31m with the eastern side outside the site. A spur extended to the west of the enclosure from its south-west corner for 12m. The ditch had an average width of 1.78m and depth of 0.70m, with steep sides and flat bottom. The spur was insubstantial by comparison, only 0.56m wide and 0.13m deep where investigated. The ditch contained a homogenous silty clay containing chalk fragments derived from the ditch edge particularly towards the base and the ubiquitous marine shell but few artefacts. One sherd of medieval pottery (1100–1225) was recovered as well as residual Roman and prehistoric material. The northern ditch clearly cut through the backfill of SFB 41 (above). The internal area of this enclosure was completely devoid of features apart from one small undated pit G4077, but a possible sunken feature building (SFB 42) was cut into the south-west corner of the enclosure. The ‘spur’ at the south-west corner may have originally been more extensive, possibly marking a further land division or possibly related to the putative track (Trackway 35) just to the south, sandwiched between this enclosure and Enclosure 44 to the south (Site 13 below).

SFB 42 was a peculiar feature directly aligned longitudinally with, and cutting the line of, the southern ditch of Enclosure 42, about 1.8m from the enclosure corner (Fig. 202). This was only sample excavated in two quadrants, partly because of its size but also because the possibility of it being some form of structure was not recognised at the time. It consisted of a sub-rectangular cut (G4051) 8m long, c. 3.30m wide tapering slightly towards the west and 1.36m deep with steep cut sides and a flat base (Plate 289). The cut was filled with relatively uniform brownish clay silts, although there was a primary layer of redeposited chalk, which yielded a few medieval pottery sherds dated to AD 1200–1250 and a copper alloy object (FN 4.36). No occupation layers were present and no mode of access could be determined.

Although at first sight nothing about this feature appears structural and it was originally considered to be some form of quarry, its position, aligned with and cutting the enclosure ditch near the enclosure corner is remarkably similar to the

location of many other of the sunken-featured structures found on the site. It is also similar in form to the more featureless of them, although longer and deeper than most. However, it is also possible that it represents some form of collapsed underground storage facility, perhaps accessed by wooden steps, much like the feature on Plateau 6 (G6048) but without the two chambers. This interpretation is possibly supported by the chalky primary fill which may indicate a collapsed roof, although it may have just as well have eroded from the edges. A more clear interpretation may never be possible. As far as phasing is concerned, the few sherds of pottery suggest that this feature was of Phase 3, rather than 2a.

Enclosure 43, the northernmost found along Seamark Road, was originally, quite logically considered to be an extension of Enclosure 42, described above, as it appears to be constructed off the northern end of that enclosure. However there are two good reasons for suggesting that Enclosure 43 predated Enclosure 42. Firstly the latter progression would indicate that SFB 41 was the earliest feature in this complex, cut by the Enclosure 42 ditch, and therefore isolated and not related to any enclosure. While this is possible, few of the other structures found were isolated in this way, nearly always being associated with enclosures or driveway ditches. Enclosure 43 would therefore have had an open southern side, unless this had been completely removed by erosion which seems improbable. However, at least three enclosures to the south also have this facet where the possibility of a completely truncated barrier completing the circuit (discussed below) which makes the possibility of this sequence more likely, with Enclosure 43 and SFB 41 belonging to the same primary phase.

Little in the way of dating evidence was recovered from any of these features and it is probable that the earlier enclosure was roughly coeval with those to the west (Phase 2), particularly Enclosure 47, as the northern edges of both align precisely thus respecting some form of property boundary that is otherwise unrepresented. Enclosure 43 and its associated structure were only slightly later in the Phase 2 sequence. Backfills of these features, particularly SFB 42, however did contain some slightly later pottery, extending into the thirteenth century, but this would not rule out a primarily Phase 2 period for their use, even though SFB 42 could date to the early part of Phase 3. The lack of internal features is redolent of the other early enclosures that may have primarily been related to a pastoral economy.

Site 13

Site 13 and the other areas of activity to the south and south-west appear to be generally later than most, if not all the medieval features to the north. Although earlier pottery was present, it was in smaller amounts and often likely to be residual. However, it does indicate some activity of the earlier period in this area. The earlier features (Fig. 203), likely to date to Phase 3 or earlier consisted of two contiguous enclosures (44 and 51), with a later development of Phase 4 agglomerating within a smaller enclosure by the trackway (Enclosure 55). The concentration of features here,

many of a domestic character, indicates a definite settlement site, probably a farmstead.

Phase 3: Enclosures 44 and 51

Enclosure 44 (Fig. 203) was an extensive ditched enclosure or field, 12.5m south of Enclosure 42, that spanned Plateaus 4 and 5 and which was integral with a smaller enclosure (Enclosure 51) in its south-western corner. The area enclosed was not regular, although roughly sub-rectangular with an apparently mostly open side to the south (see Enclosure 43 above for a similar layout); its north side was aligned near east-west, its western side approximately north-east/south-west and its shorter south side about WNW-ESE. These boundaries appear to be influenced by the alignment of Seamark Road which swings from a north-south to a more north-east/south-westerly alignment at this point, thus the northern side was perpendicular to the trackway, the western side parallel and the southern side almost perpendicular. The south side also seems to have been influenced by the location of adjacent enclosures (such as Enclosure 52 to the south and perhaps Enclosure 56 much further west). The area so enclosed was between 130m and 160m north-east/south-west and at least 115m wide. The ditch of this enclosure was relatively insubstantial, in Plateau 4 (G4005) consisting of a linear cut on an east to west alignment, 80m long which terminated at its eastern end some distance away from the road, and which turned south-west at its west end for a further 12.50m before terminating. The alignment was continued on Plateau 5 (G5076), leaving a gap of 22m. The latter ditch was continuous forming another 'L'-shape, 95m north-east to south-west with another 25m forming the extant south side. The ditch averaged c. 0.8m wide and 0.20m deep with a U-shaped profile and contained a uniform fill containing residual worked flint, but otherwise sterile, suggesting that it backfilled gradually through weathering action.

One isolated large pit (G4080) was located outside the Enclosure 44, 50m to the west of the southern terminal of G4005. This feature was 2.40m in diameter and 1.10m deep with steep sides and a flat base. The primary fill consisted of dark brown silt 0.40m thick containing abundant quantities of oyster shell with lesser amounts of cockle, whelk, mussel, *macoma* (a type of saltwater clam) and barnacle. This was sealed by a deposit of loose chalk 0.60m thick. The upper silty clay fills were sterile apart from a probably residual Roman sherd and an iron nail. Although no medieval pottery was recovered, it seems likely that the feature was of this date rather than of the Roman period, and appears to be a midden pit disposing of an interesting assemblage of marine shell.

Enclosure 51 consisted of four ditch segments forming a rectilinear area aligned north-east to south-west set in the south-west corner of Enclosure 44; it was 43m long and just under 30m wide at maximum. Ditch G5076 of Enclosure 44 made up the west and south extent while the east and north sides consisted two 'L'-shaped ditches and a further short segment at the south (G5154 and G5178) creating a discontinuous circuit. The northern ditch extended from the west side of Enclosure

44 (although not connecting with it) and curved to the south at its eastern end, forming an entrance into the enclosure that was 6.2m wide. The southern side of the access was formed by the re-entrant northern end of G5154. All the ditches were shallow in nature with U-shaped profiles that averaged 0.9m wide and 0.25m deep. The fills, similar to the ditch of Enclosure 44 yielded slightly more artefactual evidence including pottery (of AD 1200–1350 as well as some earlier material), with carbon, oyster shell, mussel, whelk and snail as well as residual worked flint. The enclosure probably represents an early phase of medieval activity in the area, probably related to a pastoral economy (see discussion). The interior of much of Enclosure 44 and all of Enclosure 51 was devoid of features, although the former did contain various later features within its orbit by Seamark Road (see below). An isolated sunken-featured structure (SFB 48) did however cut one of the Enclosure 51 ditches. Both enclosures are presumed to have originated in Phase 3, although an earlier origin is not impossible.

SFB 48 (Fig. 204)

SFB 48 consisted of a sub-rectangular cut (G5077) which cut the northern ditch of Enclosure 51 (G5178), just over 1m from the north-western corner of the enclosure. The cut, which had quite rounded corners was aligned with the ditch (roughly north-west/south-east), but cut slightly north of its southern side and immediately aligned with the end of the ditch. The feature was only c. 3.6m long, 2.1m wide and 0.2m deep with steep sides and a flat but irregular base. Located within the north-west corner the fragmentary remains of a possible hearth or oven, 1.2m wide (S6678) was composed of various deposits 0.24m thick comprising dark clay silt with sub-angular flint, carbon, daub and fragmented quern stone. A light grey brown clay silt with very abundant chalk inclusions 0.1m thick (G5156) sealed the hearth deposit. No finds were present although burnt flint was common and samples produced only minute quantities of charcoal, grain and seeds. This material may have represented demolition of a clunch structure over the base that could have formed an oven superstructure, but this was not certain; it is more likely that the remains represented a hearth. There was no other structural evidence. The remainder of the cut was filled by deposits of weathered silty clay 0.2m thick. None of these levels provided any closely datable material although the feature was obviously only slightly later in date than the surrounding ditches. This was one of the smallest sunken-featured structures identified with an internal area of only 7.6m². There was no definitive evidence to suggest that it contained an oven, similar to those found in Type 1 structures, although there was undoubtedly a hearth-like feature in one corner. Most of the Type 1 buildings that can be accurately measured were more than 1.5–2 times as large in terms of floor area as SFB 48, so it is unlikely to represent this type. Its size would probably preclude function as any sort of permanent residence (also perhaps indicated by the near total lack of occupation residues), and it is possible therefore that it represented a temporary shelter. Its isolation within the very corner of a field suggests that it was perhaps a shepherds hut.

Phases 3–4a: Enclosure 55 and associated features

Enclosure 55 (Fig. 203) was situated 53m south of Enclosure 42 within the north-east quadrant of Enclosure 44. The complex was only partially enclosed by a recut ditch on the north and west sides with clearly associated features extending further south than the semi-enclosed area. The eastern extent or form of the later enclosure ditches was never ascertained as this area was investigated during an earlier phase of work (the access road) before the character of the complex became known. However, the nature of the earlier work, east-west aligned trenching and subsequent strip, would indicate that the enclosure was only two sided, much like Enclosure 52 to the south, and open to the adjacent Trackway 30.²⁰ The area of activity represented was about 35m by 24m, aligned north-south.

The enclosure consisted of three intercutting inverted 'L'-shaped ditch segments that measured a maximum of 13m by 11m with enough of the earlier ditches surviving the recutting episodes to indicate the layout remained basically the same. A short segment of the earliest phase ditch (G5177) survived on an east-west alignment, just south of the later ditches, its presumed north-south section completely removed by the later recuts apart from a short fragment of possible southern terminal (G5131). It was just over 5.3m long with a rounded terminal on the east, 1.1m wide and 0.78m deep with a U-shaped profile. Initial recut (G5132) was almost completely removed by the latest ditch (G5133) only surviving along its north-south alignment and mostly cut away to the west. The final ditch in the sequence, which extended further east with its southern terminal corresponding with the earlier ditch termini, averaged 1.6m wide on its north-south section, although its east-west alignment was wider, c. 2m, and 0.7m deep with a flat bottomed 'V'-shaped profile. The cutting of the two later ditches thus had the effect of expanding the enclosed area slightly northward. All the ditches contained a similar fill of silty clay with chalk, mussel shell, carbon, animal bone and fragmented pottery, all of medieval date and suggestive of activity from c. AD 1225/50 to perhaps AD 1300 or just after. Most of this material was retrieved from the final recut of the ditch. Numerous features, including four sunken-featured structures (SFB 55 and SFB 59–61) attesting to occupation can be associated with this enclosure, although not all provided datable evidence. One certain and two possible structures were found south of the enclosed area, while another structure (SFB 55) cut the enclosure ditch.

SFB 59 (Figs. 205–206)

This was the largest and most complex of the buildings, located at the extreme southern end of the area and set near central to the long axis of the zone of activity. It consisted of a large roughly sub-rectangular cut (G5119) aligned approximately

²⁰ Features in this complex were sealed by the fill of an erosion hollow, originally thought to be a quarry, which partially extended into the access road. This deposit was initially investigated with two machine cut trenches. No features were located, in particular no north-south aligned ditch which would have marked the east side of the enclosure. As this material was not completely stripped in the access road, the eastern limit of the northern ditches was never ascertained, although this position can be inferred quite closely.

north-east to south-west, c. 6.4m long in total, 3.3m wide and of varying depth (max 0.58m). The cut was stepped around much of its perimeter, the bench about 0.5m wide (Plates 290 and 291). In profile, this was cut near vertical, 0.4m deep with a flat top surface, and bordered most of the east side, all of the south side and the southern 2m of the west side. It was not extant north of this point, although a slight linear depression along the edge further north may indicate its original extent. The deeper floor area of the structure was therefore restricted to a 2m wide zone in the southern half of the building, but extended for most of its length north-south (c. 4.4m). The northern side of the main cut bulged outwards on the west side and consisted of a gradually declining slope, presumably forming a ramped entrance leading down to a flat uneven base. A clunch-built wall (G5176) was constructed on the benched area, against the edge of the cut, 0.5m wide and 0.4m deep and composed of very hard compacted material.

Ten postholes (G5174) cut the base of the structure some along the inward side of the clunch wall, three fairly evenly spaced along the longitudinal axis of the building, and two near the base of the ramped entrance although these were too close together to form a doorway. The postholes were of a similar shape and size between 0.18 and 0.22m in diameter and from 0.13 to 0.24m deep with 'U'-shaped profiles. All contained a similar fill of silty clay, usually sterile, although one (S15314) on the south-east edge of the floor area contained over 20 sherds of medieval pottery which was otherwise unremarkable, but the sherds could represent a buried vessel similar to some found nearby (below). The backfill of the building (G5120) consisted of a primary trample deposit (c15231) of clay silt with carbon, mussel shell, pottery and a copper wire bracelet (FN 5.35), superseded by a mixed deposit of compacted chalk, clay silt with fragmented pottery and burnt flint inclusions, 0.67m thick. This material appeared to represent deliberate backfill and contained more pottery and a residual, possibly early Neolithic flint blade (FN 5.114). Most of the pottery from the deposits in the structure was similar and comparable to the ceramics from the enclosure ditch.

A north-south aligned gulley (G5118) 3.7m long, 0.5m wide and 0.33m deep with a steep sided U-shaped profile was situated adjacent to and aligned with, the east side of SFB 59. Its function is uncertain, but its location suggests that it may have provided drainage. It was cut by a cellared structure (G5121), undoubtedly associated with SFB. It consisted of a large sub-circular pit to the east with a contiguous linear stepped entrance, accessing the pit from the west and located directly adjacent to the south side of the sunken area (Plate 294). The pit measured 1.8m wide, 2.4m long and 2.05m deep with vertical or undercutting sides and a flat base. The linear stepped entrance extended for 3m to the north-west, was 1.44m wide at maximum and consisted of a steep-sided, flat-based cut. The base descended in three steps, no greater than 0.8m wide, with successive depths of 0.78m, 1.02m and 1.31m from the north-west end. The primary fill of the feature (0.28m thick) was concentrated in the base of the main pit and consisted of clay silt with mussel, oyster shell, whelk, barnacles, amphibian bone, a few mammal bones and pottery, sealed by a weathered fill of layered clay silt with chalk wash, animal bone, pottery and

iron nails deposited throughout. The presence of large quantities of marine shell within the primary fill may represent a final deposit of refuse before abandonment, or the remains of a trampled floor deposit. The final phase of backfill appeared to be a deliberate dump. All the pottery was of thirteenth century date. It is possible that much of this feature was originally underground, similar to other features in the area (see for example Structure 55 below).

Immediately to the north-east of the sunken area were two sub-circular cuts (G5079) 0.6m apart, between 0.36m and 0.48m in diameter and 0.2m deep with 'U'-shaped profiles (Plates 292 and 293). The first feature (S15132) contained two fragmented pottery bases located one above the other, sealed by a deposit of clay silt. The second feature (S15148) contained the base of another vessel located at the bottom of the cut beneath an inverted second pottery base that had been placed on it. A third sub-circular cut just to the east (S15162) was 0.26m in diameter and 0.14m deep, and contained a fill of clay silt with fragmented pottery and iron objects. This probably was related to the other two features. Some of the pots from this assemblage were earlier than the general corpus from this site but the features are unlikely to be earlier, the pots probably being old when utilised in this fashion. Their position in relation to the building strongly suggests an association and they may even have been within its superstructure.

The two features containing large portions of pottery vessels were very similar to those found on Plateau 1 (G1230 on Site 7), also probably within a sunken structure and perhaps originally formed for similar functions. However, here there would appear to be the remains of four vessels, all incomplete. The pots could have been used for liquid storage, or in this case they might more fancifully represent a ritual or superstitious act of deposition such as witch jars that contained votive offerings to ward off bad spirits, as has been suggested for other examples (Cotter 2014, 551; Merrifield 1987, 119–121).

SFB 59 was possibly the primary building, positioned at one end, but central to the spread of activity to the north to which its entrance faced. The sunken part of the structure was unusual in having a well-defined clunch-built wall around much of its perimeter. A similar structure was evident in SFB 53 to the south. It is likely that the bench or wall originally extended around most of the east, west and south sides of the sunken area, but had been robbed away or degraded along the north-west quadrant. There are two possible interpretations for this internal structure, either it represents a bench, or it was the footings for part of the superstructure; the latter interpretation seems unlikely since any superstructure could have just as successfully been bedded on the natural surface. Benches have been found in other structures but are usually discrete, not around the entire perimeter (but see SFB 53). The surrounding features, drain, cellar and ground-set pots which were likely to have been under cover, suggest the possibility that all or some were encompassed by the superstructure of the building. Certainly, unless the bench was in fact a wall foundation there would have been no room for a surrounding wall close to the sunken area. It is suggested therefore that all these features were within a much

larger structure, the sunken area forming only one part. If so, the building would have been at least 8m by 5m in extent.

There was no evidence for a hearth or oven in this structure, which may indicate that it served as a shelter for livestock or temporary accommodation. However, the underground storage facility to its south hints at a more complex function, while the three posts on its longitudinal axis probably acted as roof support and would have restricted space for the purposes of keeping animals making some form of domestic residence or specialised agricultural building more likely. A domestic structure seems even more possible when adjacent features are considered, one of these being a garderobe or cess-tank (below), and the associated pottery assemblage, which was mostly of domestic types such as cooking pots and jugs although some of this material may have been deposited after the structure had been abandoned.

Features associated with SFB 59 (Figs. 205–206)

A number of features were situated close by this structure and may be directly associated with its occupation. A large sub-rectangular pit (G5078) was situated about 6m north-west of SFB 59. The pit, 1.7m wide, 1.8m long and 2.1m deep was aligned in similar manner to the structure with a squared cylindrical profile that undercut to the south-east. On this side was a small square recess, 0.3m across, extending from the upper edge and forming a slot down most of the side of the feature, getting less indented and pronounced towards the base. At the surface around this cut was a small rammed clunch structure (S15129), 0.7m wide and 0.92m long, placed in a cut 0.15m deep.

The initial fill of the pit consisted of chalk wash material 0.6m thick, with daub, residual Roman tile and worked flint, with other finds including an iron nail (FN 5.125 6) and a hammerstone (FN 5.125). Various successive deposits of green grey clay silt 0.5m thick yielded charcoal, burnt clay, a disarticulated rodent skeleton, a horse skull and medieval pottery, all sealed by a 0.1m thick layer of weathered chalk. A heavily butchered horse skeleton had been thrown on top of this layer, consisting of a skull, articulated vertebrae, pelvis and partial ribs, but no legs (Plate 295). This was sealed by deposits of clay silt and organic green silt 0.8m thick, with pottery, fragmented quern stone (FN 5.9033, FN 5.9037), amphibian remains, mussel shell, grain, pulses, egg shell, digested fish remains and charcoal inclusions. The amphibian remains, comprising most of the assemblage from the entire site, were of toads and frogs presumably attracted to the pit by the conditions and trapped. Above this deposit was a second chalk fill 0.16m thick, followed by a more uniform silty clay with domestic and agricultural refuse, including a further quern fragment (FN 5.92). The pottery was mostly of thirteenth century date with a few possibly earlier medieval pieces. The organic nature of the material within the fills, and the fragmented fish bone, indicates that this feature represented a cesspit or garderobe, successive obnoxious fills sealed with chalk dumps, and intermittently used for the disposal of refuse, including the unfortunate, unceremoniously dumped legless horse. The clunch pad located on the south-east pit edge was obviously related to the

slot, possibly providing a firmer place to stand, or squat, with the peripheral slot forming the ingress point, while the remainder of the pit was probably planked over. Structure 54 consisted of three post-holes (G5126) just to the north of the cess-pit aligned north-west/south-east at similar intervals and forming a line 2.5m long that may have been a short fence forming a discreet barrier or windbreak between the cess pit and the rest of the occupation site that lay to the north-east.

Another significant feature was a large sub-circular cut (G5099; Fig. 203) about 9.5m to the north-east. It was 4.4m long and 3.8m wide at the top, with an irregular sloping profile narrowing to a vertical-sided round shaft about 1.0m in diameter at a depth of about 0.54m. The cut was excavated to a depth of 1.4m and then augured to 2.7m but no base was reached. The profile and depth of this feature are indicative of a well with an extensive erosion cone at the surface suggesting protracted use. The lower fills consisted mostly of redeposited chalk with some animal bone and small quantities of pottery suggesting deliberate backfill. The upper fills yielded a larger assemblage of medieval pottery (AD 1250–1350) indicating the casual discard of refuse if not deliberate backfilling.

Immediately south of the garderobe (G5078) was a partially excavated, large sub-circular pit (G5152) 4.4m long, *c.* 3.5m wide and 2.8m deep with near vertical sides and a flat base. It contained an initial layered fill of sandy silt with abundant chalk inclusions 0.2m thick, sealed by a mixed dump of silty clay with mussel shell and medieval pottery. Its function is unclear, its large size and steep sided nature indicative of storage, but a small chalk quarry remains another possible interpretation. The sterile nature of the primary fills suggests that the pit was backfilled gradually through weathering action before a deliberate infilling period. Most of the other features within the enclosure consisted of large circular or oval pits of uncertain original function (such as G1522) and shallower, more sub-rectangular features that could represent sunken featured structures. Some of the pits contained banded fills of sterile chalky wash or silt interleaved with deposits containing significant quantities of domestic waste, perhaps indicative of intermittent seasonal (summer?) occupation. Their size, up to 3m in diameter and depth of over a metre, with steep sided flat-based profiles, suggests they may have originally been used for storage, then for the dumping of refuse. These pits yielded assemblages of medieval pottery, with mussel shell, egg shell and amphibian bones as well as a partially articulated dog skeleton. About seven other smaller pits were scattered over the area but produced either little or no artefactual evidence or small assemblages of medieval pottery.

The potential structures (SFB 60 and 61, not illustrated) are now not strongly considered as buildings as they were particularly small and there was little, if any structural evidence although the location and shape of SFB 61 is suggestive of such a structure. They yielded pottery of AD 1225–1300.

Sub-phase 4b: SFB 55 (Fig. 207)

Structure SFB 55 (not fully excavated) cut the latest enclosure ditch (G5133) about 4.7m south of the corner of the enclosure. It cut into the west half of the ditch fills and was aligned roughly north-east/south-west with the ditch and consisted of a large irregular sub-rectangular cut (G5094) slightly over 4.0m long, c. 2.7m wide and 0.36m deep with gradually sloping sides and flat uneven base. There was a slight bulge of the edge in the north-western corner. The cut was filled by a uniform deposit containing medieval pottery (1225–1300), animal bone, mussel and whelk shell, an iron nail (FN 5.113), carbon inclusions and some poorly preserved grain. No hearth or oven or any other structural details were identified. This has been considered a Type 3 sunken-featured structure because of its size and location. The entrance might be represented by the bulge in the north-west corner. By the time it was cut, the enclosure ditch at this point must have been at least partially backfilled. However, although the structure possibly represents one of the latest features in this complex, the associated pottery assemblage did not reflect this.

All of the features within Enclosure 55 were sealed by a deposit of silty clay, mostly removed by machine, that had formed within an erosion hollow (G5106) matching the area of activity. Fills of two lowered areas within the complex (G5129, G5117) were cut by some of the features and may represent earlier phases of activity, but the fills were all relatively homogeneous and the eroded area (similar to others on Plateaus 1 and 2) can be considered as forming during the period of occupation and naturally filling with eroded subsoil after activity had ceased.

Site 14

Site 14 was a more dispersed collection of features, some of which did not appear to be directly associated with any enclosure although all were near the massive ditch of Enclosure 52 (Fig. 203). These included at least two sunken-featured structures, SFB 53 and SFB 54, the latter possibly slightly earlier than the other features, located between Enclosure 55 (Site 13) and Enclosure 52 which could be considered within field or Enclosure 44. Dating of most of the features was similar to that of Site 13, primarily Phase 4, although some may have derived or been in use towards the latter part of Phase 3

Phase 3/4: Early features

SFB 54 (Fig. 208)

This small structure was 35m south-west of the Enclosure 55 complex. It consisted of a sub-rectangular cut (G5092), rounded at its west end and c. 2.2m wide, 3.4m long and 0.55m deep, with curved sides that led to a sharp break and a flat base. This was cut in the centre by a posthole (S15130) 0.33m in diameter and 0.2m deep filled by light clay silt. The main backfill contained an assemblage of thirteenth century medieval pottery, about 90 sherds, some dated AD 1200–1250, and one sherd of residual Roman pottery. Other material included iron objects (FN 5.103, FN 5.104, FN 5.109), slag, marine shell, worked and burnt flint, the latter presumably residual.

Although this feature may just represent the base of a rubbish pit, it has been considered as a possible remnant of a sunken-featured building because of its size and the presence of the central posthole; it was very similar in shape, size and orientation to SFB 48. Against this argument, though not conclusive, is the isolated nature of the cut, as these buildings are more often related to enclosures or ditches, although there are some exceptions (SFB 53 below). However, it was perpendicular to Trackway 30, here represented by G5159, about 11.5m to the east which might be significant. Chronologically, the pottery would indicate that the feature probably originated towards the end of Phase 3, possibly backfilled during the earlier part of Phase 4.

Phase 4: Later features

SFB 53 (Fig. 209)

This was a much larger and more definite structure 20m further south-west, a large sub-rectangular cut (G5091) with maximum dimensions of about 14.4m long, 7.0m wide and 0.3m deep aligned north-east/south-west. Its south-eastern side was more irregular due to truncation and it was probably originally more regular in shape (Plates 296 and 297). The profile was steep sided with a sharp break to a flat uneven base, so that in places the depth was less. A sterile deposit (S15142) of hard silt and chalk, 0.2m thick at maximum, possibly deliberately compacted, covered much of the base of the cut.

A trench (G5165), on average about 1.2m wide and 0.25m deep with a vertical sided and flat-based profile, was cut along the base of the main cut on all of its west and north sides, in places cutting the internal 'levelling' deposit S15142. This cut also extended along the east side from the north-eastern corner for about 3.5m. The trench may have extended along most of the south side, but was increasingly eroded towards the south-east corner, where the remains were very shallow. The trench contained a mixed fill of silt and compacted chalk, probably a clunch-like material, containing a few sherds of pottery (AD 1225–1325) and an iron nail (FN 5.100).

Two opposed sub-rectangular cuts (S15109 and S15125) were located externally on the west and east sides of the building, aligned with its sides approximately 3.2m from the north end. They measured 1.4m and 2.2m long respectively, approximately 0.3m wide and 0.15m deep with a vertical sided, flat-based profile. They were filled with similar sterile, clunch-like material. Two small post-holes (S15103) were recorded inside the building adjacent to the western external cut. A few other post-holes (S15105) were also located near the centre of the sunken area, two aligned with its long axis. They measured between 0.1 and 0.52m in diameter and 0.1 to 0.26m deep with 'U'-shaped profiles. These also cut the internal floor deposit. No other internal features were identified although there was an oval depression (S15092) about 3m across in this area.

The remainder of the cut was filled with two deposits (G5166), together 0.25m thick which yielded a relatively substantial assemblage of medieval pottery (AD 1225–1325) and an assortment of iron objects (FN 5.98, FN 5.9039) including nails (FN 5.83, FN 5.95, FN 5.96, FN 5.97, FN 5.101) and the blade of a whittle tang knife (FN 5.99). Marine shell inclusions were common with small amounts of daub and burnt flint. Grain, pulses and seeds were present, with the overall composition of the deposit indicative of dumped refuse.

This structure was one of the largest found on the site, very different to the usual sunken-featured structure and rather carefully constructed. It was almost exactly twice as long as wide and the two linear clunch-filled cuts set externally in its northern half were positioned very precisely, their centres one third of the way down the length of the building. They represent the position of opposed doorways and appear to have been reinforced thresholds (Fig. 210). This arrangement brings to mind the hall and service room, divided by cross passage, layout common to many early medieval timber buildings (see Structure 47 above) although there was no obvious physical sign of a cross passage in the truncated remains, apart perhaps for two postholes, S15103. If these could be seen as parts of a flimsy internal partition for the cross-passage, they do not align particularly on the entrances. The clunch wall around the perimeter was similar to that in SFB 59 (above) and may originally have extended around the entire circuit, although the terminal on the eastern side of the building, which corresponds with the position of the entrance, may indicate that there was a gap here, but one was not discerned by the opposed portal. Again this feature probably represents a bench. The other postholes do not clearly represent any structural feature, although two were close to the centre on the longitudinal axis and could have been additional roof support, perhaps added later.

All these features appear to have cut a very compact internal deposit, which filled most of the remainder of the cut. Unfortunately the truncated nature of the remains, make an interpretation of this deposit difficult. It is likely this was a clunch floor levelling off the uneven base or forming a harder surface over the softer areas of more clayey natural. This suggests that structure saw two phases of use and that the compacted floor level and the clunch-built bench were secondary additions. Different to most others, this structure was isolated and may originally have been an agricultural building, big enough to be a barn or cowshed. If the latter this would explain the very irregular base of the feature. The entrance on the north-west side was much wider than an ordinary doorway. If the clunch step actually represents the width of the portal it was large enough for stock. Secondary use could have been domestic, with the floor re-laid and the bench inserted. However, there was little actual evidence for domestic occupation with no internal fires or hearths evident, although these may have been at a higher level and not survived, and unlike most it was not enclosed by or cutting an enclosure ditch, although just north of Enclosure 52 (below). The history of the structure may have been more complex as the careful nature of its construction in relation to dimensions and layout would suggest it was timber framed. However, such implied changes of function, from domestic to

agricultural use or vice versa have been suggested for some other rural medieval buildings.

A few rather undiagnostic features were found close to the western side of SFB 53 (G5113, G5115 and G5173) but all contained sterile fills and cannot be associated with the building apart from what their proximity, in an otherwise featureless area, might imply.

Enclosure 52 and associated features (Fig. 203)

This enclosure was located just 6.5m south-west of SFB 53 on an identical alignment, north-east to south-west. It was defined by a large ditch forming an inverted 'L'-shape (G5084), similar to Enclosures 43 and 55 to the north. The ditch, however was considerably larger, between 4.8 and 5.0m wide along most of its length (25m north-south and 27m east-west) and about 1.95m deep (Plate 298). The terminal ends of the cut were rounded and well-formed while its profile was mostly a flat-based or slightly rounded 'V'-shape, becoming less steeply inclined towards the top. The cut contained a number of fills, the basal levels mostly of sterile weathered chalk and chalky silts evenly divided in profile across the cut, which yielded a small corpus of medieval pottery (1200–1325). From about midway up the profile a sequence of bulk fills were more chalky in constitution and sterile, slanted predominantly from the interior of the enclosure. These were sealed by silty clays which contained pottery similar to the lowest fills, although there was some earlier material. Peg tile, animal bone and a number of iron nails were also recovered. The infill sequence of this particular ditch is discussed more fully below, but essentially it suggests that the enclosure possessed an internal bank that was deliberately levelled into the ditch.

This ditch formed a similar open-sided arrangement along Trackway 30 but was cut on a larger scale. There was no indication it was ever intended to completely surround an area as its terminals were well formed and showed no sign that it had been left incomplete. If the likely hollow way found just to the north does represent Trackway 30, it would have formed the eastern boundary of this and the other enclosures, as the eastern ditch terminals all respect an extrapolation of its line. Why at least four enclosures, at least initially, were left deliberately unbounded to the south, remains uncertain. One possibility, further discussed below, is that the remainder of the enclosure was represented by a non-surviving boundary. In the case of Enclosure 52, why the ditch was excavated to such a scale, which could be construed as defensive in some other context, also remains unclear, although a secondary function, of quarrying chalk is unlikely to be the primary reason. Whatever the imperative for its size, a communal effort would have been required for its excavation, which in turn may indicate that it functioned as a stock enclosure used by the general community.

To the south of its 'enclosed' area, as with Enclosure 55, were a number of features including two structures (SFB 49 and SFB 50), but the concentration was not as great, with little evidence of domestic occupation. The northern part of the enclosure was

completely devoid of discernible activity. A large roughly sub-rectangular erosion hollow (G5105) was aligned with the enclosure partly within its boundaries. It was 20m long, 18m wide and 0.27m deep at maximum with very gently sloping sides and a flat uneven base and contained a uniform fill of sterile silt clay, probably naturally redeposited subsoil. This was completely removed by machine, but few underlying features were revealed suggesting that the erosion was caused by the penning of animals. Two shallow ditch segments on the south-west corner of the hollow, may be related to this activity, particularly ditch S15080, about 5m long and aligned with the southern side of the hollow, but it contained a sterile fill. It could represent a fragment of a ditched southern side to the enclosure and resembles some of the ditch segments around similar enclosures on Plateau 1. The other segment, aligned at right-angles to the south was, 6m long, 1m wide and 0.15m deep and yielded thirteenth century pottery with shell, and iron objects also recovered. Alternatively, they could relate to the two structures situated immediately to the south-east, or form elements of this open ended enclosure which survived truncation.

Structure SFB 50 (Fig. 211) consisted of a sub-square pit (G5082) c. 6.3m long, 5.25m wide and c. 0.5m deep, aligned north-west to south-east. It was situated less than 2m north-east of SFB 49 (below) on a similar alignment and exactly juxtaposed (Plates 299 and 300). The cut had straight near vertical sides with a flat uneven base. The floor area appeared to be divided into two uneven compartments by an eroded wall of natural bedrock, 0.75m wide, 5m long and left standing to 0.15m high, aligned north-west to south-east. The slightly smaller north-west compartment of the building had a deeper linear area cut in the base, 2.7m long and 0.3m wide and 0.13m below the main area. The feature was backfilled with an initial weathered fill followed by a uniform deposit that yielded a considerable assemblage of medieval pottery dated to between AD 1250 to AD 1325/50, with some slightly earlier residual material, animal bone, marine shell, and iron nails (FN 5.9012, FN 5.9015, FN 5.9019). Pottery was also found in the deeper linear cut in the base and also contained mussel shell and two metal objects (FN 5.9013, FN 5.9014), copper alloy and iron respectively. Sampling produced a range of material including grain, pulses, seeds, marine shell and traces of fish bone. This material was probably dumped as refuse once the structure had gone out of use.

SFB 49 (Fig. 211) consisted of a sub-rectangular cut (G5081) about 5.5m long, 5m wide, and 0.39m deep aligned north-west/south-east, with rounded corners, straight near vertical sides and a flat but very uneven base, within which there was some evidence for deliberately cut flatter areas, particularly on the north-west side. The cut possibly included a ramped entrance on the south-east side, which extended down to the floor area and a possible step to the north, although both may be due to overcutting. The cut contained a fill of dark clay silt with a large and varied assemblage of material, comparable to that recovered from SFB 50, and possibly dumped at the same time. Included were pottery sherds of similar date to other assemblages from here, fired clay, animal bone, mixed shell and an assortment of iron objects, one identified as a hook (FN 5.9024), and nails (FN 5.9011, FN 5.9022,

FN 5.9025). Samples from the deposit contained frequent cereal grains, principally barley and bread-type wheat, pulses and what may have been cultivated vetch. Notably, the quantity of environmental evidence varied considerably in different areas of the deposit possibly indicating a heterogeneous origin.

Both these features, although containing no evidence for hearths or fires, or much of a structural nature are similar to a number of other structures on the site, designated Type 3. These particular examples have been considered simple sunken-featured buildings due to their size, the internal 'wall' in one and the ramped entrance in the other. Their adjacent position suggests they were in use at the same time, although their function remains uncertain, but use for storage seems quite likely considering the quantity of grain from their backfill. However, much of this material as well as the finds assemblages, was probably derived from elsewhere and not related to their use.

Site 15

Site 15 was a discrete area of activity comprising two interconnected enclosures (48 and 69; Fig. 212), one an addition to the other located 38m south-west of the quarry G5104. They were primarily associated with a single building (SFB 58), with few other features in the vicinity.

Phase 3: Enclosure 48

Enclosure 48 was the more northern and probably the earlier. It was defined by three ditch segments (G5069) that formed a rectangular enclosed area, aligned north-west/south-east, about 21m by 10m internally. The primary component was again a ditch of inverted L-shape in plan (see Enclosures 43, 55 and 52 above). The northern ditch length was complete, about 23m long, generally uniform apart from its east end, where it appeared to both narrow (to 0.6m at minimum) and kink northwards slightly around SFB 58 (below), before turning at a right-angle to the south for just over 1m where it terminated in a rounded butt-end. The contiguous western side survived for a length of 14m, before being cut away by the ditch of later Enclosure 69 to the south, but there were indications that this was where its original terminal had been, as the ditch widened appreciably to a maximum of c. 1.9m. This ditch extended slightly further south than the one representing the southern side of the enclosure (S5499), and an associated north-east/south-west aligned ditch fragment (S5463) near the site edge, that together would have formed the south-eastern corner of the enclosure, but this could not be clearly defined in plan. Both segments clearly terminated in rounded butt-ends. The enclosure so formed was therefore not completely continuous, with a gap on the south side of nearly 10m and on the east side of about 5.6m. The ditches were about 1.2m wide and 0.45m deep on average, with a consistent 'U'-shaped profile. They yielded very little dating evidence although a few medieval sherds suggested a date in the later twelfth to early thirteenth century. Some residual worked flint indicates that the ditch mostly contained material that had accumulated naturally through erosion and weathering,

so this pottery could be residual. Of the few other features that might be related to the enclosure, the largest was a sub-circular cut (G5068) 1.2m wide, 3.18m long and 0.8m deep with a steep sided 'U'-shaped profile, about 20m from the north side of the enclosure. It was probably a chalk quarry and had been cut away by the ditch of the later enclosure on the west, but contained no datable material. To the north was another sub-circular flat-based pit (G5184) about 3m in diameter but only 0.13m deep which yielded a few fragments of medieval pottery (1175–1250) but little else, although grain and pulses and a trace of slag were present in samples. The function of this feature remains unclear.

Phase 3 to Sub-phase 4a: Enclosure 69 and SFB 58

This enclosure would appear to have been an extension southwards of Enclosure 48, which increased the area southward by nearly 24m on the same alignment. The west and south sides of the new enclosure were defined by a continuous and more substantial ditch (Plate 301) that turned north-east from the south-east corner, which was partially outside the area of excavation, for about 22m, terminating in a wide rounded terminal, leaving a gap of about 5m on this side of the circuit. The ditch (G5080), quite wide and deep in places, averaged 2m wide and 1.3m deep with a steep sided, flat based profile; both terminal ends were wider however, 2.2m on the east, about 2.7m on the west, where the new ditch connected with the ditch of Enclosure 48. The ditch contained an initial weathered fill, followed by a uniform fill of dark clay silt containing a small corpus of medieval pottery of various date ranging from the later twelfth to late thirteenth century, suggesting it was of the later part of Phase 3, or more probably of Phase 4. Mussel, oyster shell and animal bone were also recovered. Some of the soil profiles indicated that at least some of the fill had derived predominantly from the inside, suggesting an associated bank. No other features were found within the enclosure.

SFB 58 (Fig. 214) abutted the ditch of Enclosure 48 at its north east corner, the relation between the two being indeterminable. It was c. about 2m from the eastern end, blocking most of the gap or entrance on the east side; blocking of causeways or entrances into enclosures has been noted elsewhere. The building consisted of a rectangular cut, with sharp corners (G5100) 5.9m long, 3.3m wide and 0.83m deep at maximum, aligned north-east/south-west. The cut had steep, near vertical sides with a sharp break to a generally flat base along the north-east edge and in the centre, but in the south-west quadrant the slope, after an initial vertical drop, gradually descended over three rough-hewn steps at an angle of 20 degrees, probably marking the position of the entrance point (Plates 302, 303, 304, 305 and 307).

The north-east end of the structure had been left raised, forming two plinths of natural chalk, the north-western sub-circular in plan, c. 2.0m in diameter with its flat surface 0.25m below ground. The second, adjacent, raised area had an uneven sub-square base 0.95m long, 0.89m wide and was 0.59m deep. The slope that led from the plinths to the base of the feature was steep with a sharp break at the bottom. A large

sub-circular oven (G5170) about 1.9m in diameter was constructed on the larger plinth, abutting the corner of the main cut. It consisted of a flint foundation 0.13m thick, above which was a sub-circular clunch-built wall, formed around the perimeter surviving to a height of 0.16m and had an entrance 0.35m wide that opened to the south into the main part of the building (Plate 3.06). The wall had been heavily truncated and originally formed a dome structure, judging by other better surviving examples. The northern edge appeared to have been disturbed by possible animal burrows (G5103). Within the wall was a layer of clunch, 0.02m thick and burnt to a dark red grey to black colour containing inclusions of carbon, burnt chalk and ash and formed the oven floor. Adjacent to the oven, on the second plinth was evidence for a 'hearth' or burning (S5650), the chalk surface reddened by heat and covered with a deposit of dark reddish black silt with carbon, burnt clay and burnt chalk inclusions 0.1m thick. Samples taken from throughout the oven area produced only trace amounts of grain, seed, mussel shell and charcoal. Adjacent to the front of the oven, on the west of the building was sub-rectangular post-hole (G5171), 0.54m in diameter and 0.14m deep, its fill packed with flints and grain, pulses and charcoal. The oven floor was sealed by a deposit (G5101) of reddish brown silty clay and burnt clay lumps 0.15m thick, probably collapsed oven superstructure. Medieval pottery (AD 1200–1300) was recovered from this deposit, as were, grain, pulses and seeds. The bulk of the structure contained a layered backfill (G5102) of silty clays that yielded small quantities of medieval pottery (1175–1250) accompanied by some residual sherds of Roman origin. Other material included quern stone fragments, residual burnt and worked flint, daub and inclusions of marine shell.

This was a typical example of a Type 1 sunken-featured building, the third largest at Thanet Earth and needs little more discussion here. Of note is the substantial posthole on the north-west side, just in front of the main oven, a typical setting found in numerous other examples. Unfortunately the structure provided relatively little environmental evidence. Taken with the dating evidence from other features here, it probably belonged to early Phase 4. Although the relationship between the ditches of the two enclosures was difficult to discern, it seems probable that Enclosure 69 was the later, forming an extension of Enclosure 48 to the south; it also contained some slightly later pottery, but there may not have been much of a temporal difference between them. The relationship between the two was not clear because the earlier ditch was still open, at least partially, at this time. The position of the structure in the north-east corner and its relation to the ditch suggests that it was earlier than the ditch which kinked round its northern limit. However, it seems likely that the L-shaped ditch of Enclosure 48 originally terminated just short of the structure in a rounded terminal similar to the enclosures to the north, and that the far eastern section of the ditch, narrower than to the west, was an extension round the building cut during or after its construction. No interface between the two sections of ditch was recorded, but this would not be surprising if the ditch to the west was still open. Thus, SFB 58 may have been constructed and in use when the enclosure was expanded to the south. This would explain the new entrance, situated some way south of the building which, if this progression is correct, was now blocking the original entrance. The functions of these enclosures remain enigmatic,

particularly when open ended even though the other sides could have been fenced off. Access was directly provided to Trackway 30 by gaps in the enclosures on their east side, suggesting the need for good direct access routes. The structure in the enclosed area conforms to the standard type, commonly interpreted as bakeries, but it is not clear if or why such a large enclosure was a necessary adjunct. It remains possible that the secondary enclosure was still in use after the building ceased to function, the extent of the complex and the size of its ditches suggesting that by this time it was purely used for stock management or other agricultural purposes.

Sub-phase 4b: Enclosure 66

The ditches of both Enclosures 48 and 69 were clearly cut by the ditch of Enclosure 66 (Fig. 212). This was a sub-rectangular enclosure, only partially revealed, with curved rather than sharp corners formed by a single curvilinear ditch extending into the site by nearly 6m and enclosing an area about 18m across from north-east to south-west, set quite centrally within the earlier complex. There was a terminal on the south side, situated about 3m from the corner. The ditch was small in relation to the earlier examples, just 0.5m wide and 0.3m deep on average, with a 'U'-shaped profile and contained a homogeneous fill yielding a few medieval potsherds of the thirteenth/early fourteenth century, oyster shell and mussel, and two pieces of glass, probably from a vessel. This has been identified as post-medieval. This enclosure was cut after the ditches of Enclosures 48 and 69 had been infilled and together with the glass, if not intrusive, suggests a post-medieval date. If so it would be the only feature of its type from the period and its function remains unclear. An undated posthole was the only feature found in its interior.

Site 16

This development of ditched enclosures (Fig. 212) and associated features was situated just under 40m south-west of Enclosure 69 and on a similar alignment. Not all of the internal area was exposed, the ditches extending out of the site area to the east (Plate 308).

Phase 3/4: Early Enclosure 49

Enclosure 49 consisted of five separate ditch segments forming a sub-rectangular area about 26m across along the north-west alignment and extending into the site by about 31m (Fig. 213). The south and west sides of the enclosure consisted of a steep sided 'U'-shaped ditch (G5071) that averaged 1.2m wide and 0.6m deep. At the north-west corner, the ditch returned to the east for about 8m ending in a rounded terminal that was partially cut away by later developments. The majority of the north side was formed by a linear quarry-like ditch (G5073) that extended eastward from a partially cut away terminal, about 0.7m from the terminal of G5071. The ditch averaged 1m wide and 1.2m deep with a vertical sided or undercut profile with a flattish base. This was sufficiently different in form to suggest that it might have been a later addition, and that the original enclosure was open-sided like those to the

north (see Enclosures 55, 52 above). The north-west section of this ditch was stepped downward over a length of 1.6m, suggesting the mode of access during the excavation of the feature. Two further ditch segments recorded just to the north of this line, perhaps recuts, appear to be additional definitions of the boundary, although either could potentially relate to later developments. Two ditches (G5152 and G5072) aligned north-east to south-west, divided the internal space of the enclosure, both cut at a later date. G5152 spanned the whole width of the enclosure 4.5m from, and perpendicular to its west end, forming a long narrow space. Ditch G5072 was 7m long extending perpendicularly from the north edge of the enclosed area. Most the fills of these ditches were similar consisting of a clay silt with sparse inclusions of medieval pottery, mussel shell, oyster shell, animal bone, including the head and lower front limbs of a dog, and daub, although most of this material came from the primary ditch G5071, some of the others being sterile. A small and rather mixed pottery assemblage was recovered, primarily thirteenth century with a few residual sherds of the twelfth. The system was probably emplaced during the latter part of sub-phase 3, perhaps backfilled deliberately with relatively sterile material during sub-phase 4. The quarry-like ditch (G5073) was primarily filled with sterile redeposited natural clay and compacted chalk, as a result of deliberate backfilling with upcast material from two adjacent ditch segments later cut to its north. No definitely contemporary features were discerned within this enclosure, suggesting its use was related to stock management.

Sub-phase 4a: Enclosures 50, 54 and SFB 51

Enclosure 50 (Fig. 212) was superimposed on and aligned with Enclosure 49 appearing to be a recut of part of the earlier features layout. It was single ditch (G5075) forming a semi-enclosed rectangular area 29m by 15m internally. The western side was cut immediately to the west of internal partition ditch G5152, while the south and north sides lay just outside the original limits of Enclosure 49, the north-west corner cutting through the small gap in the original circuit. The eastern side was unenclosed, the ditches ending in squared-off terminals about 10m from Seamark Road at about the same position as the earlier internal ditch G5072, suggesting this was re-used. The ditch averaged 1.69m wide and 0.53m deep with a steep, or near vertical sided profile and a flat base. An initial weathered fill was sealed by uniform fill containing a relatively large assemblage of medieval pottery, animal bone and oyster and mussel shell, peg tile, and iron nail inclusions as well as residual burnt and worked flint. Deliberate infilling of the ditch with domestic refuse suggests the feature was still open during further occupation of the site. The dating of the pottery is not dissimilar to that from the earlier enclosure: 'the assemblage from the ditches of Enclosure 50 is dominated by EM1 and M1 sherds. These fabrics are often not easily divided between 1200 and 1225/50, a result of the continual development of EM1 into M1 during this period. As such the group is more homogenous if one considers the EM1 to be late examples and the M1 early examples of their types'. An earlier thirteenth century date seems likely for the use of this enclosure.

Enclosure 54 was situated at the south end of the complex and represents an extension of the area in this direction. It was defined by an 'L'-shaped ditch (G5090) aligned similarly to the other enclosures, extending south from Enclosure 50 by 7.8m internally and extending into the site by 19m. The ditch segment forming the western side terminated in a rounded butt-end that may have just cut ditch G5075 of Enclosure 50, but this relationship was not certain. In any event, the ditch was almost certainly later. The ditch was continuous and averaged 1.4m wide and 0.6m deep with a 'U'-shaped profile, with similar fills and pottery to the ditch of the earlier enclosure. No features were found within the enclosed area.

SFB 51 (Fig. 215) consisted of a sub-rectangular feature (G5086) which cut into the ditch of Enclosure 50, exactly on the north-eastern corner of the enclosure, slightly external to the ditch and aligned with it. Cut into the base at either end were two post-holes (S5850, S5852) that were similar in shape and size, 0.3m in diameter and 0.2m deep with 'U'-shaped profiles. The western posthole was on the longitudinal axis of the cut, the other situated more in the corner. The postholes were sealed by the bulk fill of the cut, undoubtedly deliberate, supplying a few sherds of pottery dated AD 1225–1300 and some animal bone. The feature was heavily truncated by later cuts, primarily the ditch of Enclosure 53 (below). The shape and position of this feature suggests it was a small sunken-featured building, similar to the Anglo-Saxon two-post sunken structures, but it was very small with an internal area of only 3.3m². Although it revealed no other structural details or occupation deposits, the slightly stepped bulge on the northern side might represent the position of the entrance. If the feature was a Type 3 structure it was the smallest of all the sunken buildings on the site, although truncation may have reduced its size or perhaps removed additional elements. It may have been a simple shelter or a small store.

Sub-phase 4b: Enclosure 53 and associated features

Enclosure 53 consisted of a northwards extension of the system as a single, substantial ditch forming an inverted L-shape, aligned with the abutted enclosures to the south (Fig. 212). The two contiguous ditch segments enclosed an area about 27m across north-east to south-west. The ditch (G5089) was 3.1m wide and 0.9m deep on average with a rounded 'V'-shaped profile, with a large rounded terminal on the south which appeared to cut the fills of most of the other ditches, as well as the backfill of SFB 51. It contained a fill of clay silt with occupation detritus including mussel shell, oyster shell, animal bone and medieval pottery as well as fragmented remains of a larva quern. The pottery, one of the larger assemblages from the ditches of this complex, only about 40 sherds, was very similar in composition and date (1250–1325/50) to the material from Enclosure 52 (Site 14), suggesting they were roughly contemporary. Some residual medieval material probably derived from earlier phases of activity.

Potential structures within Enclosure 53

Unlike the other enclosed areas a number of significant features were found within this later enclosure, including one definite sunken-featured building (SFB 52) and a number of other possible, although unusual structures (SFB 56, 57 and 63).

SFB 52 (Fig. 216)

This structure was very difficult to isolate in the field and its recorded dimensions may be inexact. Its north-western side in particular was very unclear having been partially removed during machine clearance. It was set near the south-east corner of the enclosure and consisted of a sub-rectangular cut (G5087) about 4.9m long, 4.4m wide and 0.45m deep aligned north-east to south-west and set exactly perpendicular to the north side of Enclosure 49, which it cut. It had straight near vertical sides and an uneven flat base. A single post-hole (S6561) cut the base of the feature, 0.47m in diameter and 0.28m deep, just off the longitudinal axis in the north-east quadrant. Few other internal details were present apart from a few shallow hollows. A bulge in its northern side may represent an entrance but a burnt area with stones within this extension, could represent a fragment of an otherwise totally destroyed oven. Directly above the base of the cut was a trample deposit (G5161) that consisted of very firm light orange brown silt clay with grain, charcoal, seeds, fish bone and scales, avian eggshell, oyster, mussel and snail shell inclusions, 0.03m thick. Animal bone was also present and pottery recovered from the deposit was dated to 1200–1350. Directly above this was a further scatter of occupation debris that included a large iron staple (FN 5.61), a fragmented sub-rectangular iron plate (FN 5.62) and a partially intact ceramic plate (FN 5.76). The main backfill (G5162) consisted of a firm light orange brown weathered silt clay 0.42m thick, which yielded a near complete and intact ceramic green glazed jug with white glazed chevron decoration, laid on its side near the centre (dated AD 1250–1325) with other pottery of a similar period.

In its lack of internal detail this structure is similar to a number of others on the site (Type 3). However, its position cutting a ditch, probably near the corner of an enclosure, is typical of the more obvious structural examples. The potential fragment of oven within the bulge on its northern side means a Type 1 structure could be represented, but the nature of the infill, particularly the primary trampled deposit is suggestive of a domestic function. This is quite strongly supported by the eggshell, fishbone and other detritus indicative of the consumption of a variety of foodstuffs, although there was no other evidence for any hearth or oven for cooking. As usual, the common domestic types of pottery were also present. A change of use from a Type 1 structure to a simple domestic dwelling is a possibility. The dating of the primary occupation deposits places the use of the structure firmly into the first half of the thirteenth century. An interesting feature of the later backfill was the near complete jug, buried near central to the structure and reminiscent of the dog burial in SFB 24. This may also be a form of ritual 'closure' deposit. However, neither this nor any of the other artefactual material can be dated closely enough to suggest how long the structure was in use and it may have been only a few decades.

Another extensive interface may have been related to both Enclosure 53 and SFB 52. A wide, shallow linear depression (G5163) over the backfilled segments of ditch formed most of the northern sides of Enclosures 49 and 50 (Figs. 212, 216). It was 16.9m long, averaging 2.1m wide and 0.34m deep with a shallow sided and flat bottomed profile and contained a uniform fill with sea shell and animal bone inclusions, but no dateable material. The feature was located between the southern terminus of the ditch of Enclosure 53 and SFB 52, stopping short about 0.3m from the latter indicating that the structure was still present when it was formed. The function of the cut is uncertain as was its relationship with the ditch of Enclosure 53, indicating that the enclosure ditch was perhaps partially open when this feature formed. It may represent an erosion hollow or area of wear caused by the relative looseness of the underlying backfilled ditches in this position and this could indicate the passage of animals or other activity between the northern and southern parts of the complex.

Sunken-featured (?) structures in the north-east corner of Enclosure 53

Four shallow enigmatic features were located in the extreme northern corner of this enclosure, with three only partially revealed. Three have been considered to be unusual sunken-featured structures (Fig. 217) because of their size and location, the other is a later ditch.

SFB 56

SFB 56 was a sub-rectangular cut (G5095) about 3.5m wide, over 5.3m long and 0.12m deep aligned north-west/south east with the ditch of Enclosure 53 which was situated less than 0.5m to the north. The cut had steep edges, shallower on the north side, with a sharp break to a flat base. A south-westerly extension to the cut in the south-west corner was about 1m long and 1.6m wide. An oval posthole (S6536) was cut into the base just north of the longitudinal axis not far from the west end. This was 0.44m wide, 0.3m deep and yielded pottery dated to AD 1250–1350. The majority of the main cut contained a sterile backfill. No other structural elements were observed. This would appear to be a heavily truncated Type 3 sunken-featured structure, the posthole related to some above ground structural element. The bulbous extension in the corner of the sunken area was probably the access point, being similar to other examples. The structure was cut by feature G5167, a linear cut over 5m long that was positioned down the north area of SFB 56, and which extended out of the site area to the south-east. The feature was 0.38m deep with curved sides and a flat base. The uniform fill yielded a relatively large pottery assemblage (c. AD 1275–1350), and a number of iron objects. This feature might be a fragment of later ditch. An alternative could possibly be a long entrance passageway to a possible sunken-featured building to the east of the excavated area, as the cut is remarkably similar to a feature relating to SFB 63 directly to the south, though reversed in alignment. The large quantity of material within the fill probably represents a deliberate dump of domestic waste.

SFB 63

The bulk of SFB 63, a few metres to the south of SFB 56, consisted of a large, rather irregular, partially excavated sub-rectangular cut (G5169) aligned north-east to south-west. The southern part of the cut was a fairly regular shape, the northern end much more irregular and rounded, the whole being 6.9m long at maximum, 3.7m wide to the south, and 0.2m deep with steep sides and an uneven flat base.

Contiguous with this and extending from its eastern side about centrally was a linear cut (G5097) at least 7.3m long and 1.4–1.75m wide, extending out of the site area to the south-east, presumably terminating by the trackway under Seamark Road. It was 0.33m deep with an uneven flat base. The south-west corner of the main area was occupied by a deeper sub-square pit (G5098) 1.4m wide, 2m long and 0.3m deep, its west and south sides contiguous with G5169 and was probably an integral part of the main feature. No other structural elements were observed. The similar, equivalent fills of these cuts yielded the largest pottery assemblage from any of these features (dated 1250–1325), animal bone, including limb bones of dog and a neonate sheep or goat, oyster, whelk and mussel shell, iron nails (FN 5.31, FN 5.32), fragmented quern stone (FN 5.40) and an imported Scandinavian hone stone (FN 5.41). From its size shape and location, this group of features would appear to be a sunken-featured structure, with a long access ramp or passage leading in from the trackway to the immediate east. It can be compared with SFB 46 in Enclosure 45 on Plateau 4 in terms of size, shape and general outline although the access passage here was considerably more elongated. Although this structure contained no oven, or adjacent 'hearth' area, the pit in the south-west corner and the shape of the main cut to the east are suggestive of this arrangement and indicate that such structures were planned but never built, although other functions are of course possible.

SFB 57

This feature (G5096) was immediately south of SFB 63 and respected its position. It was a very irregular cut, approximately sub-rectangular to the north 6.6m long (north-west/south-east), with a square north-west end and a more rounded opposite end. This part of the cut was about 2.4m wide at maximum. Extending from near the south-west corner was a contiguous extension to the cut, set at right angles and nearly 3m long and 1.8m wide. Overall the cut was 0.21m deep with steep sides and uneven flat base. It contained a uniform backfill of silt clay with medieval pottery (AD 1250–1350). Its eastern end was apparently cut by a small pit (S6351) with a sterile fill, but again this may well be an integral part of the structure. This feature can be compared to SFB 56 just to the north and may represent the heavily truncated remnant of a similar sunken-featured structure with an entrance passage on the south-west corner. However, apart from S6351, no further structural or internal details were evident.

Other features within Enclosure 53

Most of the western side of the enclosure was barren of features, nearly all, including the structures, concentrated in its eastern half. They can be confidently related to this enclosure, since no similar intrusions were found in the vicinity externally, or in the enclosed areas to the south. The features included some large but shallow pits, possibly erosion hollows, and a few smaller features used in conjunction with the structures nearby. Some yielded pottery dated 1300–1375, but were otherwise unremarkable. The medieval features were eventually sealed by a colluvial-type layer (G5110) that had collected within a probable erosion hollow formed during the medieval activity. This contained post-medieval material in some quantity.

This sequence of enclosures and associated features indicates a protracted period of development, with enclosure ditches being recut, enclosures remodelled or added to, and probable sunken-featured structures, erected, demolished and backfilled, interspersed chronologically. There was generally however, no obvious evidence for significant occupation in the sense of prolonged domestic activity. No wells or cess-pits such as those found in other enclosed sites were evident, but significant material remains were often present in the backfill of some of the ditches or structures, including the latest ditches in the sequence. The exception was SFB 52, which had a primary fill consistent with domestic occupation which may have been intermittent. This all tends to suggest that the functions of these enclosures varied over time, although stock management would seem to be a major use, indicated by the worn areas of subsoil. Access to these enclosures was presumably via Trackway 30 (Seamark Road) as no entrances were apparent in the exposed ditches, the open side of Enclosure 50 also on the road side. The development of the enclosures is also of interest as although ditches cutting others in the sequence were recorded, it is likely that some of the earlier phases of enclosure remained in physical existence during later phases and even if the ditches were semi-backfilled, banks may have remained.

The sequence can be tentatively summarized as follows:

- Enclosure 49, use predominantly pastoral?
- North side ditch infilled, recuts emplaced further north. Enclosure divided internally. Change in use?
- Enclosure 50 reinstates part of circuit, Enclosure 54 expands area to the south, earlier ditches still partly visible? Pastoral usage?
- SFB 51 constructed. Intermittent habitation.
- SFB 51 backfilled.
- Enclosure 53 expands enclosure to north, ditches of earlier enclosures partly backfilled?
- SFB 52 constructed and occupied (intermittent habitation). Northern area partly domestic, remainder of enclosures pastoral?
- SFB 52 backfilled. Area in pastoral usage? G5163 an area of wear caused by the passage of animals?
- Enclosures go out of use. Main erosion hollow fills with late and post-medieval material.

The shape of Enclosure 53, the inverted 'L' seen in other enclosures to the north, seems to be a common factor in the enclosures along Seamark Road, which, in the cases where these are isolated, suggests that earlier elements of their arrangement did not survive in the ground, or were demarked by already existing.

Site 17 (Plate 309)

The southernmost complex of enclosures (57, 58 and 67) adjacent to Trackway 30, was only partially exposed, about 170m south-west of Enclosure 54 (Fig. 218). The subsoil in this area was relatively clean chalk, and the fills of all the cuts were quite similar, making the edges of intercutting features difficult to discern at least in the southern part of the area. Excavation was also interrupted and the margins of the area disturbed by necessary relocation works on a nearby high pressure water main. There was also an exclusion zone in the vicinity of this important service once it had been reinstated. Enclosure 67 only is presumed medieval, while the earliest of the main complex (Enclosure 57) remains undated, although early features within its orbit suggest that it was of later Phase 3. A number of features, including structures were located within the enclosed area while a few other features were situated just outside or recorded as being cut by, or cutting, the ditch of the later enclosure. They have been described below in their estimated chronological position within the sequence.

Uncertain phase (late Phase 3?): Enclosures 67 and 57

The northernmost element in this complex consisted of Enclosure 67 represented by a ditch (G6053) aligned north-west to south-east exposed for a length of 55m extending from the excavated area to both east and west. Cropmarks suggest it turned to the south-west just beyond the western limit of the site, about 65m from the edge of Seamark Road. The ditch, averaging 0.8m wide and 0.19m deep with a 'U'-shaped profile contained a weathered fill of sterile silty clay. It may have been pre-medieval, but its near parallel alignment to Enclosures 57/8 just to the south, and its similarity to the ditch of Enclosure 59 (below) suggest that it was of this period. No return of the ditch, providing a south side of the enclosure, was located in the stripped areas to the south, comparable with the similar, seemingly open ended enclosures further north although the shallow profile of the ditch could have been eroded, and there were no features within it that could be directly associated. The boundary could represent a field rather than an actual enclosure due to its extent. Enclosure 57 only survived as a short possible ditch segment (G6049) severely cut away by later features including a later recut (Enclosure 58 below), near parallel to, and 9m south-west, of the ditch of Enclosure 67. This feature, aligned north-west to south-east, survived to 6.2m in length and 1.02m deep with slightly undercut vertical sides and a flat base. At its western end, its edge rose sharply to meet the base of the later Enclosure 58 ditch, but it probably originally extended further at a shallower depth. Due to heavy truncation it is unclear how far to the north-west the feature extended, but it may have been in line with its recut (see

Enclosure 58) as no trace of a similar ditch was seen elsewhere. It contained no datable material

Phase 3: Features associated with the earlier enclosures?

Structure 55: Underground cellar G6048 (Figs. 219–220)

In the northern part of the area, part of a subterranean feature (G6048) was discovered after a collapse of the stripped ground. An adjacent feature had been recorded as a pit, which on excavation proved to be the entrance to two cellars (Plates 310, 311, 312, 313 and 316). The entrance was a large sub-rectangular cut (S6204) aligned near perpendicular to, and c. 2m south, of the line of the ditch of Enclosure 57. This cut was 3.96m long, 1.4m wide, and 1.7m deep at maximum with a steep sided or vertical profile with a small degree of undercutting. The northern half of the cut, which was wider, had a flat even base, but to the south, where the cut narrowed to about 0.9m, the base ascended in three roughly cut ledges 1.8m long in total, which formed the stepped entranceway. At the north-east end were two sub-rectangular subterranean chambers that had been cut into either side, extending from the axis at 90 degrees (Plates 314 and 315). To the north-west, cellar S6236, was 1.06m wide, 1.8m long and 1.28m high. It had a flat base, straight sides and an arched roof. The entrance was formed of a slightly lower archway cut out of the chalk. The second chamber (S6221) was directly opposite to the south-east, and was 1.07m wide, 2.25m long, and 1.25m high with a similar profile and entrance as the western chamber. Both the access pit and the chambers had been cut to the same level, the floors continuous across the feature. However, the chambers were each divided from their respective entrances by a compacted chalk clunch wall 0.4m wide, 0.82m long and 0.23m high.

The chambers and the access pit both contained a similar sequence of deposits, probably infilled together. The nature of the cellars suggests that the bulk of these deposits must have been deliberate as the soil profiles could not have accumulated naturally. An initial fill of sandy silt, 0.1m thick at maximum covered the cellar floors, but was not present in the access pit. The layer probably accumulated during use of the cellars, partly through material blown in by the wind. The finds were concentrated in the north-western chamber and included fragmented pottery and animal bone, with eggshell and other material recovered from samples, fish bones which included herring, while 'both haddock and whiting hint at a wider exploitation of gadids. This variation might suggest different uses for each compartment.

In both cellars, the primary deposits were sealed by a sequence of laminated deposits of clay and sandy silts which contained quantities of marine shell including oyster, mussel, whelk and barnacle, cuttlebone, bird and fish bones and fragments of a lava quern, and mineralised seeds and grain were recovered from samples. Throughout, an overlying deposit of brown silty clay, c. 0.2m thick, contained an abundance of oyster and other marine shell. This level contained the articulated foot

bones of a hare suggestive of use as a charm or talisman. The upper deposits, again similar in most parts of the feature were relatively sterile. A large assemblage of medieval pottery, animal bone and iron objects from many of these levels further indicated the domestic nature of the material. Above the final deposits within the two chambers there was a void that measured 0.5 and 0.3m thick respectively.

Although there are other possibilities (below) this facility was almost certainly used for storage, the cool conditions within the chambers suitable for perishable items, probably foodstuffs; the clunch-built raised thresholds inserted across the entrances of the chambers, possibly later additions to keep out rainwater, support this argument. The elaborate and well-built structure is more indicative of the storage of relatively expensive food items, rather than manure or compost and there was no positive indication that the cellar had ever contained cess: Although mineralised plant remains are most commonly found in cess pits, there was no definite evidence for the presence of faecal material in this feature, as seeds of edible taxa (such as apple, cherry), faecal concretions, straw fragments (often used as toilet wipes) and bran fragments were not present. Dilute faecal material is still a possibility, as both poppy seeds and some species of *Brassica/Sinapis* sp. (e.g. mustards) have been used for flavouring in the past. Preservation by mineralisation does indicate that nutrient-rich, moist conditions, such as are found in a midden or cess pit, were present at the site where the seeds were initially deposited. The material may then have been redeposited in the storage pit when it fell into disuse. The backfills can reliably be dated to the later period of Phase 3, the relatively large pottery assemblage deposited between AD 1200 and AD 1225 or very shortly after. Again the assemblage would appear to be dominated by cooking pots and the structure itself may have been in use during the later twelfth or early thirteenth centuries.

SFB 64/67 (Fig. 221)

A complex sunken-featured structure, just 3.5m south-west of cellar G6048 had two periods of use, separated originally into two components (SFB 64 and SFB 67) both representing the same structure, a main sub-rectangular cut (G6060) 6.7m long, 4.7m wide and 0.73m deep aligned north-west to south-east, perpendicular to G6048, with steep sides that led to a sharp break and a flat uneven base. It was slightly askew to the ditch of Enclosure 58, about 4.7m and 9m east of its western and northern sides respectively (Plate 317). A much lower sub-rectangular cellared area (G6054), at the south-east end of the main cut, was aligned similarly and on the same longitudinal axis as G6060, cut into its base and stepped in slightly from the south-east end. It was 4.4m long, 3.6m wide and 0.68m deep from the upper floor to the north-west, with very steep sides and a flat uneven base (Plates 318 and 319). A platform had been left in the solid chalk at the north-west corner, 1m wide, 1.4m long and 0.4m deep, presumably a step into the lower part of the structure. This part of the cut contained a discrete primary deposit (S16543) of silt with ash and carbon 0.25m wide, 0.7m long and 0.06m deep at the south-eastern end, possibly residue from a brazier. This in turn was sealed by a deposit of chalk rubble 0.57m thick filling the entire area of the lower cut and containing a small assemblage of thirteenth century

pottery (1200–1275). The primary level may represent use of the structure, but the later deposits are indicative of deliberate backfill, since they were sealed by a floor deposit relating to the secondary phase of use of the structure (SFB 67).

The backfill, and the remainder of the base of the main cut was sealed by a thin compacted chalk floor, 0.03m thick and a subsequent trample deposit (G6112), the latter composed of two deposits of clay silt with ash and carbon, 0.04m thick that did not cover the entire base. Although sterile, small fragments of pottery were recorded, but not kept, consistent with trampled material. Over the floor in the south-east end of the structure was a burnt deposit (S16515) that may have been the residue of a hearth or more likely a brazier. It consisted of dark grey silt clay with charcoal, pottery (1200–1325) and burnt flint, 0.32m wide, 0.8m long and 0.42m thick and was probably in the same stratigraphic position as the trample. This sequence was sealed by a backfill deposit G6061 of clay silt with chalk lenses, 0.7m thick, containing pottery of AD 1200–1325, animal bone, and tile. Interestingly, half of a stone mortar (S16544; FN 6.9007) had been inserted into the north-eastern edge of the cut, held in by a clunch mixture, and forming a semi-circular dish against the edge, about 0.25m above the floor (Plate 320). A wider shallow and irregular cut (G6074) immediately to the west of the structure may have been associated. Adjacent to the entrance point, it may have been an erosion hollow associated with the use of the structure. It also followed the line of a prehistoric ditch (G6072) to the south, suggesting the underlying, lesser compacted ditch fill was also eroded near the structure. The depression yielded pottery of similar date to the structure.

This unusual structure has no clear equivalent at Thanet Earth. Its entrance was probably at the north-west corner where there appeared to be a step, with a further large step down into the deeper, almost cellared part of the first phase structure. Burnt deposits in the lower levels indicate the presence of a hearth or brazier or even a dismantled oven, but there was no clear evidence for the latter. Few features relating to the secondary phase, after the infilling of the deeper cellar, were evident, but it is possible that the mortar fragment was inserted into the side wall during this phase. This unusual fitting may have held a candle or some other light source, and by this phase the structure had a more domestic function, after a primary agro-industrial usage. The dating suggests that it could have originated in Phase 3, but its use may well have extended into the early part of Phase 4.

Three other features possibly belonging to this earlier phase were situated on the western side of the area. Two were substantial pits (G6046), one (S16404) located just outside the Enclosure 58 ditch, the other cut by it. The former was sub-oval in shape, 0.9m wide and 2.34m long and 0.4m deep with steep curving sides, the second similar but smaller. Both contained a fill of silt with oyster shell with a single thirteenth century sherd recovered from S16404. The function of these features is unclear.

Sub-phase 4a: SFB 68 (Fig. 222)

This somewhat intermediary phase is only represented by one feature, sunken-featured structure SFB 68, although SFB 64 may still have been in use. It was a large sub-rectangular cut (G6063) 4.1m wide, over 10.5m long and 0.45m deep, aligned north-west to south-east extending beyond the excavated area to the east. It was aligned with and cut across the ditch of Enclosure 57, its south side corresponding quite closely with the south edge of the earlier ditch (Plates 321 and 322). This common configuration suggests that the ditch was still evident as a depression, perhaps significantly backfilled. In profile the cut had steep sides and a flat uneven base. No internal features or structural elements were observed although a post-hole was recorded in plan on its longitudinal axis at the eastern end. The cut contained an initial sterile fill of clay silt with chalk wash 0.15m thick, sealed by deposits of silty clay and chalk that contained medieval (AD 1225–1300) and residual prehistoric pottery, animal bone, shell, and an iron knife (FN 6.59). This structure appears to be a large variant of Type 3, partly infilled naturally, but with the bulk deliberately backfilled. There were no obvious indications of its function. The backfills were cut by two ditch segments of a later enclosure (58), possibly not long after it had gone out of use.

Sub-phase 4b: Enclosure 58

Only one corner of Enclosure 58 was exposed within the excavated area. It was defined by large ditches separated by a gap 4.3m wide in the north side, partially over the position of the backfilled SFB 68. The western side of the enclosure (ditch G6066) aligned north-east/south-west extended into the site by 20m, where it turned to the south-east for a further 15m, ending in a large rounded terminal. After the causeway the line was continued for 7m by a similar, if slightly smaller ditch G6069, extending beyond the excavated area to the east. The ditch averaged 1.9m wide and 0.8m deep with a round bottomed steep sided 'U'-shaped profile. It contained an initial weathered chalky fill 0.4m thick, followed by a deliberate infill of clay silt from which a small assemblage of medieval pottery was recovered, with much oyster shell, whelk shell, snail, animal bone, fragments of quernstone, some peg tile and slate, and iron objects, mostly nails. The animal bone included a few dog limbs. The pottery, mostly from upper fills was probably residual, and more of Phase 3 date than Phase 4, although there were some later thirteenth century sherds, and its stratigraphic relation with other features; it appeared to cut the earlier ditch of Enclosure 57 and the backfills of Structure SFB 68, suggesting the later provenance. The nature of the fills and the associated finds assemblages suggests deliberate backfilling. The presence of peg tile and slate, not a common occurrence in the medieval features, suggests that at least some of the detritus was imported from elsewhere. Cropmarks suggest that the western side of the enclosure extended for up to about 24m further south from the site limit. No south side of the enclosure was found in any stripped areas further south, nor is any clearly indicated by the cropmarks in the area. This would suggest that the ditch delineated an inverted L-shape in plan, like some of the ditches in enclosure complexes to the north (cf. Enclosure 52). Although no features contemporary with this recutting of the enclosure ditch can be confidently defined, it is quite likely that SFB 64 and other

features were still in use at the time. Why the ditch was recut is uncertain, but it may have just been enlarged during this episode.

Sub-phase 4c: Later features

A final phase of activity is represented by a few features that appeared to cut the ditch backfills of Enclosure 58, primarily a sunken-featured structure (SFB 70). However, such as it is, the dating evidence is not much different to that of earlier phases. SFB 70 (not illustrated) consisted of a large, irregular but generally sub-rectangular cut (G6071) 4.45m long, 4.2m wide at maximum and 0.66m deep with near vertical sides to the south-east, and a flat uneven base. To the north-west the cut had a more gradual side that led to a ledge 1.5m long followed by a slightly steeper slope to the base. The cut contained various fills of clay silt with medieval pottery dated to AD 1250–1300, animal bone, worked flint and whelk shell recovered. There were no other internal or structural details. Two other features were located on the extreme southern edge of the site and it was thought they may have been structures (SFB 71 and 72), but they were not examined in their entirety, one only being investigated by a machine cut slot. Full dimensions, orientation and further details are lacking, and it is possible that the features just represented large pits or pit complexes. A few other pits and isolated postholes were recorded in the same area, of which G6064 was largest, about 3.5m across and 0.8m deep. They yielded fairly substantial artefactual assemblages including pottery (1200–1325), animal bone and oyster shell, and were probably rubbish pits.

This series of enclosures and their associated features were only partially examined, and the overall function is difficult to establish. The northernmost enclosure ditch (Enclosure 67) may represent a field rather than an enclosure but its extent is uncertain. Certainly no other features could be related to it. Enclosure 57 is only represented by a short length of linear feature, mostly cut away, but probably followed the same course as the later ditch of Enclosure 58. It only survived because it was slightly deeper than the later ditch and SFB 68 and because there was a causeway in the later enclosure at this point. The intervening structure (SFB 68) must have been cut when the earlier ditch was mostly backfilled, nestling against the remains of an internal bank. It seems likely that some element of the earlier enclosure existed and was still in use. The structure was in turn deliberately backfilled when the second enclosure ditch was cut, probably following the depression left by the earlier ditch, but completely excising it along most of its length. Cropmarks, and the fact that a south side to these enclosures was not located, suggests that it formed the same apparently open ended layout as evidenced by many of the enclosures in this string along Seamark Road. All the structures and potential structures relating to these enclosures were mostly featureless internally, and give little indication of their function; there was no evidence that any had ovens or resembled the common Type 1 features in any way. SFB 64/67 is unusual due to its depth and deep cellared area. The underground chambers suggest storage of foodstuffs, which either indicates domestic occupation, or some form of trading alongside the road, a medieval version of the roadside stall. The backfill of the

chambers, however, and many of the other features is strongly suggestive of domestic occupation, which could have been contemporary with Enclosure 58, suggesting that most of these buildings were also domestic structures. The final phase (4c) is difficult to interpret as it seems to start at a point when the ditch of Enclosure 58 was all but infilled. Again, perhaps some remnant of this feature survived in the landscape, around which activity continued. Occupation of this complex may have been long-lived compared to some of the other settlement areas, with a mid-twelfth to early thirteenth century origin extending to the late thirteenth century.

Site 18

Phase 4 Site 18 was located about 50m south of Site 17, but was only very partially revealed in the site area. It primarily consisted of a single sunken-featured structure (SFB 69), which cut a ditch alignment (Fig. 223). The ditch (G6045), was undated but is likely to be medieval due to its relationship with the subsequent structure. The ditch was aligned with Seamark Road (Trackway 30) and terminated just under 3m south of the later building. It was very shallow and contained no artefactual evidence but could date to Phase 3 like many of the earlier enclosures to the north. SFB 69 was the southernmost medieval building found adjacent to Trackway 30, and only partially exposed. It consisted of a large sub-rectangular cut (G6067), 11.4m long, in excess of 3.3m wide and 0.4m deep aligned north-east to south-west, set parallel to the original trackway and approximately so to the earlier ditch. It had steep sides and a flat uneven base (Plate 323). A sub-rectangular cut (S6147), 0.75m wide, 1.85m long and 0.17m deep with a squared 'U'-shaped profile extended from the main cut, 3.2m from the north-west corner of the building representing a threshold for an entrance, similar to those located in SFB 53. A small indentation or posthole at the southern end of the threshold represented a doorpost, but this was not certain, as there was a similar feature slightly to the north. The base of the feature contained a thin trample deposit of clay silt which yielded a limestone spindle whorl (FN 6.26) and fragments of a stone mortar (FN 6.27). A similarly-shaped limestone whorl from Canterbury dated to the early fourteenth century. A further three internal features consisted of two post settings (S6131, S6143) about 0.4m in diameter and 0.7m apart with similar sterile fills and a circular-ended linear cut (S6145) 0.6m wide, 2m long and 0.18m deep aligned north-east to south-west. It contained some animal bone. The bulk fill of the cut yielded medieval pottery (AD 1200–1275), peg tile, daub and an iron object (FN 6.28).

This structure is similar in size and layout to SFB 53, but apart from the clear entrance way along the side, there was little indication of its function apart from the spindle whorl and mortar in the primary fill which would suggest activities such as wool spinning and food preparation. A domestic building seems one possible interpretation. The underlying ditch was an isolated feature, but its position indicates it was related to Trackway 30, possibly the remnant of a side drain, as a similar feature was found to the south (see Trackway 30 above). However, this is unlikely as the structure would have blocked the route and it would seem that this

particular track stayed in use up to the present day. The more likely interpretation is that it represents the western side of an enclosure, situated mostly to the east and again inverted L-shaped in plan, but this would mean that the original trackway would have to be further east than the present course of Seamark Road at this point. Given the alignment of Trackway 30 to the south, this is not impossible.

Site 19 (Plateau 5)

This was the northernmost (Enclosure 56; Fig. 154) of two relatively isolated enclosures in the southern part of the site, neither of which was associated with any clear trackway, although there is evidence that Site 19 was connected with Trackway 35 just to its north. As with the other enclosures, both were associated with sunken-featured structures, but there was virtually no dating evidence available for Site 19 with only small quantities of very abraded fragments of likely medieval date recovered, but it is undoubtedly medieval on morphological grounds. The enclosure was about 8m south of the large prehistoric ditch (G5047) that underlay the parish boundary in the north-west corner of Plateau 5 and about 325m west of Seamark Road. It was defined by a ditch (G5140) forming a sub-rectangular enclosure aligned north-east to south-west, 23m by 12m in extent internally and open on its north-east side. Part of the south-east quadrant of the enclosure lay outside the area of excavation. The ditch averaged 1.9m wide, becoming narrower towards its northern terminals and 0.68m deep cut to a 'U'-shaped profile with a rounded base. The ditch fills were clay silts with mussel shell and redeposited chalk, but mostly sterile of artefacts. The enclosure contained a well G5141 and a large building SFB 62.

SFB 62 (Fig. 224) consisted of a sub-rectangular cut (G5142) 7.6m long, 4.65–4.8m wide, and 0.2m deep, aligned roughly north-east/south-west at the northern end of Enclosure 56, and set on the same longitudinal axis, i.e. central to the width of the enclosure. The cut had curved sides and a flat uneven base (Plate 324). Along the eastern edge to its north there was a slight linear depression (S15551) c. 0.8m wide, 4.4m long and 0.02m deep, cut at the base which may have originally been more extensive, but was no more than a slight impression elsewhere. Located on the axis of the cut, just under a 1m from the north end was a fragmentary clunch wall forming a sub-circular ring, 0.96m wide, 1.2m long and 0.22m high. A very abraded feature (S15553), 0.25 thick at maximum, it was abutted internally by a deposit of carbon residue, 0.01m thick and may represent a hearth or small oven. The bulk of the cut was filled by a weathered fill of sandy clay, again virtually sterile. Although there were no traces of occupation layers, the single hearth or oven located at the northern end, but not against the corner as in the identified bakeries, suggests this was a domestic residence, perhaps only seasonally occupied by an agricultural worker or shepherd. Although the hearth had an encircling clunch-built wall, it was not necessarily an oven as it did not possess the more normal flint foundation, so interpretation as a crudely built fireplace is preferred. Although there were no signs of any structural elements, the linear depression around part of the perimeter, which may have originally been more extensive, is suggestive of a bench or a clunch-built wall (as in SFB 53), although all the fabric of this structure had disappeared, only a

clayish fill remaining. The lack of finds in both the structure and other features here does not support the idea of any intensive occupation.

The only other feature within Enclosure 56 was situated just 4m north-east of the building, and consisted of sub-circular cut (G5141; Fig. 224) 1.78m in diameter and at least 2.65m deep, excavated to a depth of 1.05m, then tested by auger. The profile was vertical sided, although the edge curved outwards at the top. The sides of the cut were lined with grey compacted 'clunch', 0.3m thick. The bulk fill consisted of silty, sandy clay with some mussel and oyster shell but otherwise sterile. The depth, vertical profile, slight erosion cone and clunch lining of this feature strongly suggest that it was a well. About 4m north of the enclosure was a sub-circular pit (G5143) 0.65m wide, 0.96m long and 0.09m deep with a very shallow flat bottomed 'U'-shaped profile, containing a fill of silt clay and a heavily truncated articulated sheep burial (Plate 325). It was approximately 60 per cent complete, consisting of post cranial elements including the limbs and axial components. The head was incomplete, eroded by the plough, and all foot bones were absent from the assemblage and may have been removed before burial. Two short lengths of gully, aligned east-west (G5139), 0.4m apart and averaging 0.3m wide and 0.12m deep, were also located, but having sterile fills, they could not be dated. Finally a large sub-rectangular cut (G5138) about 4.4m across and 0.26m deep with shallow sloping sides and a flat base was situated about 6m north-east of the enclosure, cutting the south side of the prehistoric ditch G5047. It contained a virtually sterile fill. However, its location suggests it was contemporary as it was positioned on the same line as the longitudinal axis of the enclosure. It is suggested that this may be a patch of wear or a deliberate cut, through the bank that probably bordered the ditch on its south side, and used for access to the enclosure and its solitary building from Trackway 35 that may have run along the parish boundary during the medieval period.

This unusual settlement, if such it can be called, is unique at Thanet Earth in its simplicity and lack of dating evidence. The structural evidence suggests that the sunken-featured building was an intermittently occupied shelter or simple dwelling, perhaps of a shepherd. The animal burial, undoubtedly deriving from associated activity and the buildings relatively large size (36.5 square metres) meant that it could just as easily have accommodated a small herd. The virtually complete absence of artefactual material does not suggest protracted occupation, although any waste could have been casually discarded in the vicinity, but this is contradicted by the presence of the well, which would have required some considerable effort to excavate. By comparison with the wells borehole sampled on Plateau 2 (G2135 for example), this feature would have had to attain a depth of about 30m to reach water. Was the function of the enclosure, not particularly large but with a substantial ditch, merely to pen animals?

Site 20 (Plateau 6)

Site 20 (Fig. 225) comprised an isolated enclosure (Enclosure 59) and associated features, primarily two sunken-featured structures and a quarry at its southern end. The enclosure was situated about 320m south of Enclosure 56 and about 145m from Seamark Road.

Sub-phase 3a: Enclosure 59 and Quarry G6056

The sub-rectangular Enclosure 59, defined by a ditch (G6051), was aligned north-east/south-west and measured about 39m long by 26m wide internally. An entrance 2m wide, indicated by a break in the ditch, was located 9m along the southern side from the south-west corner. The south-east corner of the enclosure was not extant, but this was possibly due to truncation. The internal area of the enclosure was divided by two segments of aligned ditch (G6101) that were 14.7m long in total. These were aligned north-west/south-east and located 24m from the northern side, dividing the enclosure into two unequal areas, with the southern about a third the size of the northern. The partition did not span the whole width of the enclosure with a gap of 6.7m on the north-western side, less so to the south-east. The enclosure ditches averaged 0.8m wide and 0.26m deep with 'U'-shaped profiles and the partition ditches were slightly smaller (0.74m wide and 0.2m deep). The ditches contained a silty clay which yielded small quantities of medieval pottery, oyster shell and an iron object. The pottery was mostly late eleventh to twelfth century in date although there was a single sherd that could date into the early thirteenth. It is likely therefore that the enclosure originated in Phase 3, about the same time as the early enclosures to the east. Apart from a prehistoric pit (G6034), the enclosed area was devoid of features, similar to other early enclosures on the site, which suggests that it was used for livestock handling or confinement, although the precise function of the internal divisions remains unclear.

A large quarry (G6056), immediately south of the enclosure was only partially exposed. The two features were close enough to be either touching or intercutting, but any relationship had been removed by a later feature SFB 65. This steep to vertical sided cut, 12.5m across from north-west to south-east, extended into the site by 6.5m and was 3m deep, sampled by machine cut slots. The cut contained a primary fill of silty clay with chalk inclusions 0.98m thick, followed by a thin deposit of black clay silt with carbon inclusions 0.4m thick (S16146) almost certainly derived from the operation of the later structure cut into the north side of the quarry (SFB 65 below). This level was in turn sealed by mixed deposits of sterile sandy silt and chalk, deposited after the site had been abandoned. The quarry, similar to others in the area (see below) and used for chalk extraction provided no concrete dating evidence, but can be placed firmly into the medieval period due to its relationship with SFB 65 and its spatial arrangement with the enclosure. Although the two features were surprisingly close together, it is perhaps relevant that the quarry did not impede the access point, being set to the south-east, and unless coincidental, their juxtaposition would indicate that, if not exactly coeval, both were present at the same time at some stage. However, it seems likely that the quarry was the later

feature as projection of its edge suggests that it may have just clipped the ditch of the enclosure.

Sub-phase 3b: The structures

The two structures were undoubtedly later than the enclosure as they both cut through its ditch, but, even though both features were completely excavated, there was virtually no associated dating evidence; the two potsherds from SFB 65 were of twelfth century date but no other contexts contained pottery or any other datable material. Although a twelfth century date seems likely for both features, SFB 65 was constructed after the quarry had been at least partially backfilled, so a later date in the medieval sequence cannot be ruled out.

SFB 65 (Fig. 226)

SFB 65 consisted of two main components, cut into the northern edge of the quarry after it had been partially backfilled, was aligned north-east/south-west similar to the long axis of the enclosure. To the north was a large semi-circular cut (G6103) 3.7m long and 2.7m wide at the surface and 1.15m deep (Plates 326, 327 and 329). Below a vertical sided 'lip', the entire northern arc of the cut had been deliberately undercut into the solid chalk by up to a metre, forming a large crescent-shaped underground recess. Adjacent to the south, was a sub-rectangular cut (G6055), 2.2m wide, 4.8m long and 1.16m deep that created a flat platform between the semi-circular feature to the north and the quarry to the south. The southern edge was bordered by a slot (S16144) that cut into the natural chalk along the length of the base and was abutted by the middle backfills of the quarry. This represents some form of timber partition or revetment. To the north side was a low wall, cut out of the natural chalk, with an aperture 0.8m wide and 0.5m deep, forming the entrance or stoke-hole to the remains of a large hearth (G6104), 2m in diameter, situated centrally in the northern chamber.

The hearth was formed within a sub-circular cut 2m in diameter with gradual sloping edges and a flat base, containing a primary deposit of clay silt with mussel shell, oyster shell, cockle shell and charcoal inclusions, 0.08m thick across the whole cut. This was sealed by a fired deposit of clay and mussel shell 0.04m thick, that had been burnt to an orange, red and black (Plate 328). Above this was a 0.1m thick deposit of light silty clay which contained chalk, burnt clay and seashell. A 0.02m thick chalky layer (G6106) sealed this deposit, and was formed of compacted chalk with dark grey silt, daub, mussel shell and whelk shells. There was no clear evidence for a domed structure as found in many other sunken structures. The base of the southern chamber (G6055) contained a substantial deposit of probable rake-out material and other detritus (G6105). The primary deposit consisted of a trampled layer of silt clay with daub and carbon inclusions 0.04m thick, sealed by layers of burnt material 0.2m thick, which included daub, charcoal, oyster shell and the two medieval pottery sherds.

The main components of the structure were sealed by a gradually accumulated fill (G6057) of clay silt with daub, oyster shell and carbon, 1.1m thick. Although not formally excavated, these levels recorded in section suggest some activity took place in the hollow after its primary use. The hearth and basal deposits had been disturbed and this interface suggests that the undercut area was partially cleared of backfill. This activity cannot be clearly interpreted but may indicate transient habitation in the residual hollow.

The function of this unique complex or the form of its superstructure, if indeed it had any, remains ambiguous. Basically, the northern chamber seems to have formed a type of large oven or semi-underground heated room, the hearth taking up most of the space, the enclosed underground form of the chamber retaining the heat, as in the more normal ovens of the Type 1 'bakery' buildings with their domed clunch walls. It is not clear if there were any above ground elements as it could have operated in the open air. The southern chamber, apparently separated from the quarry by some form of timber revetment, was obviously the working platform, ash and rake-out from the northern chamber being thrown into the quarry, forming deposit S16146 and indicating that it was only partially backfilled at the time. As for interpretation of its function, some form of drying building for crops is one possibility, but does not explain its juxtaposition with the quarry to the south, unless this was simply a readily available pit from which a below ground structure could be conveniently formed. The arrangement may indicate an integrated quarrying and burning process, such as the production of quicklime from the natural chalk, though before the industrial revolution, this was normally carried out in clamp-type or pyre-kilns, often used only once or twice for local supply. They were generally of pit-like form, often with an underground flue and were probably fired for some time, the original layered charge of limestone/chalk and fuel supplemented or topped up as the original material combusted. A considerable reddening of the pit edges was the result (see for example the limekilns excavated at Southampton; Platt and Coleman-Smith 1975, 289–294 and fig. 98). Structure SFB 65 does not conform to this arrangement (see *ibid*, fig. 98) and the structure of the hearth, or the heat involved, in the Thanet Earth building would not fit with the usual method of operation of such kilns. It can perhaps best be seen therefore, as an extreme variant of the domed oven in the Type 1 structures. Whatever the actual function or above ground form of this structure, it was obviously not used for domestic occupation, but perhaps for some form of agro-industrial process, conceivably similar to some of those postulated for Type 1 buildings.

SFB 66 (Fig. 226)

This structure was immediately adjacent to SFB 65 on the east and consisted of a large and irregular sub-rectangular, heavily truncated cut (G6058) with moderately steep sides and a flat uneven base 4.8m long, 3.96m wide and 0.28m deep, aligned north-east to south-west. This cut through the ditch of Enclosure 59 no more than 1m west of what would have been the south-eastern corner of the enclosure. A slight bulge in the north-west edge just south of the eroded corner represents the entrance

correlated with a planned bulge in the enclosure ditch at this point, suggesting that the ditch, either partially backfilled or open, was used as access to the entrance; a similar use of an earlier ditch was evident in SFB 6 on Plateau 1. Within the south-west corner of the building were the remains of an oven (G6107) consisting of a sub-circular cut 1.4m in diameter and 0.32m deep at maximum, with steep sides and a flat base. The initial fill or foundation deposit was burnt flint and sea-shell in a matrix of silty clay, 0.1m thick. This was overlain by the abraded remains of the clunch-built oven wall that formed a semi-circular ring 0.2m thick and 0.25m high, with a stoke-hole to the north-east. Within the wall a primary fill of flint and burnt clay probably represented the oven floor. This was sealed by another deposit of flint and clay, but with much less evidence for burning, superseded by a more fragmented deposit of burnt clay. This suggests the floor was re-laid with a new flint foundation layer and skim of clay that formed the latest oven level. These deposits, 0.25m thick were sealed by backfill (G6059 below), but there was no clear evidence for any collapsed dome material or other potential structural fabric. Adjacent to the oven on the east was a small area of burnt material (G6110) that consisted of three laminated deposits of very dark grey sandy silt and charcoal 0.22m wide and 0.48m long and 0.01m thick that sealed the scorched natural chalk. Two post-holes (S16116 and S16047) located 1.74m apart were cut in the base, the northern one on its longitudinal axis, the southern one slightly off line, just to one side of the oven entrance. They were of a similar shape and size 0.2 to 0.3m in diameter and 0.2m deep. Across the base of the building was a small deposit of material raked out from the oven (G6109) that consisted of light brown silt clay with daub, carbon and a few quern stone fragments, 0.06m thick. The main backfill (G6059) of the structure was a relatively uniform and sterile silty clay, suggesting gradual backfilling by weathering.

This structure conforms to the standard type (Type 1) which contain a clunch-built oven and adjacent side hearth. It was slightly more irregular in shape than most, possibly due to truncation, but otherwise similar in most respects. The entrance was at the north-west corner, in line with the enclosure ditch, and the northern posthole may have helped support the roof. The southern posthole is in a common position in front of the oven, and may relate to its operation (see discussion). Whether this structure and SFB 65 were contemporary or indeed related cannot be stated with any confidence. However, there was little evidence in any of the features at this site to indicate that any form of domestic occupation was represented. The entire site can be seen as primarily concerned with agricultural processes.

Site 21

Site 21 comprised only one possible sunken-featured structure (SFB 74), immediately adjacent to Trackway 31/32, in the relatively small northern part of Plateau 7, and three slightly later pits (Fig. 227). However, the largest assemblage of medieval pottery from one feature on the entire site, the combined trackway contexts (Plates 330 and 331), was recovered here. Unless this had been transported some distance for disposal, which seems unlikely, it must have derived from a settlement in the

vicinity, of which SFB 74 composed one small, although early part. The structure itself was unusual due to its location isolated from any enclosure, but situated within the orbit of prehistoric Barrow 2, in the south-west quadrant atop, or cut into what remained of its mound.

Phase 3: SFB 74

Structure SFB 74 (G7031) consisted of a number of components, primarily a very irregular sub-rectangular cut, about 4m long at maximum, 3.14m wide and 0.3m deep and orientated north-east/south-west, a few metres east of and roughly perpendicular to the course of Trackway 31/32.²¹ It had pronounced bulges on the eastern and south-eastern sides and had been heavily truncated leaving irregular, shallow sloping sides and a flat to undulating base (Plate 332). Directly to the south-west was feature G7039 originally interpreted as a tree-throw with an irregular, though approximately linear shape, tapering to the south-west, shallow to steep sloping sides and a very undulating, pitted base. It became deeper to the north-west where it merged with G7031. The fills and the bulk of the cut to the north-east were probably contiguous, although note was made of the difference in fill. Unfortunately the two elements were severed by what appeared to be a later pit (S7184 below). In any event, the disposition of these two irregular elements, is highly suggestive of a Type 3 sunken structure with an extended entrance ramp on its south-west side which would be compatible with the location of the entrance passage, extending at right angles directly from the hollow way. The cuts were generally infilled by a homogeneous deposit of brown chalky, silty clay with about thirty sherds of medieval pottery dated 1175–1250, animal bone and sea shell. No occupation horizons or definite structural features were identified, although some of the depressions recorded in its base might have been shallow post settings, particularly the one at the far-east end. 170m to the north-west, an isolated pit (G6096) 0.81m wide, 0.59m long and 0.2m deep yielded worked and burnt flint, oyster shell, and a few pottery sherds dating to AD 1100–1200 and may relate to activity in the unexcavated area to the north (below).

Phase 4: Later pits and the hollow ways

The sunken-featured structure was recorded as cut by two (S7184 and S7254) of three near contemporary pits (G7034). They too were irregular in profile and contained domestic material including pottery dated at the latest to AD 1200–1300, animal bone, iron nails (FN 7.2, FN 7.3, FN 7.9), quernstone (FN 7.8) and fragments of worked stone (FN 7.10). They could therefore belong to a slightly later phase of activity, occurring after the sunken structure had been backfilled.

Although the trackways may have originated before the medieval period, they are both described here as they only contained medieval material. The earlier Trackway 31 (G7027) survived for approximately 7m in length, aligned north-east to south-

²¹ It is not impossible that the bulges were also later pits, but a difference in fill was not noted. If so the feature may have been more regular.

west where it truncated the upper fill of the ditch of Barrow 2 (Chapter 2) on its western side. The cut 4.1m wide and 0.8m deep had gently sloping sides and a wide, flattish, but uneven base and contained a uniform brown grey silty clay with inclusions of medieval pottery, bone, flint, worked stone and iron. It became increasingly eroded away to the south.

This feature and the barrow ditch were cut by Trackway 32 (G7028) a linear cut traced for approximately 18m in length, on a roughly north-south alignment curving to the east slightly at its southern extent and probably merging with the original course of Trackway 31. The profile was a shallow sided cut with a wide, flat but undulating base. Its width ranged from 2.6 to 3.8m and depth varied from 0.29 to 0.85m. An elongated patch of metallated surface (S7182), of compacted flints, 0.56m wide, 1.58m long and 0.05m thick, and on the base of the cut on its western side at the south end may have been laid to fix a 'pot-hole' in the drove-way rather than being a remnant of a more extensive metalling. The superimposed main fills were mostly homogeneous with slight variation and yielded abundant artefactual material, such as medieval pottery, animal bone, brick and tile, worked stone, iron nails and other objects both of iron and copper alloy as well as residual prehistoric material derived from disturbance of the barrow deposits. The latter included worked flint, pottery and a deciduous lower right molar, juvenile fibula and fragment of adult human long bone (SK 7.8). The later of these fills were probably contiguous with a shallow lynchet (S7293) mostly excavated by machine, to the south-east, formed around the southern edge of the barrow mound as a result of ploughing and masking the presence of the barrow ditch. No trace of the hollow-way, further to the south, beyond the round barrow, could be identified.

The pottery from both these features indicates a mainly thirteenth to early fourteenth century date, with some suggestion that Track 31 was slightly earlier. However, the deposits from Track 32 are undoubtedly more indicative of when the route went out of use so in effect the backfills belong to the third medieval phase or later. It is likely that the trackway was considerably older. Most of the material probably derives from nearby occupation around the barrow and is discussed fully below.

The smaller pottery assemblage from G7027 (Trackway 31) stratigraphically the earlier, contained a less diverse assemblage of fabrics that can best be placed between *c.* AD 1225 and AD 1275. Fills of the later trackway (G7028) provided some conjoining sherds with earlier contexts, but in this context post-depositional mixing would be quite likely. The later trackway fills produced a large assemblage of material, the ceramics again mostly domestic in character, cooking pots, bowls and jugs predominating, the bulk of the assemblage dating to between *c.* 1275 and 1350. Interestingly however, some of the assemblage may have been deposited in the fifteenth century. Most of this later material derived from context 7326, a secondary fill of the trackway. The number of sherds was not great but some activity in the area at this time is strongly suggested, even if it only indicates continued use of the route.

Site 22 (Monkton Road Farm)

Evidence suggests that some of the cropmarks in the vicinity of Monkton Road Farm, previously all thought to be late Iron Age or Roman in date, may relate to the known medieval ribbon development along Seamark Road described above (Fig. 228). The features were only minimally sampled in the waste water pipeline easement and dating evidence was usually negligible. Specifically, to the west of the road, two large ditches GP42 suggest that the enclosure was medieval although this is only indicated by the recovery of one sherd from an upper fill, while the remaining material was of Roman date, but again in minimal quantities. The ditches, both on an approximate north-east to south-west alignment were roughly 46.5m apart and were c.2.2m wide, SP19 0.4m deep, and SP44 0.78m deep with the difference in depth due to a slight slope in the natural surface and truncation by agricultural activity. The features had very similar profiles consisting of moderately sloping sides that broke to a flat base.

Ditches GP43, also shown as a cropmark, appear to be a subdivision of the enclosure, similar to such features found in other medieval enclosures at Thanet Earth. A roughly east-west aligned ditch (SP57) 0.64m wide by 0.34m deep was identified in the trench. It was filled by a single deposit of silty clay, containing occasional small rounded flint, moderate small chalk fragments and a small quantity of Roman pottery. Running parallel was a shallow gully, SP59, 0.22m wide by 0.15m deep filled by a deposit of silt clay. The date of both GP42 and GP43 remains equivocal, although a medieval date for them is likely.

To the east of Seamark Road another linear feature (GP44) also closely aligned with an extensive cropmark parallel to the road may form part of similar enclosed ribbon development and can be more certainly dated. It comprised a 2.48m wide cut aligned approximately north-south running parallel with and to the east of, Seamark Road. The feature was approximately 0.78m deep and contained five fills formed through natural processes of erosion though the two upper fills, from which a small quantity of domestic material including medieval pottery was recovered, may have been deliberate backfills. This feature may have originated as a ditch with the hollow-way developing later, as an early alignment of Seamark Road.

Sites 23 and 24 (Brooksend and enclosure to north)

Site 23 (Fig. 229) was again only minimally sampled along the waste water pipeline route and in wider directional drilling pits, located within a field bounded by Seamark Road to the west, Crispe Road to the south and Canterbury Road to the north (NGR 629390 167910 centred). The corner of a substantial enclosure (GP59) was also identified in the northern section of the pipeline lying to the south of Minnis Road (Site 24; NGR 629475 169000).

The principal discovery at Site 23 was a building (Structure GP46) lying adjacent to Crispe Road within a larger stripped reception pit area opened up to enable directional drilling. The structure, only partially exposed, was sunken (defined as

SFB 81), and contained an oven, features highly reminiscent to those encountered on the main Thanet Earth excavations (Fig. 230). The structure aligned north-south, consisted of a sub-rectangular cut at least 2.17m wide, 3.94m long by 0.58m deep, with the oven (SP158) at one end, although this remained uncertain as the sides of the feature were not identified to the south (Plates 333 and 334). The feature was also disturbed to the south, probably by a service trench. The base of the oven was formed by a sub-circular cut 1.32m wide, 1.64m long and 0.15m deep, within which a layer of sub-angular flints had been deposited, forming the foundation for the oven superstructure. Lying over this were two roughly semi-circular deposits of scorched clay (SP160) forming the oven base. A gap, approximately 0.16m wide, was left between the two deposits and may have formed the flue (SP159) aligned east-west, although its function is uncertain. This was subsequently filled by carbonised material deposited while the oven was in use. Bonded to clay surface SP160 were four sections of scorched clunch wall, SP163–166, each approximately 0.16m wide surviving to a maximum height of 0.2m. They represented the remains of the original superstructure of the oven, almost certainly a clunch dome. The flue channel identified in the base also separated the clunch wall, forming the lower part of a flue or air vent in the superstructure. A second gap lying between SP163 and SP164 formed the entrance or stoke-hole to the oven superstructure itself. Apart from the transverse flue, the feature overall was identical to the ovens found in the medieval structures elsewhere on Thanet Earth.

Following the filling of flue SP159 by a deposit of carbon and clay, the dome appears to have been rebuilt and a second deposit of flints and oven floors laid within its perimeter. The flue seems to have been left *in situ*, or re-formed during this second phase of use. A large flint, located within the entrance to the flue appears to have been used as a primitive valve to control air-flow into the oven. Later, the flue was plugged by silty clay, apparently while the oven was still in use. Associated with these oven structures was a deposit of dark clay silt, containing large quantities of ash and carbon that lay over the floor of the building, representing a deposit of rake-out from the oven itself. Similar, though less carbon rich deposits (including SP125) lay to the front of the oven, formed by a mix of rake-out and other domestic material, the result of tidying within the building. Large quantities of carbonized cereal grains and pulses were recovered. These deposits were cut by an east-west aligned beam-slot (SP146) 0.18m wide, 1.22m long and 0.05m deep, originally containing a daub lined timber wall, in front of the oven and two stake-holes (SP151 and SP152).

A later phase of activity within the structure was represented by a deposit of sandy clay silt (SP97), which sealed the demolished remains of the oven. This was slightly compacted suggesting a trampled surface. The structure within beam-slot (SP146) was either still in place, or replaced at this time, with additional beam-slots cut to the south. These included SP102 approximately 1.5m to the south (not illustrated) and a north-south aligned beam-slot (SP104). Whether these were adaptations to the original structure, or a completely separate secondary building was not apparent in the restricted space. Slightly later, following abandonment, the building was backfilled by a single deposit of clay silt (containing small quantities of flint, chalk

and pottery. The pottery was mostly medieval, though some potential Roman material was also recovered.

This sunken-featured building, defined as a Type 2, presents a number of phases of use. Two successive ovens were identified the earliest of which was represented by the fragmentary remains of the clunch superstructure and part of a flint covered base. This had been largely cut away by the construction of a second oven, again a flint base and clunch superstructure. The flints had been covered by a layer of scorched clay with a central strip left uncovered. This potential flue probably acted to improve air flow within the main body of the oven, but it is the only example of such a feature at Thanet Earth. Floor surfaces within the building were largely identified through the high concentrations of ashy rake-out present. The beam-slots positioned to the immediate north of the oven and further south were somewhat anomalous in relation to those structures on the main Thanet Earth site, and appear to represent an even later structural phase after the oven had gone out of use.

Approximately 8.5m to the north of building GP46 were two highly fragmentary sections of clunch wall (GP47) surviving to c. 0.08m in height. Associated with these was a trampled surface, SP170, probably an earth floor above which lay a deposit of carbon filled clay silt. A large quantity of carbonized cereal grains were recovered from this deposit as well as hammerstone. Lying some 0.5m further north were further deposits of mixed clay, silt and silt clay containing fragments of disturbed clunch wall. These remains may represent the heavily truncated remains of a second building (SFB 82; Fig. 229).

A third building, again apparently sunken (SFB 83) was identified approximately 46m to the north. (Fig. 229) It was aligned approximately north-east to south-west, 2.6m wide at the south-west end, 3.4m wide at the north-east end, 6.0m long and approximately 0.3m deep with a steep-sided and fairly flat based profile. An extension to this cut at the south end of the feature may have formed an entrance-way. Cut into the base of the structure was a sub-circular pit, SP189, approximately 1m in diameter by 0.2m deep. This contained a layer of yellow-brown sandy clay silt on which had been lain a horse skeleton, with the head, hooves, tail, right humerus and right metatarsal removed (Plate 335). Although there was no sign of butchery marks this may have been deliberate. The upper part of the feature, including the entrance-way was filled by a deposit of clay silt spread across the lower part of the building sealed by further deposits of clay silt, all deliberate backfills deposited on abandonment. Although no medieval pottery was recovered, the structure bears many similarities to other medieval sunken-featured buildings (Type 3) identified within the Thanet Earth project several of which also appeared to contain ritually deposited animals and often fragments of quernstone, also present here.

A further sunken-featured structure or quarry was very partially exposed in a further 'directional drilling' pit adjacent to the A28 (GP53; not illustrated). This was aligned with a shallow, wide linear feature showing evidence for rutting on its base, undoubtedly a hollow way. Although near parallel with the main road at this point,

its alignment and position strongly suggests that it was a continuation of an earlier alignment of Seamark Road which joined the main road from Sarre to Birchington, underlying the main road, slightly to the east. Between structures GP47 and GP51, three pits and a number of ditches were identified, the latter relatively insubstantial and representing sub-divisions within the settlement. The pits, between 1.3–1.5m wide and 0.7–1.3m deep were all steep sided and probably used for rubbish disposal. In the most substantial, fine silty fills and green staining the edges suggested use as a cess pit which yielded a significant environmental assemblage, confirming the pits' function. The entire site had been sealed by a substantial deposit of colluvium, lying as it did at the base of a shallow but extensive valley.

A final medieval feature of note consisted of a substantial ditch forming the corner of an enclosure located approximately 310m south of Minnis Road at the far north of the pipeline (Site 24). This appeared to form the south-west corner of an enclosure (GP59) with the ditch measuring some 1.1m in depth. A low density of occupation finds suggests that the enclosure was used for containing stock rather than settlement.

Other medieval features

The only other medieval features located on the site consisted of a number of large quarries, all used for chalk extraction, chalk having numerous uses, primarily marling, to produce slaked lime for cement, and possibly as a building material. Details of these remain in archive and they are only briefly considered here. Dating of these features was particularly difficult, as all were only sampled to various degrees by machine cut trenches due to their size and depth. Usually the upper backfills were sterile brown silty clays or loams, much like a topsoil in composition and usually only a small amount of dating evidence was recovered. Quite how these later deposits accumulated in such prodigious quantity is uncertain, but if naturally this would have taken a considerable time. Although very often of medieval date this could, in most circumstances, be residual. However, the quarry relating to Enclosure 59 was undoubtedly medieval, and similar examples across the site have therefore been placed in this phase although it is possible that some were post-medieval or still being worked in this period. It must be borne in mind however, that not only would the features have taken many years or even decades to excavate, but may have taken even longer to backfill and some are possibly either later medieval or early post-medieval in date, particularly the large example (G4103) on Plateau 4. The features varied considerably in shape and size, generally sub-circular or sub-rectangular, sometimes with tapering linear extensions representing the access ramp. The larger examples tended to be deeper (some were in fact never bottomed), sizes ranging from 10 or 11m across, to 39m long and 18m wide (Quarries G4103 and G5067), while depths ranged from 2.2m to 4.6m or more.

Discussion

Introduction

The medieval period has provided the most evidence, in terms of quantity of archaeological deposits, and has revealed an extensive insight into the arrangement of part of the Kentish medieval landscape not really seen before over such a wide area. Only the large scale excavations on the A2 at Gravesend (Allen *et al* 2012, 485–583) and at Lydd on Romney marsh (Barber and Priestly-Bell 2008) can be compared in this respect. In particular, the number and variety of medieval sunken-featured-, or -floored structures at Thanet Earth is unprecedented and their nature and potential origins, their numerous idiosyncratic designs and whether they are characteristic to this particular area are all considered in some detail in the following discussion. In their respect, one point to justify initially is the use of a typology to classify them. This has never been required before as basically only one type has previously been recognised (apart from the odd exception). The imposition of such typologies is of course fraught with difficulties; such classifications have been tried periodically with little success for Anglo-Saxon sunken-featured structures (see Allen *et al* 2012, 570). The types used in this report are entirely structural, have been kept deliberately simple and there is no imperative that they should be subsequently considered necessary. However, apart from the fact that there is a big distinction between some types, it is certainly more convenient to refer to Type 1 rather than ‘those sunken-featured buildings with one or two ovens commonly interpreted as bakeries/brewhouses/or other agricultural processing buildings’.

These structures were set within an agricultural landscape almost completely defined by ditches which can, in many instances be seen to respect earlier arrangements, and thus form the penultimate element (prior to the present landscape) of a long process of agricultural land management.

Continuity from the late Anglo-Saxon and earlier periods

There is no evidence for later Anglo-Saxon settlement on the site and although a few of the medieval features contained possible later Anglo-Saxon potsherds these were in very small amounts. Nevertheless, despite an apparent occupation hiatus these sherds, along with the eighth century *sceat* found in a ditch on Plateau 8, hint at low level activity. This may have been wholly agricultural however, as apart from the general similarity in basic landscape alignment from the earlier periods, most notably in the northern area of the site, there are many individual instances of a progression from previous arrangements and the survival of some significant boundaries, such as the Plateau 4 Iron Age ditch (Chapter 4). This suggests that maintenance of the landscape, or at least a proportion of it continued throughout the intervening centuries. Rackham (2000, 328) for example, declares that grasslands, left unmaintained by regular grazing or mowing, will revert to woodland relatively quickly (a few decades), and it can be supposed that arable fields so neglected might follow the same general course of natural evolution. Not only would hedges become lost in a regime of woodland regeneration, it would seem likely that any large extent of woodland in the vicinity, engendered during the previous six centuries or more, would have been present in some form at the time of Domesday. In fact there are

very few references to local woodland in the Domesday Book (Darby and Campbell 1962). Thus, it can be proposed that although there is little evidence of actual settlement, the landscape was near-continuously farmed to some extent. Although overall the medieval agrarian landscape may have been a new emplacement, this and the various survivals of much earlier topographical details, strongly indicate that the area was never allowed to fully revert to woodland and therefore that agriculture had continued, perhaps extensively rather than intensively, in the intervening centuries.

The chronological framework

The medieval features on Thanet Earth date to between the mid-eleventh century and the early part of the fourteenth, possibly extending to AD 1350. The dating evidence for the 300 years of medieval activity is relatively limited, confined mostly to pottery (which consisted of just over 5600 sherds weighing about 60Kg, relatively small in relation to urban assemblages). Recovered assemblages, usually small in size per context, but showing little sign of residuality or contamination by later material, can be broadly divided into three sub-periods, although there is considerable overlap on the intervening margins due to the complexity and sluggish development of ceramic technology for the period. The phasing of the medieval progression (into four sub-phases) has been based on such ceramics within the fills of the various features, which could of course derive from later than their use. Generally however, the rapidity of the sequences of activity during the medieval period probably renders such distinctions irrelevant — some settlement sites may have been active for just a few decades. Nevertheless it should still be borne in mind that the pottery dating in many cases potentially only indicates the end-life of any feature or structure. On the other hand, there is perhaps an indication at least for some features (primarily sunken structures), that the material dumped in them after their lifetime, originated during their occupation and represents the clearance of rubbish, probably deriving from surface middens or dumps. This is most discernible on Plateau 4, where the end of occupation does not seem to have been superseded by any other significant settlement that would have produced the ceramic assemblages (and importation of this material seems unlikely). Pertaining to phasing also, the stratigraphy at Thanet Earth was not always clear cut and the sometimes rapid progression of development seems to be portrayed in the ambiguous relationship between features, often ditches of the various enclosures or fields. This gives rise to the suspicion that in some areas, ongoing erosion, filling features, was fairly rapid but also that later features cutting earlier ones did not always truncate a fully filled entity. That earlier features were often evident in the landscape appears to be a prevalent condition, indicated by many correlating alignments throughout this, and earlier periods, as well as the use of earlier remnant medieval ditches to aid the formation of ramped entrances into the structures.

Overall development of the medieval occupation (Fig. 231)

The earliest features (Phase 1; c. AD 1050/75–1150/75) were almost certainly the sequence of north-south aligned drove roads and trackways, defined by either hollow ways or pairs of ditch (Trackways 28–29 and 31–32) and the likely transverse route Trackway 35 (see Figs. 231–232), shows the main dating evidence from this phase and subsequent sites). These then, although potentially respecting earlier alignments, were probably new impositions. Trackway 30 may well have been an earlier alignment and was perhaps the prime route, its importance suggested by its survival to the present day. This manifestation, now Seamark Road was likely part of a much older way between Monkton and Birchington along the eastern margin of the site, maybe demonstrated by its passing directly through the extensive cropmark complex at Monkton Road Farm, parts of which are of late Iron Age/Roman date. The putative Trackway 35 (not observed as a track in the ground) which extended east-west across the centre of the site, partly defined the course of the parish boundary between Monkton and St Nicholas-at-Wade, which developed from a much older prehistoric ditch, probably banked on the south. Its presence, possibly erased by a later negative lynchet that formed on the north, down-slope side of the boundary is suggested by cropmarks, topography and later cartographic evidence. For example, its extension to both east and west is bounded by cropmarks of rectangular enclosures very similar to those lining the routes in the excavation. To the east, this alignment may have eventually extended as far as the Cleve Court area, south of Acol (just north of the western end of Manston airports runway) where similar rectangular enclosures are evident as cropmarks and where medieval remains similar to those on Thanet Earth have been excavated (Perkins *et al*, 1998 and below). The line survived as a trackway into the nineteenth century, where it is represented on the tithe map (PLATE) which indicates that to the west the route went to St. Nicholas-at-Wade; it is still partially extant as a footpath. One other route can be postulated with some confidence on the western side of the site just outside Plateaus 1 and 2. To the north this possibly terminated on the line of the (also probably ancient) road from Sarre to Birchington (via St Nicholas-at-Wade), but may also have extended into the marshes beyond.

At least five rectilinear fields, maybe coeval with the tracks or slightly later and also defined by ditches, were arranged between the two central droveways, although this system did not seem to extend south of the parish boundary, nor was any similar division found on the western side of the site (Plateaus 1 and 2) or to the far east, north from Plateau 3. A number of ditched enclosures were established within these fields or to the side, extending off the routes, often with entrances onto the droves themselves. These also were either coeval with the droves or formed slightly afterwards (medieval Phases 2–3). The enclosures were mostly bare of features internally, at least initially (generally Phase 2) and may indicate a predominantly pastoral economy for this early phase.

Subsequently in the northern area of the site, considerable modifications of this system took place. This involved the emplacement of numerous additional enclosures and sometimes alterations to those extant. These new enclosures very often appear to have cut across the line of one of the main drove roads (Trackway

28) effectively putting it out of operation (see below). Expansion to the south, mostly ribbon development along Seamark Road, seems to belong to the High Medieval period (late Phase 3 to Phase 4), much of the area possibly remaining as open grazing land (below), although some of the isolated enclosures set back from the road appear to be earlier. Over 50 of these enclosures were recorded in whole or in part. They varied considerably, some virtually devoid of features, others (almost certainly settlement sites) containing dense scatters of pits, wells and other features suggesting more protracted occupation; virtually all of the medieval features found on the site were related to them in some way. Many of the enclosures underwent further alteration, expansion and subdivision internally. In addition, most were associated with structures of sunken-featured form. The variation in the nature of these enclosures and structures and their often protracted development, is highly suggestive of a considerably more varied and complex, though still predominantly agricultural regime in the area, though a number of common patterns are evident.

Chronologically, most of the northern settlements and agricultural complexes appear to die out before or around c. 1250, although the fields were probably still used for farming. Site 1 may have been the earliest actual settlement on the site, and represented a short-lived but quite intense span of occupation which can be dated c. AD 1075–1150/75. The later features here, all sunken-featured buildings contained considerable amounts of artefactual material, probably deposited during a site clearance (perhaps prior to the area being converted back to purely agricultural land), and which dated predominantly to the twelfth century. It seems likely therefore that this settlement may have been abandoned by around AD 1200, thus just surviving into Phase 3. A similar period of activity was present to the south (Site 2), early enclosures with subsequently placed but isolated sunken structures. The relative primacy of these sites in the overall sequence may be reflected in unusual or perhaps experimental facets of some of the Type 1 or Type 2 structures represented: SFB 77 with its 'external' oven on its long side, SFB 23 with its original stake-reinforced rebuilt oven, and SFB 7 which utilized seashell in the oven foundation rather than the usual flint pad are examples.

The dating evidence also suggests that the slightly later settlement in this northern zone had ceased to operate by about AD 1225/50. These sites, on the lower ground were replaced by later activity, sometimes of slightly different form, on the higher ground to the south (and perhaps west), which saw much less activity in the earlier period. It is possible that this shift in settlement was caused, at least in part, by climatic factors (see below). Most of the early features on Plateaus 2 and 4 are also of this period, primarily dated to AD 1050–1175, although Site 5 seems slightly later, perhaps originating a century at most later. However, the ceramic assemblages were relatively small from its ditches and sunken structures. Enclosures on Plateau 4 also appear to be early and most features only contained material up to c. AD 1175. A later phase of activity here is represented by some of the structures, still probably in use in Phase 3 (AD 1200–1250), primarily SFB 45. Other sites that disappear by AD 1250, if the pottery dating is representative, include Sites 6, 8 and probably Site 9, all

in the northern area. The only exception was Site 7, predominantly of thirteenth or early fourteenth century date.

Conversely, to the south, virtually all the development appears to date from no earlier than AD 1200 (the later part of Phase 3), thus overlapping with the latest elements of settlement and noticeable enclosure to the north, but extending into the fourteenth century. Sites 18 to 20, although not particularly well dated, may have been emplaced as early as the late eleventh century (possibly in their original entirely agricultural period of use). The only definite exception to later emplacement was Site 21, discussed further below as a small hamlet aggregating about Monkton Mill, which could date from as early as AD 1100, perhaps surviving into the fifteenth century. Apart from this instance, the medieval occupation seems to cease completely at some time in the early fourteenth century. Most of the cut features were infilled, with no evidence of any later artefactual material (discussed further below) and there was virtually no archaeological sign of activity during the following centuries across most of the site.

Landscape organisation (Fig. 232)

The site is divided into northern and southern segments by the major east-west aligned boundary originating from the large Iron Age ditch and its bank, part of which forms the dividing line between the parishes of Monkton and St Nicholas-at-Wade. This boundary remained important into the medieval period. The Phase 1 sequence of mostly north-south aligned trackways seem to form the framework for most of the subsequent developments of medieval Phases 2 to 4, and in some cases have survived into modern times. To the north and west of the parish boundary (in the parish of St Nicholas-at-Wade), the land was partly divided up into a grid of rectangular fields, some flanked by double ditched drove roads. This ordered grid appeared to be completely absent in the parish of Monkton. With the exception of Trackway 30 (Seamark Road), much of this system of fields, trackways and enclosures would appear to be a completely new imposition on the landscape, although in part it was undoubtedly based on earlier alignments, such as the similarly aligned late Iron Age/early Roman field systems. In places a direct correlation with prehistoric features, such as the Iron Age ditch and prehistoric Barrow 5, both underlying the parish boundary, is evident. Some of the other prehistoric barrows also seem to have influenced the position and perhaps alignment of the routes (such as Barrow 2 and Trackways 31/32 and Barrow 8 and Trackway 28) and unless coincidental, several medieval enclosures or fields appear to respect prehistoric boundaries. If so, these boundaries must have survived across a great time-span, perhaps only as slight linear dips and banks or more probably, ancient hedges, suggestive of a continuity of agricultural use before the medieval period (see Rackham 1986, 328). Many of the enclosures of Plateaus 1 and 2 were set askew to the line of the droveways, and a persuasive explanation for this could be the presence of much earlier (Bronze Age) hedged boundaries conveniently utilised in the new arrangement.

The importance of Trackway 30, apart from its potential antiquity, is that it subsequently influenced the layout of the trackways and their associated fields and enclosures, perhaps via extant prehistoric boundaries previously influenced by the same route. These alignments appear to respect the general trend of its course, even if at some distance (as can be seen at the south end of Trackway 29 where it curves to a more northerly alignment). The ancient route probably underlies Seamark Road for much of its course, although to the south it followed a more westerly alignment than the present road, as a hollow way heading directly for Monkton church (this last alignment might suggest its southern course may be medieval in date). Projected northwards, the recorded alignment here would indicate a course slightly to the east of the present road by Plateaus 6 and 7, becoming more convergent towards Plateau 5, and eventually perhaps crossing into the site area where a length of hollow way (G5083) was recorded. Further north, towards Plateau 4 it must again underlie the present day road. These projected alignments nearly always accord with the positions and orientations of the later adjacent enclosures and buildings.

The subsequent modifications of this system during Phases 2–4 involved the emplacement of numerous additional enclosures and sometimes alterations to those extant. These new enclosures mostly seem to be closely associated with the various trackways which were probably still in use. The exception was one of the central droveways (Trackway 28) where the enclosures and structures very often cut across its line, effectively putting the drove out of operation, although it could have carried on in use as a footpath (possibly examples of purpresture; see below). This route may have been replaced by a new way to the west (underlying the concrete farm track that extended north-south across the site) as the much later evidence of the Tithe map shows a stub of a track in the same position leading north from Trackway 35 (PLATE) although little evidence for it was seen in the ground.²² However, this contention is perhaps confirmed by the fact that much of the modern farm track was at a consistent distance (160m) from Trackway 28 across most of the Plateau 1 and 2 areas (see Fig. 232), which suggests that its alignment was of some antiquity (see also below).

There is also some persuasive evidence that the landscape was at least in some areas organised into well-defined parcels, particularly from Phase 2 onwards. Although not comprehensively represented, there is a common recurrence of a distance of about 40m, or multiples (or divisors) thereof, in the spacing of enclosures and sometimes their dimensions. Thus, in the northern part of the site, Enclosures 22 and 23 are separated by this distance, while the north-south width of Enclosure 22 is about 20m. Enclosures 15, 22, 33 and 36 all extend about 20m from the adjacent trackway. Enclosures 13 and 33 are approximately 40m square and at least some of

²² However, once the concrete road along this line had been removed it was clear that the zone had been considerably disturbed with a resultant loss of archaeological information which perhaps indicates protracted use as a route way. The natural surface was also higher here by a significant amount, and as the attenuation of the land on either side must have been produced by ploughing, there is a suggestion that the modern trackway must have followed a much earlier and long-lived route which was not put to the plough.

the enclosures and other features on Plateau 5 are of this width or separated by multiples of 40m. So many others share this dimension, at least approximately, that it seems likely that this was some form of standard. In addition, at least one field from Phase 1 (Field M4), although not precisely square, was an almost exact multiple of this dimension (five by five 40m units) on its east and south sides; the measurement can also be more uncertainly discerned elsewhere (see Fig. 232). Fortuitously or not, 40m is roughly equivalent to a fifth of a modern furlong or 8 rods, the furlong supposedly originating from the optimum length of the furrow in one acre of a ploughed open field and now standardised as 201.17m in length. Field M4 and some of the other discernible fields were therefore roughly a furlong across in at least one dimension. It may also be significant that the modern farm track referred to above was exactly four of these 40m units east from Trackway 28, in the light of the potential antiquity of its alignment. However, these correspondences should not perhaps be accredited with too much significance, as the measurement of land in England during the Middle Ages 'is a subject beset with pitfalls' (Jones 1979, 18). Not only were there 'various ways of assessing the size of a parcel of land, and various sorts of acre: conventional, fiscal, standard, and local' but the modern day measure is a standardisation of a then undoubtedly more casually applied unit. Whatever the veracity of this evidence in regard to medieval land measurement, it does suggest however that a unit of measure was often applied, even if only approximately in the overall organisation of the agricultural system and therefore a degree of, probably imposed administration.

The sunken-featured buildings

Apart from a few earth-fast above ground timber buildings of more conventional arrangement (below), between 68 and 77 medieval sunken-featured structures were recorded (depending upon whether some of the more dubious examples and two possible buildings (SFBs 71–72) partially exposed on Plateau 6 are included). These structures, which until recently have been rarely observed or recorded appear to be only known in any number from Kent (Allen *et al* 2012, 577), particularly the northern littoral zone (Fig. 233), although similar medieval and earlier structures do seem to occur in other parts of the continent, and there are examples of very similar Roman period buildings in Kent (again mostly in Thanet, all more fully discussed below). At Thanet Earth, the sunken buildings are of a range and variety not yet seen anywhere else in Britain.

One of the main types, here defined as Type 1 are usually interpreted as bakeries (Schüster and Stevens 2009). These are the most frequently observed form elsewhere and contain a large oven in one corner with an adjacent compartment that also shows evidence for heating, though not of the same degree. At Thanet Earth, there are variations on this apparently standard pattern, which have been defined as Type 2. An equally, if not more predominant form (Type 3) was more difficult to recognise and to interpret. These usually consist of a simple subrectangular sunken area, frequently featureless internally and without any obvious structural characteristics. The ones defined as this type here may not all represent actual structures, but their

size, shape and perhaps more importantly, relation to the enclosures, droveways and often Type 1 structures is highly suggestive that they represent buildings. Taking this in to account and with a lack of alternative interpretation, a structural interpretation seems quite reasonable particularly as some (such as SFB 52) contained definite occupation levels. Other, more obvious sunken structures were more specialised, probably used for various functions, mostly agro-industrial, while some appear to be domestic in nature, even if only intermittently occupied; they are too diverse to be readily classified and are designated Type 4 – miscellaneous structures.

Location (Fig. 233)

Most of the variants of medieval sunken-featured building found at Thanet Earth would appear to be a predominantly, possibly exclusively Kentish phenomenon in Britain. If the Thanet Earth examples are included, the main concentration is in Thanet, but they may be just as common along the northern Kent coast as far west as Gravesend; excavation bias has potentially skewed the apparent distribution and some examples previously seen or recorded have not been recognised as potential structures *per se* (see below and Allen *et al* 2012, 577). There are also a few examples further south. The first such structure identified was at Acol, near Manston in Thanet (Perkins *et al* 1998). A similar structure was excavated shortly after in Ickham (Linklater and Sparey-Green 2002). Other single buildings have been recorded near Chilham, south of Canterbury (A. Single *pers comm.*), at Leybourne near Maidstone (Ellis 2009), Chestfield near Herne Bay (Allen 2004), and at Star Lane, Manston also in Thanet and only a few kilometres east of Thanet Earth (Andrews *et al* 2009, 134–137). More complex settlement arrangements, similar in many ways to the Thanet Earth medieval sites have been exposed in larger archaeological schemes in west Kent, particularly on the A2 works at Gravesend where at least eight sunken-featured structures were located (Allen *et al* 2012), but also nearby on the High-Speed Rail Link (HS1 – Northumberland Bottom; Reynolds 2011, 384–389) as well as at Fulston Manor, Sittingbourne (Powell *et al* 2009; see also Table 4).

Types and construction

There is much variation in the size, layout and probable function of the sunken-featured buildings at Thanet Earth and a number of unusual, perhaps unique examples. The primary type (Type 1), the most frequently observed form elsewhere, are relatively well known, with their large oven and ‘side -hearth’ and are usually interpreted as bakeries-cum-brewhouses (Schüster and Stevens 2009); eleven structures and one probable other exactly conforming to this arrangement were located at Thanet Earth. Type 2 is a variant of this main form but in most cases these were probably directly or closely equivalent, at least in function; six/seven of these were found but the following descriptions generally hold for both types. The more uncertainly interpretable Type 3 structures may in fact be the most common – twenty-six/seven probable, and at least nine more uncertain examples of these were located on the site. Their lack of structural detail or other evidence of occupation or

function makes them difficult to separate from simple 'working hollows' or large, but shallow pits, and it is likely that many have been overlooked for this reason, both in Kent and perhaps elsewhere.

Type 1

Type 1 structures (Fig. 234) have a main subrectangular cut, usually between 4 and 6m long (occasionally slightly larger) and 3 to 4.5m wide (sometimes slightly narrower) with steep edges and a generally flat base. Depth was variable partly due to different levels of subsequent truncation, the maximum at Thanet Earth being 0.9m, although there were two structures that were considerably deeper (SFB 29 and SFB 34). Floor areas were within the range of *c.* 9m² to *c.* 20m² where this could be ascertained. Access to the interior, where evident, was either by an external ramp or steps cut into the bedrock, nearly always extending from a corner of the main cut at the opposite end or corner to the oven. These entrances were often associated with two postholes on either side which undoubtedly represent a doorframe, and which possibly give an indication of the position of the superstructure for which any other *in situ* evidence does not usually survive.²³ There is however, not one definite instance of gable posts at the longitudinal ends (unlike Anglo-Saxon *Grubenhäuser*), either in the Thanet Earth examples or those elsewhere, which almost certainly indicates that these buildings did not use them, although some of the structures have internal postholes on the long axis that may have supported a ridge beam. Most of the other types of structure are similar in this respect (see below).

The main oven, always in one corner, is often set on a raised platform or plinth of bedrock left standing proud of the main floor area, to facilitate ease of working; alternatively the working area in front of the oven was reduced below the general floor level to the same effect (as in SFB 8). The ovens are disposed to left or right (when faced longitudinally) here described as either right- or left-orientated. Most of the structures at Thanet Earth were left-orientated (nine out of eleven examples), although elsewhere in Kent the right orientation seems to predominate (five out of seven examples published; see below). Taken together, the numbers suggest that the disposition of the oven is evenly divided. In the few cases where the entrance is clear, the oven is usually diametrically opposed, but maybe this was just personal preference, perhaps influenced by the left- or right-handedness of the builder or operator (quite possibly the same person or group). Various substructures or foundations were used for the base of the oven, the most common (both at Thanet Earth and elsewhere) being a raft of flints, sometimes with significant quantities of seashell, often contained within a 'clunch' wall that also sometimes formed two compartments for the oven and associated side-hearth (for a discussion of clunch see above). This flint deposit, or 'hotplate' then covered with a clay or clunch working floor, would have retained the heat from the initial firing after the ashes had been raked out. A few examples however, do not have the flint raft (or use crushed shell instead) and at Thanet Earth at least, these seem to be early, perhaps experimental

²³ In one example (SFB 32) the position of these suggested that the doorframe was askew to the longitudinal axis

examples (such as SFB 7 on Site 2). The superstructure of most of the ovens was constructed of a circular or sub-circular clunch wall formed into a dome with an access point or stoke-hole at the front and presumably with a flue or smoke vent at the apex. These ovens were sometimes refurbished or even completely rebuilt and were mostly between 1.6 and 2.0m in diameter externally. One smaller (at c. 1.45m) was in the smallest of the structures (SFB 40) as might be expected. The largest oven was in SFB 46, at about 2.1–2.2m diameter. In the Thanet Earth examples the clunch-built oven walls do not seem to have been supported by a wattle frame (unlike a few others elsewhere – see below) although the removal of one rebuilt example (in SFB 22) did reveal a circular arrangement of stakes that must have formed a frame for an earlier oven; its replacement showed no evidence for such stakes perhaps indicating that such a frame was not needed with a clunch-built dome, indeed one oven on Plateau 2 may have been built with clunch ‘bricks’ rather like an igloo. One oven (in SFB 34) did however provide evidence that the dome had been built on the outside of a frame of curved stakes, but these would have completely burnt away on the first firing, so were probably erected to aid in the formation of the dome (a ‘former’), rather than having any structural necessity. After the initial firing it is quite likely that the dome was rendered hard and quite stable.

The adjacent installation, usually based at a lower level than the oven and sometimes within its own separate compartment, is often interpreted as a hearth but does not always show much evidence for significant firing on its base although there was nearly always a layer of burnt material or charcoal present. This may indicate that the feature was not always used as a hearth as such but contained a fire at a higher level, perhaps constrained within a brazier or other portable or free-standing fire retaining structure. This is suggested because of the often restricted extent of the burning or burnt material, generally situated at the front of the compartment, rather than spreading across it to the rear, which would be the case if the fire was unrestricted. There seems to be quite a variation in the nature of this element however, the structures found at Star Lane and at Leybourne (below) containing a more obvious purposefully constructed basal hearth of teardrop shape as did some Thanet Earth examples. SFB 8 contained a clunch-built oval construction with a dished interior and may have been domed originally. SFB 78 seems to have possessed a hearth confined between two upright quernstone fragments although its overall structure was unclear. The majority of the Thanet Earth structures however did not really contain evidence for a proper hearth, the most likely explanation for the adjacent burning and burnt deposits being a brazier or trivet of some sort. It seems likely that whatever the exact form of this side arrangement, it may have often held the still hot embers from the firing of the main oven after they had been raked out.

One further structural detail relating to some of the ovens consists of one or two post settings placed in front of them on either side of the stoke (some near the longitudinal axis of the structures may have been roof supports, but this position seems unlikely in this respect). It seems possible that two such features were always present but in some cases one of the settings has been lost; many were quite shallow

and in some cases mere depressions sometimes filled with a clunch material and acting more as pads. These features were recorded in nine of the structures and have also been found elsewhere (below). The function of these post-settings has never been discussed in detail apart from by Perkins *et al* (1998, 237–239 and fig. 5) where they were considered to be props for a screen ‘or as part of a construction to separate the hearth from the remaining space’. The second of these interpretations seems implausible but the first may be more correct. It seems safe to suggest that these features related to the operation of the oven and if so their most probable function was to support a screen, to block off the stoke or entrance. This could have been used to regulate the air draft into the oven or additionally stop-up the entrance once firing was complete, thus retaining the accumulated heat and minimising sudden temperature variation which is not advisable during some types of cooking such as baking (see also below).

The date of Type 1 structures

Considering the dating of these buildings, it would seem that they were generally more prevalent in the earlier part of the medieval period, certainly during the eleventh and twelfth centuries rather than the thirteenth or fourteenth. At Thanet Earth 55 per cent of the structures dated from Phase 2 (SFBs 7, 8, 23, 32, 46 and 78), while about 36 per cent dated to Phase 3 (SFBs 31, 35, 58 and 66). Some of these, particularly SFB 58 may have lasted in use until the early part of Phase 4, and while the dating of SFB 40 is slightly uncertain, it was probably constructed during Phase 3, only becoming backfilled at a much later date (c. AD 1250–1325). At the time of writing, this trend would seem to be not so evident elsewhere however, although sample bias may be a factor (individual Type 1 structures on other sites are described below). Even so, out of the eight so far published only one (oven 210 and hollow 896 at Northumberland Bottom, Gravesend) has been attributed to the later thirteenth/fourteenth century, the others probably originating at least before AD 1250. In any event, the general form of the Type 1 buildings does not appear to change or develop over time, a conclusion also reached by others (Allen *et al* 2012, 571).

Type 2

The distinction between Type 1 and Type 2 structures may remain a little blurred until a wider range of examples are recorded, and in most cases they were probably similar in function, if not identical to those of Type 1; they were mostly of similar dimensions. They would appear to be idiosyncratic versions of the norm, very often possibly experimental or, as in the case of SFB 29 perhaps, utilising a pre-existing feature to construct a similar type of structure (this particular feature was also larger than all of the other Type 1/2 structures at 28.5m² in area). They always have an oven however, although it is either oddly constructed or in a different position, sometimes more central to the building such as, perhaps, in SFB 43. They include two examples where the oven and/or side-hearths appeared to be external to the main sunken part of the structure. This, however, may be due to truncation having

removed the upper part of the cut that would have enclosed them, as it seems very unlikely that ovens would have been external to the superstructure (but see SFB 77 below). In others there seems to be no side-hearth and although in a few cases this could have been cut away by later disturbance, it does not rule out a fire being held well above ground in some form of retaining vessel at a higher level (so the majority of these have been considered to be of Type 1).

Nevertheless, a few structures did exhibit significant variations, even though conforming to the general pattern outlined above. SFB 29, apart from being larger than the norm, was 1.87m deep, but appeared to have held ovens and hearths (although much damaged) in comparable locations. Other variations included three compartments at one end of the structure (SFB 43) and one building which appeared to have a hearth or oven externally on its longer side (SFB 77), possibly partially outside of or built into, the enclosing walling. This was a particularly early building, so if external, the oven may have proved short-lived. However, as the actual position of the superstructure is never very clear with these structures, all the ovens could easily have been within the encompassing walls, if these were very wide or set out some distance from the sunken area. Again, most of these buildings date to the earlier phases of medieval development, which might explain, in some cases, their more experimental or less proficient design.

Type 3

What have been categorised as Type 3 structures were a more predominant form but more difficult to recognise and to interpret. In size, these were the most variable of all the structures, mostly between 4–6m long and 2.5–5m wide. Some were much smaller however (3.3m² in the case of SFB 51), which may suggest that the more extreme smaller versions were not in fact buildings, although shed- or tent-like structures could still be possible. Some were much larger, SFB 68 and 69 at around 11m long and 4m wide, while the largest (SFB 26 with an internal area of nearly 64m²) may have been more than one building. Some of these features did provide more definite structural facets, such as stepped or ramped entrances, internal dividing walls (SFB 50), the occasional posthole in association, or evidence for occupation although minimal (such as burnt patches on the floor and occupation deposits), but these were in the minority. One, SFB 52, did have well defined occupation layers containing significant domestic artefactual material on its base. This variation may be a reflection of the purposes for which these structures were used.

Considering the number of this type at Thanet Earth, it seems likely that such potential structures have been found elsewhere but have gone unrecognised without the benefit of a wider context. One such contender, admittedly tentatively interpreted as a possible sunken-featured building at the time, has been excavated at Fulston Manor near Sittingbourne (below). Significantly, this was also associated with medieval enclosures with a Type 1 structure nearby, although this was possibly of slightly earlier date; the large size of this potential building (13m long and 6m

wide) is comparable to two partially exposed buildings (SFB 68 and SFB 69) on Plateau 6, both of Type 3. Another example excavated near Lydd was interpreted as a shepherds hut (Barber and Priestly-Bell 2008, 283), and a few others have been recognised on the recent A2 improvement works at Gravesend (below). It seems likely that such potential structures had a variety of uses, such as simple shelters, storerooms or perhaps for some form of agricultural processing or storage as they often appear to be associated with Type 1 structures, frequently in close juxtaposition. As far as the dating of these is concerned, they occur throughout the period, relatively evenly divided between Phases 2 and 3 (about 25 per cent for each phase), the rest seemingly of Phase 4. Whether this is a true indicator of their period of use however is unlikely as some may have survived in a dilapidated state and been infilled much later.

Type 4 (Fig. 236)

The Type 4 category is of structures that do not fall into the above patterns and can be considered miscellaneous. As with the Type 3 there is not usually evidence for hearths or ovens, although an indication of heating is often present on the floor, either suggesting small *ad hoc* fires, or the use of a brazier. Fifteen structures of this type have been isolated, nearly all having indications of stepped or ramped entrances and doorframes, some with postholes suggesting enclosing above ground structural elements. Some at least of these buildings are likely to have been domestic residences, more complex than simple shelters with evidence that they were occupied on a more protracted basis, although they rarely contained what could be construed as significant occupation deposits. They tended also to have much larger floor areas than other types (23m² or above) and include SFB 41, which contained internal 'furniture' in the form of a bench with armrests carved out of the solid chalk and a storage compartment composed from clunch-built walls (see below for a continental parallel). Structure SFB 13 was multi-compartmented with a connecting corridor with similarities to some of the Roman sunken-featured structures found to the south-east in 1994 (Hicks 2008; see SFB 15, 130–134 and fig. 2/18). It appears to have been partitioned to conform to the one third/two third arrangement seen in above ground timber-framed buildings of the medieval period (corresponding to the hall, service wing and cross-passage). By far the largest structure, SFB 53, was 14.4m long and 7.7m wide with an original floor area of over 100m² and was built to a closely defined plan, again showing the ratio of thirds in the position of its opposed entrances which are indicative of a cross-passage. This structure, SFB 59 and perhaps SFB 62 had evidence for clunch-built linear features around most if not all of their perimeter, these almost certainly representing or acting as benches, for which there are also some continental parallels (see below). These types appear to be domestic residences although SFB 53 may have started life as a cowshed due to its extremely uneven original floor (below) and may not have been sunken far into the ground.

Another feature (SFB 63), which was basically a Type 3/4 building with an extremely long entrance 'passageway' was also superficially comparable to a Roman structure near Monkton in this respect (SFB 14, *ibid*, fig. 2/17). Structure (SFB 11) was

very similar to a Type 1 with its two compartments at one end but with no evidence for hearths or ovens, or that these had ever been intended to be built. Others are more difficult to define. SFB 33 may not have been a building or even medieval, while SFB 42 seemed at first sight to be a subrectangular quarry, although of quite regular form. SFB 45 was probably originally a domestic residence (nearly 11m long) but possessed, in a secondary phase, a typical domed oven, here situated at its centre, suggesting more variation in its possible function (thus showing the difficulties of classification in turning from a Type 4 to a Type 2 structure); it bears close similarities with a building excavated at Gravesend (see below). Structure SFB 65 was a large industrial or agro-industrial facility cut into the side of a quarry on Plateau 6; this probably had some form of superstructure and was definitely sunken but whether it was really a building as such is difficult to ascertain. It has been suggested that it was a limekiln but other functions seem as, if not more, probable. SFB 21 had an underground larder in one corner (a number of buildings had semi-underground niches or larders but this was a large and completely underground feature) and an unusual clunch-built construction at the other end of the building. This was possibly a smoker and perhaps a replacement of an earlier more conventional oven (thus transposing the building from a Type 1 to a Type 4). Some of these structures therefore seem to have undergone modification during their lifetime, for various agro-industrial uses, whilst others may be straightforward residences/shelters. The possible above ground arrangement of these buildings is further considered below.

Location in the settlement areas

Virtually all the sunken-featured structures, apart from a few notable exceptions, were either within enclosures (usually near the corners), cutting enclosure ditches (again often near the corners), or cutting the drove road ditches (that usually formed one side of the enclosed areas). Significantly, all the enclosed structures were in alignment with the enclosure ditches indicating obvious contemporaneity, and even when cut into the enclosure or drove road ditches that they superseded, still respected the earlier alignment, suggesting that the ditches or at least their associated banks and probably hedgerows were still in evidence.²⁴ This sort of arrangement is also common on the other sites where the wider context can be appreciated (see below). The placement of buildings, sunken or otherwise on the periphery or corners of contemporary enclosures is understandable, particularly as the enclosures may well have held livestock in both earlier and later phases. Structures containing ovens, where there was an obvious fire risk would also need to be kept isolated from any other structures or facilities where possible, although there was not always any evidence for other structures in the vicinity, apart usually from Type 3 structures (below). Perhaps most importantly it also seems likely that there was an element of shelter involved, particularly where structures cut earlier ditches,

²⁴ A few of the structures were cut by enclosure ditches, although they had previously cut earlier ditches, but this was usually where there were multiple phased enclosure systems indicating a prolonged chronology and variations of use.

as any associated banks were probably hedged would have provided additional shelter from wind.

A common juxtaposition of Type 1 (or 2) and Type 3 structures is demonstrated in about half the cases, SFB 76 and 77 (6.8m apart and in line), SFB 30 and 31 (1.2m apart), SFB 25 and 35 (10.5m apart and in line) and the adjacent and parallel SFBs 26 and 29 (5.4m apart). SFB 22 was probably also within 10m of a Type 3 structure. Others were very close to Type 4 buildings, which could also have performed some of the same functions as those of Type 3 such as storage of raw materials (such as grain) and finished products. These include SFB 13 and 14 (1.2m apart), and SFB 65 and SFB 66, adjacent and parallel in the corner of Enclosure 59 (3.7m apart).

Other Kentish examples

Before discussing these medieval sunken-featured buildings more generally, it is worth briefly considering and comparing the other known structures of similar type in Kent and their setting, where these have been more fully excavated or published. At Ickham Court Farm, about 100m west of Ickham church (NGR 62210 15820), a sunken structure of Type 1 was probably set within an enclosure system relating to a monastic farm, although the ditch layout was only very partially revealed (Linklater and Sparey-Green 2004, 22–23). The subrectangular building was 4.5m long and 3.3m wide, about 0.45m deep with a large oven in its north-eastern quadrant, set in a shallow hollow (right orientated; see above). This was of typical domed construction, about 1.8m in diameter, surviving to the top of the cut, bedded on a raft of small flint nodules. Adjacent to the oven was an area of burnt subsoil interpreted as a hearth, while the main sunken area was covered with rake-out deposits. The hearth was archaeo-magnetically dated to AD 1115–1160 (TE medieval Phase 2), while a soot and charcoal deposit within the oven yielded charred cereal grains, chaff and other seeds, as well as a trace of smithing slag. This sunken-featured structure was of typical Type 1 construction, although the oven dome was a completely clay-built feature constructed around a frame of wattles unlike most of the Thanet Earth examples, probably due to the clay subsoil. Although the structure seems to have been in use in the middle of the twelfth century, pottery from backfill levels may have dated up to the early thirteenth. The structure was probably backfilled on purpose as it was later cut by two ditches.

At Kent International Business Park, near Acol, Manston on Thanet (Site 18), Structure 13/14 was set near the corner of a partially revealed ditched enclosure that contained other medieval features including a larger rectangular building (Perkins *et al* 1998b). Other medieval enclosures were also revealed nearby and probably form the easternmost limit (as far as presently known) of a ribbon development of medieval enclosures alongside Trackway 35 that extend from Thanet Earth to the west. The structure was 5m long, 4m wide and 0.7m deep with two flat-based niches extending out from its long sides (possibly representing post-settings for its superstructure) and a larger undercut niche at one end. The opposing end contained the remnants of an oven in one corner (right orientated), constructed on a raised

plinth of natural chalk, 'scraped flat'. The oven, for which little or no superstructure survived was 1.5m in diameter and composed of a raft of flints sealed by a deposit of burnt clay. The usual side compartment was evident, separated from the oven by a clunch-built wall, although it is unclear whether this exhibited any sign of burning. The corner opposite to the oven presented what was probably the entrance, a ramped cut on the long side bordered by two post-holes that may well represent a doorframe. Just in front of the oven on its left-hand side was a post-setting, with another adjacent. The structure was dated to the late twelfth-thirteenth century (roughly equivalent to TE medieval Phase 3). The building corresponds to Type 1 in virtually all of its particulars; of note is the post-hole in front of the oven, a common setting in such structures.

Also near Manston, at Star Lane (NGR 6360 1679), a similar structure was excavated (Andrews *et al* 2009, 134–138, feature 7250). The feature was positioned just within a medieval enclosure, not far from its south-west corner in a similar manner to many of those recorded at Thanet Earth. The building measured 3.6 by 2.9m and about 0.3m deep, comprising a roughly subrectangular hollow with a probable entrance at the north-east corner. The south-east corner contained the oven (thus left-orientated), slightly external to the main cut causing a bulge in the feature here, and comprised a sub-circular construction 1.6–1.8m in size set in a slight hollow. The basal foundation for the oven was a layer of flints capped by a deposit of crushed marine shell. These levels were surmounted by the working oven floor and the remains of its domed wall, all constructed of clunch. Two large flints had been set in the floor of the structure just in front of the oven entrance, interpreted here as strengthening the entrance. The adjacent side facility in this building was a smaller, elongated 'keyhole' shape cut into the floor with traces of what appeared to be a clunch-built formation around the edges (suggested to be the remnants of another dome). Heat was applied directly to the base of this feature and its northern end contained a charcoal spread. High amounts of grain were recovered from various deposits (mostly rake-out levels) within the structure while the fuel used in the firing of the ovens was predominantly of twigs and branches, probably bunched into faggots. Again this structure, dated to the eleventh or twelfth centuries (Thanet Earth medieval Phases 2–3) can be confidently assigned to Type 1.

On excavations related to the West Malling and Leybourne By-pass (Andrews *et al* 2009, 11–14), Area B1 revealed a sunken-featured structure (Structure 638) set in the corner of what were probably medieval fields or enclosures (only one ditch could be certainly dated). The site, to the west of Leybourne was not far from Leybourne Castle, and possibly part of the manorial estate owned and developed by the de Leybourne family from the early thirteenth century (Andrew *et al* 2009, 54). The subrectangular pit of the structure was 4.06m long, 3.24m wide and 0.34m deep. A lateral bulge in one corner of the hollow probably represented the entrance, whilst the opposing corner held an oven (about 2m in diameter and right-orientated), constructed with a foundation of Kentish ragstone (reflecting the local geology), capped with a baked clay lining – none of the superstructure survived. The oven was associated with charcoal-rich deposits that spread from the oven into the hollow and

undoubtedly represent residue from its firing. Adjacent to the oven was a smaller construction, consisting of a teardrop shaped feature containing carbon and charcoal and interpreted as a second oven. Charcoal from the structure showed that oak and beech were the most commonly used fuel (although crop processing waste was also suggested) but with hazel, hawthorn, maple and elm also present. There was a considerable quantity of environmental remains, which included grains and rachis fragments of free-threshing wheat, some barley and possibly rye. The building, a classic Type 1 structure, was dated to the early thirteenth century from the pottery (TE medieval Phases 3–4) which included a near complete vessel probably smashed *in situ* within the backfill; this potentially ritual act is similarly shown in SFB 52 at Thanet Earth.

At Fulston Manor, Sittingbourne (NGR 5907 1628 centred), two sunken-featured buildings were located within a system of multi-phased ditched, perhaps manorial enclosures, Phase 1 dating to the mid eleventh to early thirteenth century, Phase 2 to the late twelfth to early thirteenth century (TE medieval Phases 1–3; Andrews *et al* 2009, 175–197). The main structure, interpreted as a bakery, was set square to one enclosure in its north-west corner and comprised a large subrectangular hollow (405) about 7.4m long, 4.8m wide and 0.7m deep. This is the largest such structure so far located of this type. It had an irregular L-shaped extension near the corner in the north-east quadrant, flanked by two large post-holes on line with the main edge. This almost certainly represents the entrance with an associated door frame, here described as a porch. In the opposing corner were the remains of an oven (right orientated) about 2m in diameter internally and of a number of phases. Deposits under the oven levels suggested activity (probably an earlier oven) within the sunken area prior to its construction. The oven was fairly typical, constructed on a raft of flints, with baked clay floor over, and the remnants of a side wall representing the base of the dome. This was rebuilt with a clay and flint wall during a second phase, and further phases of rebuild and use were also evident. The usual ‘hearth’ was found adjacent to the oven here comprising a pear-shaped structure of flint nodules bonded with clay showing evidence of burning. What was probably a clunch mixture enclosed the structure and a clunch wall separated it from the oven. Various fills and floor deposits within the main part of the structure suggested fairly protracted use, as do the various rebuilds of the oven. Archaeomagnetic dating of the second and third phase oven floors gave ranges of AD 1180–1230 and AD 1200–1230 (95 per cent probability). A late twelfth-early thirteenth century date would accord with TE medieval Phase 3, possibly into Phase 4. Environmental remains were relatively limited but predominated by wheat and the structure was interpreted as principally being a bakery, it being suggested that the grain was fully processed into flour prior to its use within the structure (*ibid*, 183), although other uses were not ruled out. Another possible structure was located about 50m to the south-east, again within the enclosure system though possibly of a later phase. This subrectangular hollow was 13m long, 6m wide and up to 0.9m deep with a metalled ramp perhaps representing an entrance at one end. The feature was not certainly interpreted at the time, although the possibility that it was a building was mooted; in

the light of more recent evidence it is quite likely to have been a Type 3 sunken-featured structure (*ibid*, 189–190).

At Northumberland Bottom (a number of HS1 excavations south of the A2 at Northfleet), a site to the west of Downs Road revealed two intercutting ovens ‘comprising a domed clay superstructure formed over a framework of stakes’ (Reynolds 2011, 385); these were not attributed to a sunken-featured structure but it seems likely that they were (they were associated with a ‘working hollow’; Askew 2006, 39). The ovens were set within a system of ditch-bounded fields and dated to about AD 1100–1250 (TE medieval Phases 2–3), associated with grains of rye, oats and bread wheat. At Northumberland Bottom itself (Booth *et al* 2011, fig. 6.39), a structure (oven 210 and hollow 896) clearly of Type 1, was associated with an enclosure/field system. The building was set close to the north-west corner of the enclosure, the enclosure itself an extension to an earlier-phased arrangement. The sunken-featured structure was about 6.5 by 3.5m in extent (again at the large end of the range) with a ‘chalk built’ oven (210; probably a clunch-type mixture) founded on a raft of flints; there was, as usual, an adjacent facility (a burnt oval pit and flue; Askew 2006, 41). The structure (right orientated), was dated to the late thirteenth-fourteenth century (TE medieval Phase 4) although the evidence was minimal (*ibid*, 41) and the structure itself might be somewhat earlier. Wheat, barley, oats and pulses, plum or bullace and cherry stones were recovered and it was suggested that it was used for food preparation and crop-processing. Another possible sunken structure (998) was recorded in the same corner of the enclosure but not fully investigated; its location would strongly suggest that it was a sunken structure in the light of the Thanet Earth evidence, although not necessarily of Type 1.

On the A2 road scheme at Gravesend, a number of separate areas revealed relatively complex medieval sites similar in many respects to those at Thanet Earth, all with associated sunken-featured structures of various types. Towards the west of the scheme two distinct groups of medieval features (sites L and A) were partially exposed (Allen *et al* 2012, 491–496) and at Site L, two sunken-featured structures were recorded. The more fully investigated (Structure 12583) was sub-square, about 4m across (a common dimension for square forms – see above) and 0.48m deep and aligned with, and less than 10m from, a medieval ditch. The entrance was probably at the north-west end, where a single post-hole could conceivably represent part of a door-frame (*ibid*, fig. 5.5). An oven, about 1.9m diameter had been constructed in the eastern quadrant of the building (left-orientated), in a similar fashion to many of the Thanet Earth examples of Type 1, with walls about 200mm thick on a layer of rammed flints somewhat raised above the general floor level. A hearth comprising an oval hollow layered with burnt clay was situated next the oven and the remainder of the structure contained rake-out and other deposits derived from its use and secondary layers from the collapsed oven or superstructure. The structure was dated to the late eleventh century (possibly into the early twelfth, i.e. TE medieval Phase 2) and it was suggested that it only lasted for a few generations. Plant remains primarily included cereal grains of wheat and barley with some oat, vetch and hazelnut. Charcoal from the structure suggested that wild cherry was

probably a main fuel source with hawthorn and oak, birch, hazel, beech and field maple also represented. The second structure, (12787 about 25m distant and of similar date) was not fully excavated as it was not considered a structure at the time. There was no evidence of burning but it was subrectangular and respected the position and alignment of the medieval ditches so it is suggested here that this was almost certainly a building of Type 3.

The settlement at Site C to the east of Site L (Allen *et al* 2012, 496–525) comprised a complex series of multi-phased subrectangular enclosures and field ditches, various timber framed structures, pits and a number of sunken-featured buildings. It was only about 50m north of the HS1 excavation at Northumberland Bottom mentioned above and probably part of the same site. Phase 1 here was equivalent to TE medieval Phase 2 but there were no sunken structures allocated to this initial period. Phase 2, closely equivalent to TE Phases 3 and 4 contained all the sunken buildings and a number of other structures allied with developments of the enclosure and field system, although many of the structures appeared to be associated with the Phase 1 enclosures, whose ditches presumably survived into this phase. This sequence of development clearly echoes that postulated at Thanet Earth. Four, possibly five sunken-featured structures were located. Structure 15035 (*ibid*, 502), was set in the south-west corner of an enclosed area and was, 5.5m by 4m in extent. It was heavily truncated so not all of the edges were clear but was probably subrectangular. Near centrally at one end the floor was heat-reddened and sealed by a layer of charcoal, suggesting a hearth or brazier. A number of post-holes were located at points around the edge of the sunken area but did not appear to be significant structural elements; some though, might represent a doorframe at the entrance. External to the main cut on the south-east corner was a subrectangular oven with two chambers in an hourglass shape and perhaps with a domed roof. Although the oven was considered earlier than the sunken building, the relationships were not certain (*ibid*, 505). In any event, this structure does not compare with the Type 1 buildings at Thanet Earth and the ‘external’ nature of the oven, which was not paralleled at the time tended to suggest that oven and building were not related. Some Type 2 structures do however have what appear to be external ovens, so it is possible that the sunken area and oven were related and conform to Type 2. The building was dated to the late twelfth century (TE medieval Phase 3) but little environmental evidence was recovered from it.

About 25m to the west, Structure 6280 was again of slightly unusual form, roughly subrectangular, 6m long, 4m wide and 0.3m deep, set closely parallel to an enclosure ditch. The bowed western end was formed of a raised central platform left standing during the excavation of the cut. This was sealed by various layers of cobbling (similar to the basal layers of the ovens), but there was no oven superstructure in evidence and no real sign of burning, so it is debatable that there ever was an oven in this position, although the raised plinth is a common feature of such arrangements. Whatever the situation, a pit ‘probably functioning as an oven’ (*ibid*, 506) was cut along the long side of the building. This was subrectangular with two chambers separated by an arch of natural chalk. One chamber evidenced signs of burning, the

other (the stoke-hole) contained ash and soot. Charred grain was recovered from the oven deposits, but in small quantities, mostly barley but with some wheat. The structure was obviously not of the usual Type 1 and would appear to be a miscellaneous type, perhaps a domestic dwelling, or some sort of agricultural processing building or malt or brewhouse. It was dated to the late twelfth century.

Another rather odd sunken-featured structure (Building 5347) was situated immediately beside and perpendicular to a hollow way. This comprised a rectangular cut with pronounced rounded corners, 8.3m long, 3.8m wide and about 0.28m deep. There was no evidence for an oven in this structure, though there were patches of burning on the natural chalk floor sealed by spreads of charcoal. The north-east quadrant however contained a rectangular pit or channel with a base sloped up to floor level and which had a burnt base and sides – this was interpreted as a rake-out pit for a hearth to the south-east, or possibly some remnant of an oven. Occupation deposits yielded pottery dated to the later thirteenth century up to about AD 1350 (TE medieval Phase 4), while a later backfill provided a lava quern fragment and similar ceramics. All contexts produced charred plant remains, generally barley, possible rye and wheat in varying amounts with large quantities of vetch/pea and beans, with weeds mostly represented by dock and stinking chamomile (*ibid*, 510). A potential second phase of use was evident in this structure, one important deposit consisting of a spread of cobbles in the central area of the feature. There was ‘no evidence of significant burning on them’ however (*ibid*, 511) and their function was uncertain. Nevertheless, this structure overall is closely similar to SFB 45 on Plateau 4, which was similarly adjacent to and aligned perpendicular to a trackway. SFB 45 was longer and narrower than Building 5347 but otherwise the floor areas were comparable at 34.6m² and 31.5m² respectively. There are other similarities in that SFB 45 appeared to have two phases of use, firstly domestic, while in the second phase a central oven was constructed over a cobble base. It seems possible therefore that the cobble spread in Building 5347 was the base of a similarly constructed oven. Flint or cobble oven foundations at Thanet Earth did not always show great signs of burning and presumably this was dependent on the exact form of oven construction and probably how intensively it was used. The structure overall was interpreted as a possibly having a domestic function, or a type of kitchen and would be considered as a Type 4 structure in our classification; and it is suggested here that it was virtually identical to the Thanet Earth building in its development and uses, although the potentially late date is unusual and possibly aberrant.

Structure 5950 about 60m to the east consisted of a heavily ploughed subrectangular cut 5.7m long, 3.3m wide and just 0.15m deep. There was no obvious entrance point, but some of the post-holes along its western side could represent such an entrance although it was not considered that any were necessarily related to the superstructure; there were also a few internal features, a pit and two post-holes. A probably contemporary feature was located on the edge of its northeast quadrant, slightly external to the main cut and consisted of a rectangular, undercut pit about 1.1m deep and 2m by 1.3m in area at the base with a niche at one end (redolent of

some of the Thanet Earth internal features). Apart from a small patch of burnt floor near the centre, there was no other evidence for direct heating of any sort, although the internal pit contained a charcoal-rich layer which yielded charred grain and pulses. The feature contained relatively large amounts of domestic waste, particularly from the pit. Pottery was dated to AD 1270–1350 (TE medieval Phase 4), whilst the pit yielded a large assemblage of domestic fowl as well as other animal bone and shell. The function of the building was not clearly ascertained, but it was adjacent to a more conventional and probably domestic post and beam-slot building so could have been used for storage or some ancillary function or even a part of that same structure. Malting was suggested due to the presence of a ‘bung-hole cistern’ (used in brewing or for storing ale) and another unusual vessel from a nearby pit (*ibid*, 517); however another nearby building (Structure 6280 above) may more certainly represent a brewhouse. Structure 5950 would be considered a Type 4 in our classification.

A settlement site at Pond D south, at the eastern end of the scheme revealed a single sunken-featured structure, again closely related to an arrangement of rectangular plots or enclosures of single phase, aligned with medieval Watling Street. Structure 2158, only partially excavated, comprised a subrectangular pit, about 5m by 4m in extent and 0.48m in depth. At the western end, remnants of an oven projected slightly beyond the main edge of the cut, built on a slightly raised level left uncut to full depth, a common occurrence in such buildings. The oven here, 2m in diameter and of three phases was set nearly central longitudinally however, but otherwise of very similar construction to the usual type with layers of flint as a base capped by a skim of heat reddened clay. Although little of the superstructure was evident it was probably a dome of clay and flint some of which survived around the circumference (*ibid*, 528). The oven was refurbished or rebuilt at least twice. Unlike Type 1 structures, the oven was associated with two adjacent heat related features, to its fore and an adjacent oval feature constructed in a purposefully laid deposit ‘whose base and sides were fired red’ covered with a deposit containing much charcoal (*ibid*, 532). This feature may well have been a smaller domed oven or at least a form of hearth but was not fully excavated. On the other side but slightly to the south of the oven, was a near circular depression with a burnt surface and ‘two groups of flint nodules’ on its east side (i.e. extending towards the rear of the structure. Thus this building would appear to have three heated or heating elements. Dating evidence was confined to a small pottery assemblage that suggested relatively long term use, perhaps from the mid eleventh to twelfth or early thirteenth century (TE medieval phases 2–3), also suggested by the numerous reconstructions of the oven and the sequence of floor, rake-out and occupation deposits within the building. Environmental remains were also quite sparse despite extensive sampling, but charred grain, pulses and fruit stones as well as weed seeds were recovered. This Type 2 structure was considered to have been used for some form of agricultural processing, but despite its differences in layout to Type 1 buildings these are fairly superficial and it is likely to have performed very similar functions.

The construction, function and use of medieval sunken-featured structures

For virtually all of the sunken-featured structures, there is little positive evidence for their above ground form or construction (see also the discussion in Allen *et al* 2012, 573–574). However, considering their rural setting and relative impermanency of use as well as the generally low status of those both using, and probably building them, the likelihood is that overall, simplicity in design and construction was a prerequisite. Unlike some cases of the more commonly observed Anglo-Saxon sunken-featured structures, it is clear that in these types the base of the sunken area was always the working floor. One of the prime advantages of the sunken-floored form, if problems of damp or flooding are not a consideration, must have been its impact on the requirements for the superstructure, particularly the main walls.

The floor level in these buildings probably varied in depth below ground level, but it is difficult to determine precisely due to the unknown severity of subsequent truncation. At Thanet Earth this truncation must have been at least 0.3m–0.4m. Ignoring the extremely shallow examples (where truncation over the norm is suggested by the irregularity of the edge of the features), about half of the structures (including most of those elsewhere in Kent) were between 0.2 and 0.5m deep. However, over 30 per cent were cut to between 0.5m and 1m below the natural subsoil level. Only a few are much deeper, SFB 31 being the deepest of Type 1 at about 1m depth. This suggests that the original depths of most of these buildings would have been between 0.5m and 1m, or slightly more in the deeper examples. Ignoring the extreme variants, the average surviving depth is just over 0.5m so that most buildings were probably around 0.8 to 1m deep at minimum. Thus, If the functional area below ground was in this order, then the headroom above ground level needed for working or living is considerably reduced, and the necessary superstructure to achieve this correspondingly so. Thus external side walls would only need to be about 1m high, and possibly lower to achieve a functional building (see Fig. 235). The two great advantages of this are ease of construction and cheapness of materials.

If any timber was used in the walls, a usually complete lack of structural post-holes, suggests that it was not a main element and not functioning in a major load bearing capacity. There is never any evidence for gable posts (at least in the English forms and it is not particularly common in the continental comparanda) and it seems unlikely that all trace of these has been lost. Without gable posts however, the walls, whatever their construction, would almost certainly have been topped with a timber plate or beam, to distribute the weight of the roof, which itself must have been mostly timber-framed, albeit probably of simple design (the reconstruction in Allen *et al* 2012, fig. 5.39, gives a good indication of what these structures may have looked like although one can quibble about certain details). This form has been suggested for continental examples of similar structures (Kobyliński 1997, 102–106).

It is even possible that the buildings did not have side walls at all, apart from at the gable ends, as in some reconstructions of medieval ‘pit-houses’ in Europe. In this case the roof would have extended right down to ground level, probably some

distance out from the sunken area, leaving useful ledges around the internal perimeter (such ledges would also be present however, if walls were some distance from the sunken area). In this case there are implications for the position of the door, which if entering the side of the building would have to have been porched through the roof structure. This was the form favoured by Sabján (2002), in reconstructions of medieval 'pit-houses' in Hungary (based on more recent examples of rural sunken buildings), but although his reconstructions utilized gable posts, his explanation for the common absence of the respective postholes (that the pit was dug down to the level of the post bases themselves after they had been put in) is not convincing (*ibid*, 321–326). There is, unfortunately, no clear evidence for either case in the Kent medieval structures, but the complete absence of gable (or corner) posts is suggestive of the particular form of walled superstructure already detailed.

The majority of the post-holes that do appear, are normally on either side of the entrance (SFB 32 and 46 for the Type 1 buildings at Thanet Earth and in at least ten in others), where it seems reasonable to assume that they represent a door frame, on which a timber door could be successfully hung (some of the buildings, of course, may not have required an actual door). Generally, the most common position for the entrances (indicated by post-holes or ramps/steps) is at the end furthest from the ovens in Type 1 structures, usually, but not always on the corner opposite the main oven, never near the centre of the span (one structure, SFB 31 had two entrances at the end). This might, but not necessarily imply the presence of a gable post, which any doorway would have to be adjacent to, but in any event may suggest that these buildings at least, were erected with low walls, as if not, there would be little room for a doorway of any height under the slope of the roof (unless of course the roof was much wider and therefore higher by the sunken area). A perhaps more complex arrangement is suggested in the few cases where the doorway may have been chamfered into the corner, set at an angle to the axis of the building.

In others the entrance point is located on the long side but still close to the corner, again never near the centre of the span. This is in fact a noticeable difference to a large proportion of the Roman sunken structures at Monkton-Mount Pleasant, such as SFB 3, 5, 9, 12, 15, 19, 21 and 23 (Hicks 2008, 111–147) where the entrance is near or on the centre of one side. Thus, in a gabled rectangular structure, assuming that the overall plan of the building reflects the sunken area (which seems likely), doors set within the gable wall would not require a porched structure, but those buildings with transverse entrances would perhaps need one, to maintain the integrity of the roof where it was pierced by the doorway. However, it is noticeable that many of these side access points were quite elongated which may indicate that the side walls were so thick (see below) that such porches were not necessary (as in the A2 reconstruction). The position of these door-post settings usually suggests that the wall line was close to the sunken area, as they are generally less than 0.1m from the edge, on the edge or even slightly within the cut (see for example, SFB 32). This means at the very least that the doors were positioned on the inside face of the wall, or somehow, the door frame was inset, porch-like within the wall line. This also holds for most, but not all of the structures of other types (SFB 6 and 44 for example).

Variations to this occur in SFB 41, where the doorframe posts were set back from the edge of the cut by 0.43m at minimum. Thus in some cases, the wall lines may have been some distance from the cut, as is also suggested by the buildings where there is an irregularity in the sunken area, assuming that this was not caused by post-use erosion of the edges, for which there is little evidence. These would include SFB 31 which appreciably bulges in the centre or working area of its surviving internal space, SFB 46 which, otherwise quite rectangular, had a prominently curved northern side that seems unlikely to be accidental and many others where the sunken area is not a true rectangle. This may also explain the seemingly external nature of some of the ovens, which could have been in an enclosing sunken area that has been lost to truncation or built into the enclosing clunch wall (as in many continental structures of sunken type; below). In any event they are likely to have been under cover, in a superstructure that encapsulated all elements of the building. A few of the structures stand out in this respect, both at Thanet Earth and elsewhere where the oven either protrudes from the otherwise regular sunken space, or appears to be at least partially, or completely external to it (SFB 22 and SFB 36 for example).

In structures other than Type 1, there is also evidence that the wall line was well outside the limits of the sunken area. In SFB 13 for example, it is difficult to conceive of any edifice, however shoddily built, following its surviving limits. A superimposed rectangular superstructure would be much simpler to erect above it (see Fig. 190). In one of the more complex Type 4 buildings (SFB 59), there is compelling evidence to suggest that the sunken area was but one element of an entire range of features that were within a much larger, overarching structure (see Fig. 205). If so, at least some of these structures would have been considerably bigger than the sunken area would indicate, in perhaps the most extreme case of SFB 59, potentially 2.5 times the sunken area. In fact there is little reason to believe that in many of these buildings the wall line (or its outside face) was not considerably further out than any surviving door posts might suggest, this having the additional advantage that the structure would not impose too much weight near the edge of the sunken area and lead to possible collapse. This again suggests that the walls may have been quite thick.

Although there are no really clear examples of collapsed walling in the structures (not surprising if the walling was actually remodelled natural subsoil), probable demolition deposits in some suggest that the Thanet Earth buildings at least, probably had low clunch-built (or cob) walls perhaps with either a modicum of timber framing or none whatsoever (one structure had some burnt timber in its backfill but this could have derived from the roof). If so, the walls could have been almost as thick as high and if less than a metre in height, quite sturdy (cob or clunch-built walls can be erected to much greater heights without any problems; see for example Chapelot and Fossier 1985, 256 and fig. 84). The cost-, if not labour-free raw material for their construction derives directly from the excavation of the sunken area which would also have provided the basis for building the ovens and any other internal fixtures or structures. This may have been the prime consideration,

additional benefits such as shelter or protection from extreme winds, suitable temperature and humidity (suggested for Anglo-Saxon sunken-featured buildings where weaving may have been carried out; Chapelot and Fossier 1985, 120) or, in the case of Type 1 structures, better operation of the oven, may have been additional considerations, or just inadvertent benefits.

There is little evidence for the form or construction of the roof in these buildings, but it was most likely a simple pitched or ridged arrangement with gabled ends (much like the common reconstructions of Anglo-Saxon sunken-featured structures), sometimes suggested by single postholes at the base on the longitudinal axis, which may have added support to the ridge beam, or been later additions due to structural inadequacy or failure. Rather than being fashioned with a complex arrangement of jointed timbers, as in dwellings meant to last a long time (see the Allen *et al* 2012 reconstruction), it could have been very simple, with slender poles lashed or otherwise connected to a more substantial ridge beam and possibly simply nailed to the sill beam. The relatively large number of nails found in association with some of the structures (in at least sixteen buildings) may be an indicator of such a simple construction method, although they could of course have derived from elsewhere rather than the structures themselves.

The timber frame for the roof could have been covered by various materials, including thatch or even turf, both easily and cheaply obtainable. There is some indication that turf was used in at least some of the Thanet Earth examples (in SFB 49, seeds of Brome grass and a few onion couch tubers were recovered, the latter commonly present on grassland); there is some indication that SFB 80 was thatched, although that structure was post-medieval in date (see Chapter 8). The gable ends (possibly with a central vertical timber set on the wall plate to support the ridge beam?) will have had vents in those structures with ovens, to release the fumes and smoke and provide a suitable updraft although the use of a crude form of chimney should not be ruled out (Allen *et al* 2012, 573 citing Wood 1965). If no chimney was used, the roof must have been at a sufficient height above the oven to not catch fire.

It can be seen, that many arrangements and constructions are possible with the little evidence that survives for the detailed above ground form of these buildings. In truth, the position of the superstructure, its construction and the shape and form of the roof was probably down to personal preference and the quantity of the available materials and almost certainly, like their size and ground plans, varied considerably. The prime motivating force however may have been economy and ease of construction, using the basic minimum of purchased materials such as timber (which may have been relatively scarce in the immediate locality – see below). Such structures could probably have been erected, and their internal ovens and other fixtures built, entirely with the immediate materials to hand, by financially modest individuals with a modicum of technical knowledge, or that gleaned from their neighbours by word of mouth or example. Other advantages may not have been initial considerations, but are still significant, particularly that of additional shelter and insulation by submerging the floor level below ground (Hicks 2008, 278). An

additional benefit is the lesser likelihood of being blown over by the wind, of importance in exposed situations (such as the north Kent coast), this more likely if an intrinsically strong and grounded timber frame is not employed in the walls.

Environmental and other evidence from the structures

A considerable range of environmental evidence, primarily charred plant remains, has been recovered from these varied structures, most up till now from Type 1 buildings, much of which however can be variously interpreted. It is worth reviewing the evidence from Thanet Earth and elsewhere as it has potentially considerable bearing on the function of the structures themselves. Deposits from primary contexts are generally considered as these are most likely to represent what was actually present within the buildings while they were in use, though secondary deposits in the same building often yielded similar assemblages; not all of the buildings had primary deposits that could be isolated however and a few were not sampled.

Barley was often the most dominant crop but usually only found in structures of Type 1 or 2. These included SFBs 7, 8, 46, 47, 77 and 78. Type 1 SFB 23, although only supplying a trace of grain from initial deposits, yielded large quantities of barley and other grains from a secondary level probably relating to a rebuilt oven. Barley was usually associated with smaller quantities of other grain including bread-type wheat, oats and rye (least common). One Type 4 structure also contained barley (SFB 44) as well as oats and rye and large quantities of threshing wheat. Bread-type wheat was also found in primary deposits of SFB 29 and 34 (Type 2 structures), and grain more generally, but in small quantities in SFBs 23, 32, 43 and SFB 58 (all Type 1 or 2). Barley and various bread-type wheats have also usually been found in these structures elsewhere, or if not specified, charred cereal grain is nearly always present. At Thanet Earth and on other sites these main indicators are usually in combination with crops such as rye or oats in smaller quantities, but it seems quite certain that at least wheat and barley were the prime crops (whether already processed or not) used in whatever food preparation processes were undertaken. Other material from Type 1 structures included chaff from crop processing, vetch, pulses, cherry stones and egg-shell, while SFB 46 contained a small amount of barley that had sprouted. Sprouted barley has been recovered from a number of these structures elsewhere, but not in any significant quantity. Some Type 3 and 4 structures also contained traces of grain, suggesting that it may have been stored in them.

One other significant find from the sunken-featured structures was quernstones, usually fragmentary but quite common. At least twelve of the structures contained quern fragments, most prevalent in the Type 1 and Type 3 buildings. Hammerscale is often noted from samples, and occurred in a number of deposits within structures. It is however, probably nothing to do with the function of the structures themselves. At Thanet Earth there was a noticeable and relatively constant presence of hammerscale, in mostly very small quantities across the site in features of all

periods. It is considered that most of this material is intrusive, probably mainly introduced by biogenesis such as worm action. There was little evidence for any significant metalworking of any type actually on the site, apart from in a few pieces of slag from some medieval features on Plateau 5.

Function of the buildings

Type 1 and Type 2

The function of the Type 1/Type 2 structures has been discussed by Schuster and Stevens (2009, 250–251) and others (Allen *et al* 2012, 574–576) and it seems likely that their overall interpretation, that the structures were probably used for various purposes, primarily baking bread but perhaps also for cooking or brewing is substantially correct (the last was closely connected to baking in medieval society). The operating temperatures indicated by the remains, rule out high-temperature activities such as metalworking. The form of the ovens, domed with an access point or stoke-hole at the front and presumably some form of flue, exit vent or (more unlikely) chimney compares with many other bread ovens of different periods and countries, including those wood-fired examples seen today for the production of pizzas. The basic process would have been relatively straightforward. The ovens would have been charged with wood, probably in the form of faggots or bundles of smallish twigs or possibly waste materials from crop processing, lit and replenished as required, and the oven heated to the necessary temperature. Various woods seem to have been used for this, probably whatever was available locally (above). The use of waste material, specifically from the processing of sheaves (chaff) has been suggested for the West Malling structure (Ellis 2009, 47). Chaff was present in some of the rake-out deposits of the Thanet Earth structures (SFB 7, SFB 8, SFB 21 and SFB 46), although in small quantities, but this would not rule out its use. Prior to loading with the dough, after testing the temperature of the oven, the ashes would have been raked out and the loaves inserted, possibly after scattering the floor of the oven with grain to prevent sticking or burning. This could have a dual function as grain can be used for testing the temperature of the oven itself. Both these processes have been one explanation, for the quantities of burnt grain that have been found in these structures (Powell *et al* 2009, 183).

The post-holes or other settings just before the oven entry point suggest baffles, not only capable of controlling the amount and force of air entering the oven, but also to stop-off the entrance once firing was complete, thus not only retaining the heat but mitigating against sudden variations in temperature caused by draughts which could have a deleterious effect on the baking process.²⁵ Temperature would have

²⁵ In the Star Lane structure (Egging Dinwiddy and Schuster 2009, 135–136 and fig. 2.30), two roughly comparable features were caused by the impressions of two stones found *in situ* about 0.36m apart, but these formed part of the oven superstructure as a reinforcement or ‘supportive structure for the stoke-hole’. In most of the Thanet Earth (and Manston) examples the post-settings were much too far apart (c. 1.5m in SFB 31) and/or distant from the oven superstructure to have performed this function.

been stabilized and retained by the oven dome itself, and also by the sub-structure of the oven, the near ubiquitous raft of flint or stone on which they were mostly constructed, emanating heat for some time and also minimising temperature fluctuation.

The purpose, form and use of the side-oven or hearth is more difficult to determine; there is considerable evidence that this was some above-floor heated structure such as a brazier in many instances, although other forms of constructed hearth or mini-oven have been recorded. These various features may have just been used to keep the building warm (perhaps not necessary when the main oven was in use but that could have been intermittent). It seems quite likely however, that after the still hot embers had been raked from the oven, they would not just have been left lying on the floor but could have been collected, and re-used in the side structure with the addition of extra fuel if need be. This would have utilised any residual heat for additional or other cooking purposes. This is suggested since rake-out deposits were generally quite thin so no large accumulation was allowed to build up and there was little evidence for scorching on the main floor areas which might be expected if hot embers had been left there for any length of time. In any event, a spread of hot ashes on the floor, apart from hindering operations would also be a potential fire risk. In respect of other types of cooking apart from baking, it may be significant that 'several medieval deposits associated with hearths or ovens contained eggshell fragments ... while this may simply reflect the disposal of domestic waste by burning, it could also relate to the common medieval practice of baking eggs in embers' (Wilson 1991, 144–146). No examples of braziers or trivets have been found in association with any of these buildings however, but then few other implements or household accessories have been either – many such items would have been made of wood, and metal braziers were probably too valuable to be casually discarded. Although trivets are not unknown from medieval sites (Egan 1998, 153), braziers seem to be such an uncommon survival that they do not appear in the British archaeological record, at least after the Roman period. The above floor form of this side facility cannot therefore be strongly established, but the presence of discrete areas of scorched floor in many of the other structures certainly suggests that a brazier was used, and has also been suggested for some of the Gravesend buildings (Allen *et al* 2012, 571).

There has been some discussion about the role of these structures and ovens in brewing. Malting is a process that has been used in the manufacture of ales for many centuries and usually involves barley (see for example Patrick 2004). The grains are made to germinate by soaking, then, once sprouted the germination is halted by the application of heat, or hot air; this converts natural starches to sugars which are more readily fermentable. Prior to the nineteenth century, beer making was primarily a domestic activity, both malting and brewing carried out on a small-scale: 'There are references to malt being produced in England since the eleventh century, but early production was possibly in barns and the kilning may have been done in

domestic ovens' (Patrick 2004, 4). The use of the bread ovens in these structures for malting was suggested by Linklater and Sparey-Green (2004, 24), but has been considered unlikely by others for technical reasons (Schüster and Stevens 2009, 250). However, although the environmental evidence is slight, there would seem to be no reason why malting on a small scale should have not been carried out in such structures, the oven only heated to sufficient temperature to enable the process to occur. As well as its use in malting however, 'barley is a very adaptable crop that can be used for a range of purposes including bread-making (if mixed with wheat to make the loaf lighter), used whole in soups and stews [or pottage] or for fodder'; thus its presence in association with wheat in the structures is not altogether surprising, and need not necessarily imply malting was taking place. Another potential use of the ovens, at lower temperature, would be the parching of grain. When used for human consumption hulled barley would need to be parched prior to de-husking, and this may be why the ovens and hearths were dominated by barley grains, rather than free-threshing wheat that requires no parching

Types 3 and 4

If fairly certain interpretations can be made for the use of Type 1 and 2 structures, for the others this is not always so secure. Some of the Type 3/4 structures may have had a more pastoral use, such as shepherds huts or temporary shelters for herdsman. The Lydd feature, with an entrance ramp and occupation residues within was interpreted as a possible shepherds hut (Barber and Priestly-Bell 2008, 66, 283) and was compared to 'shielings or *hafod* buildings found in various [upland] areas of Britain', or the Romney Marsh 'lookers or shepherds' huts' dating to the late eighteenth and nineteenth century. Of interest is the apparent frequent association in some parts of the country, of such huts or cots (not necessarily sunken) with prehistoric burial mounds, in similar fashion to that of SFB 74 and Barrow 2 (O'Neil 1967, 27; Drewett 1986). A medieval sunken-featured structure (AD 1275–1300) near Chestfield was located within a late Anglo-Saxon and early medieval agricultural landscape a few miles south of the coast between Whitstable and Herne Bay. Four metres square (a common size for such buildings and those on the continent; below), it was of a Type 4 form, and more akin to a crude domestic dwelling, as it contained a hearth in one quadrant and was associated with domestic refuse. This structure could well have been associated with animal husbandry but in any case indicated a 'rudimentary standard of living' for the occupant(s) (Allen 2004, 130–131). The Chestfield building may have been similar to SFB 48, which was rather small (3.6m by 2.1m with a floor area of about 7.6m²) with a badly damaged hearth or oven remnant in one corner. It seems likely therefore that at least some of the Type 3 and 4 structures at Thanet Earth were either shepherds huts or possibly temporarily occupied dwellings, particularly when found in isolation, but others may have represented storage facilities as they appeared to be associated with structures of Type 1 or 2 in settlement areas.

The superstructure of this form was probably similar, at least in most cases, to the Type 1 buildings considered above (see for example Fig. 236, where some

possibilities are outlined) and will not be discussed further, but some of the larger examples may have had elements of timber framing in their walls, perhaps set in a shallow ground beam so that no trace has survived. In some cases, it is difficult to make sense of the evidence from a structural point of view; SFB 47, represented by a relatively small sunken area, had three post-settings on its mid-sides, but no evidence for corner posts. A fourth posthole on its south side was of similar dimensions, but may have represented a skewed doorframe along with a smaller post to the east. No rectangle or regular shape which might represent an above ground layout enclosing the sunken area can be easily formed from these elements (see Fig. 236), so it remains possible that none had any relation to it.

With SFB 59, the internal but peripheral clunch wall could be construed as a possible wall footing, but if so, this would not have encompassed the entire sunken area. It is more likely that this was a bench, and that the wall line was further out, possibly enclosing the variety of features that seem to be associated. There are in fact Scandinavian examples for this arrangement, where some medieval above ground structures had benches along the walls filled with earth or limestone; these would have been supported by planks, as is possible in the Thanet Earth examples (Pulsiano and Wolf 1993, 300). More closely, a sunken-floored structure dated to the eleventh century AD excavated in Århus, Denmark also had a bench around its perimeter (*ibid*, fig. 53 and below). In SFB 59, apart from the line of three postholes along the axis, which may have supported elements of the roof, there is no other clear indication of superstructure. However, if these supported the apex of a timber-framed roof, then the walls could not have been this far extended (unless the roof was unevenly pitched), and most of the associated features would be outside or even under the wall line (Fig. 205). The problem of door position, set within the more obvious line of the superstructure wall (in relation to the sunken area) has already been discussed; it is a particular problem with SFB 44, unless the bulge on its southern side to the west of the door is a post-use/demolition artefact, which is not impossible (Fig. 198). However, such bulges in the sides of the sunken area are quite a common factor, and there is no explicit record in any feature that they were caused by a collapse of the edge.

SFB 65, excavated into the side of a quarry, may not in fact be a structure at all, although there is no reason to suppose that it was not covered in some way. Although the nature and extent of this cannot be determined from the evidence, it is likely that, if there was a superstructure, its southern side, adjacent to the quarry was open. In addition to the uses outlined above, some structures of Type 4 would appear to have been of sufficient size or complexity, and/or associated with significant evidence for more protracted occupation, to have served as domestic residences, even if only occupied on a seasonal or intermittent basis. This is perhaps suggested by the laminated fills of some of the pits associated with SFB 59. Another quite complex structure (SFB 44), which was near SFB 45 with the central oven, may also have been a domestic residence in an initial phase.

Change of use

In at least two of the larger and more complex structures there is evidence for a change of use during their lifetime (SFB 45 and SFB 53). The former has already been discussed in its similarity to Building 5347 at Gravesend, and it seems likely that in its first phase it was possibly a domestic structure, although, since there was little other associated evidence for settlement in the immediate area, various agricultural uses cannot be dismissed. Primary use appears to be of Phase 2 while potentially in Phase 3 an oven, identical to those used in Type 1 buildings was constructed at its centre. Its function in the later phase was probably similar to those structures. SFB 53 on the other hand, may have originated as a purely agricultural building, possibly a barn or cowshed, although its careful layout and depth suggests that it was more akin to an above ground domestic structure of the period, and it may have been predominantly timber framed. Its original, very worn internal floor surface seems to have been re-laid and it is probable that the surrounding bench was also constructed at this time.

Other structures

Relatively few medieval structures not of sunken form were located, and of these, most were badly preserved with only traces of structural elements and few, if any internal features. They appear to divide into probable domestic dwellings, or agricultural structures such as barns, although even these could potentially have served as residences.

Perhaps the most likely dwelling was Structure 47, within Enclosure 13 on Site 2 (above), which can be compared to the form of earthfast timber buildings common from the Anglo-Saxon to early medieval periods (James *et al* 1984), with similarities to some of the twelfth to thirteenth century structures found about 1.5km to the southeast on the Monkton-Mount Pleasant road scheme (Bennett *et al* 2008, 307–340), although these did not generally have a near continuous trench defining their perimeter (evidence for end wall lines is often conspicuous by its absence in such structures). The two postholes in the north corners were eventually recut and this must represent a major repair to the structure, which would indicate some longevity. Large structural postholes in the four corners are not particularly typical of such buildings however, although building IIA at Monkton-Mount Pleasant was similar in this respect, and of a comparable size. The opposing doors would have marked the position of the cross passage, dividing the building into two unequal sized rooms, the larger the equivalent of the medieval hall, the smaller comprising a service room (or rooms) where food was stored and prepared (*ibid*, 338–339). Notable here is the proportions used in the design of the building, with a longitudinal division into thirds, the western third approximately positioned at the centre of the cross passage. This is also a common arrangement in buildings of this date and also apparent in some of the sunken-featured structures on the site (SFB 13 and SFB 53). The layout suggests that the structure was a domestic dwelling, while occupation of some permanence is also indicated by the presence of a well in the north-west corner of the enclosure.

Structure 64 (Site 4) may have been a similar, although larger structure but its full plan was never recovered (see Fig. 174). There were no associated post-holes recorded in relation to it, and it remains possible that it was not a building. Structures 51 and 52 on Site 5 were very possibly domestic buildings, probably superimposed rectangular earth-fast buildings, but very little of the layout could be discerned. Only one other definite building was located, Structure 53 on Site 11 (with a possibly comparable building (G1119) of similar dimensions between Sites 8 and 9). This had large post settings on its longitudinal axis undoubtedly for gable posts, with an array of smaller features delineating its long sides. Little other structural information remained however, but the building was almost certainly a barn or cowshed.

The sunken-featured buildings in their wider context and a consideration of their origin

The various types of medieval sunken-featured buildings (described above) so far seem to be largely if not exclusively confined to Kent in this country (discussed further below). Why this particular sunken-featured form should suddenly (or apparently so) become current around the time of the Norman Conquest and predominantly in one relatively small area, has not previously been considered in any depth (but see Allen *et al* 2012, 570–571). It seems improbable that it represents a resurrection of an earlier tradition exemplified by the Anglo-Saxon sunken-featured structures (*Grubenhäuser*), which mostly date to the earlier part of the period, or the even earlier Roman sunken buildings excavated at Monkton-Mount Pleasant and on other sites within a few kilometres to the south-east of Thanet Earth (Hicks 2008). None of these earlier buildings are likely to have survived in the landscape (in any case the evidence of their infilling suggests otherwise), and it seems unlikely that the idea of this particular structure could have been handed down the generations. However, the medieval buildings have a number of distinct facets, which distinguish them quite clearly from the more well-known and widespread Anglo-Saxon structural repertoire, although the Roman structures are in many respects (although not all) more comparable.

The primary distinct features of the medieval buildings, particularly those of Type 1 (see above) which exhibit a more regular format can be easily summarised. They can vary somewhat in size within limits, but tend to be around 4 to 5m long and about 3 to 3.5m wide (average of the published Type 1 examples is 4.5m and 3.3m respectively) while other types are usually larger. Unlike most Anglo-Saxon sunken buildings, they have more variety in overall shape, with a distinct square variant (usually about 4m across), though this is perhaps not so prevalent in Type 1 structures which are more often subrectangular (the exceptions being SFBs 34, 40 and perhaps SFB 66). The floor level was without doubt on the base of the cut of the sunken area, and there is often a clear access point, either a ramp or steps cut into the bedrock. This seems to be mostly set close to, or even on one corner, but hardly ever at or near the centre of the span on either the end or longitudinal sides. In fact only

very few have an entrance centrally on a span (such as the Type 3 Lydd example; Barber and Priestly-Bell 2008, 283), and these never seem to be of Type 1 (this trait is often the opposite in Roman examples; see below). This most well-known type has a large near circular domed oven located in one corner of the sunken area, usually directly opposite the entrance; other types are often of very similar form but with no evidence for ovens. Type 1 structures nearly always have evidence for an adjacent heating facility, either a smaller oven-type feature, a hearth or perhaps in many cases evidence for the use of a form of brazier or other above floor heating fixture. Structurally, the most distinctive feature of the Kent buildings is the complete lack of gable-end post-holes (the most common trait in Anglo-Saxon structures) or other good evidence for earth-fast structural timbers, apart from some cases where the posts for a doorframe flanked the entrance-ways.

Allen *et al* (2012, 570) posit a pre-Conquest origin for the medieval buildings of this type, citing a late Anglo-Saxon sunken building with a domed oven at Fladbury in Worcester as a potential precursor (Peacock 1967; Wilson and Hurst 1968). In addition, it is suggested that the form may have had continental roots as very similar sunken buildings are also known in eastern and central Europe (referred to above). This second suggestion merits serious consideration, as there is in fact a long continental tradition of a particular type of sunken structure (often called ‘pit-houses’) that is quite distinct from the more commonly discussed Anglo-Saxon form (the *Grubenhäuser*) and identical in many respects to the north Kentish structures, particularly the Type 1 examples. In these structures, the floor is set on the base of the sunken area and they often have ovens and internal fittings within the sunken area, the ovens nearly always in one corner (and often an adjacent supplementary heating facility) as in many of the Kentish examples. Although evidence for their superstructures and other details might be quite varied (or absent), this can often be seen as due to the type of local materials available — thus timber is used for wall construction in wooded areas and stone ovens are built where stone is readily available.

Although it is only possible to give a brief résumé of these buildings here, the form was apparently extant in the fifth to seventh centuries AD and originally represented in early Slavic settlements of eastern and central Europe, initially the Ukraine, then ‘the Danubian region and the Balkans ... Poland, Slovakia and Bohemia [and] by the 7th century the middle Elbe region’; Kobyliński 1997, 99); over 300 of these structures have been excavated in Czechoslovakia alone (of the Prague-Type culture (PTC); Kuna and Profantová, 2011, 415). The sunken area of this building tradition was near square, about 3–4m across, sometimes with extended entrance ways or ramps and structural postholes, though the arrangement of these settings is quite diverse (see Kobyliński 1997, fig. 1). These types had stone-built ovens in one corner (or sometimes clay ovens or an open hearth), usually directly opposite the entrance point where that is known (*ibid*, 100–101). Buildings at Rožtoky (Prague-West district, Czech Republic) also had secondary ovens that sound very similar to the Kentish medieval main ovens: ‘In several cases domed clay ovens were found in houses as a secondary heating device; these were typically embedded in the wall

next to the stone oven. There were around five such discoveries in Roztoky, and their most likely use was to bake bread or other food. Similar ovens are known from other sites in Bohemia and elsewhere' (Kuna and Profantová, 2011, 421). The form and size of these structures is remarkably similar to some Thanet Earth examples, particularly SFB 6 which was near square and 4m across, although it did not have an oven (one of Kobyliński's examples (1997, fig. 1 *h*) from East Germany is virtually identical in layout and size. Kobyliński suggests 'some form of standardisation of the internal arrangement of these dwellings over wide areas' (*ibid*, 101). The above ground construction of the structures, which have sunken areas of various depth (up to 1.3m) has brought about much discussion (*ibid*, 101–102 and briefly referred to above).

This particular square form seems to die out towards the end of the first millennium, although examples as late as the ninth and eleventh centuries AD are known from northern Germany and Poland (*ibid*, 107). However, the fundamental idea of this structural type persists in central Europe until the thirteenth or fourteenth century and later medieval sunken-floored buildings are recorded in Hungary during the Árpadian Age (ninth to thirteenth century AD; Laszlovszky 2003, 386–387) and in Czechoslovakia (Staššíková-štukovská 2002). The presence of the corner oven is very common, although now the shape of the sunken area and the structural arrangements that can be postulated from associated postholes or the lack of them, vary widely (see for example Staššíková-štukovská 2002, fig. 2). One of the prime uses of the ovens generally considered is the baking of bread (*ibid*, 2). Such variations, many with resonances to the medieval Thanet Earth buildings are displayed in a large ninth-century structure at Mietlica, located on the east bank of Lake Goplo in central Poland, which not only had a stepped entrance-way but also a chair-like structure or bench carved out of the clay bedrock on one side, redolent of SFB 41 (Maloney 1988, 248–251). Ramped or stepped entrances are also present in a variety of sunken structures at the site of the Royal Palace at Tilleda, Germany, where they date from the eleventh or twelfth centuries AD (Grimm 1968, 96–97, figs. 22A and 24B–D); these were interpreted as dwelling houses or ancillary buildings, some with ovens 'constructed in the same way as baking ovens'. Buildings, virtually identical to the Kentish structures of Type 1 are still being excavated in Bulgaria (Andrew Macintosh *pers comm*).

The form or something very like it is also found in Scandinavia, possibly as a result of Slavic migrations (Milek 2012, 89–92 and see below). A sunken-floored structure excavated at Århus in Denmark dated to the eleventh century AD and had a fireplace (or potentially an oven) in one corner and an entrance in the long side *near the corner* (Pulsiano and Wolf 1993, fig. 53, my italics). It differed to the Kent buildings in its use of gable and corner posts. Other sunken-floored buildings at Lindholm Høje (North Jutland) were around 3.5m–4m wide and 4m–5m long, with hearths in one corner (Card Donnelly 1992, 24). Sunken structures of similar dimensions are also found in Oslo, Tonsberg and Trondheim (Pulsiano and Wolf 1993, 300).

Sunken-floored structures, termed 'pit-houses' with stone-built ovens have also been found on many Viking-Age farmsteads in Iceland and date from the late ninth to eleventh century AD. These 'have been subject to wide ranging interpretations, from short-lived, expedient dwellings to saunas, women's workrooms [and] the houses of Slavic settlers...The most common type are small rectangular or near-square buildings that have a stone-built hearth or oven ... against a wall or in a corner...' (Milek 2012, 85). In these structures, the sunken area is usually 0.3–1.4m deep and in some cases 'access into the pit was gained via a short ramp, for which a cut had been made in one corner of the house' (*ibid*, 94). The sunken areas of these buildings are in the order of 2.0–3.7m wide and 2.2–5.5m long (*ibid*, table 2 and figs. 3–5) and although associated postholes are much more common, suggesting a timber superstructure, there is a striking absence of what could be considered gable posts. Milek (2012, 85), has from good evidence interpreted these buildings as principally women's workrooms for the production of woollen textiles. These structures also often have thick and complex floor sequences (unlike most, but not all the Kentish buildings) suggesting that their 'occupation was neither short-lived nor temporary' (*ibid*, 103). Otherwise however, they have many similarities to the Kentish buildings. That such buildings were functionally varied in different areas and times is hardly surprising. They may also have been lived in, rather than just performing some agro-industrial function, and this is perhaps intimated by the two ovens in some European buildings, the stone built examples perhaps just being heating devices, the clay ovens for baking or other specialist use (the braziers suggested in some of the Kent examples could also have been used for heating the interior).

There is however, some complexity involved in substantiating an argument for the importation of such a structural/cultural idea. Malik (2002, 91) dismissed the suggestion of a direct Slavic influence because 'Although Icelandic pit houses do share many characteristics with Slavonic sunken-floored houses, particularly those of the Prague-type culture of central and south-eastern Europe, the Slavonic versions date to the 6th–8th centuries, were squarer than Icelandic pit houses and have common features in them that are absent in Icelandic pit houses, such as hearthside vessels set into the floor'. It was more likely that 'Since Slavs and southern Scandinavians were in contact well before the Viking Age, and these contacts intensified with trade across the Baltic during the 8th–9th centuries, Slavonic sunken-floored buildings with corner ovens may indeed have been the forerunners of the Scandinavian ones'. One other interesting comparison here is that vessels set into the floor are also potentially present in some of the Kent examples.

Although this is a very basic summary of what is very probably a long and complex building tradition, a progressive development (partially engendered by migration, replication and variation) from near square and relatively simple forms to a diversified and potentially complex type of structure seems quite probable. Any direct and external route of influence for this form of building into southern England is impossible to isolate, but there seems no reason to dismiss the strong possibility that the form arrived in Kent from the continent shortly before or around the time of the Norman Conquest. This type of structure seems to be absent in France and the

western part of Europe (Allen *et al* 2012, 571), so if not by the Normans themselves (although they were partially of Viking origin; Van Houts 2000, 13–23), a direct Viking influence seems very plausible as they were active in northern and eastern Kent during the ninth to eleventh centuries. If so however, one might expect there to be similar examples in northern England. Various forms of sunken or cellared structure are known in northern counties (such as those at Coppergate and Hungate in York; Hall *et al* 2014), but almost exclusively in urban contexts and none seem to closely resemble the Kentish examples, all of which are completely rural. Specifically Viking sunken-featured buildings do however occur in Scotland, although they appear to more commonly use stone walling and timber in the superstructure and are often much larger and probably only superficially similar to the Kent buildings.²⁶ Sunken-floored buildings or ‘pit-houses’ similar in form and chronology to those of Iceland, do appear in Shetland, but they seem to be quite rare (Crawford and Smith 1999, 207–213). Whatever the origin, the fundamental idea of this type of building seems to be widely persistent across Europe and Scandinavia until its eventual demise in the thirteenth or fourteenth century AD and would appear to be completely separate from the Anglo-Saxon ‘*Grubenhäuser*’ in both its origins, chronology and the essential nature of its construction and use.²⁷ It seems possible that the idea of this form once introduced, but perhaps very locally to Kent, could explain their apparently sudden appearance. The principle could have been extended over the decades to engender the other multifarious arrangements and functions that are evident (Types 3 and 4), as their advantages would have been obvious (see above) to a relatively poor population.

One caveat to this theory remains, the few Roman examples of sunken-featured structure that are very similar to the medieval buildings, although these are extremely rare with only a few known outside of Kent in this country (such as at St Albans and *Verulamium* – see Hicks 2008, 276–278); this could be construed as indicating some form of connection). Three buildings excavated at Tothill Street, Minster in 2010 can be compared very closely to the Type 1 medieval buildings in particular (Jon Cotton *pers comm*). Of these, one had a two-phase oven in one corner, together with associated rake-out deposits containing barley and spelt. The dating suggests that this feature went out of use around AD 175–250/300. More significantly, another building of a similar date and with similar botanical assemblages, although not completely excavated, contained another well-preserved, single phase oven in a corner, together with an adjacent rectangular hearth formed of three *tegulae* (this latter point of course tallying with the usual side hearth in Type 1 structures). More recently, further examples of Roman sunken-featured buildings have been discovered on the East Kent Access (EKA) road scheme, to the east of

²⁶ See for example <http://canmore.rcahms.gov.uk/en/site/69504/details/hoddon/&biblio=more>, <http://canmore.rcahms.gov.uk/en/site/113014/details/unst+baltasound+hamar/>, Bond *et al* 2008, <http://canmore.rcahms.gov.uk/en/site/81323/details/ratho+quarry/>, Smith 1993.

²⁷ This fundamental difference has not always been perceived, often with vague conflation of the two inherently different types of structure in the discussion of early medieval, and, indeed later medieval sunken-featured buildings, as in Chapelot and Fossier’s (1985) otherwise admirable and seminal study of European medieval settlement, where the two forms are presented without clear distinction (p. 111–126)

Tothill Street and near Ebbsfleet (Andrews *et al* 2015a, 333–339). This has increased the known number of such structures by about 18, although those with ovens can still be considered rare, as out of these only about seven had such facilities (*ibid*, 337)²⁸.

There seems little doubt that these buildings could have performed similar functions to the medieval ones (see above), but it is difficult to say whether perhaps similar Roman period buildings on the continent were the ancestors of the early medieval Slavic examples. In any case, the structural and cultural continental strand of building repertoire referred to above seems much more symptomatic as the origin of the varieties of medieval buildings of this type found in Kent, particularly as the latter range of its chronological continuum tallies so closely with the Kent evidence. A Roman period origin is perhaps not impossible, but the direct source of the Kent medieval structures is most likely due to the great later first millennium developmental sweep of such structures across Europe, into Scandinavia and eventually possibly to England in the tenth or eleventh century.

Why the structures are apparently confined to Kent, at least in any number is perhaps a more difficult question. Although it is impossible to say that the form (as exemplified in the types discussed above) does not appear elsewhere in Britain, it is difficult to believe that such obvious features (particularly the Type 1) can have gone unrecorded, if present in more recent large-scale excavations elsewhere. Although occasional such structures may exist outside of Kent, it must be significant that at Heathrow, one of the largest excavations ever conducted in the south-east (covering about 75ha) where a considerable area of medieval landscape, including field systems and settlements was recorded, not one example of a sunken-featured structure was found (Framework Archaeology 2010, 334–366). Area for area, if compared to Thanet Earth there would have been well over a hundred. A few possibly very similar examples have been recorded elsewhere but not on the same scale as in northern Kent (Allen *et al* 2012, 577). The currently known limit of Gravesend to the west must therefore be taken, at present, as the definitive edge to the distribution of this form in this country. Perhaps, if the form was indeed introduced very specifically to Thanet or northern Kent in the tenth or eleventh century, the tenurial nature of early medieval rural peasant societies, where it seems to have been mainly used (this aspect is further discussed below), may have limited its dissemination to other regions?

²⁸ The nearby Roman settlement at Monkton-Mount Pleasant (Hicks 2008) for example, had a number of Roman sunken floored buildings, some with scorched areas on the floor but no good evidence for ovens. Only one (SFB 23; Hicks 2008, 143–149) had what was can be interpreted as a constructed hearth, here in two-phases, set in one quadrant if not the corner. This intriguingly also contained a raft of pottery sherds in the earlier phase, redolent of the flint rafts in the medieval ovens. Although it was suggested that this was an open feature rather than a domed oven, there remains a possibility that it was such at some point, although rather smaller than its medieval counterparts (as are most of the ovens recorded on the EKA road scheme; see Structure 170132 for example; Andrews *et al* 2015a, 249).

Finally, If it cannot yet be graced with the term of tradition, there is certainly a long history to the use of the sunken-featured or -floored form of structure in Kent, with various sunken constructions perhaps dating as far back as the Iron Age, possibly even into the late Bronze Age.²⁹ A wider consideration of these and how they may relate, or not to the medieval examples is beyond the scope of this volume, particularly as many of the more recently found examples await publication. The most well-known form is of course the Anglo-Saxon sunken-featured structure or *Grubenhäuser*, widespread across England and Europe, but these seem to represent a completely separate and less long-lived line of architecture.

The medieval sites and their nature

Before looking at the medieval occupation phase more broadly, it is worth summing up the disposition and nature of the individual sites described above. Although the function of many of the enclosures is not always apparent and some may have been mostly used for stock management or other purely agricultural purposes, there is generally a clear progression from enclosures of this type that then became occupied, either in the original enclosures or in new or adapted ones. This latter phase is generally shown in the complexity of their development and/or the domestic nature of their associated features, including some of the many sunken-featured structures, all highly indicative of occupation. Settlement is also suggested by cess-pits, although only a few sites had them and by wells, at least ten of which were found on the site, normally associated with other settlement evidence. The wells were of considerable depth (over 20m in some cases) and would have required a significant input of labour to excavate, which would seem incommensurate for a site only occupied occasionally or for short periods (although they could of course have been used for watering livestock; the apparent lack of waterholes has already been discussed for the prehistoric period).

Pastoral/agricultural paddocks and enclosures

To the north, Sites 2, 3, 4 and 5 in their earlier phases all seem to be agricultural enclosures or paddocks, strung along Trackway 28 for a distance of over half a kilometre, with little sign of actual habitation. Site 6 may well be similar but it is unclear whether any of its enclosures were later occupied as evidence for this may have been outside the examined area. Further south on Plateau 4, Sites 11 and 12 do not initially show much evidence for settlement, which was relatively negligible across the whole period of their life, although at least some of the relatively scattered buildings appear to have been dwellings.

²⁹ A late Iron Age sunken 'Belgic hut' was excavated at Canterbury many years ago and a number of enigmatic features that may be comparable have been recorded on Sheppey (Diack 2002, 14; Kent HER No. TQ 97 SW 85), although on the HER, the features are considered to be Anglo-Saxon in date, which is admittedly possible. Further, at least one sunken-featured structure of mid Iron Age date has recently been found near Cliffs End, a few kilometres to the south-east (Simon Mason *pers comm*). Examples of Iron Age date with more definite structural evidence and metalled floors have recently been found near Canterbury (Clark and Lane 2014).

Site 2 was situated in the base of the shallow dry valley (here less pronounced than at Site 1; below) along the spine of the plateau. Site 2 comprised numerous elements, initially enclosures (considered Sub-phase 2a) that were probably roughly coeval. These were all generally featureless internally, although a possible waterhole (G1144) might be contemporary with the use of Enclosures 21 and 22, suggesting use as paddocks for keeping stock or for storage of materials such as hay or manure; all had entrances into the adjacent fields or more open areas. The unbounded area to the west was potentially used as common grazing land. The three northern enclosures (Enclosures 21–23) were constrained to the west of the drove road with no obvious sign of access into the medieval field (M3) to the east, suggesting that this field was under a different tenancy or regime, or possibly all used for arable. One interesting aspect of these enclosures is their apparent respect for much earlier prehistoric boundaries, as all were set perpendicular to a major Bronze Age drove way and its ditches (Droeway 24) rather than the medieval route Trackway 28. This is unlikely to be just coincidence of alignment, as the prehistoric track curved to a more northerly line to the north, and this swing in orientation was reflected in each of the adjacent medieval enclosures. Further, the westward extents of at least some of them appear to be delimited precisely by the much earlier ditches, which must have survived in the ground, either as depressions or lined by still extant banks or ancient hedges. Enclosure 23 possessed an open north side, but its ditch terminated just north of a prehistoric ditch line suggesting the northern side of the enclosure was defined by a pre-existing feature such as a hedge. Survival of such alignments from the Bronze Age into the post-Roman period has been seen elsewhere and there is nothing inherently unusual in this as it would make sense to re-use pre-existing banks and hedges wherever possible. Moreover, boundaries and property boundaries in particular ‘seem to be very stable as long as they are in continuous use or remain visible features in the landscape’, particularly within conservative rural societies (Oosthuizen 2003, 43).

Enclosures 18, 19 and 24 to the south and their subsequent developments were set on the east side of Trackway 28 and in this respect they can be thought of as a completely separate site, probably held by different tenants. Enclosure 19 however, was somewhat divorced from the rest of the arrangement, straddling the medieval fields and should perhaps be considered as an isolated development not connected to the activity elsewhere; it may have even had access to a well (G1148), although this was situated in the adjacent enclosure but only a few metres from both structures within the enclosure (below); there was evidence for an access point across the ditch at this point. Again these early enclosures had entrances, here into Field M2 to the east, but did not appear to respect any earlier alignments, although the prehistoric system was less well represented in this area.

The only development in the northern part of Site 2 was the emplacement of sunken-featured buildings (Sub-phase 2b), set in a string along the trackway, cutting into its western side-ditch but not completely blocking access along the route. The two northern structures (SFB 10 and 24) were of Type 3 and perhaps simple shelters for herdsman. To the south however, was a Type 1 structure (SFB 8) which was

associated with Enclosure 22 and set in its north-eastern corner near the entrance. Although the buildings may have not have necessarily been related, there would seem to be a fairly common juxtaposition of Type 1 and Type 3 structures, particularly during Phase 2 in this northern part of the site (it was not evident on Plateau 4 or in Phases 3 or 4) and can be seen or construed on some other sites in Kent (see above). As discussed above, associated Type 3 structures could therefore have also been used for storage of materials such as the fuel (which would have needed to be kept dry) for use in the Type 1 buildings, or the storage of finished products. The chronological sequence of these early structures and the enclosures cannot be deduced from the dating evidence and they could all be contemporary. The rather odd Enclosure 19 just to the south was related to two Type 1 structures (SFB 7 and 23). These however could possibly be slightly later than the northern buildings as both were constructed in the middle of the trackway and would have brought its use as a drove road at least, to an end. SFB 23 here was unusual in that it showed protracted development with at least one complete rebuild of its oven as well as refurbishment.

Site 3 requires little comment as it was virtually identical to the northern enclosures of Site 2. The only variation was that the original Phase 2 enclosure (Enclosure 41), similar in date to those on Site 2, was replaced in Phase 3 by Enclosure 42 covering a near identical footprint but enlarged to the south. These enclosures were similar in layout to those at the north, also set to the west of Trackway 28 (with an entrance into the apparently open field to the west) and again at a skewed angle to it, which suggests that they also were respecting a pre-existent feature. This could well be a southern continuation of one of the Bronze Age tracks on Plateau 1 (Droeway 7) which projects onto the correct position and alignment. Common also was the presence of a sunken-featured structure (here SFB 34) set in the southern corner of the later enclosure against the trackway and blocking the entrance into the earlier Enclosure 40. The structure was probably of Type 1, but is considered Type 2 as it was the smallest of the Thanet Earth Type 1 examples although well preserved and there was no evidence for a side hearth. There did not appear to be any associated structures, apart possibly for a potential structure SFB 33 but this was undated and positioned next to the track 14m to the south of the enclosure. However, a well was located external to the enclosure, just south of its entrance. The function and development of this site would therefore seem to be very similar to the northern enclosures of Site 2.

The adjacent Sites 4 and 5 formed two of the more complex settlements at Thanet Earth. Early developments undoubtedly continued the alignment of Phase 2 enclosures evident to the north, here represented by Enclosure 35 to the west of Trackway 28 which was similar in form and disposition to the more northerly enclosures (although aligned more squarely to the track; part of the northern ditch of the enclosure set at a skewed angle may well have followed the alignment of a Roman ditch, physically located to the north-east). The possibly contemporary Enclosure 33 was on the eastern side of the track, considerably smaller and possibly open on the north side (subsequent developments having obscured much of the

earlier layout here, this cannot be stated with confidence). These two features provided the germ of Site 4. Site 5, which was divorced from the trackway to the west was undoubtedly coeval, although could be seen as a slightly later development respecting the position of its neighbour. It initially comprised an enclosure (37) of very similar size to Enclosure 35, although rather fragmentary and probably open on its south side. The two sites were precisely juxtaposed, only 7.5m apart, and seem to have been positioned to each encompass a Bronze Age barrow (Barrows 7 and 8). If not coincidental (which seems highly unlikely), why this was done is unclear, unless any residual 'tumps' were considered some form of advantage. One can surmise that the barrow mounds survived in slighted state but perhaps not particularly elevated and their ditches may still have been evident as depressions. It is possible, perhaps, to gauge the extent of the surviving mounds from the disposition of the medieval features.

The Site 6 enclosures were superimposed over an earlier arrangement of medieval ditched field boundaries aligned in similar fashion, and it seems likely that a further driveway (perhaps still marked by an extant lynchet to the south of Plateau 2), bordered these outside the site area on the west. Each of these areas, which appear to be constrained by a near north-south aligned boundary that was undefined in the ground (none of this activity extended much more than 20m from the western edge of site), exhibited different characteristics. The northern complex consisted of three Phase 2 or early Phase 3 enclosures only very partially revealed in the pond area, while in the main part of the plateau numerous overlapping enclosures were revealed in the north-west corner. The northern enclosures were of single phase but insecurely dated, the main complex more firmly of Phase 2 and 3, with at least six or seven separate, overlapping enclosures (Enclosures 26–32) discernible. All of these enclosures were relatively devoid of any internal activity suggesting they were paddocks for animals or crop/manure storage, but the complex development of Enclosures 26 to 32, similar to other sites, suggests that more activity may have been carried out to the west, external to the site. Thus it remains possible that some of these developments were similar to the more complex later arrangements adjacent to Trackway 28.

On Plateau 4 an arrangement of enclosures (Site 11, Enclosures 45–47) was found to the west of Trackway 29, here avoiding the colluvium filled lower part of the valley. Some of the enclosures may have originated during Phase 1, but there is evidence that they were slightly later (variations in the width of the west ditch of the trackway look like recutting) and all appear to be of Phase 2, although Enclosure 46 was a slightly later formation. All three enclosures seem to have been in use at the same time however. These enclosures were less heavily occupied than some on the site, although sunken-featured structures were found in all of them, and an unusual post-hole building of uncertain function (Structure 53), possibly a barn, was set in the northern part of Enclosure 45. The enclosures may have been predominantly agricultural, as the quantity of medieval finds in this area was relatively low. As well as the ubiquitous Type 1/2 sunken-featured structures, and one possibly of Type 3 in Enclosure 47, a number of buildings in this area appeared to be domestic-type

dwellings, perhaps only intermittently occupied. One was situated on the eastern side of Enclosure 47 where it may have been related to a well immediately to its north. Two others (SFB 44 and 45) were probably outside any enclosed area but adjacent to the major east-west Trackway 35. Both were of unusual form and probably domestic residences at least initially. The elongated SFB 45, however, seems to have changed in use when a large oven was constructed at its centre. This building is very similar to one excavated at Gravesend (Building 5347; above). All of this complex seems to have gone out of use by the end of Phase 2, similar to some of the northern sites on Plateau 1.

Site 12, to the east was the northernmost of a major string of enclosures aligned down the western side of Seamark Road (Trackway 30). These varied in arrangement and complexity and in the types of features they contained, some virtually bare of internal features, although structures or potential structures were always associated. Some of these enclosures, most only partially exposed, may have been for stock handling or storage with entrances onto Trackway 30, while others seem to have had, or acquired different functions. The two enclosures of Site 12 (Enclosures 42 and 43) were of this form and apparently contemporary with Site 11. This is not only suggested by the pottery but also by some topographical relationships that seem more than coincidence, the north and south limits of Enclosure 43 seemingly laterally adjacent to elements of Site 11 (see Fig. 232). Apart from two unusual sunken buildings, one of domestic character (SFB 41) there were virtually no associated features, although there may have been additional activity closer to Seamark Road. One facet of Enclosure 43 (also shown by Enclosures 52 and 55 in particular to the south in this string) was their apparently open ended nature, always to the south. Enclosure 23 on Plateau 1 also exhibited this open side (there to the north) although it may have been bounded there by a much earlier alignment or a hedge. There was no evidence for such boundaries in these southern enclosures however, although the evidence may have been ploughed away. That some form of barrier existed is suggested by the position of SFB 41, contemporary with the enclosure and set parallel, just over 5m from what would likely be its southern limit. Most of the structures elsewhere were placed close to boundary or enclosure ditches, so that may have been the case originally here. There is little evidence to suggest the function of this site, perhaps, mostly associated with animal husbandry.

The ribbon development to the south of Site 12 initially appears to be similar in most cases although later in date. Site 13, separated from Site 12 by Trackway 35, comprised a number of elements, the earliest being what was probably a relatively large field (Enclosure 44), again mostly open-ended on its south side, and a probably contemporary enclosure (Enclosure 51), all set parallel to Trackway 30, here represented by a hollow-way. A small structure of uncertain arrangement (SFB 48) was set in the northern corner of Enclosure 51, but the enclosed spaces were mostly empty, at least originally. All of these features, probably originating late in Phase 2 or in Phase 3 seem to be entirely agricultural in nature (SFB 48 possibly a shepherds hut), set in a mostly open landscape.

To the south was a large open-ended enclosure (Enclosure 52, part of Site 14), which was delineated by a massive ditch of almost defensive proportions. The size of the ditch indicates a considerable input of manpower in its excavation, but why such a massive earthwork (not evident anywhere else on site in this period) was required is unclear. Again, this enclosure's south-east side must have been demarked by the adjacent trackway, but the south-west side was just not evident, unless represented by a short length of a considerably smaller ditch further south. Thus the size of the ditch makes little sense as a defended enclosure. Internally the enclosure was bare of features but at its south end was an extensive area of erosion that may have been formed by animal penning or perhaps intensive occupation activity but there was no evidence for the latter. Immediately to the south however were two large, adjacent Type 3 buildings, possibly used for storage, so it is possible that truncation has removed evidence for more extensive activity in this area. A short length of ditch perhaps indicates that the two structures were in their own small enclosure, most of which did not survive later truncation.

Situated much further south was Site 15. There was no evidence for any features apart from a large quarry in the intervening space. Site 15 consisted of two successive but contiguous enclosures (Enclosures 48 and 69), the former smaller and originating in Phase 3. This appeared to be partially open on the south and also had a wide entrance onto the adjacent trackway. The subsequent enclosure of Phase 4 extended the area considerably to the south and then formed a complete circuit apart from another entrance onto the trackway located directly south of the approximate south side of Enclosure 48. Again this enclosure revealed no internal features that could be judged contemporary. Unlike some of the other enclosures in this string, the internal area of both enclosures was fully revealed in the excavation, thus as there was no possibility of unexposed buildings nearer the trackway, it can be said with some confidence that they were not domestic in nature and not representative of settlement (finds quantities were also relatively low from this complex). These enclosures therefore seem to be primarily and purely agricultural in nature, either used for penning livestock or the storage of manure/produce. SFB 58, a large but otherwise standard version of a Type 1 sunken-featured building (here of Phase 4) would appear to have been constructed after Enclosure 48 (it blocked its entranceway), and was perhaps slightly earlier or coeval with the extension of the area to the south. Unusually, it stood alone as no other structures were found nearby but is analogous to similar isolated buildings on Plateau 1 and 4.

Site 16 further south was a complex development of enclosures originating in Phase 3 and showing multiple adaptations. It was enlarged to the south in Phase 4, with an even later extension to the north (Enclosure 53). The southern part of the complex contained no obvious internal features and may have primarily related to stock management, one small sunken structure (SFB 51) just outside its north-western corner possibly representing a shepherd's shelter. An extensive erosion hollow traversing the entire complex may represent herding of animals in part, and there was evidence for considerable erosion over the complex of ditches that separated the northern and southern parts of the complex, again perhaps produced by animals.

Site 19 remains an oddity amongst all the Thanet Earth enclosures as it was relatively small, completely isolated (apart from Trackway 35 immediately to its north) and only contained one rather large sunken-featured structure and an undoubtedly associated well. This enclosure could not be dated (although was certainly of this period) as the finds recovery from the ditches, building and other features was so low. The evidence would suggest that the site was entirely related to stock-keeping and the size of the admittedly rather large structure probably indicates that apart from being for the use of the shepherd it also sheltered the herd, likely in this instance to have been of sheep. Finally, Site 20 was again fairly unique, comprising an isolated enclosure set some distance from Trackway 30, but roughly parallel to it. The enclosure was probably placed early in Phase 3, although there was not much dating evidence and some of the pottery was of the late eleventh/twelfth century, suggesting an origin no later than about AD 1200. Internally there were no discernible features apart from a dividing ditch, and with the paucity of domestic rubbish or any other evidence for occupation this suggests a stock enclosure or storage area was its prime function. The enclosure appeared to be contemporary with a large quarry, partially revealed to the south. A secondary phase of activity saw the construction of a single Type 1 sunken-featured building (SFB 66), cut into the enclosure ditch and an adjacent, much larger possible sunken structure set into the side of the still open quarry (SFB 65). The exact function of the latter is uncertain, but crop-processing of some form seems possible. The site can be closely compared with the final arrangement of Site 15 to the north-east, its enclosures about the same size and with a single Type 1 sunken structure.

Occupation sites

Many of the enclosures described above eventually became occupied, some quite clearly small farmsteads. Site 1 in the pond area north of Plateau 1, does not show this development so obviously, possibly because it appears to be the earliest settlement area on the site. A complex zone of features, mostly of medieval Phase 2, was revealed in the area of colluvium at the valley base, here at the lowest point of the Thanet Earth area (16–18m OD) at a position where it might be expected that no one would have based a settlement. The features, particularly the ditches were generally shallow and relationships between them were often difficult to ascertain in the field, the fills usually near identical and consisted mostly of eroded colluvial material. The easily eroded nature of the subsoil apparently resulted in the re-cutting of many alignments. Indeed, the site may have been particularly wet during the winter months and subject to flooding and abandoned relatively early in the medieval sequence perhaps not surviving beyond AD 1200, or even earlier, although there was a later phase of activity (Phase 3) represented by a probable enclosure ditch.

The bulk of the remains were located to the west of the line of the drove road (Trackway 28) that extended from Plateau 2 to the south, and consisted of a complex of intercutting and overlapping ditches, often intermittent due to truncation; these

could have represented enclosures or fields, but the evidence was graded away to the immediate west. It is probable that only part of the site was exposed, although it did not extend much to the east of the valley base (apart from a small stock corral), and maybe not much further south considering the disposition of the ditches, but it may have extended much further north. The precise sequence of early developments is difficult to assess and the early enclosures or fields may have originally only been associated with agriculture with no initial settlement activity, as elsewhere (medieval Phase 1). The drove way (Trackway 28) was probably still in use in this early phase with access into the adjacent enclosures or fields. This route was eventually blocked by a building (SFB 75 below) as it was on other sites to the south.

Eventually however, there was a greater concentration of settlement-type features and associated domestic-type artefactual assemblages in this complex compared to some of the other areas of medieval activity, the former including at least one well to the west (bored to a depth of 14m), at least one cess pit, scattered detritus filled rubbish pits and pit complexes, post-holes and at least four structures of sunken-featured form, these all arranged at intervals along, and cutting, an east-west aligned boundary or field ditch. The westernmost building (SFB 78) was of Type 1 form, although one of the smallest of this type on site, the oven taking up almost a quarter of the floor. The adjacent SFB 77 was similar but with significant variations including what would appear to be an oven external to the main sunken area and which may represent an early experimental variation. This building was slightly smaller than SFB 78 in its sunken area, although the superstructure is likely to have at least partially encompassed the external oven, and therefore perhaps be of equal size or even larger. Two other buildings, of Type 3 were also evident, the one at the east (SFB 75) containing an interesting array of finds, including an assemblage of quernstones, while a chalk cup is likely to have been deposited in the base of the feature in a purposeful manner rather than merely discarded, possibly at the time that the settlement was abandoned; it is uncertain whether this was a medieval or curated prehistoric artefact. Apart from these two structures however, there was little obvious sign of habitable structures on Site 1. A post-hole scatter (G10056) was situated just north of the three western sunken-featured structures and close to the well and rubbish pit complexes and in an otherwise open area. It is possible that these represented a basic rectangular earth-fast timber structure of domestic character, aligned in similar fashion to the other structures. The site, once abandoned seems to have reverted to fields. Much of the domestic detritus within the backfilled structures may represent a continuation of occupation in the vicinity (perhaps in the later enclosure to the north), but its early date suggests it was perhaps more plausibly due to clearance of left-over surface rubbish into any residual hollows before the area was returned to a purely agricultural regime. There is a trend in the northern parts of the site for settlements to disappear by the end of Phases 2 or 3 (by around the later twelfth/earlier thirteenth century or before) and the area being returned to fields and pastoral enclosures. The single later (Phase 3) feature, enclosure or field ditch (G10089, would not be incompatible with this progression.

On Site 2, all of the northern structures seem to have gone out of use and been backfilled by the end of Phase 2, although the enclosures and fields in the area were probably still being utilised. This ongoing use of the enclosures at least is possibly indicated by some evidence for recutting of the ditch of Enclosure 21 along the line of Trackway 28, while the type of deposits within the ditches and the residual nature of the artefactual assemblages suggest that many backfilled naturally with material eroded from the colluvial deposits here. The southern part of the site witnessed developments slightly later in date (Phase 3) although some elements may have originated in Phase 2, the dating evidence all deriving from backfills. A succession of three overlapping ditched enclosures (Enclosures 13, 15 and 20), was cut across the earlier paddocks and the course of the trackway, although respecting or in fact using the latter's western side ditch. The primary Enclosure 13 (Sub-phase 3a) was much larger than any of the others in the area. As with many of these sites it is often impossible to determine where many of the individual internal features fit in with the enclosure sequences, but here the size of Enclosure 13 intimates that it was of some importance and it has been assumed that most of the features within it were contemporary. Enclosure 13, nearly 40m square internally, was subdivided by an arrangement of ditches and its south-western corner occupied by one of the few medieval structures at Thanet Earth that was not of the sunken-featured type (Structure 47). Although finds from the area were relatively minimal, and there were only a few associated rubbish pits, it seems likely that this enclosure represented settlement although occupation may have been transient, or short-lived, as perhaps suggested by later developments. As elsewhere, a group of sunken-featured structures was situated in this complex, but none contained any definite evidence for ovens and their function in some cases remains uncertain. Some of the other enclosures to the south of Plateau 1 were similar in this respect, although not all were completely exposed and it is possible that Type 1 buildings were present outside the excavated area. However, the location of Structure 47 (a possible dwelling) within Enclosure 13, in tandem with the lack of Type 1 buildings does suggest that this complex performed a different function. Structure 47, quite possibly a domestic residence, was set square to the enclosure in its south-western quadrant, near central to a space delineated by internal dividing ditches. Apart from three post-holes outside to its east, few other features seem to be associated, apart from a well in the north-west corner of the enclosure and another sunken-featured structure of Type 3 (SFB 12) in the south-eastern corner. However, there is no reason why the building should not have still been standing and in use during the later developments here, as more sustained use of it seems to be evidenced by structural repairs during its life.

These later developments were to the south although the southern ditch of Enclosure 13 at least, was presumably backfilled and cut across by two successive enclosures; it is difficult to say whether it survived as a functioning entity or was left to degrade – at least some of the features (such as SFB 12) seem to have infilled naturally in part. The primary development (of Sub-phase 3b) was the emplacement of Enclosure 20. This was associated with at least one sunken structure (SFB 21) and two others, SFB 6 and 9/11 although the latter seems to intervene in the sequence in an unusual way

(below). It is not impossible that SFB 21, set immediately south of the south-west corner of the enclosure but connected to its ditch by an entrance ramp, was originally of Type 1. It was of compatible size, and there was evidence for an earlier feature, potentially an oven in its south-west corner. However, this earlier feature, whatever it was, had been replaced with an unusual clunch-built structure perhaps a smoker or dryer of some sort. The building could have been habitable, but was obviously converted to perform a particular type of food processing. If originally of Type 1, this would explain the lack of these structures in this particular complex as they do seem to be usually present in these northern sites. SFB 6 was built on the line of the trackway, at but mostly outside the corner of Enclosure 13. Again this building could have been a domestic dwelling as it contained more internal features and structural details than those of Type 3. SFB 9/11 was probably two successive buildings, the earlier mostly excised by the later. The secondary structure at least may have been the last building here as it cut the ditch of Enclosure 20, but its function is very uncertain, superficially constructed like a Type 1 but with no evidence for any oven or other form of heating. The most likely interpretation of these phases of use is of an ongoing settlement or activity site with potentially domestic dwellings, and used for a variety of agricultural and food processing functions, maybe only intermittently occupied and probably of limited duration. The site seems to become defunct before the end of Phase 3 (c. AD 1250). As with Site 1 it is tempting to see the short-lived nature of occupation and its rapid redevelopments as due to its location on the colluvial deposits within the shallow valley, where heavy rainfall would have flooded the site and eroded any exposed faces of subsoil, rapidly filling open ditch alignments and probably sunken-featured buildings; this in fact did occur during the excavation. A final period of use, if not actual occupation is represented by Enclosure 15 which cut most of the earlier enclosure ditches and SFB 9/11. There were no features definitely relating to the enclosure, and although it extended south from the site area it seems possible that it represents a reversion to an entirely agricultural regime, possibly again a stock related paddock.

Sites 4 and 5 almost certainly represent discrete and probably contemporary farmsteads. Their evolution was particularly complex, and will not be repeated in detail here. In summary, an early development within Enclosure 35 (Site 4) was the construction of another Type 1 structure in its north-eastern corner adjacent again to the track (Sub-phase 2b). This structure was abandoned and infilled during the next development of the site, the imposition of a larger enclosure that subsumed the trackway and extended east of it (Enclosure 36). This represented the most intense stage of activity here, of Phase 3, where a contemporary suite of sunken-featured structures of Types 1, 2 and 3 were located. As usual, these were all dispersed at the periphery of the enclosed area and probably represent a variety of agricultural processes. Although there was no clear evidence of a habited dwelling, one structure (SFB 26 in the south-eastern corner) was large enough to be lived in, although there was little evidence for this within. As with Enclosure 13 on Site 2 there was a well, here just north of SFB 26, but only a few scattered pits containing a minimal amount of artefactual evidence, but with relatively considerable quantities of food residues such as oyster shell. The most unusual aspect of this complex during this phase was

the presence of two systems of underground chambers which were undoubtedly used for the storage of possibly quite large quantities of raw materials or produce. These features were the best preserved examples at Thanet Earth, with evidence for similar but less extensive subterranean facilities on Plateau 1 (below). The chambers (rather like Dene Holes which they superficially resemble in plan, if not depth) would have provided a cool storage space for perishable foodstuffs (perhaps including beer) and were undoubtedly related to the settlement focus. Similarly shaped cropmarks in fields on the Chalk elsewhere in Kent quite possibly representing similar caverns, suggest that such features were not uncommon. Later phases of activity are more difficult to interpret and although there was some evidence for a large structure of rectangular shape with trench-built footings (Structure 64), its form was never very clear. However, it seems likely that this site was very similar, both in function and date, to that represented at the southern end of Site 2, primarily a site for carrying out agro-industrial processes on a relatively large scale, that may have been occupied for a short duration – there was no evidence that it (or Site 5) survived beyond c. 1250. However, the intensity of activity here is demonstrated by the amount of erosion within the enclosed areas, enough to later be filled with a migrated soil and give the impression when first revealed of a large quarry.

Developments at Site 5 comprised a sequence of rectangular enclosures, seemingly open on the southern side during all phases; multiple re-cutting of the boundaries occurred. The structures and possible structures evident here were all spaced around the edges of the main enclosure complex, possibly facing inward to an open area or courtyard. A Type 1 sunken-featured structure was situated in the south-east corner (SFB 36), with a Type 3 structure on the north side, cutting through earlier enclosure ditches in the common fashion. Evidence suggests at least four or five other sunken structures as well as a cellar around the perimeter, but most of these were heavily truncated with little surviving. At least two other structures, a rectangular post-hole structure possibly a replacement of an earlier building that only survived as floor surfaces, was also located to the west. Two wells (shown by percussive boring to be c. 26m deep) and a number of pits were also indicative of settlement, while a large quarry at the western end of the site appeared not only to be a late feature, but also provided evidence for possible underground facilities, features which were more evident in the eastern settlement. Considerable activity was similarly represented by a significant and widespread area of erosion, almost certainly caused by the traffic of men and animals. Environmental evidence from the wells gives a good indication of the nature of these two settlement sites, while animal bone remains suggest butchery taking place, the latter not clearly evidenced elsewhere (both aspects are more fully discussed below).

Sites 7 and 8 along the western edge of Plateau 1 were similar in many ways to the two farmstead sites recorded on Plateau 2 but were relatively badly preserved and not fully exposed. Generally later than the settlements so far described, it is tempting to think of them as a translocation of the Site 2 settlement to slightly higher and dryer ground. Site 7, which may have been situated in an earlier quarry, did not

seem to be bounded by any enclosure ditches, although the regular rectangular shape of the depression suggested that it may have originally been enclosed, the ditches mostly removed by later truncation. A number of intercutting linear features in the north- and south-eastern corners of the area may be all that remains of any such enclosure. Activity seems to have occurred both in the base of the quarry and on its margins. A Type 1 sunken-featured structure (SFB 22) situated in the north-east corner of the area was an early feature and may again represent an originally isolated example. There were some rather amorphous subrectangular features in the south-eastern corner, some of which may have been Type 3 structures, and a smaller, more likely candidate on the south edge (SFB 15). Within the quarried area, at least some of the basal hollows may have represented sunken structures, while on the eastern edge were more underground chambers, although these had mostly collapsed. A few pits contained domestic refuse such as pottery, animal bone and marine shell, while other features included a well at the western side of the area, and towards the centre of the site, a subrectangular six-post structure about 2.8m across. These posts were evenly distributed around the edge of a platform of densely packed flints, likely to be the base of an oven or hearth. This undoubtedly represents another building, and may be related to another hollow directly to the west. Also in this area, and again possibly within a structure, were two adjacent small and shallow pits that each contained the truncated remnant of a large pottery vessel of late thirteenth/early fourteenth century date, inserted upright and tightly fitted into the pit. Similar features have been found elsewhere on Thanet Earth (also in pairs), and on similarly dated settlements in Kent, often within buildings. Various functions for these have been proposed, including ritualistic purposes, but here the vessels were probably used for storing liquids.

This site can therefore be seen as similar to the more completely exposed farmsteads represented by Sites 2, 4 and 5 described above, with a suite of buildings, some probably domestic residences and others used for various agricultural processes, with the usual presence of a well and places for the storage of raw materials or produce. The difference with this site is its location within a quarry and its later date, of Phase 4. Some features may have been earlier but the majority of the dating evidence suggests that activity took place primarily in the latest phase. It is possible that the quarry was excavated during the earlier phases and that once abandoned, it was opportunistically used to provide an area of settlement (here being outside the adjacent dry valley and on the well-drained chalk). Oddly enough, Site 8 immediately to the south seems to have suffered a reverse fate. Again of Phase 4, at Site 8 most of the structural evidence was removed by quarrying that took place after the period of occupation. Little more can be said about this area except that is likely that a similar type of settlement was originally present as there were traces of the usual enclosure ditches, although segmented and fragmentary. The southernmost complex of this string (Site 9) consisted of a partially exposed ditched enclosure, of which the south-western half had been incompletely eroded away at a later date. This erosion may have been caused by animal penning rather than quarrying since it was relatively shallow, but had similarly removed some structural evidence. Activity here was probably all of Phase 3, although there was again some

evidence for earlier activity. A radiocarbon date from a well (G1143) provided a date of AD 894–1117 cal BC (at 95 per cent probability; Table 6, UBA-22213), but this could have been from slightly residual material, as perhaps suggested by the associated preserved plant remains which suggested derivation ‘from woody debris that accumulated on waste ground’. The erosive episode probably occurred in Phase 4 after occupation of the site had ceased. Externally to the north, but possibly related to this area rather than Site 8, and partially truncated by that sites quarrying, were two very large post-holes (G1199) about 5.5m apart that may have represented a substantial timber framed structure, possibly a barn. The post-holes were of similar size and separation as those in a better preserved barn-like building on Plateau 4 (Structure 53). Within the northern part of the enclosure was a strange multi-compartmented sunken-featured structure (parallel to the enclosure ditch) that could have been of domestic function (SFB 13). It was certainly large enough for habitation and although the sunken areas were quite irregular, was possibly designed with the two-thirds to a third ratio evident in some of the other structures (Fig. 191). Immediately to the south the erosion had removed most of yet another structure, of which only the oven base survived, but this was almost certainly another Type 1 building.

In the southern part of the site, subsequent developments, all to the east and adjacent to Trackway 30, appear to be all of Phase 4 although there were traces of earlier pottery probably indicating prior use of the earliest enclosures. Enclosure 55 (Site 13) was situated in the north-eastern corner of Enclosure 44, again open-ended on the south, and probably to the east where it must have been directly bounded by the trackway. It contained a suite of, as far as can be ascertained, contemporary elements very similar in most respects to the more complex settlement sites to the north, a well and a cess-pit, plus one major and complex sunken-featured structure (SFB 59) that was almost certainly a domestic dwelling, associated with drains, buried pots and an underground cellared feature to its immediate south. There was one significant difference with this enclosure however, that being the absence of a Type 1 sunken building, virtually ubiquitous in the more complex sites to the north. Indeed in apart from one instance, most of the enclosures to the immediate south seem to lack structures of this sort, suggesting they were fundamentally different to, as well as later than their northern counterparts. This may be partly due to the chronology, as Type 1 structures appear more commonly dated to the earlier part of the medieval period although seemingly late examples do exist. Most however can be ascribed to Phase 3 or before. A single Type 3 sunken structure, which appears to have been the latest feature in the vicinity, may suggest that the complex reverted to a purely agricultural use once occupation had ceased.

Site 14, 35m to the south dated to Phase 4, again with the proviso that earlier ceramics suggest an origin in the latter part of Phase 3. This was a disparate spread of features that included two buildings not seemingly associated with enclosures. Apart from SFB 54 which was very small and uncertainly interpreted, SFB 55 was by far the largest sunken-featured structure on site, with an internal area of about 100m². Unfortunately it was heavily truncated which has made interpretation of it

slightly difficult. Unusually for such structures it seems to have been designed to an exact size in feet, and in proportions of thirds, much like timber-framed buildings of this period. There is a suggestion that it was originally a barn or more probably a cow-shed but was converted perhaps, into a domestic building with benches on its perimeter. On Site 16 the northern extension of the earlier complex (Enclosure 53) was cut with a much larger ditch and contained a considerable number of potential structures probably contemporary with it. None of these were of Type 1, and most remain quite enigmatic functionally. Many of the earlier ditches were infilled during the various development stages and generally yielded a relatively considerable quantity of domestic refuse, suggesting that at least some of the structures may have been domestic residences, SFB 52 in particular. In addition, the enclosures and internal features were not fully exposed, so additional features nearer the roadway may have been present. However, unlike the more obvious settlement areas to the north, there were no wells or cess/rubbish pits, so the domestic occupation of this site may have been quite short-lived. The alternative is that all the waste was imported from elsewhere. This site is additionally unusual in that a significant amount of post-medieval artefactual material was recovered from the area, mostly from a colluvial soil filling an erosion hollow on the eastern side of the complex. A few ditch alignments that do not seem to fit into the overall development of the enclosure systems may also date to this period, although their exact chronology could not be verified.

The remaining sites to the south can be seen as a southern continuation of the ribbon development along Trackway 30 but none were exposed completely. Site 18, apparently of Phase 4 was only very partially exposed so its nature is not clear, but is likely to have consisted of another enclosure, or enclosures similar to the sites to the north, and had at least one associated building. Site 17, mostly also of Phase 4 but with an early but uncertainly dated enclosure probably of Phase 3, was more complex. The primary enclosure (Enclosure 57) that was almost completely removed by a later circuit on the same line (also potentially of Phase 3 but probably very late if so), held an unusual underground facility of two subrectangular domed chambers (Structure 55) that was probably used for the storage of perishable foodstuffs, and an apparently associated two-phase sunken-featured building (SFB 64/67), possibly of domestic nature. Few, if any contemporary features were isolated. SFB 64/67 was quite deep in its first phase, but its cellared part was infilled and the structure re-floored. In one or both phases it contained half a stone mortar cemented into the side wall of the cut, presumably to hold some sort of light source. There was no evidence for any ovens in this building although heating may have been provided by a brazier in both phases of use. The function of this enclosure is difficult to gauge at this time, but some form of food or crop processing seems likely.

An intermediary stage probably dating to early late Phase 3/early Phase 4 saw a large and featureless sunken building of Type 3 cut into the enclosure ditch on the north side, before it in turn was backfilled and the whole enclosure restructured (Enclosure 58). The cellar and SFB 64/67 may have continued in use, at least for a while, before both were purposely backfilled, the cellar with considerable amounts

of domestic waste and a large quantity of oyster shell. A later phase again is reflected by a number of features that cut the probably semi-backfilled ditch of Enclosure 58, some of which may have been Type 3 sunken-featured structures. However, this was not reflected in the pottery dating, suggesting that developments in this complex across both Phase 3 and 4 were fairly rapid. The quantities of domestic waste evident in features in this complex suggest that it was occupied for at least some of the period, but again there were no wells or cess-pits and few pits that could be clearly interpreted as for rubbish disposal. Its use as an entirely agricultural complex can therefore be considered likely, even though only a relatively small part of the site was examined. It can however be stated with some confidence that the southern side of the site was again not enclosed by any substantial ditch.

The remaining sites were not examined in detail, being mostly outside the examined area and require little further discussion. Of these, Site 21 was mostly represented by large quantities of discarded artefactual material in a hollow way, but appears to have originated in Phase 3 with a possible Type 3 sunken-featured structure (SFB 74) set over the remains of a prehistoric barrow. A subsequent Phase 4 period of activity after the structure had been backfilled consisted of a few pits and the artefactual material in the trackway. Interestingly some of this may have been deposited in the fifteenth century which would represent the latest sign of medieval activity on the entire site. This may possibly relate to a settlement that aggregated around the medieval Monkton Mill, a later version of which was located on Plateau 6, but if so, this is now likely to be buried under the infilled part of the plateau. There is a possibility however, that the earlier mill itself may have been constructed on the remnants of the mound of Barrow 4. Site 22 under Monkton Road Farm and Site 23 at Brooksend were only minimally examined but indicate that the ribbon development along Seamark Road probably extended to the route between Sarre and Birchington, now represented by the A28. Site 23 almost certainly represents a settlement due to the presence of structures and cess pits, the latter containing better preserved environmental remains than most of the features on the higher ground of the main site.

The origins of the medieval settlement

Jon Rady

If the Anglo-Saxon period was defined by a very low density rural settlement pattern this trend was spectacularly reversed during the early medieval period with a proliferation of dispersed farmsteads across the Thanet Earth site. The reasons for this surge of activity, probably commencing shortly after the Norman Conquest are unclear but may partly be due to the acquisition of the land by the major Canterbury ecclesiastical establishments in the eleventh century. Documentary sources also indicate that Thanet became one of the most heavily populated areas of Kent during the medieval period, and this, allied with economic growth (as well as political and

other factors; see Faith 1999, 183–202 for example) may have encouraged the formation of individual farms and small agricultural settlements.

The nature of medieval settlement and agriculture

Landholding and tenure

Sheila Sweetinburgh (Chapter 27) has detailed the complex nature of landholding and tenure during this period and the difficulties of relating the documentary sources to the archaeological evidence for the area under question. Two relevant factors are fairly clear, that the land was held by ecclesiastical institutions and that the balance between direct farming by landlords and the acreage held by tenants altered over time in response to such issues as demographic changes, natural factors and market (wages and prices) forces. So, although by the eleventh or twelfth century most manors had been leased out for a food farm or cash rent, or a combination of the two, this policy was then reversed because landlords realised that they could exploit their demesne lands more successfully through direct farming as agricultural prices rose (Mate 2010, 4). Nonetheless, tenant farming was always significant, not least because of the high proportion of gavelkind land across the county, and the importance of the free peasantry.

In Kent, this perhaps more flexible land market was due in part to the agrarian field system which included large fields often divided into small unenclosed blocks held by the peasant landholders ‘who could farm them as they saw fit’. This latter point is quite significant. Schuster and Stevens (2009, 251) posing the question ‘*Only for the rich? Or Off-the Shelf for every farm*’, compare possible direct seigniorial ownership of some of the Type 1 sunken structures with the more widespread scatter of such structures at Thanet Earth. The archaeological evidence at Thanet Earth supports the idea that in the rapidly expanding economy of the twelfth and thirteenth centuries, the tenant farmers and smallholders at Thanet Earth were, for the most part allowed a considerable degree of autonomy, erecting farmsteads and small settlements and constructing and deconstructing buildings and enclosures, even blocking trackways, although overall a quite rigid arrangement is apparent. These developments were often quite rapid and it is unlikely that there was generally much interference from the lord. Thus we can suggest quite strongly that a market-type economy proliferated, albeit relatively small-scale in its individual components with, apart from the individual crops grown and animals husbanded, various types of produce, particularly bread and probably ale, made both for personal consumption and potential sale. There is no reason to suppose then that sunken structures, at least at Thanet Earth, were necessarily owned by the lords or operated exclusively under their control, but can be seen as individual examples of the work of entrepreneurial tenants.

However, there was an overarching and generally quite rigid structure, based predominantly on the position of the earlier trackways, themselves in part disposed under the influence of even earlier arrangements. The tenacity of boundaries and

some element of planning is indicated by the common distances between, and sizes of enclosures in many cases, subtle hints at respect for land boundaries or subdivision (probably marked by fences or stones, or even hedges that have left no archaeological imprint) and also cooperation – it seems unlikely that Trackway 28 would have become blocked by buildings without a degree of local agreement, although this issue is complicated by purpresture (or encroachment onto common land for personal land-gain). Depending on the status of the route (some minor ways were private property; Rackham 2000, 265), these intrusions may have been individual examples of purpresture. Roads and trackways within the manor were usually common land, not belonging to any adjacent farmers, and individual encroachments onto common land were frequently recorded for routeways and ‘most often took the form of narrowing a road, either by a neighbouring farmer pushing out his frontage or by a third party setting up a smallholding within the route itself’ (*ibid*). Such malefactions were often tolerated if the requisite annual fines were paid to the lord. With Trackway 28 however, the road was pretty much completely blocked at various points.

Other examples of communal effort might be represented by some of the enclosures as the size of some of their ditches on Plateau 5 in particular may have been beyond the capabilities of one household and have required some form of collectivised labour in their excavation. This might suggest that although most of the land was held in severalty, some enclosures, particularly those on Plateau 5, may have been used in common (as suggested for one of the enclosed sites at Lydd; Barber and Priestly-Bell 2008, 287). The potential rigidity of the overall landscape structure (Fig. 232), which must be related to land ownership or more probably lease-holding, is possibly reflected in the location of Site 1, perhaps in an eventually untenable location at the base of a shallow valley. Moving the settlement just to the east of its adjacent trackway would have placed the farmstead on slightly higher and much better drained land, but there is no evidence that this occurred. The site was merely abandoned instead and reverted to fields, suggesting that translocation to the better position was not possible in this instance, possibly due to tenancy by another party.

The difference in the landscape between the areas north and south of the Parish Boundary (or more specifically the line of Trackway 35) has been noted. This line does not seem to represent the boundary between separate manors (Sweetinburgh above). However, an actively different land management may have been imposed in the separate areas, even though both were part of the Christ Church holdings. Alternatively, or in combination, the earlier disposition of landscape features, or at least its surviving components, may have produced the difference between the more open arrangement to the south in comparison to the more rigidly defined northern layout of fields and trackways. The nature of the northern area certainly seems to have been influenced by the presence of already ancient boundaries that had survived for many centuries, and even if awkward individual survivals were not necessarily retained, the overall orientation was. To the south, this maintenance of an earlier landscape is not so apparent, although even here, in its much more open nature, there are some slight suggestions that elements of the prehistoric layout

survived and were utilised. Specifically, the western side of Enclosures 44 and 51 are on a very similar alignment to the prehistoric one in this area (this could just be a reflection of the Seamark Road alignment, but it is probable that this route is of considerable antiquity, and not impossible that it represents a fossilized prehistoric route – see Chapter 3) and both Enclosures 48 and 53 seem to align on prehistoric boundaries to the west (see Fig. 232). It has already been suggested that the open-ended aspect of some of the enclosures may indicate that their apparently unbounded sides were delimited by earlier hedge lines, Enclosure 21 on Plateau 1 being the most noticeable example of this possibility.

However in the end, there is no way of determining how the southern area was divided, if at all, apart from by the ribbon development along Seamark Road, and the two isolated enclosures further west. It is worth noting here that most, if not all of these roadside enclosures, whatever their function, only seem to have entrances onto the adjacent route, not into the open area to the west. They should therefore perhaps be considered as a distinct and separate (and generally later) development, with no necessary relation to any adjacent open ground. With a lack of both documentary and positive archaeological information, it is impossible to be certain about the overall nature of this part of the site, but that it was a common pasture zone with more patchwork, predominantly arable fields to the north agrees with the evidence that survives. Thus, for example, drove routes through the arable zone would be needed to move stock between this common land and other pastures (including summer grazing of marshland) to the north. Further, since the Christ Church monks, ‘relied heavily on horses for draught animals [and] built up cowherds on many manors that had never contained cows before’ (Mate 2010, 6), it is not improbable that large areas were predominantly pasture or meadow. That grazing land was the prime function of this area is of course supposition, as it could still have been divided into arable plots for which no archaeological evidence survives (a similar situation to the area from the southern edge of Plateau 3 northwards across most of Plateau 8 where there was a comparable lack of separated fields or other medieval activity). The eradication of the prehistoric barrow mounds in this area (Chapter 2) certainly suggests that these were removed by constant ploughing, although this could have happened after this period, perhaps during the archaeologically void centuries after the Black Death. However, the chronological difference between the northern and southern parts of the site is also marked, with significant activity not occurring in the south until medieval Phase 3. This may well indicate that the area was exclusively retained as pasture during the earlier medieval period and primarily so afterward.

Settlement and settlement form (Fig. 237)

Sheila Sweetinburgh has already considered the effect that matters of landholding and customary manorial regulations may have had on local settlement patterns in the light of the archaeological findings, and compared them to Lydd in broad terms (Barber and Priestly-Bell 2008); further comparisons with other parts of Kent, as far as they are known are made below. The settlements at Thanet Earth were relatively

small, perhaps often short-lived and none can be considered much more than hamlets. In reality they were probably farmsteads, primarily if not exclusively engaged in relatively small scale agricultural production, with various attendant facilities and possibly a single structure for habitation (see below). At the lowest level of habitation, isolated structures were scattered amongst the fields or enclosures, often in their corners, sometimes adjacent to trackways but not always so. Some of these buildings were probably used entirely as barns, stables, store rooms, temporary shelters for herdsman and shepherds, and other agricultural purposes, but some provide evidence for habitation, or are of a size which suggests that, if not used exclusively for sheltering animals, they may have been occupied for short periods, or for part of the year. These are particularly evident on Plateau 4 (SFB 44 and 45 on Site 11, SFB 41 on Site 12), where there is no sign of any larger scale occupation and immediately to the south (SFB 53 on Site 14 and SFB 62 on Site 19), all perhaps not insignificantly toward the higher, most exposed parts of the site. Site 19 was relatively unusual consisting of a large structure, set in its own and quite small isolated enclosure (about 275m² internally and accessed from Trackway 35) and seems have been completely concerned with animal husbandry, possibly occupied by a single herdsman or shepherd and his livestock. It was of similar size to some of the smaller enclosures at Lydd (below). There was little sign of significant occupation here, although the enclosure was provided with a well, the keeping of sheep suggested by the animal burial just outside. Frequent amongst the scattered buildings were relatively isolated Type 1/2 sunken-featured structures, again usually set within corners of enclosures, but mostly with no evidence for people living nearby (SFBs 43, 46 and SFB 45 in its later phase on Site 11, SFB 58 on Site 15 and SFB 66 on Site 20). It can be noted that these isolated examples predominate to the south of the site, most of those to the north being closely associated with farmsteads or relatively close by. This suggests that the isolated facilities were visited and used only when required, by people living elsewhere, possibly in the villages (where the majority of the population may have been resident).

It is probably significant also that the majority of the actual farmsteads are to the north, those to the south of the parish boundary restricted to the ribbon development along Seamark Road (Sites 13, 16 and 17). This may be partly due to the necessity for easy access between the peasant's small, perhaps scattered acreages and plots, and the local markets or manorial centres. Nearly all of the northern farmsteads were also adjacent to trackways (Sites 1, 2, 4, 5, 7, and 9), although those by Trackway 28 were soon to have this route closed. This may have only seriously affected Site 2 however, as the route may well have remained open to the north of Site 1 and possibly to the south of the complex of Plateau 2 settlements where it would have connected with Trackway 35.

One potential settlement has not been included here, but the evidence from the hollow way on Plateau 7 and some of the features cutting into Barrow 2, suggests that there may have been a significant 'hamlet', that survived into the fifteenth century, aggregated around an earlier manifestation of Monkton Mill on Plateau 6 (which may have been built on the remaining mound of Barrow 4; see Chapter 8).

Apart from possibly outlying features and artefactual dumps on Plateau 7, the core of the settlement or the earlier medieval mill were not revealed during the excavation, but if any remnants exist both could be under the unexcavated part of Plateau 6. This may have represented one of the smaller clusters of habitation (such as 'Parva Monkton'), referred to by Sweetinburgh (above).

The form and layout of the farmsteads is considerably varied, perhaps reflecting the individuality likely to arise from relatively light manorial control (all are described in more detail above; Fig. 237) and although little about them can be gleaned from documentary sources, there would have been a mix of domestic and agricultural buildings. It is not always possible to determine the precise nature of these Thanet Earth farmsteads as some were not completely uncovered, or the exact function of all the possible structures. In terms of size, the farmsteads were not particularly extensive, the largest fully exposed being Enclosure 13 (Site 2) at 1600m², while most were much smaller (Site 5 at about 500m², Site 13 at c. 700m² and Site 4 at 860m², the remainder probably of similar dimensions). This compares with Lydd Site A where the farmstead covered an area of 500 square metres, although some settlements on the marsh (Site H) were even smaller, about the same size as Site 19 (Gardiner 2008, 302). One enclosure of the Monkton settlement to the south-east (Bennett *et al* 2008, 307) was somewhat larger, about 2200m² but this may well have been of higher, or at least different status (as suggested by its attendant buildings) than most of the Thanet Earth sites, and although probably a farmstead, it lacked the ubiquitous sunken structures (although there may well have been some in the enclosure corners which were mostly outside the examined area). Gardiner (2008) was unsure whether the size of the settlements at Lydd was a regional variation or due to low-status, as few comparanda were available at the time. The Thanet Earth evidence, in a different geographical and topographic setting therefore suggests that size did have some relation to status – the Fulston Manor enclosure for example was potentially relatively big and quite probably in, or associated with a higher status settlement (see below).

This lends weight to the possibility that the settlement core of Site 2, comprising the largest enclosure examined (Enclosure 13) with its beam slot building (Structure 47) was in some sense more important, or had a higher status than the other settlements or farmsteads evident here. Structure 47 was also the only one of its type, and it has been suggested that this type of structure was prevalent in higher status sites (such as the Monkton-Mount Pleasant medieval site perhaps).

Various structures, the majority of sunken form, are evident, often distributed around a more open courtyard-like area (such as in Sites 4, 5 and possibly 17; Fig. 237) and nearly always at least partially enclosed by ditches. These have been described as 'courtyard plan' farmsteads (Gardiner 2008, 302), where usually the adjacent trackway and entrance to the yard is opposed to the main house, set at the rear. The position of the trackway (assuming Trackway 28 was now defunct) is not possible to determine with Sites 4 and 5, but a more transient route may have extended from east to west along the unenclosed boundary of both sites. The other

form that can be seen more generally is the 'street front' plan, where the main house is 'on or close to the street, which limited access to the farmyard behind' (*ibid*). This arrangement is not so clearly present, perhaps only represented in the Enclosure 13 complex of Site 2, where Structure 47 is adjacent to Trackway 28, which may have been open, at least in this area, during this sub-phase. However, the structure was end-on to the track and hardly blocked access to the enclosure. This is similar in many ways to the Monkton eastern medieval enclosure (Bennett *et al* 2008, fig. 4/1), another possible indication of the different status of this particular settlement.

There is another arrangement evident in at least some of these farm complexes, a variation on the courtyard plan. In this lay-out, the farm enclosures appear to be predominantly set with one long side adjacent to the trackway. What appears to be the main structure is at one longitudinal end with the remaining space either fairly open or containing various features including other buildings, the latter often near or on the perimeter. Site 4 can be seen as an example of this arrangement where the most likely dwelling (SFB 26) is set in the south-east corner, with a well just to its north. The remaining courtyard space is relatively open but with the secondary structures arrayed near the perimeter to the north and west (SFB 29–31). A similar pattern is possibly evident in Site 9, where the main structure (SFB 13) is situated at the north end of the enclosure (with trackway to the west), Site 13 (main structure SFB 59 to south, trackway to east). Sites 16 and 17 were probably similar although the actual dwelling is more difficult to identify.

The overwhelming number of sunken buildings, in relation to more conventional structures is a major and previously unseen facet of medieval rural settlement in Kent, although potentially other sites along the northern coast may be comparable. Whether it is unique for this area has been touched upon above and is considered further below. In other respects the sites are not particularly unusual. One, or even two wells are usually present, and sometimes rubbish or cess pits, although the relative lack of these (in comparison to urban sites for example), rather than necessarily reflecting a low intensity of occupation may merely indicate that most of the refuse ended up on the fields as manure, perhaps after being allowed to decompose in surface middens (the importance of manuring is dealt with below). The actual intensity of activity in at least some of these sites is apparent from the extensive depressions of eroded ground within or closely around the enclosed areas (Sites 4, 5, 13 and 16). On the other hand, the southernmost sites along Trackway 30 (Sites 15–17) did not have wells or obvious cess-pits and may have been less intensely or only intermittently occupied.

The function of many of the structures in these small settlements is difficult to determine, but there is nearly always one (sometimes more) Type 1 or Type 2 sunken-floored structure, suggesting that baking and probably brewing was a widespread activity. Only at Site 2 was there no Type 1 structure in the southern core of the settlement (although SFB 21 may have originally been of this type) although there were two others only a short distance to the north. In the settlement areas, these buildings were nearly always associated with Type 3 structures, some

undoubtedly used for the storage of raw products or the final commodities. The lack of this association in the more isolated southern Type 1 examples is suggestive, and perhaps reinforces the conclusion that these were only visited when used, the raw materials brought in and the products taken away on an *ad hoc* basis. In the settlement areas however, the importance of storage is indicated by the number of cellared or subterranean facilities, some quite sophisticated (Sites 4, 5, 7 and 17), which suggests that at least these farms were generating appreciable quantities of produce in surplus.

The actual houses, or habitable structures are less easy to identify, but the likelihood is that not all of these were of sunken form and may not therefore have survived subsequent truncation. This is suggested by the badly preserved posthole structure on Site 1, Structure 47 on Site 2, Structure 51/2 on Site 5, and the tenuous Structure 64 (Site 4), all represented by extremely shallow remains although Structure 51/2 may have incorporated a sunken area (SFB 25) at its south end. All of these were big enough to represent modest dwellings, as are some of the larger sunken structures that are nearly always associated. Rural domestic low-status dwellings of this period were not particularly large. On Romney Marsh the evidence suggests a size of about 10m by 5m which is comparable with the few medieval cottages that survive in the area (Barber and Priestly-Bell 2008, 287). The smaller of the more conventionally constructed domestic buildings at the Monkton medieval site (Buildings IIA and IIB; Bennett *et al* 2008, 311–317) was of very similar size to Structure 47 (Site 2) which was 8m by 5m in extent, while SFB 26 on Site 4 was about 10m long and 6m wide and SFB 13 on Site 9 was probably in excess of 11m by 3.2m. SFB 38, which would seem to be the most likely contender for a domestic dwelling on Site 5 was only 6.3m long and 3m wide however (but could have been larger internally if the walls were set back from the sunken area as suggested above), but in any case could still have been big enough for a peasant dwelling (see Allen *et al* 2012, 574). It is also of course possible that some of the larger Type 1 structures could have been used as dwellings in addition to food processing.

Some idea of other structures that may have been present in these sites is potentially supplied by beadles' rolls, and although they only refer to buildings which formed part of the manorial complex, there would seem to be no reason why such structures were not present on tenanted farms (see Sweetinburgh above). These would have been predominantly agricultural buildings such as barns, granaries, stables, sheep houses, and cattle sheds, most of which are potentially represented in the excavated evidence. Craft occupations such as blacksmithing may also have been carried out but there was little evidence for them (see below), particularly any form of smithing or metalworking. None of the structures or their ovens seem suited to this purpose and the only ironworking material (smithing hearth waste debris) was found in one rather dubious sunken structure (SFB 54) on Plateau 5, and a ditch of the probably late medieval or early post-medieval Enclosure 66 to its south. In both cases, the material was undoubtedly deposited from elsewhere. Thus the remains at Thanet Earth are a reflection of an almost entirely agricultural society and lend support to the idea, that although 'most households were involved in some form of by-

employment, the primary economic activity would have been farming among the peasantry of Monkton' (Sweetinburgh above).

A consideration of settlement density and by extension, the population at the Thanet Earth site is a more complex problem. This is due to many factors, partly the fragmentation of landholding, to the fact that the number of farmsteads may in fact may be greater than discernible (some of the incompletely exposed enclosures could have had settlement elements that were not seen), that the numbers do not seem to be constant over time and that the southern part of the site appears to be devoid of any significant settlement sites during the earlier part of the period. The problem is made more difficult by the fact that much of the site was probably being used by people that did not actually live there. It is generally assumed that fifteen acres (c. 6ha) of land would have been a necessary holding for self-sufficiency (although in practice many peasants probably held much less), a figure also suggested for settlement densities on Romney Marsh (Barber and Priestly-Bell 2008, 287). The excavated area at Thanet Earth was 46ha (114 acres), which on the above figure suggests that 7.5 households could be represented. There are in fact at least six and probably more actual settlements in the earlier medieval phases, but if these are chosen they can be considered to occupy about half the area. However not all of these settlements were coeval. Taking Phase 3 settlements only, just over three should be present in the northern area, which does at least approximate to the number actually suggested. However, the difficulties inherent in this sort of evaluation are obvious and have been noted elsewhere (*ibid*, 287–288).

The agricultural economy

The main factors in the agricultural economy, as far as it can be determined, have already been outlined; 'our knowledge rests principally on the archaeological record and indirectly from demesne accounts'. Bruce Campbell's (2010) assessment for thirteenth and fourteenth century Kent has suggested that 'it was an agrarian system based on intensive mixed farming with cattle', the key features being the close integration of arable and livestock production, the cropped land providing fodder and seasonal grazing for the animals, the latter in turn supplying draught power and manure to the arable (Sweetinburgh above). The intensity of the agricultural regime has also been noted (see also Campbell 2010, 27–28), and soil enrichment would have been an important aspect of ensuring the success of crops in this environment. Thus, 'Land was also further enriched by the widespread sowing of legumes – peas, beans, vetch – which added nitrogen to the soil' (Mate 2010, 5). This may explain the relative lack of rubbish and cess pits on the site (above), as anything that could have aided fertility was probably used on the fields.³⁰ Middening and manuring has also been suggested as a reason for the low number of pits at Lydd (Barber and Priestly-Bell 2008, 283). Spread amongst the more likely settlement sites are a number of enclosures that do not display much evidence for occupation, but these could have

³⁰ This is also possibly suggested by the condition of recovered animal bone, over half being abraded and showing signs of surface erosion indicative of being out in the open for a period of time before burial.

been used for a variety of purposes, as stock corrals or paddocks, or for the storage of manure before it was spread on the fields, as well as other materials such as fodder. Storage of manure in dung heaps for example is indicated in Christ Church Priory records (Barber and Priestly-Bell 2008, 286–287). There is some evidence that occupation sites once abandoned reverted to being used in an entirely agricultural capacity, either for storage or for stock management, such as the progression represented in the southern Site 2 complex of enclosures.

The type of crops being grown have already been partly described in the discussion of what the environmental remains signified about the use of the sunken buildings. In these, 'barley was dominant, bread-type wheat the next most frequent, followed by rye and then oats ... The dominance of barley is most likely due to the light, calcareous soils suiting this crop better than bread wheat'. However, the proportions of crop in the structures are likely to have been influenced by their particular function, and barley especially may be over represented due to its multifarious uses (see above). Bread wheat was, more generally, the predominant crop across southern England at this time as indicated by documentary sources and recent archaeobotanical analyses (Rippon *et al* 2014, 210). Thus, in contrast to the sunken building assemblages, one of the few productive ditch samples (from ditch G1031 in the south-west corner of field M3) supplied more abundant bread-type wheat grains, although barley was still significant (consisting of 60 per cent wheat, 35 per cent barley, 2 per cent oats and 3 per cent rye). Given the various provisos that may be relevant to the composition of the plant remains in the structures, these ratios are probably more compatible with what is known of the relative importance of such crops in Kent, 'Wheat, the pre-eminent commercial bread grain, generally occupied at least half and sometimes the whole of the area devoted to winter grains ... Rye, its closest substitute was less frequently grown' while 'on a majority of demesnes...barley was the most important spring grain' (Campbell 2010, 33). It must also be remembered that the exact combinations and quantities of crops grown could vary from manor to manor (Campbell 2010, 34), also influenced by differing soils and geologies (Rippon *et al* 2014, 211). Other crops already mentioned were the extensively grown legumes, particularly prevalent in Kent (*ibid*, 210–211) although only found in relatively small quantities in the Thanet structures, where peas and vetch were most commonly represented. The latter was grown almost exclusively as a fodder crop in Kent (Campbell 2010, 32–33), perhaps explaining its minimal although consistent presence in the sunken structures.

Oats were sown in winter, but in variable amounts (*ibid*; Sweetinburgh 2008, 19) and may not have been a commonly cultivated crop on the elevated ground of the site. The otherwise unremarkable ditch of Enclosure 62, in the extreme north-west corner of Plateau 1 (Site 6), undoubtedly part of the medieval enclosure system but not closely dated provided a sample from the primary fill 'unique in being composed of an almost pure deposit of common oats (581 grains), identified as *Avena sativa* by ten intact floret bases. No other identifiable cereals were mixed with the oats, so the accompanying weed taxa provided reliable evidence of the type of soil on which the oats had been grown – a situation rarely encountered in archaeobotanical

assemblages because of the mixing of different crops. Stinking chamomile was the main weed taxon (136 seeds), with corn cockle, dock, *Brassica/Sinapis* sp., *Vicia/Lathyrus* sp., *Odontites/Euphrasia* sp., grasses and sedge (*Carex* sp.) being present as only occasional seeds. Sedge seeds were very rarely found in the samples from Thanet Earth, as the chalk soils on the plateau were well drained ... so their presence in this deposit was notable. As a whole, the evidence suggests that oats were being grown on heavier, damp soils such as the loamy, clay soils of the river valley and coastal flats to the west and south of the site. The charred oat deposit is most likely to have originated as fodder that was burnt as waste, or because it was infested, and dumped in the ditch'.

The medieval animal bone assemblage was badly preserved and about three-quarters could not be identified to species, so that documentary evidence is probably a more reliable indicator of the types of farm animals utilised (see Sweetinburgh above and also Gardiner 2008, 303), but all the common domesticates were identified and included cattle, sheep, sheep/goat, pig and horse. Dogs were also common, a number of skeletal elements found in ditches and sunken buildings, often deposited in a potentially ritual manner, but wild animals as a food source were scarce and restricted to hare. A ditch of Enclosure 53 (Site 16) produced house mouse indicative of buildings close by, but otherwise rodents were remarkably absent from this period. The overall animal bone sample is likely to be taphonomically and statistically biased (the minimum number of animals represented in the assemblage was only 52), but cattle fragments were the most numerate forming 35 per cent of the deposit, sheep or goat formed 21 per cent (likely to be mostly sheep as no definite goat was found), pig 19 per cent, horse 15 per cent, dog 9 per cent and hare 1 per cent. However, minimal numbers of animals suggest that perhaps similar proportions of sheep/goat and cattle were farmed throughout this period, with pig perhaps less broadly utilised than the other species. In fact it is possible that sheep were dominant in this area, as in many parts of southern Britain on similar limestone geologies (Rippon *et al* 2014, 223). This mostly compares with what is known of animal husbandry at the time (Campbell 2010, 34–35 and below, where 'swine accounted for between a tenth and a fifth of all non-working livestock units'). It is likely however, that only a relatively small proportion of livestock used on the site over a period of nearly 300 years entered the archaeological record, many possibly being slaughtered elsewhere, or sold at markets (the latter probably necessary for the peasantry during time of hardship; Mate 2010, 8), or their bones being deposited on the fields in the manure. Most, if not all of the animal bone on the site is likely to be the residue from domestic meat consumption, although there are 'considerable uncertainties in determining whether animal bones [are] indicative of production, consumption or both' (Gardiner 2008, 330). There was however, little sign (in the form of multiple burial) of the large scale animal epidemics to strike the county in the early fourteenth century (below), suggesting that even diseased carcasses were not just discarded.

Although the animal bone assemblage may be problematic in terms of statistical analysis, it does provide a few clues to the nature of the pastoral regime. For cattle,

the interpreted cull strategies may reflect an approach 'that focussed on rearing animals for a mixed dairy and meat based economy, culling them at optimum meat weight and in prime years of life after possibly being used for breeding and exploited for milk, traction and manure whilst alive...some juveniles, possibly excessive males may have been culled in the first/early second year of life'. This correlates with what can be seen as an 'emphasis upon adult females' in the documentary record (Campbell 2010, 34). The assemblage 'included a mixture of primary butchery waste that included head and foot bones as well as meat bearing bones from all areas of the skeleton. This broad range of skeletal parts may reflect a whole spectrum of processes that included slaughter, primary butchery processes, removing the head and feet, secondary butchery dividing carcasses into sections, consumption and disposal of waste'. Horn cores (used in glue and lantern making) were singularly lacking, despite the presence of cranial fragments, so were probably removed from site for processing. The same was true for the sheep bones and is further suggested as 'the only butchery mark observed on the sheep/goat assemblage was a chop mark on a sheep cranium around the base of the horn core supporting the notion that they may have been deliberately removed'. For these animals toothwear data suggests that culls were undertaken on a seasonal basis, 'No sign of elderly animals over six were observed ... The cull pattern may suggest a mixed economy based upon rearing for meat and wool. Animals culled in their first year may represent excessive males slaughtered to produce lamb with females and some males kept for breeding and wool production. Later culls seem to represent animals that have reached optimum meat weight at the later sub adult / adult stages of life, to provide mutton for the meat market. Animals seem to have been kept until their late second/third year of life before being reviewed for culling. It is likely that animals were kept to rear young and exploited for milk, wool and manure whilst alive'. One neonate was observed in the assemblage from SFB 63 confirming that breeding must have taken place close by. In all cases of pig, juvenile animals were 'culled at... around 9 months old. It is possible that these animals were butchered in the late autumn, if they were born in the early spring. Autumn was commonly a period where surplus animals, that could not be overwintered were culled. Pigs were frequently fed on autumn fruit fall in woods and orchards to fatten them for slaughter... [and] chosen for autumn culling as their products were suitable for preserving in the form of sausage, hams, bacon, dried pork and pickled trotters to last over the winter months'.

The domestic economy

The mixed agricultural regime described above can be broadly applied to the entire site, but there was probably some variation between individual tenants and settlements, though these are almost impossible to discern in the archaeological or documentary record (the actual nature of the immediate landscape as far as it can be ascertained is discussed below). The lack of Type 1 buildings in the core settlement area of Site 2 is quite distinctive, suggesting a different emphasis to agricultural and domestic practices, although one of the structures (SFB 21) may have originally been of this type. This may also reflect the possibly divergent status of this complex

referred to above. However, there are some suggestions that particular settlement or activity areas were more concerned with animal husbandry (such as Sites 3 and 4 – see below), and apart from the evidence for use changing over time, the chronological progression on the site indicates that towards the end of the period the Type 1 structures became less common suggesting an adjustment in individual regimes, but this could have been based on a number of factors, some external.

The low-level status of the occupants of the farmsteads and land-users at Thanet Earth is undoubtedly reflected in the artefactual assemblages recovered from medieval contexts. For the earlier part of the period, the pottery 'in general is one in keeping with low-status rural agricultural settlement. The vast majority of the Early Medieval pottery is of local Kentish origin with most coming from the Canterbury area and increasing quantities coming from a generic coastal industry. Non-local English pottery constitutes a mere 0.47 per cent of the assemblage and imported wares just 0.15 per cent...The regional English wares both from London and Thanet would have been easily reached via the Thames. They appear on a number of other Thanet sites but numbers are always very low suggesting they were casual imports rather than the product of specific marketing. The imported material is all from North France and the Low Countries, an area that Thanet would undoubtedly have had direct contact with. Despite this the quantities are so low that the vessels were obviously arriving on a more casual basis'. For the later High Medieval period (by the mid thirteenth century) the assemblages are totally dominated by vessels from the potters at Canterbury. 'Virtually no other local wares are present with other types, always in low numbers, deriving from a few English regional or Continental sources ... As such there are no obvious indicators to suggest that the social status of the occupants was any greater than it had been during the Early Medieval period – the slight increase in imports probably being the result of a general increase in contact with the Continent...'.

There was little other artefactual evidence of any significance that can be applied either to individual settlements or to the site as a whole. No medieval coinage for example was recovered from medieval features although four coins were located by metal detectorists in the topsoil; three from the south-west edge of plateau 4 the other located 45m to the north-east. These consisted of three short cross pennies (including a fragment and a cut halfpenny), and a long-cross cut halfpenny, with a date range of AD 1204–1205 to c. AD 1251–1265. The Phase 3 into the early part of Phase 4 date of these coins is later than the settlement activity on Plateau 4, although they may have migrated down-slope from the later occupation on Plateau 5, or perhaps derived originally from the ongoing use of Trackway 35. The absence of further long-cross pennies and sterling issues of Edward I (reigned AD 1272–1307) is significant as these are normally plentiful as site finds (at least in an urban context; *ibid*). This is further evidence that significant occupation on site ceased in the second half of the thirteenth century, reflecting its overwhelmingly agricultural use during Phase 4, most of the settlements having disappeared. In any event the dearth of coinage is probably again indicative of the lowly status of the occupants or the relatively small requirement for coins in an agrarian context.

Most of the other finds were of domestic or utilitarian items that might be expected in such rural settlements, but there was surprisingly little evidence for any agricultural implements apart from knives. Finds such as pins, buckles and strap-ends mostly came from Plateaus 4 and 5 and dated from the thirteenth or fourteenth century. A sexfoil mount from Plateau 7 (Cat. No. 25), stamped with two concentric rings of raised bosses set within Tudor rose type petals, probably dates to *c.* AD 1350–1400 based on two mounts of very similar design from London and possibly derives from the potential later medieval settlement around Monkton Mill (Site 21). The knives included examples of whittle tang knives of various types that were common throughout the period, and a number of tools and fittings were recovered, some of the latter perhaps from wooden doors of structures. These included a chisel or punch from Plateau 1, a clench bolt from Plateau 4, a hooked fitting, possibly part of a latch lifter from Plateau 4 and a hinge from a door or chest from Plateau 2. More unusually, an unstratified socketed arrowhead with a lozenge shaped blade was recovered from Plateau 5 (FN 1.75; Cat. No. 72) and could have been used for hunting or warfare. A complete key with a large looped handle (and a simple bit) from a ditch on Site 1 (FN 1.115 Cat. No. 73), was of similar design to keys dated to the eleventh or twelfth century (Monk 1999, 10) and suggests some of the structures may have been kept secure. Some indication of different craft activities taking place on the farmsteads (see above), otherwise not archaeologically visible, are probably represented by a large hemispherical spindle whorl made from the femoral head of a cattle bone, drilled through the centre, and known from other medieval contexts. A number of horseshoes were also found in some medieval contexts. Generally however, the minimal residue of utilitarian items recovered suggests that even when sites were abandoned, useful items were removed by the occupants rather than discarded.

The most significant medieval copper alloy item, was a personal seal matrix from Site 17 (Plateau 6; Cat. No. 21) unfortunately unstratified but possibly from the ditch of Enclosure 58. This was in the form of an 'oval amulet with an image of a large bird with the head of a man on it, the whole surrounded by an inscription. The bird was possibly a swan, duck or goose. This was originally thought to be a rebus on the owner's name. Although the motif is typical of this period the teardrop shape and amuletic form are unusual. The seal is also unusual in being complete since it was often common practice to 'cancel' personal seal matrices by cutting them in half (Cherry 1992, 23–24). Writing on the seal appears to refer to the owner's name, which was Richard, written as 'S RICARDI', the 'S' referring to 'sigill' or sigillum' meaning 'seal'. The rest of the inscription appears to say 'DE: E ST ONA' or 'DE:E STONA' which may refer to the parish of Stonar in the Thanet district on the River Stour, approximately a mile from Sandwich. Stonar was destroyed by the French in 1385. The inscription therefore may refer to Richard de Stona, although no reference has been found to anyone of that name, nor to any connection with the parish'. This may have been lost by a traveller rather than anyone living on or near the site (see below).

Generally, the evidence suggests that, at least in the earlier phases of settlement, individual landholders were producing their own crops, hay and other fodder as well as food items, undoubtedly bread but also probably, eggs, chickens and other comestibles and maybe ale, in enough quantity to allow for both personal consumption and sale to others. This extra-production for sale may well have been necessary as the evidence suggests that generally the Thanet peasantry were not particularly prosperous and probably poverty stricken at times, although able to 'supplement their income through employment opportunities provided on the demesne farm'. Some would have owned, or had access to (by rent for example in the case of cattle; Campbell 2010, 35, 49) probably relatively small herds and flocks of cattle, sheep and pigs, supplying dairy products, wool, meat and also manure. Horses or oxen would have been used for traction, either ploughing or transporting produce to market.

Some of the livestock seem to have been butchered and meat products consumed in the settlements. 'Deposits included a mixture of primary butchery waste that included head and foot bones as well as meat bearing bones from all areas of the skeleton'. This activity was predominant on Plateaus 1 and 2, which was of course where the earlier main settlement sites were located. However, a considerable number of ditch and pit contexts of Phase 3a on Sites 3 and 4 'contained primary waste only, suggesting these areas may have been used for slaughter with the least utilised parts of the carcass disposed of whilst the main section of the carcass was used elsewhere'. Apart from the meat bearing bone assemblages present, some cattle long bones displayed smooth helical fractures, axial splits and impact scars suggesting that bones may have been broken open deliberately to extract marrow. There is also an indication from insect remains recovered from the Plateau 2 wells that there was a concentration of livestock in the area (see below), and this may represent an individual variation of the agricultural regime towards a pastoral economy on these particular sites (Sites 3 and 4). There is also a suggestion in the horse bones that they too were consumed as some of the individual assemblages also consisted predominantly of meat bearing bones and a number displayed similar fractures to those of the cattle, while one metapodial had a chop mark from a bladed cleaver type instrument made in the side of the shaft breaking open the bone. Notwithstanding the value of horses as traction animals and a possible aversion to eating horsemeat (Gardiner 2008, 303) it seems likely that at least some horse was consumed, perhaps in times of hardship (see for example Mate 2010, 7 for later in the period). Human consumption of horse-meat has also been suggested at Fulston Manor (Powell *et al* 2009, 194).

Poultry too were almost certainly an important part of the domestic economy. 'The consistent and widespread recovery of eggshell from medieval deposits suggests that the consumption of eggs and probably the keeping of domestic poultry were more common than might appear from the records of bird bone. The presence of domestic chick bones in a large underground chamber (Structure 55; G6048) on Plateau 6 certainly suggested that they were casualties from fowl bred nearby'. Thicker shells, likely to be of goose eggs suggested that both geese and chicken were

exploited during the period. These again could have provided both food for personal consumption and sale. Although evidence for other comestibles is relatively restricted (due undoubtedly to the small number of cess pits on the site where the remains of other food items would be more likely to survive), both fish (as might be expected only a few miles from the sea) and other wild resources were consumed. Two cess pits on the main site (S10344 on Site 1 and S15078 on site 13) and cess pits on Site 23 produced a relatively wide variety of fish but sample sizes were small. Some fish bone was also found in deposits associated with the cellared Structure 55 on Site 17. Aside from the more common species, such as herring, haddock, cod and whiting, two hand-collected elasmobranch vertebrae are probably from a small shark species rather than ray, though rays are represented by a single tooth. Eel and possibly a small rockling were also identified from single vertebral *centra*. Mackerel, (seasonally abundant in local waters) represented by three vertebrae 'suggest a seasonal local fishery. Dab may have been trapped with other flatfish species along the shoreline'. Although the nature of the deposits may be affecting the quantity of fish bones recovered for the medieval period, and despite an intensive sampling programme, the size of the assemblage for all periods, 'given the wide date range and large area of excavation is more typically rural rather than coastal with few fish in each of many samples and does not seem to indicate a strong role of the fish in the diet. There is some suggestion of an increase in consumption of gadids in the medieval period compared with the strong presence of herring in Anglo-Saxon deposits, which may be evidence of the rise of commercial line fisheries typical of the period'. However, the size of the medieval assemblage does not readily allow for comparison with other sites locally. Although evidence for fish consumption was relatively minimal, evidence for shellfish was considerably more apparent.

On Site 23 (pipeline), three samples from two cess pits (pits SP74 and SP141) provided relatively small amounts of information about the medieval diet because preservation conditions were not ideal. However, they were important in confirming that the much larger and more numerous charred plant assemblages actually do provide a reasonable overall impression of the medieval diet on this site. Overall, plant remains from these features and others on the main site suggested that no exotic fruits, nuts or spices were being consumed, at least not on a frequent basis, but the more common fruits (and occasional nuts from the charred assemblages) were, although this may have mainly been on a seasonal basis, since one pit contained more fruit remains than the other. It is uncertain if the remains were all from native fruits gathered from hedgerows, but this is possible from the taxa represented. If orchard fruits were grown they may not have been in large enough supply to be preserved and eaten throughout the year. Fruits represented included elderberry (*Sambucus nigra*), blackberry/raspberry (*Rubus* sp.), sloe or cherry (*Prunus* sp.) and apple/pear (*Malus* sp./*Pyrus communis*). These may have been gathered from the wild, or in some cases cultivated species such as cherries might have been consumed, having been grown in orchards or gardens. Peas and beans were also recovered from these features.

The results suggest that cereals and pulses (peas and beans) were the staple part of the diet, which for the occupants of the medieval settlement at Thanet Earth was a fairly simple, rural one based on cereals, pulses and gathered hedgerow fruits and nuts. When the meat, fish and shellfish component is added this was probably a fairly healthy, if not very varied, diet. In this respect it was probably not much different to numerous other peasant rural communities along the north Kent coast or even further afield, although there were obviously some differences in detail (see for example Powell *et al* 2009, 194–195).

The character of the medieval landscape

Enid Allison and Jon Rady

There are some indications that the Thanet Earth landscape during this period was relatively open, probably with little or no woodland, but with perhaps ancient hedgerows, open pastureland (particularly to the south), and arable fields.

Environmental evidence from most of the features primarily survived as charred crop and weed residues from agricultural operations, but the wells that provided waterlogged samples which can be quite certainly dated to the period of occupation do generally support these interpretations even though they may only be indicative of the conditions that existed in the near vicinity of these particular sites.

Preservation, taphonomic and other factors may also have produced some bias. So, for example, for the pollen record, it has been noted that 'Each well represents a small depositional basin, so will have correspondingly small pollen source areas, reflecting predominantly the vegetation of the immediate locality of the site. The dominance of *Lactuceae* grains [a tribe of plants that includes lettuces and dandelions] in many of the samples...does suggest the assemblages may be biased towards taxa which are both resistant to decay and are readily identifiable.

Nevertheless, the diversity of the assemblage does provide some useful and meaningful results. The very limited concentration of tree and shrub taxa and dominance of light-loving herbs and ferns clearly indicates that the environment was very open. The majority of the herbaceous taxa recorded are suggestive of the growth of disturbed ground taxa at the site, such as grasses, dandelions, fat hen, plantains and nettles. There are also indications of nearby cultivation or on site crop processing with pollen from cereals and their associated weeds (e.g. cornflower, black knapweed, fat hen and charlock) frequently recorded. The growth of pondweed and bur-reed suggests the growth of plants in an aquatic, probably associated with the wells, or adjacent to ditches/ponds. This last comment is of some interest, since it may indicate the presence of ponds in the vicinity, of which no evidence has survived archaeologically; the apparent lack of waterholes for stock on the site has already been mentioned for earlier periods (Chapter 3).

All of the well samples recovered were also rich in insect remains and the analysis of these (Allison 2014) is worth quoting in detail. A consistent range of species were represented, and almost all were from terrestrial habitats. Some of the species identified are confined to localities in southern Britain at the present day, and some

are specifically associated with coastal areas. A modern study of insect remains from sediments in a well in Kent found that they provided a good representation of habitats in its immediate surroundings (Hall *et al* 1980, 132). Some species are more mobile than others and might arrive from further afield, but another modern study has shown that most terrestrial insects in small water bodies will have arrived from within a 100–200 metre radius (Smith *et al* 2010).

The interpretation of biological material from ancient wells can often be problematic. Firstly it is often unknown how long the wells remained open and therefore over what time period the sediments had accumulated; secondly they may have been cleaned out periodically; thirdly they often provided a convenient place to dump occupation waste that might include plant refuse and an associated insect fauna once their primary function ceased; and lastly they may have been infilled with soil to level the ground after they fell into disuse which could also have introduced substantial assemblages of plant and invertebrate material. At Thanet Earth these problems were minimised because only the basal clearly waterlain sediments were sampled. The lack or poor representation of very common soil-living invertebrates in the samples (particularly earthworm egg capsules) indicated that there was not a significant input of soil into the basal deposits. Some invertebrates could have been introduced into the wells with plant-based litter, probably mainly accidentally, but the large size of the insect assemblages (including a large number of taxa not associated with decaying material) in comparison to the small amounts of rather poorly preserved plant remains and even smaller amounts of other occupation material, suggests that most insects in the lowermost fills entered the wells from habitats in the surroundings rather than with dumped refuse. There were also very low numbers of fly puparia and beetles associated with foul habitation waste. Finally, the radiocarbon date (AD 894–1117 at 95 per cent probability; Table 6, UBA-22213) obtained from beetle remains from the lower sample from well G1143 is not incompatible with the known date of occupation in the vicinity, implying that at least the lowest deposits were concurrent with settlement. The close similarities between the insect remains, both spatially between the wells and temporally within each well, indicate that ground conditions in the three locations were broadly similar and remained so for a considerable period of time.

The large numbers of insect remains in the basal fills of the wells provided a rare opportunity to study a line of evidence that is usually absent from archaeological sites on the Chalk, where very well-drained ground conditions limit the ways in which plant and invertebrate material is preserved. The insects also provide the main evidence that places the medieval archaeology at Thanet Earth in its environmental setting. The insect assemblages produced a consistent picture of the local environment and also highlighted some slight differences between the immediate surroundings of the wells. The fact that the wells all seem to have functioned as pitfall traps indicates that any well-surrounds were either insubstantial (suggested for at least some by their extensive erosion cones) or had gaps at ground level that allowed entry to a cross-section of the local ground-living insect fauna. There were suggestions from a group of wood-associated beetles that

well G1143 on Plateau 1 (Site 1) had a decaying wooden superstructure. Conditions around the same well were probably significantly damper and muddier than around the two wells on Plateau 2, probably due to spillage (or, that this particular site was more likely to be set in prevalently damper conditions).

Many of the insects in the assemblages were typical of man-made habitats, indicating that accumulations of decaying plant-based litter or vegetable waste such as compost heaps, stack refuse and dung heaps associated with occupation were present close to the wells. The evidence for this was particularly strong in well G1143 suggesting that activity was closer or more intense. Some of the litter appeared to have come from within buildings but the types of buildings could not be determined on the available evidence. Human fleas were firmly identified from well G1143 but they can be associated with domestic mammals and stables as well as with humans (George, 2008, 14), and they sometimes occur in archaeological contexts where stable waste is present (Kenward and Hall 1997). There does not appear to have been dumping of large amounts of occupation waste of any kind into any of the wells, although there may have been limited incidental entry of some plant-based litter by natural agencies such as the wind, or because of ongoing settlement activity. Since there had been no distinct dumps of habitation waste it was not possible to deduce much of crafts or other activities carried out in nearby buildings. A record of honey bee (*Apis mellifera*) in well G1143 does not provide conclusive proof that bees were kept on the settlement, but does imply that managed hives or feral bee colonies were present locally, and therefore that honey, beeswax and propolis (a bee-made resin used in traditional medicine; Kuropatnicki *et al* 2013) were locally available.

As a whole, the insect assemblages point to a mixed farming economy in an open rather dry landscape. Immediately around the wells there is likely to have been a growth of weedy vegetation and probably patches of bare earth. Plants such as mayweeds (*Tripleurospermum* and *Matricaria*), common mallows (*Malva sylvestris*), knotweeds (*Polygonum*), and cruciferous plants (Brassicaceae) would readily have colonised such areas. Nettles were present on nutrient-rich, possibly relatively neglected ground, and thistles were indicated close to well G1143. Disturbed ground appears to have been present in the environs of the wells, much of it almost certainly under cultivation, either as gardens or arable land. There were hints of cereal cultivation from several records of *Zabrus tenebrioides*, and the numbers of some other plant-feeding insects were high enough to suggest that some may have come from cultivated pulses and brassicas. This was not conclusive however, since many of the beetles recorded also feed on a variety of wild and cultivated members of the same families, some of which are common crop weeds or found on disturbed or waste ground. However, all these records would be compatible with other data (see above).

There was no evidence that domestic animals were kept in enclosures adjacent to any of the wells, but unimproved, permanent pastureland would have been present further afield. Some of the dung beetles would not have been able to maintain

populations unless dung availability and grazing were continuous. The relative abundances of dung beetles in the well fills suggests that populations of domestic animals may have been present in higher concentrations, or perhaps closer to the wells, on Plateau 2. Some of these particular sites have already been discussed as potentially more concerned with animal husbandry, which would tally with this evidence.

The insect remains from Thanet Earth were comparable in many respects to an assemblage obtained from a Roman well of second to third century date near Monkton, approximately 1.8–2.5km to the south of Plateaus 1 and 2, where analysis also indicated a mixed agricultural regime (Robinson 2008). The proximity of the two sites and the similarities between the assemblages is highly suggestive of continuity of land use in the area between the Roman and medieval periods.

A unique or widespread landscape? A comparison with sites elsewhere in Kent

Kent is relatively distinct in terms of its agricultural system which ‘stemmed from the county’s unusual institutional characteristics and the strength and penetration of the external commercial opportunities to which producers were early and for long exposed’ (Campbell 2010, 25–26). Internally there was considerable variation ‘both in terms of the crops and animals produced and the techniques and intensity of their management’, but ‘it was east Kent that most strongly embodied the distinctive agricultural attributes of the county’ (*ibid*). Is it likely then that the Thanet Earth landscape and its individual components of enclosure and sunken structures are comparable with elsewhere in the region? In the immediate locality, the enclosure systems revealed do appear to be more widespread, extending to both east and west of the site, possibly for some considerable distance. Similar enclosures and attendant structures have been recorded as far east as Manston (Boast 1998; Egging Dinwiddy and Schuster 2009) and are likely to represent the same ranges of activity. The medieval enclosure at the northern end of the pipeline (Site 24) also suggests a similar arrangement may exist closer to Birchington.

Conversely, the evidence from the EKA road scheme indicates relatively sparse activity of this period on the high ground overlooking the Wantsum, most of the medieval sites being concentrated on the Ebbsfleet peninsular (Andrews *et al* 2015a, 465). In addition, although a number of farmsteads were partially revealed at Ebbsfleet, there were no certain cases of sunken-featured structures (apart from one possibly slightly sunken structure; *ibid*, 479), although enclosures and subrectangular field systems perhaps similar to those at Thanet Earth were evident, some (though by no means all) also exhibiting the 40m unit, mentioned above, in their layout (see for example *ibid*, fig. 6.5). In at least one case also, it was suggested that the occupation areas lay outside of the area investigated, so the presence of sunken-floored buildings cannot be entirely ruled out (*ibid*, 471). Nevertheless, this does indicate quite significant variations in local land management across the island.

For the remainder of Kent it is more difficult to make comparisons due to the relatively limited nature of previous investigations of medieval rural landscapes. The studies on Romney Marsh around Lydd represent one of the largest area excavations (Barber and Priestly-Bell 2008), but although there are certain similarities, the nature of the landscape there is considerably different to the higher ground of Thanet, which has undoubtedly had an effect on its form and development. Thus the generally rectangular network of small fields and enclosures at Lydd, intimately related to shingle ridges and ongoing land reclamation and where the ditches would have provided drainage, is not represented at Thanet Earth which seems to have had a much more 'open' aspect. Leaving aside any discussion here of environmental determinism, that the Lydd landscape was not entirely engendered from its geographical position and hydraulic situation is perhaps indicated by a medieval field system at Claxfield Farm, just south of Teynham on the North Kent Coast, on relatively elevated land where a regimen of small subrectangular fields and enclosure, more similar to Lydd, seems to be represented. It is also noticeable that no sunken structures have yet been located in this area (Clark and Holman 2014). This of course suggests that variety was dependent on a more complex set of circumstances. For other sites along the north Kent coast, there are obvious similarities to Thanet Earth in the types of enclosures and structures that have been revealed although most of the other discoveries have been on much smaller sites where the more extensive arrangement of the medieval landscape remains unknown. Comparisons are not always so clear therefore, and in some cases (Fulston Manor and Leybourne) these settlements may not have had the same status in terms of land ownership or administration though morphologically the arrangements of enclosures and structures are quite similar to those at Thanet Earth as far as can be determined.

For these and other sites it has been suggested that the facilities were under direct seigniorial control and that Type 1 structures, in the same fashion as mills, were 'centralised amenities for the exaction of dues'. Alternatively and in consideration of the Thanet Earth evidence, perhaps that the 'bakeries were far more common and perhaps not exclusive to manorial or ecclesiastical farms' (Egging Dinwiddy and Shuster 2009, 139). Thanet Earth strongly indicates that, although some of the sites and structures recorded may have been more feudally managed or influenced, this was not necessarily the case, and that the structures and their associated features were largely the result of individual actions and initiatives by tenant farmers and under their direct control (for example see Ogilvie (2011) for the manorial constraints (or lack of them) on peasant choice).

In a connected theme, it has also been proposed (in relation to the Fulston Manor site) that 'the scale of the enclosure and the investment in a stand-alone bakery suggest a settlement of some size' (Powell *et al* 2009, 193). This may have been the case here as the enclosure was large in relation to the Thanet Earth examples (at about 70m across) and the bakery itself the largest yet found in Kent (Powell *et al* 2009, 177-178). However, the Thanet evidence indicates that these features were not inevitably associated with particularly large or high status settlements (perhaps also

intimated by the limited evidence for settlement at Fulston Manor; *ibid*) and could indeed stand-alone within the fields away from any centres of habitation. Further, the evidence from the structures themselves, their situation and their number within the landscape of Thanet suggests that rather than being a prohibitive investment, they could be relatively easy and cheap to erect, and within the capacity of many peasant households.

It is the medieval settlements at Gravesend however, partly excavated on the HS1 sites and the A2 road scheme (Booth *et al* 2011; Allen *et al* 2012) that suggest that the settlement pattern revealed at Thanet Earth may have existed in similar, if not identical form further west along the north Kent littoral. These sites display a similar chronological trajectory to Thanet Earth and consist of various sunken-featured structures and other buildings 'within complexes of small enclosures or paddocks, and those in Site C [see above] were clearly integral parts of a developing settlement practising a mixed farming regime' (Allen *et al* 2012, 576). On Site L, there was evidence that the field/enclosure layout respected earlier alignments and formed part of a ribbon development along a roadway (*ibid*, 577). The pond D South site was also set beside Watling Street, where it was suggested the facilities could have been used communally, or represented a 'wayside eating-house' and watering stop for travellers (*ibid*, 579). Notwithstanding the lesser importance of Seamark Road as a routeway, something similar (including the communal usage already discussed) could be construed with at least some of the sites of the ribbon development on Plateaus 5 and 6. This could explain the rather unusual presence of the seal matrix on Site 17, possibly a casual loss from a traveller stopping off at a wayside facility? Activity at Site C (probably part of the Northumberland Bottom settlement on HS1) was more long-lived and complex, with many of the fields and enclosures forming more triangular shapes. However, this variant morphology can be seen as due to the local topography, the layouts constricted by the presence and ongoing use of an undoubtedly pre-existing (prehistoric?) hollow-way to the south and of different orientation to Watling Street, which bounded the fields on the north. This therefore does not necessarily suggest a distinct function for the complex. Here there was also more variation in the sunken structures represented on the site, more closely similar to Thanet Earth than any other medieval rural site so far examined (*ibid*, 579–581). Although there are many similarities in detail however, the morphology of this site is more difficult to reconcile with what could be seen as the generally more rigid Thanet Earth layout, but overall, these settlements would appear to be the closest in terms of development, status, agricultural economy and settlement pattern to the site-wide system at Thanet Earth and therefore strongly suggest this is more than a local or 'Thanet' phenomenon and may be more extensive in Kent, or at least along the northern littoral zone.

The decline and end of medieval activity

The decline and eventual end of the medieval settlement and its associated agricultural system was not a sudden event, but occurred across a century from about 1250. There is clearly an abandonment of at least part of the northern area of

the site from about AD 1200–1250 or slightly later in terms of the diminution of the number of peasant farms and isolated activity areas utilizing sunken-featured structures – agricultural use must have continued however as suggested by the latest emplaced enclosures. Generally in the south-east there seems to be a decline in the number of small farmsteads and settlements during this period. This has been observed on Romney Marsh for example, where ‘rural occupation sites ... were most numerous during the ‘Early Medieval’ period (AD 1050–1250), after which there was a gradual decline’ (Sweetinburgh 2008, 16). To concentrate on the northern Kent sites which reflect the presence of sunken structures and enclosure systems perhaps more similar to those at Thanet Earth, it has already been noted that the Type 1 structures at least appear to be more predominant in the earlier part of the period, but on many of the sites more generally, activity seems to lessen, or alter in character in the first half of the thirteenth century. At Fulston Manor, the bakery ‘was demolished in the early thirteenth century, and while there was some continuity of occupation into the 14th century...the nature of that occupation seems to have changed substantially’ (Powell *et al* 2009, 196). The Gravesend sites, which in many ways appear to be the closest in form to Thanet Earth, also demonstrate this diminishing trajectory. The sites develop in the eleventh or early twelfth century, some having disappeared by the late twelfth or early thirteenth century, others originating later, as at Thanet Earth and continuing to the mid/late fourteenth (Allen *et al* 2012, 569–570). This apparent cessation or variation in settlement activity has to be considered in the light of rising population levels (above), which suggests that the economic viability of smaller, dispersed farmsteads and settlements became harder to sustain during the early thirteenth century.

This diminution of settlements, if not population occurs well before the problems that beset the fourteenth century (below). A number of factors were undoubtedly involved, but there is perhaps some indication at Thanet Earth that climate variation may have had some effect on the smaller, less well-disposed farmsteads, even though it is very unlikely to be the sole cause of a more widespread decline. This concerns the ‘medieval warm period’ or climate anomaly, considered (by different authorities) to have occurred for various durations between *c.* AD 900–1300 or later and generally seen as a time of abundance (see Fagan 2008, 11 who also gives a useful general overview of the whole subject). This is a complex and perhaps still contentious area of study (see for example Graham *et al* 2011; Hughes and Diaz 1994; Fagan 2008, 245), well beyond the scope of this volume to consider in any detail, but there are indications that during at least some parts of this period, warmer average temperatures in the northern European zone caused more extreme weather conditions, or at least a climate ‘of sharp extremes’ (Fagan 2008, 27). The storms that affected the southern coasts and the low-lying land at Romney Marsh were a result of this and a probable increase in winter rainfall for England at certain times has been proposed (Lamb 1965; Hughes and Diaz 1994, 131]. At Thanet Earth in particular, any significant increases in winter rainfall could have seriously undermined the viability of settlements set within the lower lying, valley bottom zones (mostly concentrated in the central areas of Plateau 1). These lay on the clayey silt colluvium rather than the relatively solid and better drained chalk. It may be

significant that settlement in these northern areas appears to have transferred to the slightly higher ground to the west (Sites 6–8), on a chalkier substrate.

The same factors may have been at play in the central valley area of Plateaus 4 and 3, but do not explain the apparently contemporary decline in activity on the far east and western sides of the area (Sites 11 and 12), particularly the latter which could be seen as a northern limb of the later medieval occupation of the road frontage to the south. Thus potential climate change was probably not the only reason, but more extreme weather events may have made life in general more difficult, in addition to any socio-economic factors. Thus, the disappearance of the Type 1 buildings in such numbers after about 1250 may just be a reflection of the fewer farmsteads existing after this time, but here perhaps economic factors may have played a more direct part. The price of fuel (faggots) increased threefold between 1260 and 1348 for example (Mate 2010, 3). The Thanet Earth landscape was an open one (above) with probably little if any woodland in the vicinity and fuel may have eventually been too difficult or expensive to acquire for the viability of such a potentially large number of these facilities.

In any event, by Phase 4, or the early second half of the thirteenth century, most of the settlements or farmsteads in the northern part of the site had been abandoned. By about the middle of the fourteenth century the earlier agricultural layout of the site (and therefore the regime in place), and what remained of the settlement or activity areas to the south and along the Plateau 1 western margin, had also gone, the only possible exception being the putative settlement around the medieval mill on Plateaus 6/7, and some minor activity evident along Seamark Road. This would have been a very difficult period for the peasant population, as the first decades of the fourteenth century were ‘buffeted by exogenous shocks ... a mixture of natural and some man-made disasters’ (Mate 2010, 6–7). These included a disastrous harvest in 1306, heavy rain during 1314–15 which caused wheat harvests to fail for two years in succession (although barley and oats remained unaffected), an epidemic during 1319–1321 killed cows and oxen, in 1331 there was drought, and there was sheep and cattle disease in 1334. From 1338 the Hundred Years War compounded the situation and in 1348 came the Black Death.

There remains a dichotomy between the physical disappearance of the agricultural regime at Thanet Earth by 1350 and what is perceived historically where, ‘farmers on the rich, arable lands in north-east Kent seem to have bounced back after the bad harvests with remarkable ease...agriculture was still a profitable occupation’ (Mate 2010a, 10). We can be fairly certain that most of the medieval settlements in the northern part of the site had disappeared a century or so before the disasters of the early- to mid-fourteenth century; a straggle of sites mostly along Seamark Road were the only survivors. A close analysis of the latest features of the northern sites suggests that these were sometimes infilled (at least partially) with detritus left over from occupation, or more commonly that features and ditches filled naturally over a period of time. The indications are that agriculture continued in one form or another, and it may be that physical aspects of the earlier landscape were left in place unless

they were proving problematic (deep features posing a danger to animals for example). To the south, the later sites, which should illustrate more clearly the mechanism behind this mid fourteenth century event horizon, have proven more difficult to analyse, although in some cases a similar progression is evident. Thus on Site 13, the backfill of the latest ditch (of Enclosure 55), is very suggestive of deliberate backfilling with artefact rich soil, prior to the emplacement of SFB 55 (which itself seemed to fill by natural erosion). The detritus may have all derived from the earlier occupation of the site, settlement being replaced by pastoral use of the fields in the latest phase (as it may have been before in this area – see also below). In all cases though, there is absolutely no evidence for any artefactual material later than 1325–1350, which suggests that even the extremely large ditch of Enclosure 52 did not last much beyond this date. In this feature, there was no obvious sign of deliberate infill initially, primary fills deriving from natural erosion almost equally from both sides. From about midway up the sequence there was a preponderance of sterile fill from inside the enclosure, which might indicate that the ditch was purposefully levelled with the remnant of an internal bank. Very small quantities of pottery of AD 1250–1325 was recovered from basal and top layers, with some slightly earlier ceramics and other artefactual material. This probably all derived from occupation in the vicinity, contemporaneously or residually in each case. Thus, it can be suggested again that the features of the earlier landscape were deliberately slighted if they were a problem or obstruction here, perhaps during the early to middle decades of the fourteenth century. Whatever the reason, the system disappeared and the post-medieval field layout was eventually completely different.

This lack of an earlier influence on the post-medieval landscape, at least in Kent, has also been observed on the HS1 sites of Northumberland Bottom and Westenhanger (Reynolds 2011, 389), although this does not seem to be a universal factor (*ibid*, 399). The tendency seems to be for more detailed, complex systems to give way to simpler more extended ones. The exceptions are the routeways, some of which remained of importance and which did not necessarily impede economic progress – they may have been integral to it. There are also signs of fifteenth century occupation round Monkton Mill. Its survival, at least temporarily may be related to what perhaps could be seen as an aggregation of the population into villages, although this suggested development was not necessarily universal. A similar cessation of activity has been noted at other comparable sites, such as Fulston Manor near Sittingbourne, but there it may have been due to selling of the land and at other sites (such as Lydd) activity continued, although nearly always in different form.

It is clear that farming continued and the population of Thanet remained relatively considerable, but the imprint of agricultural practices appear to have been irrevocably altered. Because this area of Kent was so densely populated in the immediate aftermath of the Black Death there were still considerable numbers whose holdings were small and who could take on the plots of their dead neighbours and kinsmen. Thus some sulungs were no longer held by numerous peasants but might be in the hands of one individual. The longer term effect therefore, was that some smaller landholdings were subsumed into larger ones, eventually often acquired by

leading citizens or the nobility, men such as John Roper of Canterbury, who from the late fourteenth century were in a position to accumulate land from several manors in east Kent. This almost certainly led to some different farming practices. This initially may have taken the form of increased pastoralism, as suggested by Rackham (2000, 338) amongst others, where 'the shrunken population could not use all the arable land', which may well have negated the need for detailed enclosure systems, or droveways between arable fields. Due to Thanet's relatively high remnant population after the Black Death (above) this may not however have been so typical here, but it did occur in Kent where 'arable land was converted to pasture' or went out of use altogether. In any event, there is evidence from post-medieval accounts and documents that most of the land was arable by the early nineteenth century (extensive cornfields), as it has remained almost till the present day. It is suggested here, that if increased pastoralism was perhaps partly responsible for the disappearance of the medieval agricultural system, it is possible also that an arable economy ultimately became much more productive in this area (perhaps leading to the final eradication of the prehistoric tumuli), and that for this to be most viable, larger fields were required. One clue may be in the nature of the soil, rich and well suited to an arable regime. Hedges, small enclosures and prehistoric barrow mounds (even if only residually present) would impede this progression, similar perhaps to the need for larger fields during the agricultural mechanisation of the twentieth century. Whatever the precise causes, there was virtually no archaeological sign of activity during the following centuries.

Chapter 8: Post-medieval and modern

Jon Rady

Overview

After the widespread medieval activity had died out, there is little in the archaeological record to indicate any direct settlement on the site, apart from possible occupation around the original location of Monkton Mill (see Chapter 7, Site 21), although there is evidence that agricultural use of the area continued. An extensive negative lynchet (G4100) formed mostly through agricultural activity, along the line of the large prehistoric ditch that extended along the boundary of Plateaus 4 and 5 (Fig. 238) is supported by documentary evidence suggesting arable agriculture was predominant in this period, or at least towards the latter part of it.

The most notable find of the post-medieval period (mostly on Plateau 6; Fig. 239) was a cross shaped (cross-trestle) foundation representing a windmill, the latest of a series of windmills dating back to the medieval period. This was also used as a 'seamark', a navigation aid for shipping in the estuary. The footings of an actual seamark and two temporary precursors, erected after the mill had been demolished in the late eighteenth century were situated in the same area (see Plates 49, 338, 339 and 340). Documentary evidence has thrown significant light on the seamark and its history, less on the history of the windmill or any forebears. Other features in the area appear to be related either to the windmill or seamarks and included a very late sunken-featured building. From more recent times, a subterranean, part brick built structure dated from the Second World War and was probably a navigation beacon for aircraft approaching Manston aerodrome, while some trenches on Plateau 3 may also date from this period. Other post-medieval features were few, but do include fence lines and animal burials, one on Plateau 2 being a multiple burial containing a complex and formal arrangement of carcasses. A less well preserved burial was also found on Plateau 8 and both are presumed to be of this period.

Monkton Mill and the seamarks

The remains of an eighteenth or nineteenth century Seamark, from which Seamark Road got its name, was excavated at the far west end of Plateau 6, possibly the only one of its kind to be formally excavated. It served as an aid to navigation for ships in the Estuary, to determine position together with other 'seamarks' along the coast such as St Nicholas-at-Wade church or the Reculver towers. The site seems to have been long used for this purpose, with a much earlier windmill in the same spot having been a seamark for many years.

Early post-medieval: The windmill and associated features

The windmill (Structure 58; Figs. 239–241)

The earliest structure, a cross-shaped feature (G6079) about 8m across formed by two elongated, subrectangular and contiguous, flat-based cuts set at right angles. One, aligned north-east to south-west was 6.1m long and 1.3m wide and 0.23m deep on average, cut away at its north-eastern end by the construction pit for Structure 59 (below). The second, more bulbous at its western end, aligned north-west to south-east, was 8.3m long averaging 1.02m wide and 0.26m deep. Both had steep sides leading to a sharp break and a flat base. The silty clay fill was uniform throughout and yielded seventeenth to early eighteenth century pottery of , animal bone including mice and rat, as might be expected in association with a mill, nails, clay pipes, brick and peg tile, quern stone, glass, iron and copper objects and mortar and mussel shell. A copper alloy Nuremberg jetton (Hans Krauwinckel, AD 1586–1635) and a James I coin (AD 1614–1625) were also recovered (Plate 342).

The trenches were almost certainly dug to house a wooden cross-trestle for a vertical upright with bracing struts from the ends of each arm of the cross. In plan this is typical of cross-trestle foundations for post mills, and is virtually identical to one recorded during construction of the Bridge by-pass (Macpherson-Grant 1980). The foundation trench showed no trace of a ghost representing timbers and the bulbous end on the west suggests these had been dug out. Documentary sources confirm that that a mill was present in 1596 and that Monkton Mill had been dismantled by the early 1780s – ‘probably in 1782, certainly by late September 1783’ and Searry (Chapter 28) suggests that it was removed to Sarre. Finds retrieved from the trestle foundations indicate two phases of datable material, the earlier from around AD 1600 with the James I coin indicating AD 1614 at the earliest, and the later no earlier than AD 1725, based on the ceramic evidence. . Although some of the earlier material may derive from construction of the mill as artefacts deposited in the backfilled construction trench, it is more likely the majority is residual from the use of the mill from c. AD 1600 onward, backfilled when the mill was dismantled and its footings extracted, entailing the removal of most, if not all, of the softer fills of the foundation trench. There were no traces of animal runs within the soil matrix, so the presence of the rodent bones within the fill is certainly suggestive of clearance of the site and disposal within residual open features.

One feature associated with the mill (G6102; Fig. 241) was two ditch segments extending for 19m south from near the mill footing, yielding a few residual early medieval potsherds. It could represent a drain, similar to a feature associated with a mill recently excavated near Canterbury (Wilson 2013). Two features (S16172 and S16210) immediately to the south of the mill footings may relate to its demolition. Both were irregularly shaped shallow intrusions, the latter about 2.6m long and 0.7m wide, the former smaller, and contained post-medieval detritus but, with nothing closely datable, probably represent disturbances to the ground during demolition.

The sunken-featured structure (Plates 336 and 337)

A number of features relate to the use of the mill. The most significant was a sunken-featured structure SFB 80 located about 16m to the north-east of the windmill and on

a virtually identical alignment to the north-south foundation (Fig. 239). The presence of a possible recut suggested two superimposed structures, but this is unlikely although it may have been adapted.

SFB 80 was a near square cut (G6077) aligned north-east to south-west with rounded corners and curved sides to east, north and west (Figs. 242–243). 4.4m long, c. 4.3m wide and 0.75m deep it had steep sides leading to a gradual break and a flat base which extended over an area 5m² (2m by 2.5m). An elongated ramp extending from the main cut on the south side was 3.7m long, 2.3m wide at maximum, tapering to a butt-end about 3.7m south of the main sunken area cut with four shallow steps descending to a flat level 2.8m long with a final step down into the main basal area. Four subrectangular postholes between 0.23 and 0.26m wide and from 0.21 to 0.46m deep (G6120: S16369, S16390, S16394 and S16367) at the corners cut into the chalk edges of the main cut forming a rectangle about 3m by 2m, aligned with the building's axis. The postholes had steep sides and flat bases. Two sub-circular postholes (S16394–16395) cut into the south-west and south-east corners of the building towards the upper edge 2.9m apart, the western setting in line with the west side of G6120. Another posthole (S16312) was in line with the eastern setting 1.75m to the north-east and may be related. The postholes were between 0.26 and 0.32m in diameter and 0.46m deep, with a 'U'-shaped profile and may have supported the superstructure or roof of the building. Apart from some anomalies in the backfill, which are likely to represent animal burrows, two other post-holes were recorded. One at the north end of the structure on its longitudinal axis (S16388) may have been added to support the roof, and another on the eastern side of the entrance passage (S16363) of more uncertain function.

There were a few other structural details of note. On the western side of the main cut, a niche, about 1.6m long, 0.6m wide undercut the main edge near the north-west corner. With a flat base and set about 0.2m above the floor level it was almost certainly a bench or seat. A longer and less well formed bench was discernible on the eastern side of the structure, about the same width and set slightly higher above floor level. A circular pit, c.0.8 m diameter, c.0.5 deep, and partially external to the eastern side of the structure (S16286), with similar, near sterile fills, might be related or could be an earlier feature. Some evidence for burning was recorded on its base and in the lowest fill. A small amount of prehistoric flint from this level might suggest a prehistoric provenance. Two other small pits or post-holes on the north side (S16291 and S16293) may have been associated.

The building contained a trample base deposit of beaten chalk with a secondary laminated backfill of mixed chalky clay silt 0.25m thick (G6078; Fig. 8.5) from which quern stone (FN 6.516), brick, tile, an iron nail (FN 6.502) and animal bones, but no pottery was recovered. The upper 1.1m thick fills within G6085 yielded peg tile, animal bone, iron nails (FN 6.517, FN 6.521, FN 5.498, FN 5.505), clay pipe fragments (FN 6.504, FN 6.518, FN 6.520, FN 6.522), an iron latch or fitting (FN 6.499) and two iron blades (FN 6.500, FN 6.501). The animal bone included partially articulated

skeletons of two puppies. The majority of the ceramic assemblage from these levels, dated to 1550 to 1750 with one sherd of residual medieval pottery.

Feature S16291, which is likely to relate to the structure gives an indication of the roofing materials. The sample was examined because the flot was different in character and contained frequent cereal straw fragments (culm nodes and culm bases), together with a free-threshing wheat rachis fragment and several bread-type wheat grains and a few small weed seeds. Since this post-hole/pit may have held a roof support, the straw could be the remnants of burnt roofing which fell into the feature suggesting wheat straw was used for thatching. Bread wheat and rivet wheat straw were commonly used for thatching in medieval times, and both would have been growing on much longer straw than modern varieties (Letts 1999). The presence of several culm bases is slightly at odds with this suggestion, as thatching straw needs to be carefully trimmed to lie in a water-tight fashion. A range of materials including uprooted straw can be used as a base coat, or the thatch may have been fairly rudimentary. Very basic thatch of a variety of waste materials was often used on small agricultural structures and outbuildings (Letts 1999).

Other features

Various scattered pits in the vicinity dated to a similar period to the operation of the mill. Two pits less than 20m to the west of SFB 80 (S16234 and S16229) were near square and about a metre wide, vertical sided in profile with flat bases 0.3–0.35m deep. S16234 contained some brick fragments and other post-medieval detritus but neither yielded any pottery. Three smaller circular pits or postholes no more than 1m in diameter (S16183, S16174 and S16249) to the immediate south of SFB 80 yielded brick, tile, slate and in some cases pottery of seventeenth to mid-eighteenth century date. They formed no particular pattern and their function is unknown.

Later post-medieval: The Seamarks

Structure 57 – timber Seamarks

Thirteen metres to the south-east of the windmill, Structure 57 (Figs. 8.2 and 8.3b) consisted of two large, adjacent circular post-holes (G6033), 1.9m apart and between 0.9 and 1.1m in diameter, both 0.63m deep with a 'U'-shaped to flat-based profile. They contained a similar fill of silty clay and chalk with evidence for a post-pipe (c. 0.3m diameter) and contained mid to late eighteenth century pottery, clay pipe, glass and brick. Together they represent the timber seamarks erected after the demolition of the mill and probably consisted primarily of a large post resembling 'a ship's mast – complete with rigging and probably a capstan'. The first was constructed in late AD 1784–1785, and augmented after it had blown over in a gale. There was no definite indication of a third mast, erected in AD 1786, again after the destruction of the earlier timber structures, although an irregular shaped pit (G60800) 2.13m wide, 1.23m long and 0.53m deep with an uneven 'U'-shaped profile cutting the northern side of Structure 58 could be related, although its profile was unusual. It yielded

fragments of clay pipe, iron nails and other objects. However, as the third mast was located within the footprint of the old mill, any evidence for it may have been removed during the erection of the more substantial Structure 59.

Structure 59 – The brick Seamark (Fig. 240)

Structure 59 consisted of a near circular construction cut (G6081) about 3.4m in diameter, with a slight bulge on the south-east side at the surface, and 1.16m deep with vertical sides and a flat base. Built closely against the side of the cut was a circular brick structure 3.3m in diameter, 1.16m high and 1.1m thick with a central circular cavity 0.85m in diameter (Plates 339 and 340). The bricks survived in good to moderate condition and were approximately 0.2m long, 0.1m wide and 0.1m thick, laid in five uneven lines, end to end out from the centre. There were fourteen surviving courses that had been bonded with firm grey white mortar with small grit inclusions. The central shaft contained an initial fill of white grey mortar 0.04m thick, probably a construction tread, sealed by dark brown sandy clay with brick and chalk inclusions, 1.1m thick, followed by a deposit of silty clay that yielded a London stoneware tankard with WR ale mark. The structure was sealed by a 0.08m thick deposit (G6083) of clay, brick and chalk containing a number of large iron 'brackets' partially sticking up into the topsoil and probably disturbed by the plough. Their function or origin remains uncertain.

Surrounding the structure at a distance of c. 0.5m were seven features (G6082) of four paired and three isolated cuts set in an approximately circular pattern. The features were mostly similar in shape and size, subrectangular in plan and measured between 0.41 and 0.59m across and from 0.09 to 0.33m deep with 'U'-shaped profiles. They all contained a similar clay fill with brick, clay pipe, glass, shell, animal bone, tile, mortar and iron nails; two contained pottery. One (S16141) contained a post ghost about 0.1m in diameter (Plate 341). The pottery assemblage relating to the seamark and its associated features was of fairly mixed post-medieval date, and some, if not all, derives from occupation of the windmill, rather than being introduced during the construction of the new edifice.

The brick structure itself was the foundation for the documented brick-built Seamark tower, erected around 1791. The central hole is unlikely to have held a post rather 'it was empty, and continued upwards, through much of the height of the structure, tapering away as the beacon diminished toward its crown. Such an arrangement would have saved on the expense of bricks, and, perhaps equally importantly, have avoided having to joint them together in the middle' (Chapter 28). The surrounding post-pits were probably for scaffolding during erection. A further five and relatively shallow irregular cuts (G6122) located 2.4m to the south of the structure can be less certainly interpreted, but most cut the windmill foundation and would appear to relate to the later brick seamark. They measured between 0.33 and 1.64m wide and from 0.07 to 0.36m deep with shallow 'U'-shaped profiles and contained fills of silt clay with similar inclusions to the other features.

World War 2 features

Structure 61 and Feature G3045

This partially underground facility in the north-eastern quadrant of Plateau 4 (Fig. 238) was served by a shallow cable trench containing three separate 10mm diameter cables that extended across the entire plateau on a near east-west alignment. The structure (G4096) consisted of two separate chambers, an unlined cut to the west (Room 2) and a brick-built structure to the east (Room 1), separated by a short corridor with a perpendicular line of steps extending southward from the corridor (Plates 343–345). The building was set within a near vertical sided and flat-based cut (G4093) up to 2m deep and about 10.7m long overall (east-west) and 5.6m wide at maximum, though the latter was probably wider than originally due to the machine excavation of its backfill, which left an irregular upper profile particularly in the south-east area, although this was partly caused by its demolition. Room 2 was cut directly into solid chalk, rectangular in shape, 5.75m long and 3.3m wide. A concrete floor in this chamber, 4.86m in length, 2.48m wide and was at a depth of 1.80m, had moulded gullies around its perimeter, 0.10m wide by 0.10m deep. Transverse scars on the floor suggested the presence of five rectangular objects. The scars may have been left by heavy duty batteries, with the gullies around the edge containing any spilled battery acid.

The eastern chamber and corridor were brick lined with concrete floors, the corridor set about 0.15m lower than the chambers, 3.1m (10ft) long and just over 1m wide internally, returns in the brick wall forming a doorway *c.* 0.77m wide (2.5ft) into Room 2. In the floor of the corridor at the eastern end was a 0.50 x 0.50m square drain, probably emptying into a soak-away but this was not investigated. A slightly wider doorway in the south side of the corridor at this end led into Room 1, while the access steps were positioned immediately adjacent on the west, thus abutting the western side of Room 1. Both Room 1 and the steps therefore extended further south than Room 2.

Room 1 appears to have comprised the main operational room. A rectangular concrete plinth had been formed with the floor in the south-east quadrant of the room. This was 0.60m wide, 1.10m long and stood 0.50m high. On top of this plinth were iron fittings that could have held a generator or possibly supported the base of an aerial or mast. The cables from the east were conducted down a pipe (built in the wall) in this corner of the room and were obviously originally connected to this facility (the cable from the west had been cut some distance from the structure). No other internal fittings were visible.

At some stage Room 2 seems to have become defunct (presumably the batteries were no longer required, or may have pre-dated the installation of the cable?). A stack of wooden planks (G4095) set against the brick returns of the corridor blocked off the room, which was then backfilled (G4096) with redeposited natural clays and chalk. Once the building went out of use it was deliberately backfilled with a mid-greyish

brown silty clay and brick and concrete rubble. A few modern metal objects were also recovered but not kept. At least part of this debris is likely to have derived from the upper part of the building, some of the concrete, in the form of large thick slabs suggesting that these may have represented the roof.

On Plateau 3 a rectangular cut (G3045) 2.2m wide, 3.36m long, 1.01m deep was located on the north edge of the area (cutting through the medieval sunken-featured building on this plateau); it was filled with dark silty clay and contained the remains of corrugated sheet. An east-west aligned trench extended from the south-east corner extending for a length of approximately 7.8m, 0.9m wide and 0.32m deep before forming a 'T'-junction with an irregularly shaped north-south ditch 9m in length. The feature appears to have formed a military structure, possibly a small bunker, with an associated slip trench. It is probable that it formed part of the defences of Manston airfield during the Second World War.

Other features

Apart from a line of modern postholes representing a fenced boundary on Plateau 1 (G10061), most of the other post-medieval/modern features were animal burials. Only two of these are of much interest. G2019 consisted of five sheep skeletons with four forming a fairly tight grouping and a fifth (S2137) rather isolated about 20m to the north. Of the group, S2129 consisted of a subrectangular cut about 1.45m long, 0.91m wide and 0.22m deep contained the articulated remains of five animals, again sheep, laid out in a formal arrangement. A similar burial was found some way to the north on Plateau 8 where a rectangular pit (G8329) 1.26m wide, 2m long and approximately 0.1m deep contained the remains of eleven well-preserved, articulated and semi-articulated sheep skeletons; these were associated with a fragment of post-medieval glass. The animals were probably killed and interred due to disease.

Discussion

The reasons for the decline of the medieval agricultural activity in the mid fourteenth century have been discussed above. It is probable that agriculture continued after the Black Death period, albeit in a different form, but there is virtually no evidence for it from an archaeological perspective, apart from a few post-medieval burials of probably diseased farm animals, and the lynchet between Plateaus 4 and 5 (plus the others still visible as landscape features). Thus, although the nature of post-medieval landscape use was probably predominantly agricultural, there is little to indicate its form or the topographical layout of the fields. If the lynchets are indeed of post-medieval origin, which would seem to be the case, then some of the fields at least were arable (as suggested by the 'extensive cornfields' mentioned in various sources for later in the period; Seary above). All that is certain is that the medieval field system was eventually almost completely obliterated as there is no evidence that many of the boundaries survived much beyond the mid fourteenth century. The tithe maps in particular (being the earliest remotely reliable

survey⁵¹) suggest that by the early nineteenth century little trace of the medieval layout was left and it is likely that it had gone considerably earlier.

Only a few boundaries present in the medieval period survived long enough to be indicated on the tithe maps. They included the parish boundary, marked in places by the lynchets that probably formed during the later medieval or earlier post-medieval period. Seamark Road continued in use throughout. The boundary to the west of the northern part of Thanet Earth, north of the parish boundary, is also present in the nineteenth century and still survives. More importantly perhaps, the putative line of Trackway 35 is shown as a trackway to the west of the site, as a route to St Nicholas at Wade. This is a strong confirmation of the line of the medieval route. To the east it may still exist as a boundary but is not shown as a track (although still a footpath). However, these are the only boundaries that survived the end of the medieval occupation. This lack of continuity is in contrast to some other areas of Kent. On at least parts of Romney Marsh around Lydd, the medieval field system largely remained unchanged until the modern period (Barber and Priestly-Bell 2008, 296), while a number of sites on HS1 suggest that both settlement and agricultural features 'continued to influence boundary patterns into succeeding centuries, sometimes up to the present' (Reynolds 2011, 399). However, on these sites (such as Westenhanger; *ibid*, 389–392) as well as those excavated near Gravesend on the A2, and others such as Claxfield Farm near Teynham (Clark and Holman 2014) it can be seen that the complexity of the medieval development tends to simplify (if not entirely disappear) as settlements go out of use, although the general character of the landscape may have 'remained unchanged down to the twentieth century' (Munby 2011, 405).

The post-medieval field arrangement in the site area was remarkably open, not too dissimilar to what it was like by the twentieth century. There were relatively few boundaries and the fields were large and probably separated by fences as no evidence for these boundaries survived as archaeological features. The large fields may of course have been further subdivided on a more informal basis (perhaps one instance being a north-south aligned array of fence posts in the Plateau 1 pond area), but in all only about seven mostly large fields impinged on the Thanet Earth site area. These were probably the result of a complex sequence of land acquisition by relatively wealthy landlords in the late- or early post-medieval period (a system of informal enclosure (Croft *et al* 2001, para 3.70).

There was no clear evidence for any settlements on the site; after the depredations of the fourteenth century the population probably became concentrated in the villages and hamlets that surround the area. There may have been some form of activity in the later medieval and earlier post-medieval period around Site 16 (Chapter 7) indicated by a concentration of artefacts in late deposits here, but it is unclear what this consisted of. Monkton Road Farm itself would appear to have originated in the

⁵¹ Previous maps such as Andrew, Drury and Herbert's of 1769 do show trackways and potentially fields but they would seem to be more illustrative than a real depiction.

late nineteenth or very early twentieth century according to the various editions of the Ordnance Survey.

The most significant post medieval remains are probably the sequence of structures and other features relating to the windmill and seamarks on Plateau 6. Although interesting in their own right, particularly in relation to local history, the seamarks in particular do not throw much light onto the local post-medieval landscape as they are basically fairly unique and quite separate from surrounding developments, although obviously located here due to the position of the earlier mill. Monkton Mill turned out to be well documented but was possibly only the last of a series of windmills in the vicinity and there may have been others dating back into medieval times. These may well, from an early date, have been used as seamarks by sailors navigating the Thames Estuary. However, there was no sign of any structure that could be representative of an earlier windmill, although it could have been within the un-excavated area between Plateaus 6 and 7.

In this respect there is an intriguing possibility that the medieval remains at Site 21, 175m south-west of the windmill, which suggest a settlement site nearby, might be related to an earlier medieval mill. The settlement was not definitively located, Site 21 consisting only of a single sunken-featured structure but later pits and large dumps of ceramic waste within an adjacent trackway (Trackway 31/2) were strongly indicative of nearby domestic occupation. It seems likely that the settlement thus indicated, which may have lasted into the fifteenth century on the ceramic evidence, was to the north of Plateau 7 in an unexcavated part of the site (Fig. 239). Could this be the location of the earlier windmill or mills? Alternatively, it is quite feasible that a medieval mill had been constructed on top of the remnant mound of Barrow 4, located just 25m to the south of the later mill (Fig. 240). This would have been in or near the suggested area for any later medieval settlement indicated by the Plateau 7 finds, although there was no definitive evidence for this arrangement. It is suggestive however, that of all the barrows, the later fill sequence of the Barrow 4 ditch suggested that it had been levelled relatively quickly and from the inside of the circuit, perhaps during the construction of a surmounting edifice that would have required levelling of the mound top. It may be relevant that 'the 'ancient' name for Acol was Millburgh which comprises the elements *myln* and *beorg*, denoting 'a mill-mound', which is perhaps indicative that this mill also was erected on the tump of a prehistoric barrow.

The sunken-featured structure not far to the north of the mill (SFB 80) was almost certainly associated (its entrance extending to the south-east towards the mill) as are many of the other post-medieval features in the immediate locale. Its mode of construction, although utilising the same sort of sunken area as the medieval buildings was somewhat different, with far more postholes representing either the walls or more likely considering their position, roof support. There was evidence that the roof was thatched and it probably looked rather similar to the medieval buildings, themselves almost certainly having an extensive pedigree extending back to the immediate post-Roman period on the Continent (Chapter 7). It was,

nevertheless a surprising find considering this seemingly persistent 'tradition' of sunken-featured buildings in the area, whether it was used for simple storage or for habitation. Although the structure contained no obvious mode of heating and there was an absence of any occupation deposits, the benches along its side could have been used for seating and it is tempting to see it as a temporary dwelling or shelter for the miller or his workers.

Documentary study has not thrown much light on the function of the subterranean, part brick built structure dating from the Second World War, although it was probably some form of navigation beacon. Other indications of war time Thanet include debris from a Canadian Halifax bomber that crash landed in 1945 having overshot RAF Manston and shrapnel from a V2 rocket that exploded near Monkton Road Farm.