

CANTERBURY'S

ARCHAEOLOGY



CANTERBURY
ARCHAEOLOGICAL
TRUST



CANTERBURY'S

ARCHAEOLOGY

15th ANNUAL REPORT

1990
1991

Canterbury Archaeological Trust Ltd

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The Canterbury Archaeological Trust is an independent charity formed in 1975 to undertake rescue excavation, research, publication and the presentation of the results of its work for the benefit of the public.

Grateful thanks are extended to all members of staff who have contributed to the production of this year's Annual Report. Further copies of 'Canterbury's Archaeology' can be obtained from our offices at 92A Broad Street, Canterbury, Kent CT1 2LU.

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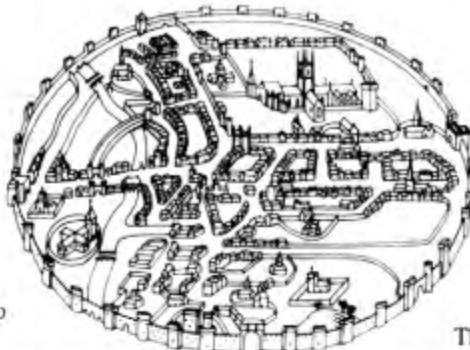


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FOREWORD



Patron of the Trust:
The Lord Archbishop
of Canterbury

Chairman of the Trust:
The Lord Mayor of Canterbury

CANTERBURY ARCHAEOLOGICAL TRUST LTD

Registered Office: 92a Broad Street, Canterbury, Kent CT1 2LU Telephone: Canterbury (0227) 462062

The work recorded in this report represents a busy year for the Trust. The spread of activities is most impressive, ranging from desk and fieldwalking assessments, major and minor evaluations, building recording, human bone studies, small finds recording and studies in pottery, education in archaeology, as well as complex excavations and post-excavation reports. The totality adds greatly to our knowledge of Canterbury's archaeology and history, and further afield in other areas in East Kent. It would be invidious to single out items for special mention; the overall standard and interest is uniformly high, and reflects great credit on the Director and staff.

There are however two items of management interest to which attention might be drawn. The first is the proposed closure of the shop at the end of March 1992. This incredibly successful enterprise by Marjorie Lyle and her band of helpers has provided the community at large with a most useful service, and has given the Trust a valuable freehold property, together with a handsome income for the last five years. It is proposed to let the ground floor shop for retail purposes and to continue to let the upper floor as student lodgings. We shall continue therefore to gain an income from it. Many thanks are due to Mrs Lyle and all who helped her in this splendid enterprise. The second is that our schools education service under Marion Green goes from strength to strength, and is now supported by the Kent Archaeological Society and the Kent County Council. We expect even better things in the future.

On a less optimistic note, the period under review has seen the conclusion

of one major and highly successful excavation in the centre of Canterbury and the start of another, St George's Church. After these, the Trust has the prospect of tackling further major work at Whitefriars and the Tannery sites.

Country-wide recession and other factors is causing these developments to be delayed. As a result, a gap is opening up in the Trust's future excavations work load. While some smaller excavations in Canterbury may be expected to continue, and while there is a great backlog of post-excavation work, most of which is already funded, nevertheless the Trust may be entering a period of retrenchment. We shall have to trim our workforce in line with a downturn in excavation work and income: cut our coat according to our cloth. To some extent this downturn may be tempered by work we are increasingly being encouraged to take up outside Canterbury, in Kent and Kentish towns such as Dover and Folkestone. Included in these are major evaluations or impact assessments, such as that for the proposed Broad Oak reservoir.

Canterbury will always remain our first and overriding priority, but we cannot, in present circumstances, overlook opportunities to work in other areas of Kent. In all this, although the direction and spread of the Trust's work may change somewhat, its high standard of excellence will continue.

In offering the grateful thanks of the Trust to all who have supported us with their time, effort and resources, I must add that we may need that support more than ever in the difficult years that may lie ahead.

Dr F.H. Panton
Chairman of the Management Committee

INTRODUCTION

This report which records the activities of the Trust between July 1990 and July 1991 has as its centre-piece the final stages of the Longmarket excavation and the commencement of our work at St George's Church. An increasing percentage of our workload now occurs outside Canterbury District and articles on operations conducted in other districts of the county of Kent appear below. The recording of standing historic buildings remains an important part of our yearly activities. The purchase of a rectified photographic camera and the installation of a fully-equipped dark room in our premises largely paid for by the Friends of the Trust have considerably extended the range of activities of the Building Recording Officer, Rupert Austin, as can be seen below. Post-excavation and senior site staff are engaged in a wide range of projects. Some of these projects and the by-products of research undertaken on them are featured in these pages. Computerisation of our site recording, finds processing and general post-excavation systems are considerably assisting with the speed of production, layout and design of reports.

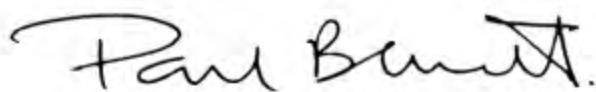
Management of the post-excavation teams is now in the hands of Peter Clark who joined the Trust in January 1991. I am indebted to Peter for many improvements in our working systems. The Trust has benefitted greatly from his appointment and I look forward to working in partnership with him in years to come.

The status of archaeology county wide has been much improved by the appointment of a County Archaeologist, Dr John Williams and the adoption of new planning policy guidance notes for archaeology (PPG 16) within the planning framework of every district. Planning officers now consider archaeology a major issue to be addressed when considering applications for new development. Structured programmes for archaeological work to be undertaken in advance of development are now commonplace. Planning decisions are now made following an impact

assessment, where the presence of archaeological deposits and features are suspected. A number of these assessments, by desk-study, fieldwalking and evaluation trenching undertaken in the past year appear below. The assessments provide a range of information used by planning officials to determine applications with the principal objective of the assessment being to preserve important sites in situ. Where this proves not to be possible or a site does not meet the criteria set down for preservation, then the archaeology will be preserved by record (excavation) at the developer's cost.

The Trust's attempts to create an Education section within the organisation has received support from the Kent Archaeological Society and other bodies in the past year. Our Education Officer, Marion Green, has developed a range of teaching aids for use in the classroom and on site visits. Marion, and her assistant Alan Pope, have visited a large number of Kent schools over the year and many school parties have taken the opportunity to visit the excavations at Longmarket and now St George's Church. There appears to be a great demand for an archaeological education service in Kent and a good basis for future initiatives has been laid down this year. Visitor management of the major excavations has also been a great success. For this we are indebted to the hard work of Elizabeth Rothwell-Eyre and her team of volunteer guides from the membership of the Friends of the Trust. Without their unstinting support it would not have been possible to offer many tens of thousands of visitors to the excavations an enjoyable and educational experience.

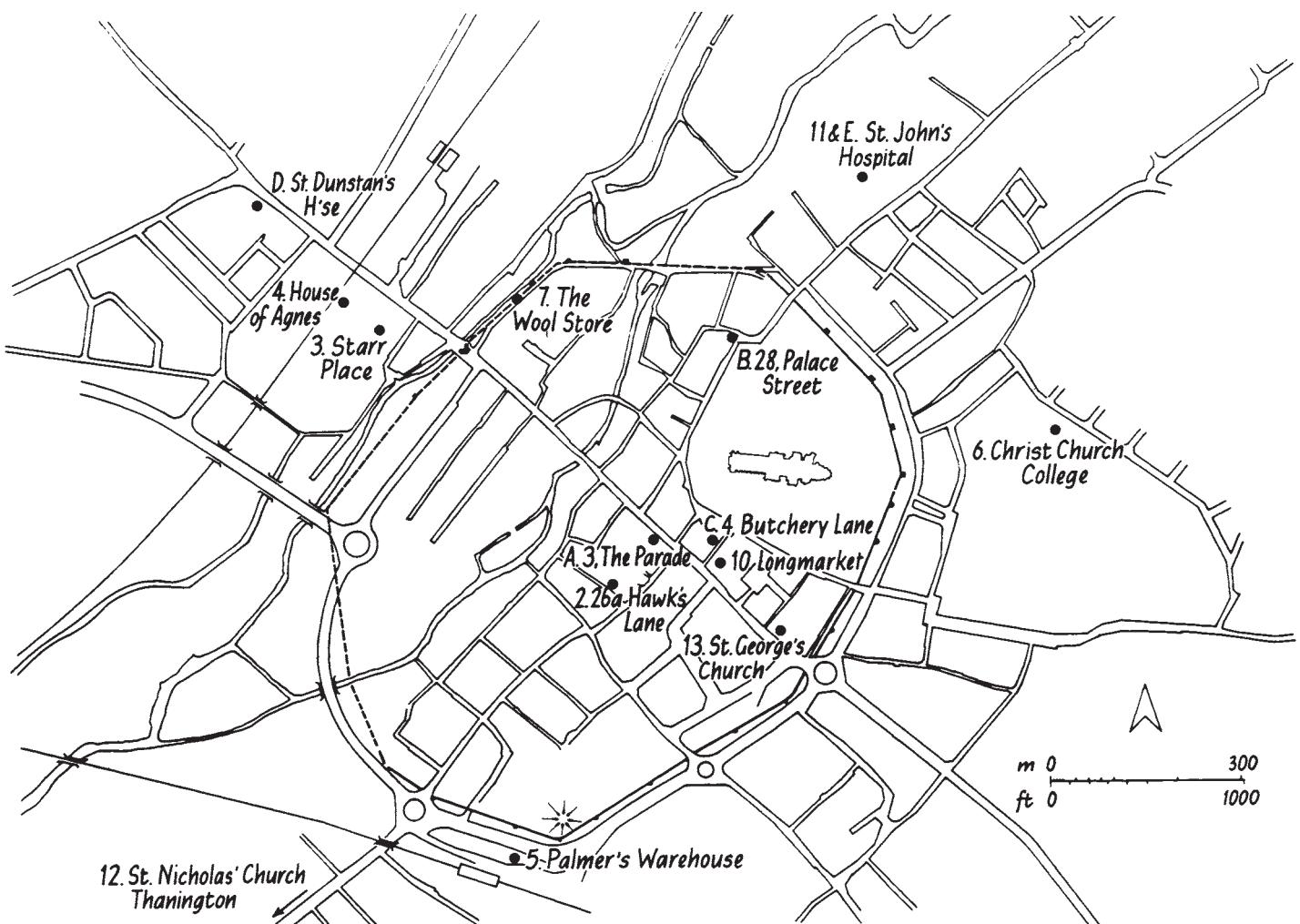
Our premises at 92A Broad Street is gradually being improved and equipped, the Friends of the Trust and the staff of the Trust shop at 72 Northgate continue to give us sterling support and in general the Trust has had a busy and fulfilling year. Despite the recession and gloomy forecasts the Trust remains buoyant and optimistic and we look forward with some anticipation to the coming year.



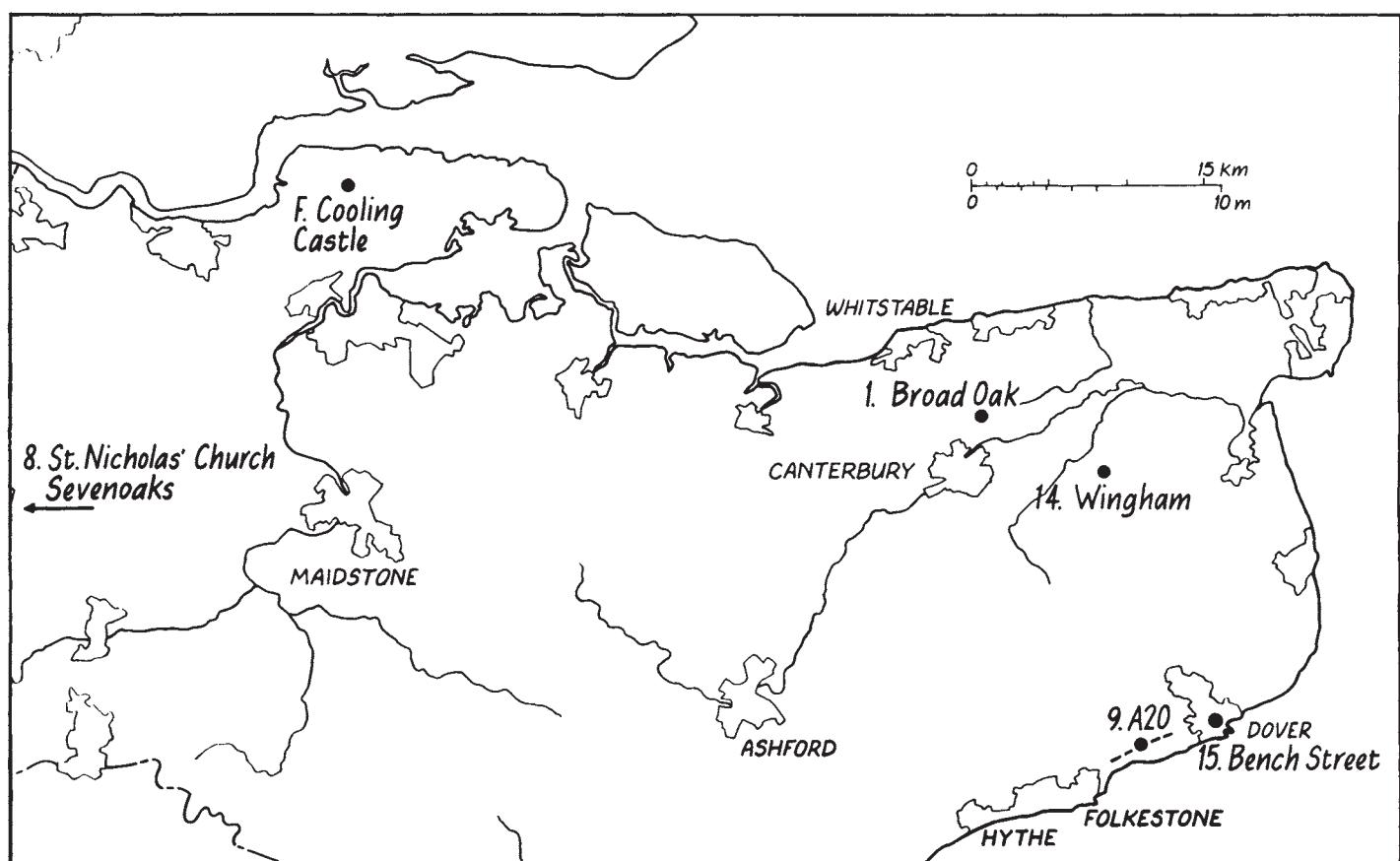
Paul Bennett

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Canterbury Sites: Excavation and building recording projects discussed in this year's report.



Kent Sites: Excavation and building recording projects discussed in this year's report.

PART ONE

FIELDWORK

I DESK AND FIELDWALKING ASSESSMENTS

Introduction

In accordance with now accepted procedures for the incorporation of archaeology into impact assessments for large scale developments, the Trust has in the past year undertaken desk-top and fieldwalking evaluations for a number of proposed schemes.

Three of these assessments have been commissioned by Kent County Council Highways Department with specifications for the work prepared by the County Archaeologist for Kent, Dr John Williams. The three schemes are for parts of the proposed route of the Thanet Way, the Denton to Hawkinge by-pass and the Whitfield to Eastridge road improvement. In all three cases the Sites and Monuments Record has been consulted to provide previously known information and the routes have been walked to provide details for extant historic landscape features. Detailed fieldwalking for the latter two sites is in progress at the time of writing, but in the case of the Thanet Way, fieldwalking has provided valuable information indicating the presence of nine potential archaeological sites. These have yet to be fully tested by evaluation trenching in order to determine whether they are of sufficient merit to be preserved in situ by negotiating a change in road alignment; excavated in advance of road construction; monitored during construction activities or are of insufficient value to justify a further level of archaeological enquiry. Although it is too early to provide a detailed report on the Thanet Way or the other operations, it is worth stating that such a structured response to large scale developments is providing a range of information which would have not been available otherwise. Further still,

the inauguration of such schemes well in advance of construction activities will not only materially assist the preservation of regional and nationally important sites, but will also ensure that lesser sites are adequately recorded before destruction takes place.

Similar assessments have been undertaken in advance of residential and commercial development at Westhawk Farm, Kingsnorth; Waterbrook Farm, Sevington near Ashford; parts of Dover Western Heights and the Whitefriars area of Canterbury. Two further assessments have been undertaken in advance of proposed redevelopment along the seaward side of the town of Dover and the western side of the valley of the Sarre Penn, north-east of Canterbury.

All the desk-top evaluations are interesting documents in their own right, given that they have been designed to draw together all known information relating to each study area. In the case of the western part of the Sarre Penn and Dover harbour area the original desk assessments have been extended by field work which is continuing at this time. These, and the remaining assessments, will hopefully lead to further levels of enquiry which will considerably increase our knowledge of each study area and the wider rural or urban landscapes in which they are sited.

Only a summary of one assessment has been included here to highlight the value of incorporating this form of inquiry early in the development process.

1 The Western Part of the Valley of the Sarre Penn

by Richard Cross

As part of the environmental impact assessment for a proposed reservoir at the west end of the Sarre Penn valley, just to the north of Canterbury, the Trust was commissioned early in 1991 to undertake a preliminary survey of archaeological sites in the area.

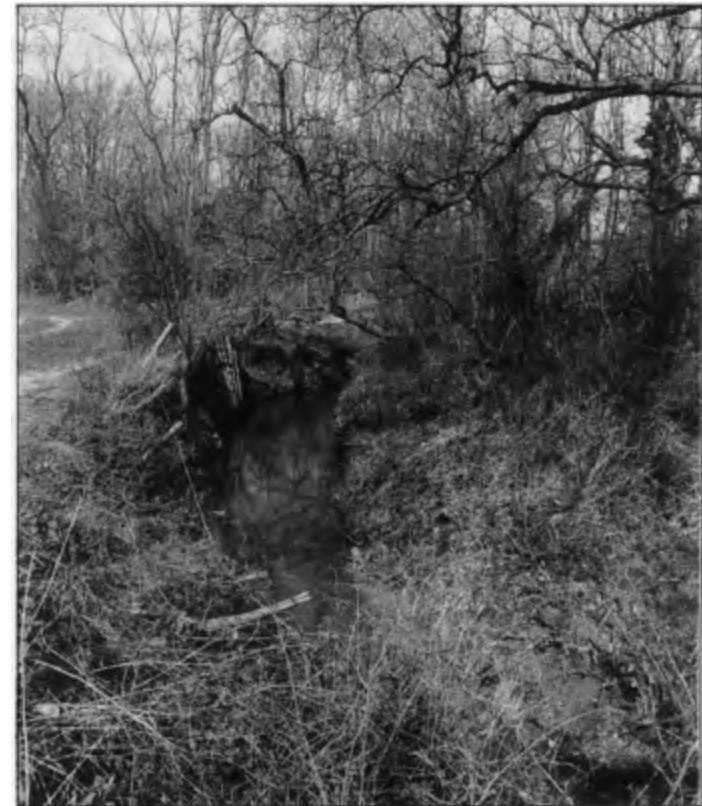
In spite of the difficulties of surveying such a large area in a very short period of time, and hampered by the advanced growth of winter wheat, it became clear that the area is rich in archaeological remains; evidence of a long and complex history, complemented by a rich documentation over the most recent 1,300 years. The story to emerge, even after only a preliminary assessment, is of protracted settlement and landscape management over some 8,000 years, the whole in a context of interaction with the rather special combination of natural resources of the Sarre Penn valley and its surroundings.

Though only a preliminary survey has been undertaken, the wealth of information recovered has meant that only the briefest of summaries may be presented here.

The west end of the Sarre Penn valley lies some 3 km. north of Canterbury, close to the University of Kent. Here the London Clays are covered by Head Brickearths. Elsewhere Head Gravels lie over the clays, perhaps representing successive terraces of a very early route of the Great Stour. These deposits were probably originally covered in mixed deciduous woodland; however, the presence of Head Brickearths, which here give rise to light, easily worked fertile sandy loams provided an attraction to settlers from the early prehistoric period onwards.

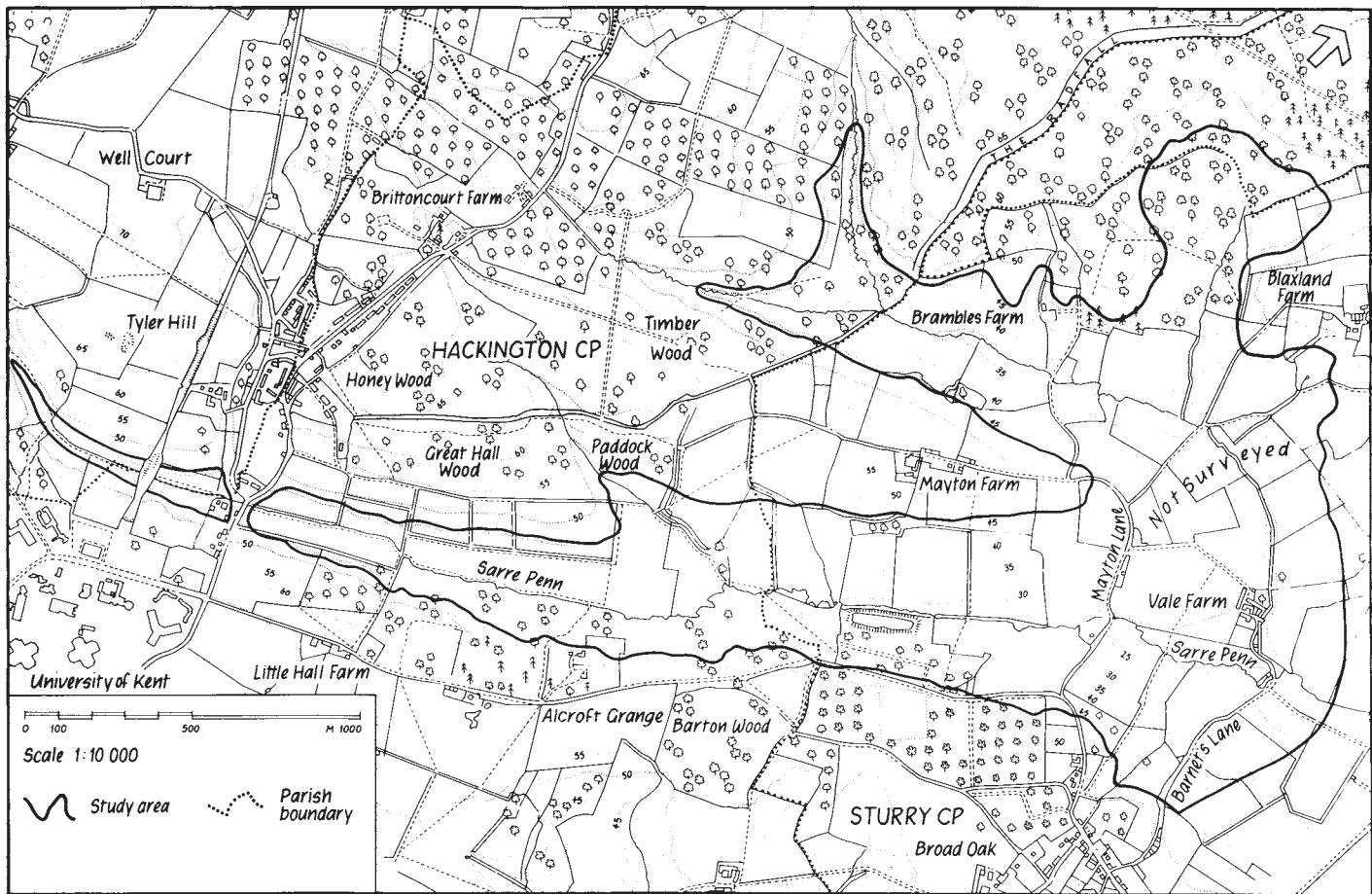
Work began with a detailed study of the bed and exposed banks of the Sarre Penn, the stream's course effectively providing a valuable longitudinal section of the deposits throughout the length of the valley. The second phase consisted of a systematic general programme of fieldwalking of arable and pasture within the study area; this constituted just over 70 per cent of the total land area. The third and final phase of the fieldwork programme consisted of a search of the extensive woodlands within the study area. Unfortunately the rapid growth of winter wheat, and the thick undergrowth in the woods, made this survey programme very difficult to conduct effectively, and it is likely that the information gathered from the survey is merely a sample of what actually lies in the Sarre Penn valley.

In addition to the field survey, a review of potential documentary sources was undertaken in a variety of archive offices; whilst no detailed study of



Broad Oak: Typical view of the Sarre Penn stream.

these sources was made, it became clear that the good archaeological survival was matched by a rich documentary archive.



Broad Oak: Plan showing the extent of the study area.

Prehistoric Remains

There had been few discoveries of prehistoric material in the area prior to this survey. A few implements of Mesolithic date had been found near Mayton Farm and around Calcott, and aerial photography had located two ring ditches (possibly indicating prehistoric burial mounds) above Little Hall Wood, just to the south-east of the study area. The Trust's survey added a significant number of new discoveries to this tally, evidence of occupation in the valley from the earliest times and through the prehistoric period.

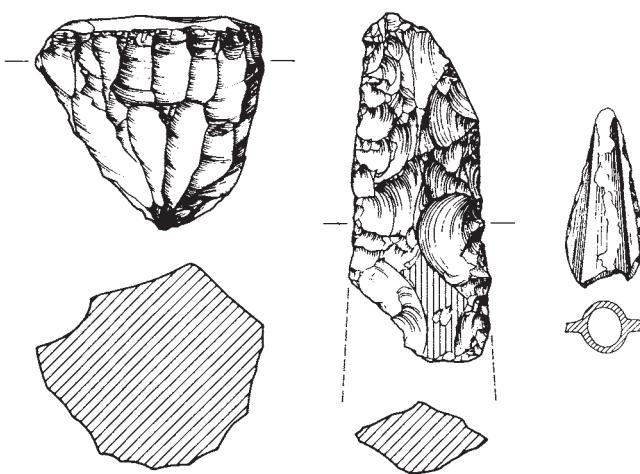
Struck flint artefacts and burnt (or calcined) flints were found across the study area; indeed, very few of the arable fields walked failed to produce at least one or two examples. A concentration of struck flakes in Field 16 adjacent to Little Hall Wood (Location N) may indicate some sort of settlement; nearby a fine Mesolithic blade core was found. Other artefacts were found elsewhere, perhaps the most notable being a reworked fragment of a Neolithic ground and polished flint axe, found near Vale Farm.

Concentrations of burnt flint were found at Locations T1, X, Y and Z, which may also be indicative of localised occupation areas. The examination of the exposed banks of the Sarre Penn revealed several horizons of dense calcined flint material, often mixed with black ash and charcoal, sealed by hill-wash up to 1.80 m. thick in some places (Locations U, F2, I, P, R, V1, S and T). Three of these horizons were associated with cut features, perhaps indicating settlement areas.

Within Cole Wood a low mound, some 0.5 m. high and 9 m. in diameter was found, hidden by dense undergrowth; this is probably a burial mound of Bronze Age date. The tip of a cast bronze spearhead of the same period was discovered during the survey of the Radfall.

A few flint-tempered pot sherds of Iron Age date were recovered from the lower zone of a hill-wash deposit exposed in the stream bank below Mayton Cottages (Location V). Whilst apparently not in situ, these sherds, provisionally dated to c. 500-300 B.C., are clearly suggestive of Iron Age occupation in the area.

This preliminary survey has therefore discovered traces of fairly widespread prehistoric occupation within the study area. From the sections exposed in the stream banks it appears likely that a prehistoric land surface lies buried by colluvial deposits along the length of the Sarre Penn valley; elsewhere, concentrations of calcined and struck flint material may indicate occupation areas that have yet to be properly investigated.



Broad Oak: Mesolithic flint core (1), reworked polished flint Neolithic axe (2) and tip of cast bronze socketed "Bronze Age" spear (3). Scale 1:2.

Roman Settlement

The majority of previously known evidence for settlement in the Roman period is situated well to the south of the study area. Late Iron Age/Belgic finds including cremations, some early Roman, and an Iron Age gold coin were discovered piecemeal during gravel quarrying between 1927-32 just north of Sturry, all presumably suggesting a substantial multi-period settlement. To the east of Sturry a creekside settlement of second- to third-century A.D. date, including a quayside, has been partially recorded, situated on the north side, and utilising what must then have been a navigable section of the Great Stour. Access was presumably from the via glarea strata (the gravelled roadway) which followed an alignment from the north gate of *Durovernum Cantiacorum* (Canterbury) through to Upstreet. East of Sturry a later branch road struck out towards the fort at *Regulbium* (Reculver) and at this junction a large Roman cemetery

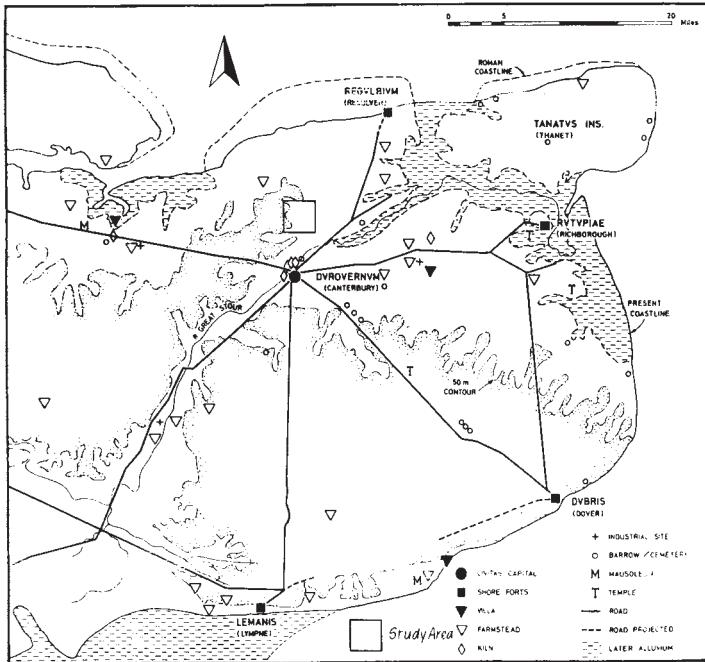
The Anglo-Saxon Landscape

Recolonisation of the landscape during the Anglo-Saxon period would appear to have followed a sequence from the Great Stour valley northwest to the heavier clays of the Blean Forest. In considering the settlement history of this period a wide overview of the area has been taken, the evidence being in the form of the sites of cemeteries, charters, boundaries and early place-names from a number of locations. Generally, the administrative units of study taken in the late Anglo-Saxon period have been the ecclesiastical parishes of Sturry and Hackington, the tenurial pattern of ownership being largely reflected in the development of the ecclesiastical estates of St Augustine's, Christ Church and the Archbischopric.

Two major cemeteries occur within the locality, both probably part of the same complex of settlement and burial. At Hersden, an early mixed cemetery of cremations and inhumations has been excavated, comprising some seventy burials dating from the early sixth century A.D. to the seventh century. Closer to the study area, just south of Shelford Farm, is a possible burial mound cemetery. The finds, dating from the late sixth/early to mid seventh century A.D., include buckles, spear heads and a cruciform Anglo Saxon brooch.

The cemetery at Shelford lies on the south facing slope of the valley overlooking what then must have been the remnants of the Roman road from Canterbury to Upstreet and sited just above Sturry. This was almost certainly a villa regalis (royal estate), one of a group of important royal centres, the others being Eastry and Lyminge, which clustered around Canterbury and date back to the reign of Aethelberht. The area of this early Anglo-Saxon river estate, centred on Sturry, is uncertain but probably extended across the present parishes of Sturry, Westbere, Hoath and Chislet. During the later sixth century A.D. this district north of the Stour was probably unexploited and sparsely settled; as an undeveloped (possibly Roman) estate it contained all the agrarian elements of arable, meadow, pasture, woodland and pannage which were to make it such a valuable addition to the ecclesiastical estates first of Minster in Thanet and then of the abbey of St Augustine.

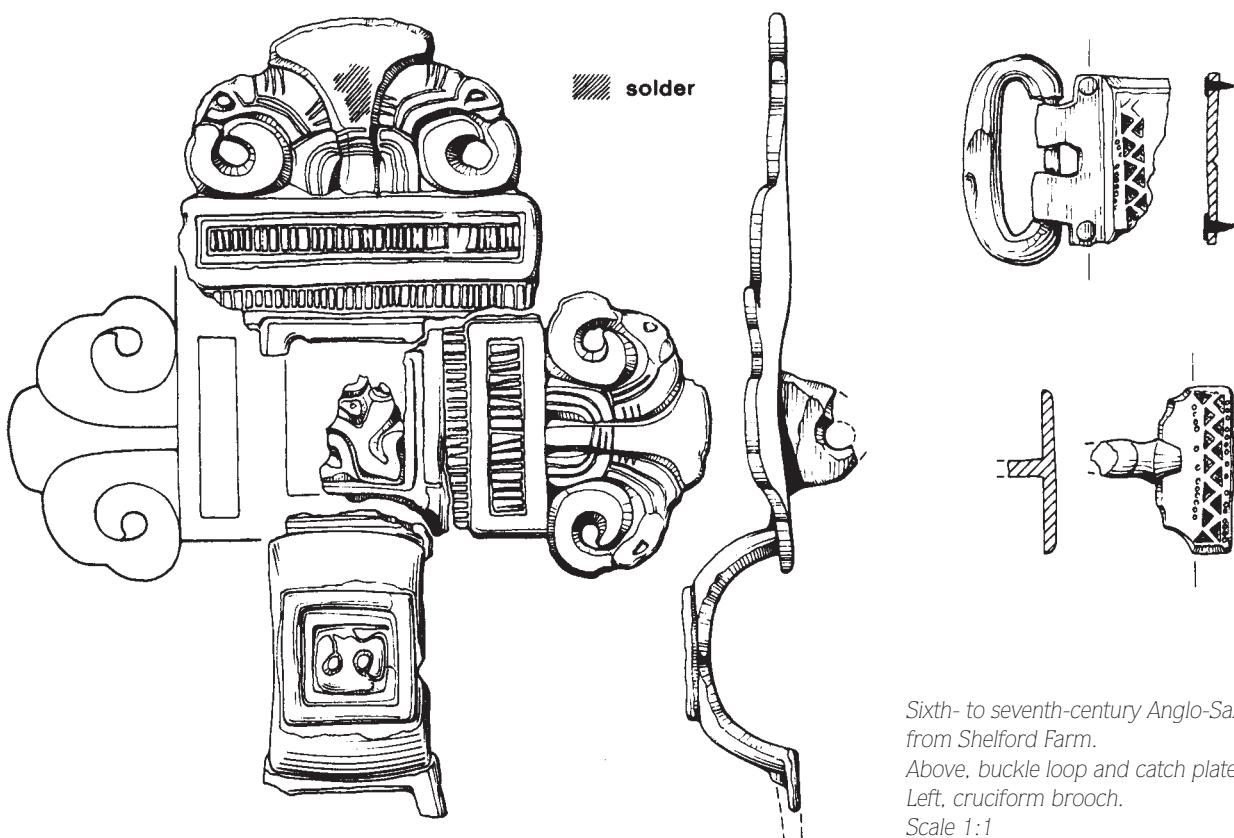
From the seventh century A.D. the charter evidence and pattern of place-names allows a clearer understanding of the local settlement pattern and landscape history. The earliest charter is dated A.D. 605, a grant by king Aethelberht to the church of SS Peter and Paul (later St Augustine's). Grants of Sturry were made by Hlothere to Aebbe the abess of Sudmynster, one of the 'double minsters' of Kent founded in c. A.D. 670.



Broad Oak: Map of Roman Kent showing study area.

has been recorded. Other larger cemeteries are known outside the north gate of Canterbury. The evidence points to a concentration of occupation confined to the lower terraces of the Great Stour valley, with much of the activity closely linked to Canterbury itself, and to which the quayside settlement must have served as some form of port.

The field survey programme added little to our knowledge of Roman settlement at the west end of the Sarre Penn valley. A small collection of Roman material, including pot sherds and tile fragments together with a silver coin (a second-century denarius) were recovered. Most of this material was found towards the north-eastern end of the study area, near Vale Farm. Although the evidence is slight, it may indicate some small Roman farmstead in the vicinity of Vale Farm, exploiting the fertile valley soils, by then presumably long cleared of primary woodland.



Sixth- to seventh-century Anglo-Saxon finds from Shelford Farm.

Above, buckle loop and catch plate.

Left, cruciform brooch.

Scale 1:1

FIELDWORK

The grant of A.D. 678/690 formed only a small part of a much larger endowment which also included half of the island of Thanet, with Sturry serving presumably as a detached possession of the minster and as a denn (a detached holding of woodland pasture), providing at once rents, timber, pannage rights and access to a navigable waterway. The estate must have undergone rapid development during the later seventh and eighth centuries with the clearance of the Blean woodlands. The charter confirmations of A.D. 690 refer to ten or twelve settlements with woods and orchards some of which probably survive amongst the later six boroughs of Sturry Street, Butland, Buckwell, Calcott, Blaxland and Hoth, subordinate to the paramount manor of Sturry and the sub-manor of Mayton. All of these place-names are philologically early though none are recorded in pre-conquest sources.

From the early ninth century A.D. the minster of Thanet gradually became untenable under the Danish raids which culminated in the sacking of Canterbury, and presumably also of Sturry, in A.D. 1011. In 1030 King Cnut granted the whole of the lands of the minster, along with Sturry, to St Augustine's, a possession it was to retain until its dissolution in 1538.

In summary it is possible to discern from the sixth century A.D. the establishment, set against a recognisable late Roman background, of an early Jutish (Anglo-Saxon) river-estate centre, in one of the primary areas of colonisation, the foothills of east Kent. Developed from the mid sixth century as a villa regalis centred on Sturry, the settlement with its arable, meadow and pasture seems to be restricted to the lower terraces of the Great Stour valley but also included tracts of the forested Blean uplands as outlying wood pasture and as a source of timber. With the advent of the influence of the church from the early seventh century A.D. and with royal patronage, Sturry came as part of a much larger endowment to the minster of Thanet. Later documentary sources indicate a developing estate and the gradual clearance of the Blean woodlands from the eighth to tenth centuries A.D. an estate which passed in the early eleventh century to the abbey of St Augustine's, Canterbury.

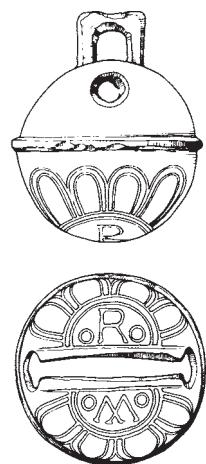
The Tyler Hill tile and pottery industry was based at the western end of the study area, and substantial remains of pottery or tile kilns and waster dumps were identified during the survey. The history of this important medieval industry is reviewed below by John Cotter, but it is clear that

its physical remains have survived remarkably well within the area of the proposed reservoir.

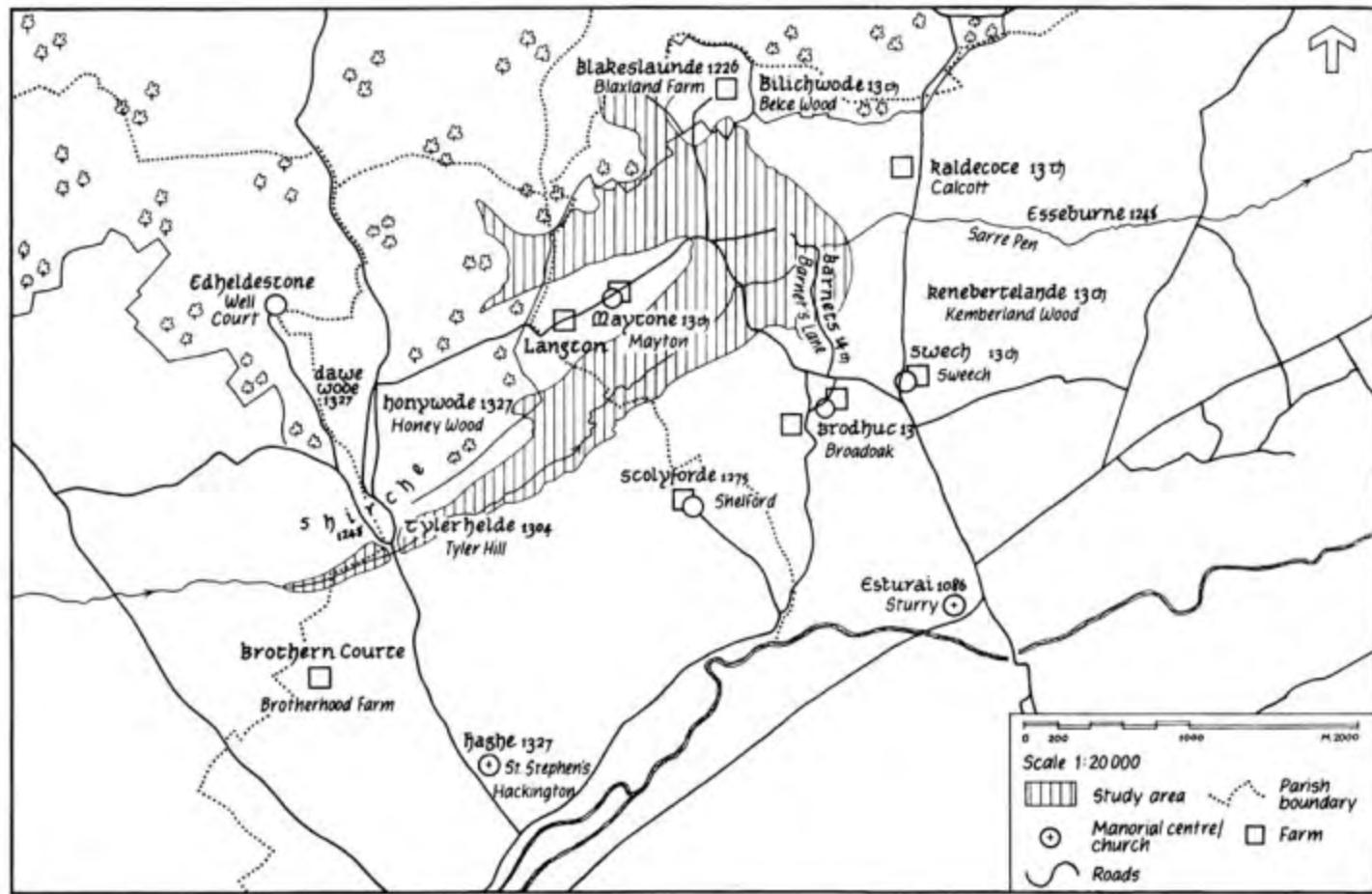
Boundary Archaeology

One of the largest field monuments identified during the field work at the west end of the study area was a linear earthwork known locally and for many centuries as 'The Radfall'.

The present extent of the Radfall runs through woodland from a point in Cripps Wood just south of Knockhymdown Hill to Tyler Hill, where it terminates at the north-western boundary of Hales Park. Originally the earthwork may have extended further north, perhaps as far as Bleangate to the north-east, along a route now occupied by an unbanked footpath. To the south a shallow linear depression, shown on the 1874 first edition Ordnance Survey map as a footpath, may well perpetuate the line of the earthwork, and if so, then the original earthwork may have once connected with the common pasture of Hackynblen (now known as Tyler Hill) and perhaps to Radfall Road to the west. Together the Radfall earthwork and Radfall Road jointly represent parts of an early road or droveway system extending east-west across the Blean woodland and connecting areas of common pasture. A brief metal detector survey of the Radfall earthwork close to the northern margin of the study area provided a small collection of horse shoes and a 'cow' bell, accidental losses which perhaps confirm its use as just such a droveway. Of equal importance must have been the use of the Radfall as a carriageway for the products of the tile and pottery industry to the coastal ports of north Kent and beyond.



Broad Oak: Copper Alloy
"Crotal" (cowbell).
Scale 1:2



Broad Oak: Plan of the study area showing documented villages, farms and woods.

Apart from the Radfall itself, a series of wood banks were located and surveyed within the Blean woodlands. These medieval features ,present property boundaries, delimiting the divisions between individual owners of the woodland resource. Some of the larger woodbanks measure some 10 m. across, including a ditch; the study of these well preserved woodbanks, particularly in the relationship between size, elaboration and cost of construction and tenurial ownership, offers an opportunity to examine the woodland management of the Blean forest in the medieval and post-medieval periods.

Summary

This brief survey has demonstrated the richness of the archaeological landscape just north of Canterbury, which will allow a detailed study of the development of the landscape from the Mesolithic period through to the present day. The Sarre Penn valley is a complex historical mosaic, with the potential to tell the story of man's settlement history and interaction with the environment over a period of some 8,000 years.



Broad Oak: Large woodbank located at the western end of Little Hall Wood, looking south.

II EVALUATIONS

Introduction

In the past year evaluation excavations have been undertaken on five Canterbury sites and two others outside Canterbury district. Evaluations represent the opening of small 'windows' on the stratified sequence in order to obtain a quantitative and qualitative assessment of the archaeology of a site. These operations are undertaken before a planning application for development has been determined to ensure that the archaeology of a site is taken into account by the prospective developer.

Archaeological sites are by their nature a fragile, vulnerable and diminishing resource. It has long been recognised that redevelopment processes are harmful and often totally destructive to archaeological levels. As a consequence every effort is now made to mitigate the effects of new development on the resource. Mitigation can only be successfully attempted with foreknowledge of the nature of the archaeological deposits, their depth below the existing ground surface, the nature of their composition, the total depth of the sequence, the relative importance of the sequence and so on. Having obtained this information by desk study

and field evaluation, negotiations can be entered into with the developer and his agents to determine the likely impact of proposed construction on the archaeological levels. The positioning of individual buildings can be adjusted to help preserve vitally important parts of a site. Foundation design for new buildings can be discussed as a means of assisting reduce disruption to the archaeological levels. Those parts of the site considered to be of regional or national importance can be left undeveloped, perhaps to form public open space or gardens within a development. Parts of the site of lesser importance, but still materially affected by a development and considered worthy of preservation by record, can be subjected to full archaeological excavation, the necessary work being timetabled and costed into the redevelopment. All this forms part of the structured integration of archaeology into planning processes to ensure that preliminary archaeological enquiry shall be an essential component for redevelopment schemes in historic, rural or urban areas.

2 No. 26A Hawks Lane, Canterbury

by Jonathan Rady

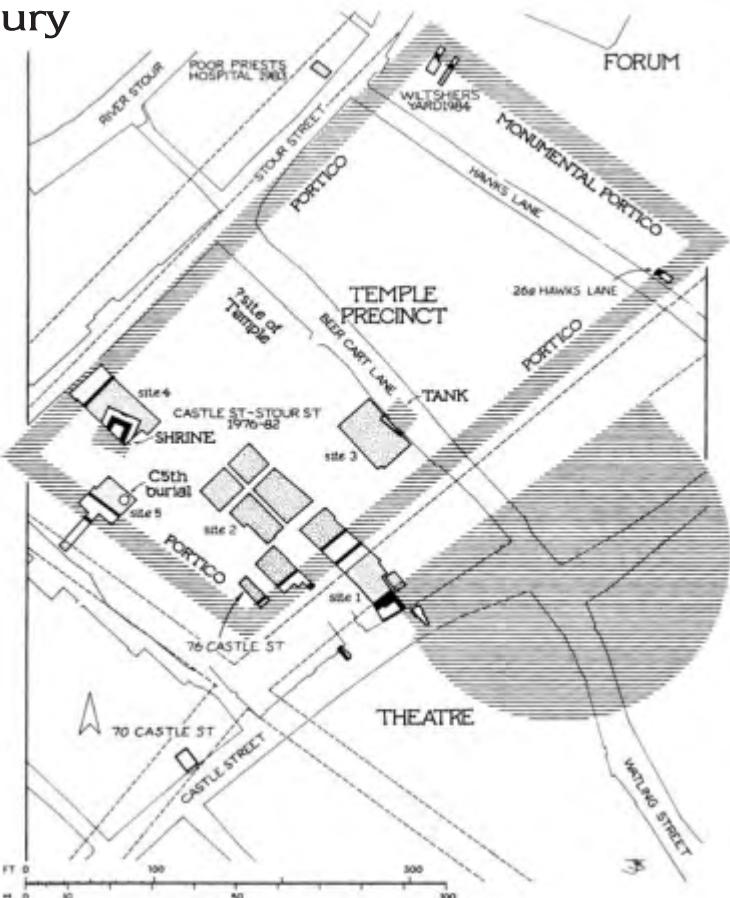
For about a week in April 1991 small scale excavations were carried out on a site due for redevelopment on the north frontage of Hawks Lane (at present a car park). The work was funded by the developer, Sunley Holdings PLC.

The works were primarily designed to evaluate the archaeology of the site and to determine whether further, more extensive excavation was necessary or feasible, prior to development.

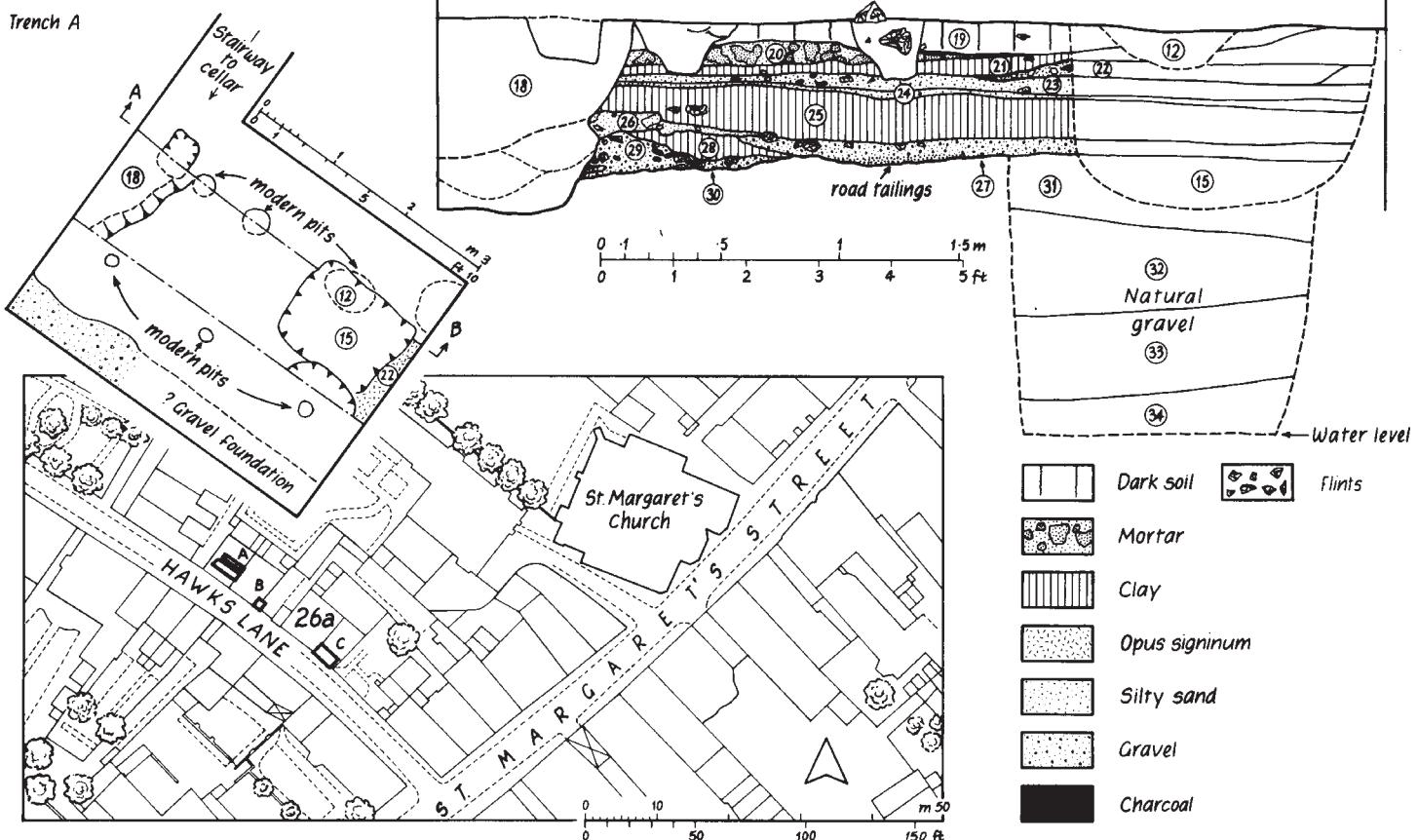
The main part of the area lies on the site of two early nineteenth century cottages, demolished after the Second World War. Machine excavation of a small area to the west of the site immediately confirmed that the cottages were cellared. The complete removal of cellar backfill by machine, and the hand excavation of a narrow trench (Trench A) through surviving archaeological levels beneath the brick floor of the cellar, was then carried out. In addition two small handexcavated trenches (Trenches B and C), were cut to the east. Trench B confirmed the presence of two cellars on the site. Trench C, dug to the east of a standing brick building (no. 26A Hawks Lane), confirmed that no cellars existed here, but that the more recent archaeological levels were badly disturbed by modern services and features.

No traces of surviving medieval floor levels or structures were observed in any of the trenches, although a shallow, linear gravel-filled feature, located at the base of the cellar (Trench A), on the road frontage and parallel to it, might indicate the remains of a foundation of a medieval structure predating the cottages.

The site lies at the north-eastern corner of the Roman Temple Precinct, immediately over and adjacent to the portico or covered walkway around



*26a Hawks Lane:
Plan of the temple precinct locating evaluation excavations.*



26a Hawks Lane: Location Plan for Trenches A, B, C; plan of Trench A and section A-B.

the precinct, which has been located on a number of previous excavations in the area.¹ In Trench A, Roman levels were encountered about 10 cm. beneath the cellar floor, at a depth of c. 1.80 m. below the existing ground surface.

The Roman deposits were cut by a number of medieval pits. A longitudinal feature (18) at the extreme east end, was undoubtedly an early medieval robber trench, and had removed the remains of the stylobate or inner wall of the portico. To the east of the robber trench various levels relating to the inside of the portico were examined. A layer of dark soil (19) probably dating from the immediate post-Roman period, capped a deposit of mortar rubble (20). Previous excavations to the south have demonstrated that the portico was demolished, possibly in c. A.D. 350-60, and its paving stripped prior to the laying of the latest courtyards within the Temple Precinct, which extended over the former portico. Layer 20 is either part of the latest courtyard surface, construction or bedding deposits for portico paving, or possibly demolition detritus from the portico superstructure. Layer 21 which immediately underlay 20 was probably a clay bedding for a late floor surface. This deposit sealed a substantial concrete floor of opus signum (22) which has not been found within the portico on earlier excavations. Across most of the trench the floor was considerably eroded and only survived as a thin scatter of fragments, but at the eastern end, adjacent to the projected position of the outer portico wall, it remained virtually intact at its maximum thickness of 12 cm. Below the floor was a sequence of clay and sandy layers (23-25).

which overlaid a lens of mortar, flint and stone (26). This level, which was considerably thicker adjacent to the position of the stylobate, may represent a construction deposit for the portico. The mortar directly superceded various layers of gravel (27-30) which are probably tailings from a major Roman street which flanked the east side of the Temple Precinct.

The earliest exposed deposits (31-34) appeared to consist of natural gravel. The upper horizon of this deposit is at the level expected for subsoil in this area. Normally, one would expect the uppermost natural subsoil to consist of Head Brickearth, a fine yellowish loamy clay. Although a 1-2 m. thickness of brickearth usually overlies natural gravels of the river terrace, it is possible that this gravel represents a localized 'pipe' or outcrop of natural gravel. To test this hypothesis a 1.2 m. deep sondage was cut through the deposit, to the level of the water table. This proved inconclusive since the lower level of the layer was not found, and no inclusions, such as pottery or Roman tile, were present to suggest redeposition. The layer may well be natural gravel, or, within the narrow confines of the investigation, was conceivably a very early Roman feature, presumably pre-dating the laying of the Temple Precinct in the late first/early second century A.D., such as a wide wall foundation, or deliberate infilling of a large pit or clay quarry.

The identification of features and levels forming part of the northeast portico of the Temple Precinct is of particular importance. The location of opus signum paving in the portico constitutes a significant addition to our knowledge of the complex history of this public building.

3 Starr Place, St Dunstan's, Canterbury

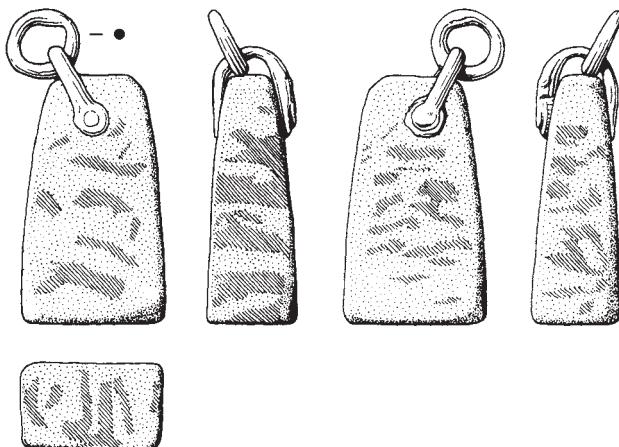
by Paul Bennet

During May evaluation trenching at Starr Place, St Dunstan's Street was undertaken in advance of the determination of planning consent for a small residential development. The excavation provided evidence for Roman industrial activity in a suburb west of the Roman town well-known for such discoveries.

Starr Place, formerly the site of a small early nineteenth-century mews connected by a passage to St Dunstan's Street, is now an overgrown area surrounded by ruined garden walls and the foundations of cottages that

once flanked the north-west and southeast sides of a small yard. The site lies some 40 m. (130 ft) south-west of Roman St Dunstan's Street and some 140 m. (460 ft) west of Roman West Gate.

Two trenches were opened on the proposed site of new buildings in the former gardens of Starr Place. One trench (Trench A) aligned roughly north-west to south-east was positioned to locate a Roman street found in 1987 on an adjacent site to the north-west. The second trench (Trench B) was aligned at right angles to the first and set to the south-west of it.



Starr Place: Goldsmith's touchstone bearing traces of gold. Scale 1:1.

Roman street metallings were encountered 1.2 m. below the existing ground surface of Trench A and 1.5 m. below that of Trench B. Both edges of the street were exposed, indicating a total road width of approximately 5 m. Shallow scoops either side of the street, filled with deposits of road wash indicated the position of side drains of approximately 0.6 m. wide. Trench A was excavated to the level of natural brickearth north-east of the street, but metallings were not removed. One or possibly two remetallings of the street were in evidence in the sides of later features found cutting the alignment.

Trench B was not excavated to brickearth. Here weathered brickearth, interpreted as a deliberate dump, sealed earlier Roman deposits. This material capped the south-western road drain and overlaid road metallings, indicating that at the time of deposition the street had fallen out of use. Two late Roman pits yielding fourth-century pottery and a number of metal finds including a coin of Valentian I (367-375) cut this deposit. The earlier horizon was only exposed in limited areas of the trench, but a well-stratified sequence of layers, on average 0.4 m. thick was in evidence in the sides of deeply cut later features. These layers of dark grey clay were interleaved with bands of carbon and burnt clay. The laminated deposits yielded a small number of 'waster' pottery sherds.

Remnants of a pottery kiln with two firing chambers separated by a central dividing wall were located at the south-western end of Trench B. The kiln had been largely removed by a late medieval pit but sufficient fabric survived to discern its plan. The stoke-hole was probably situated at its north-east side facing onto the street, entirely consistent with the deposits of carbon and burnt clay identified in the sides of deeper cuttings. The firing chambers of the kiln were approximately 0.4 m. wide and may have been in excess of 1 m. long from the projected mouth of the stoke. The central dividing wall was 0.35 m. wide. The internal dimensions of the structure measured some 1.05 m. north-south and in excess of 1.10 m. east-west. The internal fabric of the kiln survived to a maximum height of 0.25 m. with heavily-fired internal lining surrounded by a 'halo' of heat-penetrated bright orange natural brickearth on average 0.10 m. wide. A thin lens of carbon and burnt clay lining the base of both fire chambers was capped by a uniform demolition fill of kiln structure. The entire structure and its fills was in turn sealed by the dump deposit. Although the kiln was partly removed by a later cutting and its north-east end lay outside the excavated area its general dimensions and internal plan bore marked similarity to a kiln located in 1978 at 26 North Lane.³

A surprisingly small corpus of pottery was found in association with the kiln and overall the size of the assemblage will not allow a full appreciation of the kiln's products. The pottery and finds recovered from the general horizon indicate the kiln was constructed in the early to mid second century with industrial occupation terminating late in that century.

The latest Roman horizon was capped by a 0.85-1.10 m. thick deposit of brown garden loam. The development of the loam may be partly attributable to agricultural activity in the post-Roman period, but is more likely to be a bi-product of garden landscaping in the nineteenth

century. Although slight differences in the colour and texture of the deposit were discerned during excavation no distinct sub-divisions were identified. Five pits, yielding late twelfth- to fourteenth-century pottery and a brick-lined cess tank of nineteenth-century date were excavated. Although the original cutting of the pits may have been from different levels within the lower matrix of the deposit this was not successfully proven during the excavation. The brick tank was cut from the uppermost levels of the garden loam.

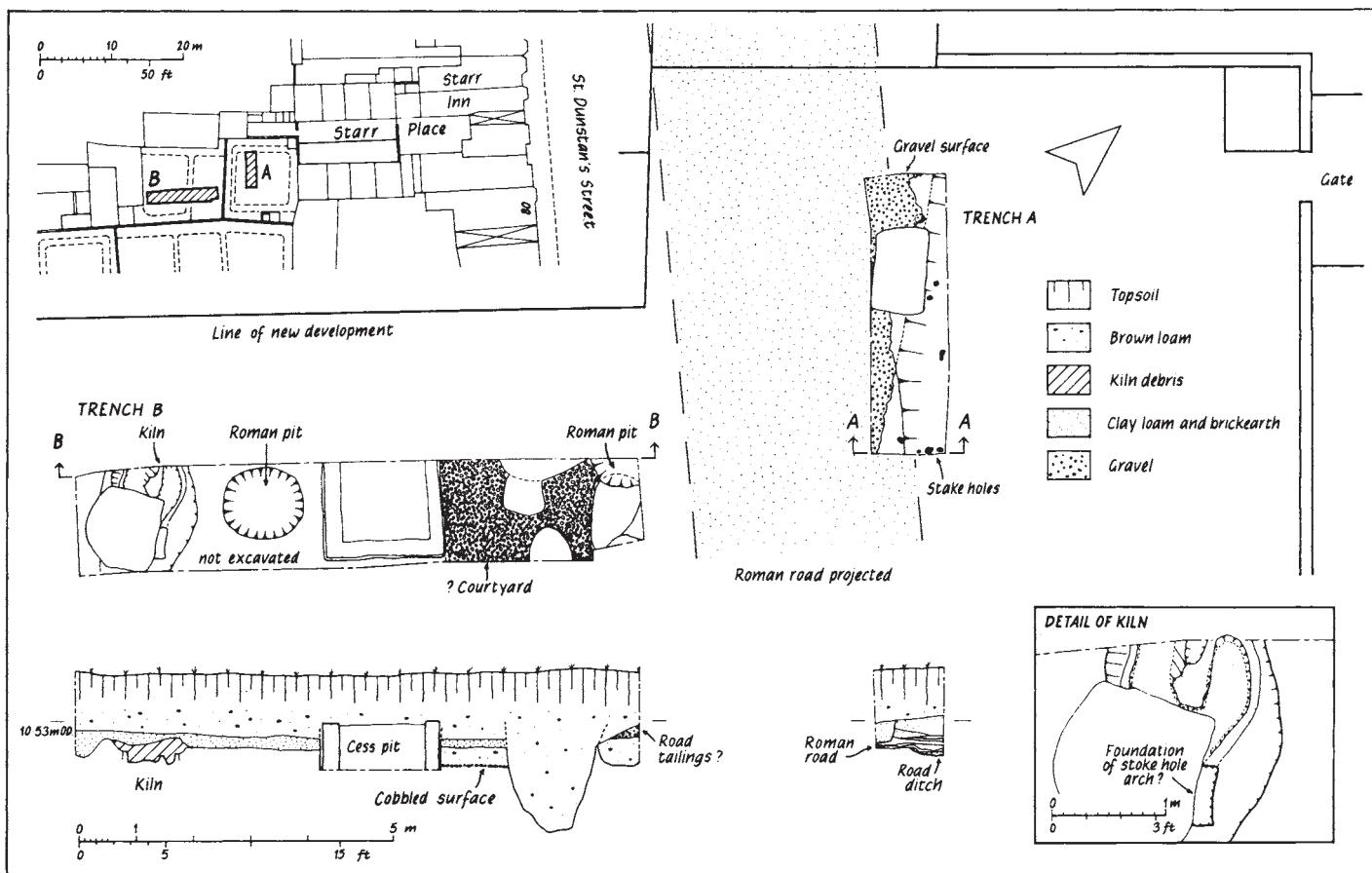
Numerous sitings of Roman levels and features have been made in the western suburbs of present-day Canterbury.⁴ Although many of the observations were for later Roman inhumation burials, some of the discoveries relate to earlier Roman metallised streets and industrial activity. In sum the evidence suggests the presence of an early suburb to the Roman town, laid out with a regular pattern of gravel-paved streets facilitating access to industrial working areas, principally devoted to the manufacture of pottery, brick and tile, but also containing some evidence for metalworking. No evidence for domestic activity has yet been discovered.

The suburb may have been established in the early second century, or perhaps slightly earlier, and appears to have been in disuse by the time the town defences were constructed in A.D. 270-90, when an inhumation cemetery (or cemeteries) was established in the area. The north-eastern boundary of the suburb may have been defined by the line of St Dunstan's Street, the south-western boundary by the line of Watling Street issuing from London Gate. The south-eastern boundary may have been formed by a north-west to south-east aligned street located in the Whitehall Gardens area in 1955.⁵ Roman industrial activity has not been located south-east of this line, but it is just possible that the suburb may have extended to the line of the present extra-mural stream or even the eventual position of the town defences. Further extension south-eastwards seems unlikely since domestic settlement is almost certain at this point. The north-western boundary of the suburb is equally unclear although Roman cremation burials south of the London road would suggest that it did not extend that far north. Although only two internal streets for the suburb have been located thus far a further subdivision of the area seems likely. Most likely is a north-west to southeast aligned street extending from the civic centre north-westwards to sub-divide the suburb into two equal halves. The present minor street, now located on three sites, tentatively suggests a division of the north-eastern half of the suburb into three roughly equal blocks each approximately 130-150 ft wide. Traces of perhaps three or more pottery kilns are now known immediately south-west of the minor street, all within 90 ft of each other. Although there is at present too little evidence to speculate upon, it is tempting to interpret this concentration of kilns as perhaps part of a small potting factory located in one insula of the suburb.

Of the two late Roman pits located during the evaluation trenching at Starr Place more should be said, since they represent some of the first evidence for later Roman extra-mural activity other than burials that have been discovered in this area. Both pits appeared to have been used for the disposal of domestic rubbish and therefore might indicate the presence of dwellings outside the town wall in the fourth century.



Starr Place: View of the kiln fire-box. Looking west. Scale 50cms.



Starr Place: Plan of evaluation trenches.

4 Land to the Rear of House of Agnes, St Dunstan's, Canterbury

by Paul Bennet

A small evaluation pit cut by machine in open ground formerly garden to the rear of the House of Agnes revealed the presence of a deeply buried Roman street. The trench, opened by a 'mini' mechanical excavator in early July 1991 was monitored by the Trust and the sides of the cutting were recorded. Although the north-south aligned pit was only 0.5 m. wide and 1.25 m. long, the sectional view provided by the cutting was considered sufficient to evaluate the likely impact of proposed footings on surviving archaeological levels.

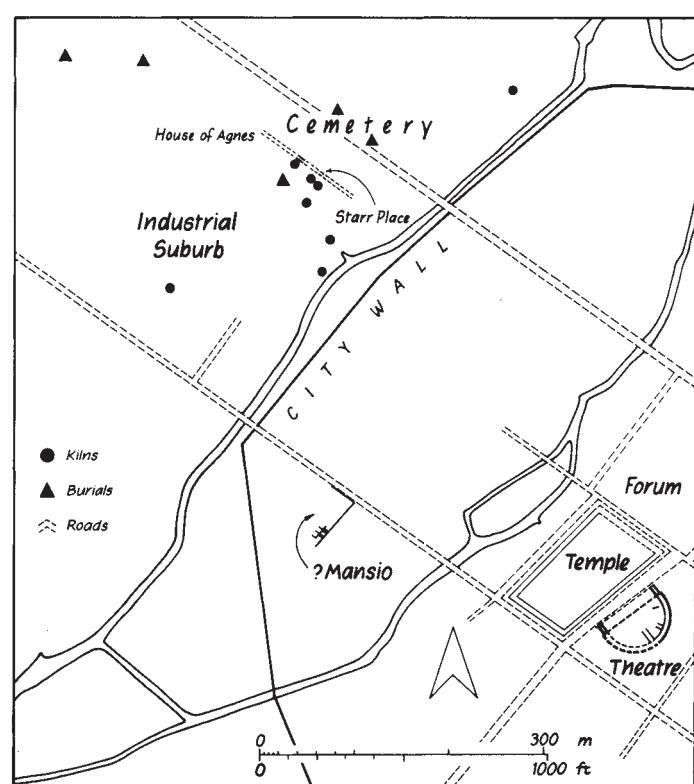
The sequence of levels observed comprised: rammed gravel metalling at a depth of 1.32 m. below existing; overlain by a 0.90 m. thick deposit of light brown sandy loam with few inclusions and a 0.40 m. layer of dark brown garden loam containing a lens of crushed brick rubble which outcropped at the present ground surface.

The lowest deposit of rammed gravel almost certainly represents the surface of a metallled Roman street. A single sherd of secondcentury coarse ware was recovered from deposits of pea-grit which overlay the street surface. The compact metalled surface was relatively even and smooth, but cambered from south to north, indicating perhaps that the section of street exposed lay close to the northern verge. A section of the same street was located on an adjacent site off Linden Grove in 1987 and another section of the same street at Starr Place earlier this year (see above). Overall all three observations indicate the presence of a street parallel to the line of Roman St Dunstan's Street set some 40 m. south-west of it.

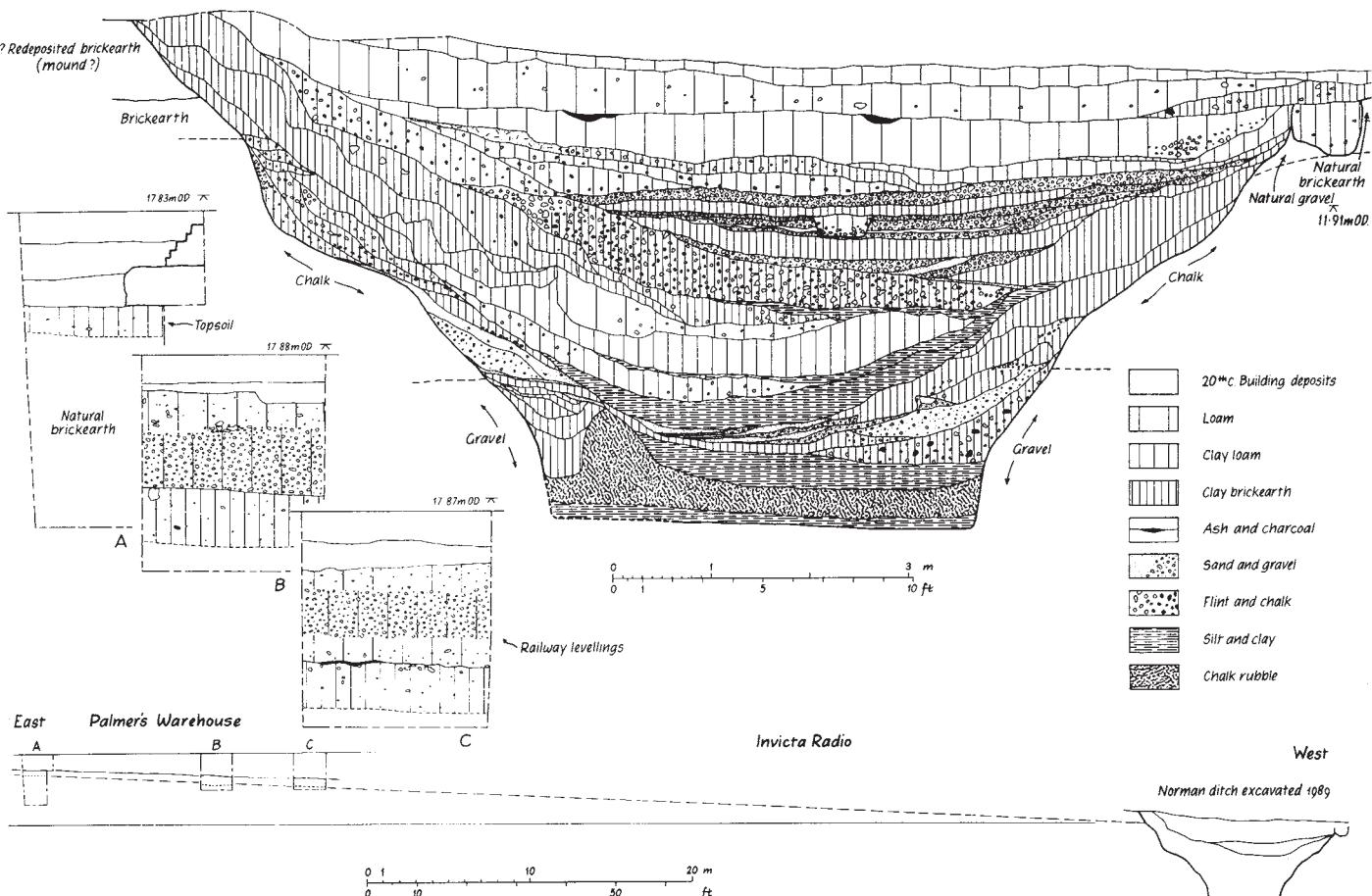
Despite the size of the evaluation pit the discovery of a section of north-west to south-east aligned street is significant and proves without doubt that the site has an high archaeological potential.

The deposits sealing the Roman horizon appear to contain no evidence for later occupation. The layer of light brown sandy loam, which constitutes the bulk of post-Roman overburden was homogeneous and appeared to contain no cultural materials. The texture of the soil was surprisingly soft, with very few inclusions, save for the occasional pebble. It was heavily root-infested and wormcast, suggesting perhaps that it developed as a consequence of agricultural use over a considerable period. The depth of the deposit is surprising and although agricultural use may provide one explanation for its development, other factors may be involved which cannot be explained at the present time.

The capping layers of modern topsoil and brick rubble were recent formations associated with the use of the area as a well-managed garden.



Plan of the western suburbs of the Roman town.



Station Road East: Sections from the 1989 and 1991 excavations, with a combined profile to show the early ground surface.

5 Station Road East (Palmer's), Canterbury

by Martin Herdman

During April 1991 test excavations prior to planned redevelopment were conducted in Palmer's warehouse at the extreme eastern end of Station Road East. The evaluation exercise was one of a number to have taken place in the area in recent years' all of which were conducted in the hope of widening our knowledge of the Roman cemetery known to have existed outside the town walls close to Roman Worthgate. In the event no burials were found. Excavations at the western end of Station Road East' provided evidence for a substantial ditch of early medieval origin, perhaps associated with an outer bailey for the Norman motte and bailey castle. Although there were high expectations of additional evidence for the earthwork, no further related discoveries were made.

Three trenches were cut inside the building within a small 12 m. square area. Despite the restrictions of the limited excavation area, an early ground surface was uncovered. This consisted of a topsoil of grey clay loam and contained mainly Roman pottery, some Roman tile and a coin dated to c. A.D. 330-345. Beneath this topsoil was what appeared to be undisturbed natural brickearth; a test pit was dug a further 2 m. in Trench A and no evidence was found to dispute this. An extensive dump layer of stony brown loam was encountered in each of the trenches. This may have been imported to raise the area in the 1860s when the station approach road was constructed.

Our thanks are extended to Sunley Holdings, the present owners of the site, for funding the evaluation exercise.

6 Christ Church College, Canterbury

by Ian Anderson

In July 1990 a trial trench was excavated by machine south of the Student Facilities building of Christ Church College, to assess the archaeological deposits in that area in advance of the construction of a new teaching block. The area investigated lies just north of the site of the main complex of St Augustine's Abbey and east of the Outer Court and monastic kitchens.

Earlier episodes of excavation and watching brief works,⁸ all in advance of or during the construction of new college buildings, have provided a substantial corpus of information for mid to late Anglo-Saxon occupation, industrial activity of thirteenth- to fourteenth-century date and a number of buildings, yards and drains associated with the Outer Court of St Augustine's Abbey. The evaluation trench was cut to ensure that similar features were not likely to be affected by the development.

Unfortunately it was found that no intact archaeological stratigraphy survived due to extensive concrete foundations of a warehouse which had stood on the site until demolition in the 1960s. The foundations were found to cover the entire trench and further evaluation was not possible at that time. A watching brief currently in progress during construction has revealed a complex pattern of pits of Anglo-Saxon and medieval date, whose presence was not indicated during the evaluation. The salvage recording of these features will be reported on next year.

We are grateful to the Bursar and Principal of Christ Church College for the finance and assistance given in this investigation.

7 The Wool Store, Pound Lane, Canterbury

by Dr Frank Panton



The Wool Store: Eighteenth-century view of the western city defences, looking towards Westgate, Pre -dating the construction of the Wool Store.

Early in 1991 the City Council asked the Trust to investigate the history, construction and use of the buildings known as the Woolstore in Pound Lane, in order to provide guidance to the Council in its consideration of the restoration and future use of the buildings. In response to this request, Dr F.H. Panton, Chairman of the Management Committee, carried out a review of available documents and contemporary sources, and produced a report for the Council. In payment for this work, the Council gave a donation to the Friends' Donald Baron Trust Fund.

It was found that Alderman Bunce's listing of land and properties owned by the City in 1797 included the land on which the Woolstore buildings now stand. It is clear from Bunce's description that the city wall survived there at that time. The City Chamberlain's accounts record the sale by the city of the land (or part of it) in 1802 to Mr Deane Parker, a prominent citizen. An engraving of the West Gate from Pound Lane in (*Perambulations in the County of Kent*), 1822, shows the city wall still standing, with no sign of the Woolstore. An engraving from Hasted in 1800 of 'A North View of Westgate' clearly shows the Sudbury Tower and Westgate with part of the town wall standing in between, with no sign of the Woolstore buildings. A print of a painting dated 1830 by T. Sydney Cooper, of the same scene, shows some buildings on the Woolstore site, together with a foot bridge across the river to the North Lane side.

From the deeds of the buildings held by the City Council (Deed file No. D582), the first of which is dated 14 November 1866, and from an examination of the series of Kent and Canterbury Directories held in the City library (dated from 1805 onwards), it may be deduced that from 1824-1829, James Clarke, woolstapler, was located in Pound Lane, probably as a tenant of William Fowler, then most likely the owner of the Woolstore. From 1845-1872, Robert Avann (senior and junior) variously described as woolstaplers, fellmongers, tannery and leather dressers, woollen agents, occupied the premises first as tenants and then as owners. In 1880 the Stagg family of Fellmongers bought the buildings and carried on business there until 1914. In 1918, Green and Co., a well established Canterbury firm of wool merchants, bought the buildings and occupied them until 1972, when the Council acquired them.

Clearance of the interior of the Woolstore ruins by the Trust revealed that four pieces of stone with lettering incised on them had been incorporated into the inside of the wall of the Pound Lane frontage of the

building nearest the Sudbury Tower. Together these pieces form part of an entablature, which reads:

ECONOMIC FIRE ASSURANCE ASSOCIATION
INSTITUTED, 1824.

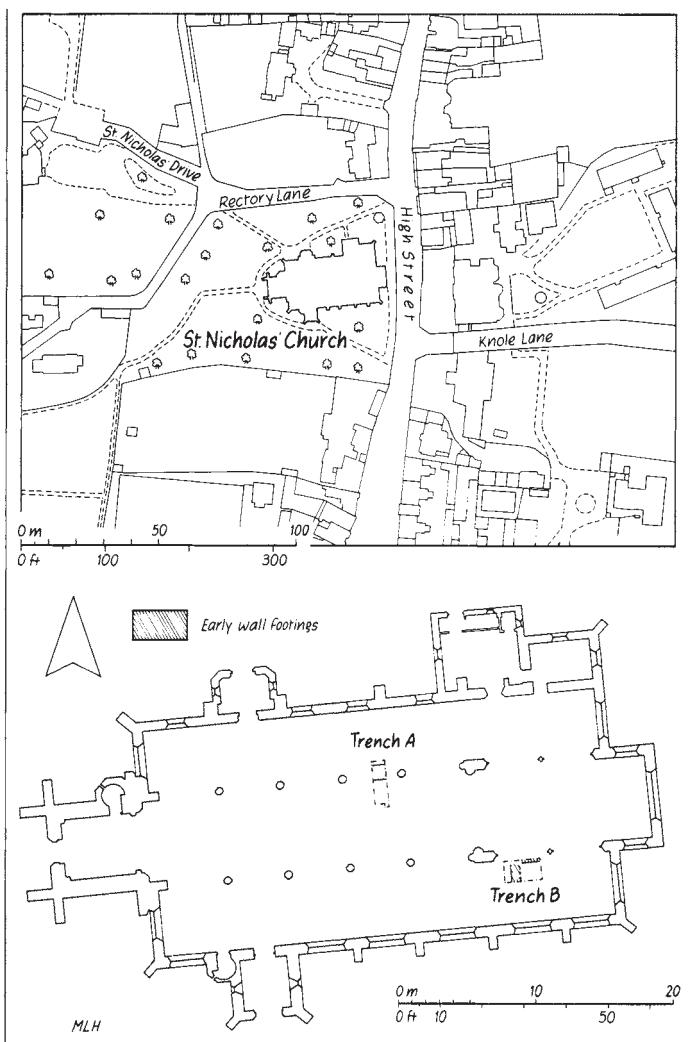
City records show that the city owned a building in St George's with such an entablature, which they sold in 1825 to John Calloway by public auction for £444. The map in Gostling 1825 edition shows the Economic Fire Assurance Association building in the area now occupied by Marks and Spencer. There seems no doubt that the inscribed stones in the Woolstore came from that building, or were a test piece, not in the event used, in the building in St George's Street.

In sum, the available evidence points to the conclusion that the Woolstore buildings were probably erected no earlier than 1822 but that by 1830 buildings had been erected on the site, with a light bridge across the Stour to connect them to associated buildings in North Lane. The buildings were used throughout most of their life until 1972, together with associated buildings over the river in North Lane, for fellmongering, tanning, woolstapling and as a wool store. Little guidance as to the construction of the buildings can be extracted from the available documentary evidence. Examination of the remains provides the best guide; if this indicates materials or constructions older than 1822, these must have been brought from another site for re-use.

Should it be intended to use the buildings to house a permanent exhibition of Canterbury life and history it is suggested that consideration should be given to an exhibition on either 'Strangers in Canterbury' or 'Canterbury and the River Stour' as appropriate to the building and the site. As to the former, the history of the successive influxes of Flemish and Walloon wool, cloth and silk weavers into Canterbury, their effect on the local economy and their relations with the indigenous community would be a good story to tell. The connection between this and the Woolstore is somewhat tenuous, but such an exhibition should attract foreign visitors. As to the latter, the story of the many mills, tanning and other uses to which the river has been put, the efforts through the centuries to make it navigable, or to give Canterbury a canal route to the sea, is one which deserves an exhibition on its own, and would be well placed on the Woolstore site.

8 St Nicholas Church, Sevenoaks

by Alison Hicks and Alan Ward



For a period of two weeks in October and November 1990 the Canterbury Archaeological Trust undertook the excavation of two evaluation trenches within the medieval church of St Nicholas, Sevenoaks. The purpose of these trenches was to gain an insight into the surviving archaeological strata within the body of the church prior to the possible construction of a basement. The archaeological evaluation was funded by the parish.

Sevenoaks church is first mentioned in the 'Textus Roffensis' of 1122, the standing structure being mainly of thirteenth-to fifteenth-century date. This is not the place to undertake a documentary and architectural history of the church; the nineteenth-and twentieth-century restorations have been studied by Ann Stocker who includes a bibliography with her work.¹⁰ It is sufficient to note here that documentary evidence suggests the existence of a church pre-dating the present one.

Trench A was cut across the line of the northern aisle arcade in the second bay west of the chancel area. The trench, of dimensions 3.40 x 1.00m was excavated to a maximum depth of 0.60m. The archaeological deposits were far shallower than expected and few traces of early floors or intact early stratigraphy were located. However, a stone foundation (27), 0.95m wide, surviving to a depth of 0.30m was discovered (plan and sections G-H, I-J), this covered by a thin layer of disturbed sand (26). Although this unmortared foundation comprising two or three courses of irregularly-shaped greensand blocks may have served as a foundation for the northern aisle arcade, the existing columns are not central to the foundation and the probability is that this footing may have formed part of an earlier twelfth-century church. The construction trench for the foundation was cut into undisturbed deposits which comprised, natural sand overlying a thin layer of ironstone rubble (visible in the southern part of Trench A). Natural sand of unknown depth lay below the stone horizon.

Below the level of the modern timber floor the nave arcade base east of the evaluation trench was obscured by a cladding of brickwork. Intact

archaeological deposits were set well below the pier base, with brickwork appearing to face foundation masonry (section A-F). The absence of an earlier sequence of floors, the apparent facing of exposed arcade pier-foundation masonry with brickwork and the discrepancy between the level of intact deposits and the top of the arcade foundation, collectively suggest that earlier floors were removed during major episodes of refurbishment in the nineteenth century.

Two, or possibly three graves were encountered in the sides of Trench A. Of the two certain graves, feature 23 was partially infilled by compacted plaster and mortar fragments (21) and seems to cut feature 25, in which the stain of a wooden coffin could be identified (section A-F). The third possible grave (F20) was cut into the early wall foundation (section I-J).

The early wall foundation and natural sand deposits were sealed by a thin layer of dirty disturbed sand (26). This layer, cut by all burials and later disturbances, may have been demolition or construction residue associated with the establishment of the fourteenth-century church. A similar but less extensive layer of dirty trampled sand was noted in Trench B (Layer 29, section B-C) and overall this thin deposit, perhaps common to both trenches, may prove to be the only surviving archaeological layer pre-dating the present church. Capping layer 26 and all graves was a compacted levelling deposit of plaster and mortar (18), perhaps laid during the 1878 restoration. This levelling deposit forms a basis for the brick dividing walls supporting the joists for the modern sprung floor.

Trench B measured 2.70 x 1.50m. The trench cut to a maximum depth of 1.20m, was located within the boundary of a former Chantry Chapel at the east end of the south aisle. The major part of this trench lay beneath a black marble slab 2 x 1 x 0.10m which was removed with the assistance of Durtrells Ltd.

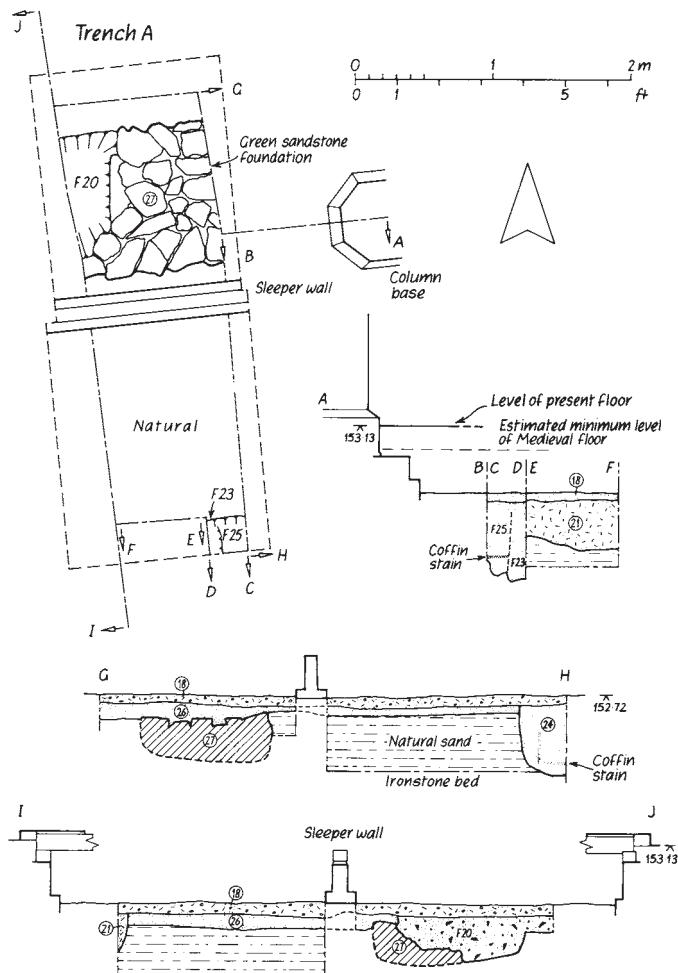
Extending under the northern side of Trench B were elements of what appeared to be two superimposed foundations. The uppermost of these, in mortared ragstone, may have been the edge of an extended foundation for the existing arcade base to the north-east. The south-east corner of an extended foundation for the chancel arch also in mortared ragstone was uncovered in the north-west corner of the trench (F17, plan, sections C-D, B-C).

Overlying the foundation in the north-east corner of the evaluation trench was a remnant of beaten earth, possibly a floor (31, plan and section C-D). A thin lens of dirty sand (30) underlay the later foundation and capped the earlier footing (15) which was set on the same line as the present arcade. This possible early wall foundation may prove to be associated with a second fragment of masonry found at the centre of the trench (12), bedded on natural sand. The masonry which comprised several irregular-shaped unmortared greensand stones, may have formed part of a wall set at right-angles to the eastwest footing. The evidence for the wall however, is slight being based on an apparent straight edge to the masonry on its western side.¹¹ The presence of other stones to the west of the postulated edge and the absence of a construction trench for the footing, perhaps argues against this interpretation. Further excavation may clarify this. Both early footings were sealed by successive deposits of trampled dirty sand (30, 29).

Part of a burial (F14, SK1: plan and section D-A) survived cut into natural sand; the skeletal material was recorded but not removed. The burial had been cut by the construction trench (F9) of a brick barrelvaulted tomb (F10). The eastern end of the vault may have been provided with an entrance to the tomb. A considerable number of disarticulated bones, including eight skulls, were recovered from the fill of the tomb construction trench (8). All the skeletal material has been reburied and will be recovered for analysis if future excavations take place. The tomb may contain three burials, the ledger slab perhaps having been moved from above the vault when the modern heating ducts were constructed. An earlier under-floor heating duct (F6) lay immediately below the floor (section A-B).

The loose sandy infill of the tomb construction trench was covered by loose rubble and sand (7), upon which a fragmented but compact mortar deposit had been lain. This levelling deposit was perhaps associated with the construction of brick dividing walls, the northernmost of which supports the timber floor of the chancel. The dividing walls were abutted by rubble infill (2) which provided a basis for the tile floor laid in 1878.¹²

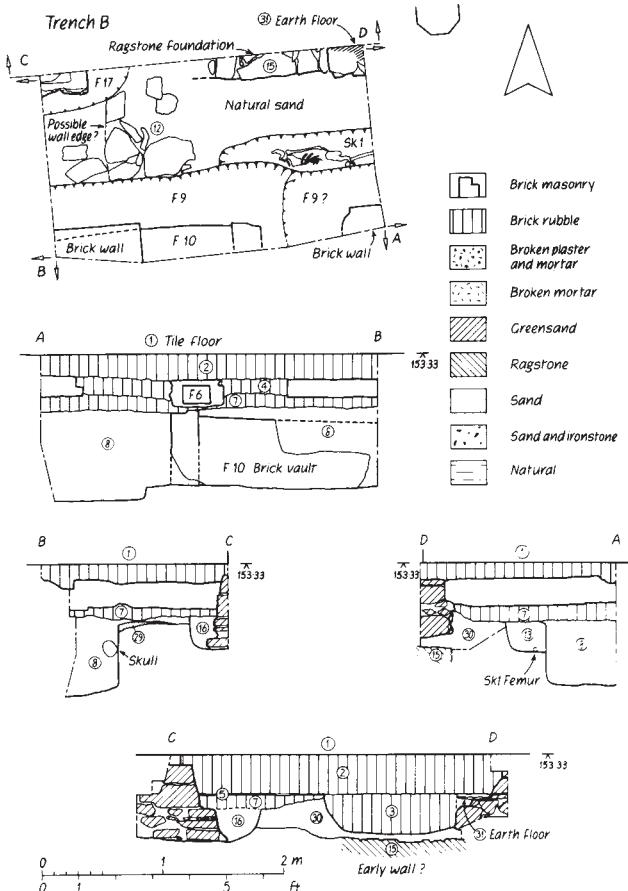
Although it is difficult to make definitive conclusions for the whole of the church interior from the results of cutting two small evaluation trenches, a number of observations can be made. First, it seems likely that no medieval or post-medieval floor deposits have survived nineteenth-



Sevenoaks Church: Plan and sections of Trench A

century episodes of refurbishment within the body of the church. Indeed, on the basis of observations made during the evaluation it seems likely that the surviving surface of intact archaeological deposits may be some 0.40 m. below the postulated original floor level of the standing church.

Secondly the survival of early masonry in both trenches suggests that the foundations or sub-foundations of an earlier twelfth-century church may exist within the body of the present church. These fragmentary traces of perhaps an earlier building are the most surprising and exciting results of the evaluation.



Sevenoaks Church: Plan, sections and key to sections, Trench B

Thirdly, the density of burials within the body of the church would appear on the basis of the evaluation to be of some magnitude. In these relatively small cuttings at least four burials, the constituent parts of at least eight others and a burial vault were encountered. A prolific number of individual inhumations, many cutting one another, can therefore be assumed to exist in the entire area of the church. At the east end of the church several brick tombs will be encountered: the Thorpe's 'Registrum Roffense' also suggests that vaults exist within the nave.¹³

9 Extension of the A20: Folkestone to Dover

by Jonathan Rady

Towards the end of 1990 the Trust began an archaeological evaluation of the route of the first stage of the Department of Transport's new A20 road from Folkestone to Dover. The project was supervised by Steve Ouditt.

The route of the proposed dual carriageway, c. 8.2 km. long, extends from two tunnels being excavated under Round Hill at Folkestone (TR 217 382), across the A260, and along the Alkham valley, adjacent to the present B road, to Cut Throat Lane (TR 236 396). From here the route turns east and crosses the high ground of the Downs north of Capel, eventually descending to the present A20 at Court Wood (TR 270 389).

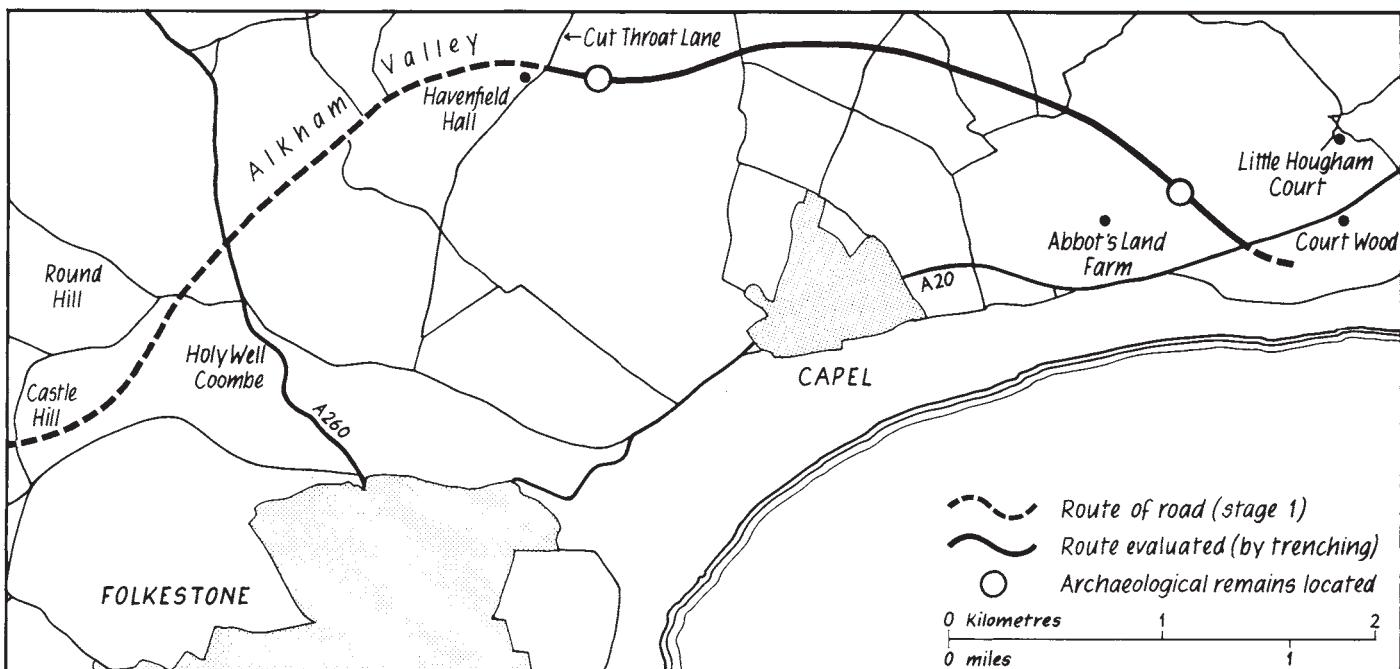
The first phase of the evaluation consisted of fieldwalking as much of the route as was possible in order to identify possible areas of ancient occupation and locate potential archaeological features. This operation yielded a considerable quantity of artefacts, mainly worked flints, particularly from the fields on the higher ground north of Capel, but these finds usually represented general scatters from wide areas and were not indicative of any localised activity.

The second stage of works consisted of prospection of the route by trial trenching. This involved the excavation of trenches, cut by mechanical excavator down to the subsoil, along the centre line of the road to locate and identify archaeological sites.

As is often the case with projects of this kind, particularly where an archaeological input has not been considered in the overall construction programme, very little time was available for the archaeological fieldwork before construction processes commenced. By the time work started on 7th January 1991 major earthworks by the contractors Balfour Beatty had already disturbed much of the route along the Alkham valley. Prospection trenching was therefore limited to the section east of Cut Throat Lane c. 3.5 km. in length and was by necessity carried out with some rapidity.

Most of the corridor for the road was on average 30 m. wide and in these areas a single line of trenches cut along the axis of the road was considered sufficient to locate important or extensive archaeological remains. In places, however, due to proposed large cuttings, embankments or associated landscaping, the area under consideration was up to 270 m. across. In these positions supplementary lines of trenches were cut across the axis of the road.

In about one month 120 trenches, on average 10 m. long, were excavated and associated features recorded. Generally the trenches were cut to the surface of the natural subsoil, usually a clayey brickearth, chalk or hill-wash; on occasions sondages through the hill-wash, normally



The A20 Evaluation: Route of the new A20 extension, showing location of archaeological remains.



The A20 Evaluation: Trial trenches on the Downs north-east of Capel.

resident at the base of valleys, were excavated. All the trenches were backfilled on completion.

In the event only two areas of ancient occupation were located. The first at TR 239 396 (c. 400 m. north-east of Havenfield Hall) was situated on the 100 m. contour on the lee side of a small hill. Here a small group of heavily-truncated pits, most only c. 20 cm. deep, were revealed. One of the features was however c. 90 cm. deep and yielded sherds c. Iron Age (c. 600-300 B.C.) and Belgic (A.D. 0-75) date. Although no evidence for structures was located, erosion and ploughing have probably removed much of the evidence and it is likely that a small occupation site of the Iron Age and Belgic periods is represented, possibly situated on the higher ground to the south-west.

The other area of activity was located at TR 266 390 (centred), on a high plateau (140 m. O.D.) c. 400 m. east of Abbot's Land Farm. Here a system of ditches generally aligned with the contours, approximately south-west to north-east, was located over a fairly wide area. Since this part of the route was at the tail end of the construction programme, a reasonable amount of work was possible. This involved cutting extra trenches to define the limits of activity and some small scale area excavation where archaeological features were concentrated.



The A20 Evaluation: Anglo-Saxon field ditches east of Abbot's Land Farm under excavation.

Although one or two possible pits were excavated, little trace of direct habitation was discerned. Some of the ditches appeared to date to the Anglo-Saxon period, specifically to the sixth to seventh centuries. Later material from the tenth century was also recovered. A considerable quantity of residual artefacts, including worked flints of Late Neolithic to Early Bronze Age date and finds from the Iron Age, Belgic and early Roman periods were also represented.

The majority of examined features probably date from the Anglo-Saxon period, although some could well be prehistoric, and probably represent parts of an agricultural field system associated with a nearby settlement. The wide chronological range of material recovered from this area, although possibly derived from more than one ancient occupation focus, strongly suggests that an unknown multi-period occupation site exists in the vicinity. This is perhaps located in the area of Little Hougham Court (TR 274 394, c. 750 m. to the north-east) or maybe around Abbot's Land Farm itself.

Considerable thanks must go to Ken Duguid of Mott Macdonald, consulting engineers to the scheme, whose support was of considerable importance in enabling the archaeological works to take place at such short notice, and who assisted throughout the project. Thanks are also extended to English Heritage for funding the operation.

III EXCAVATIONS

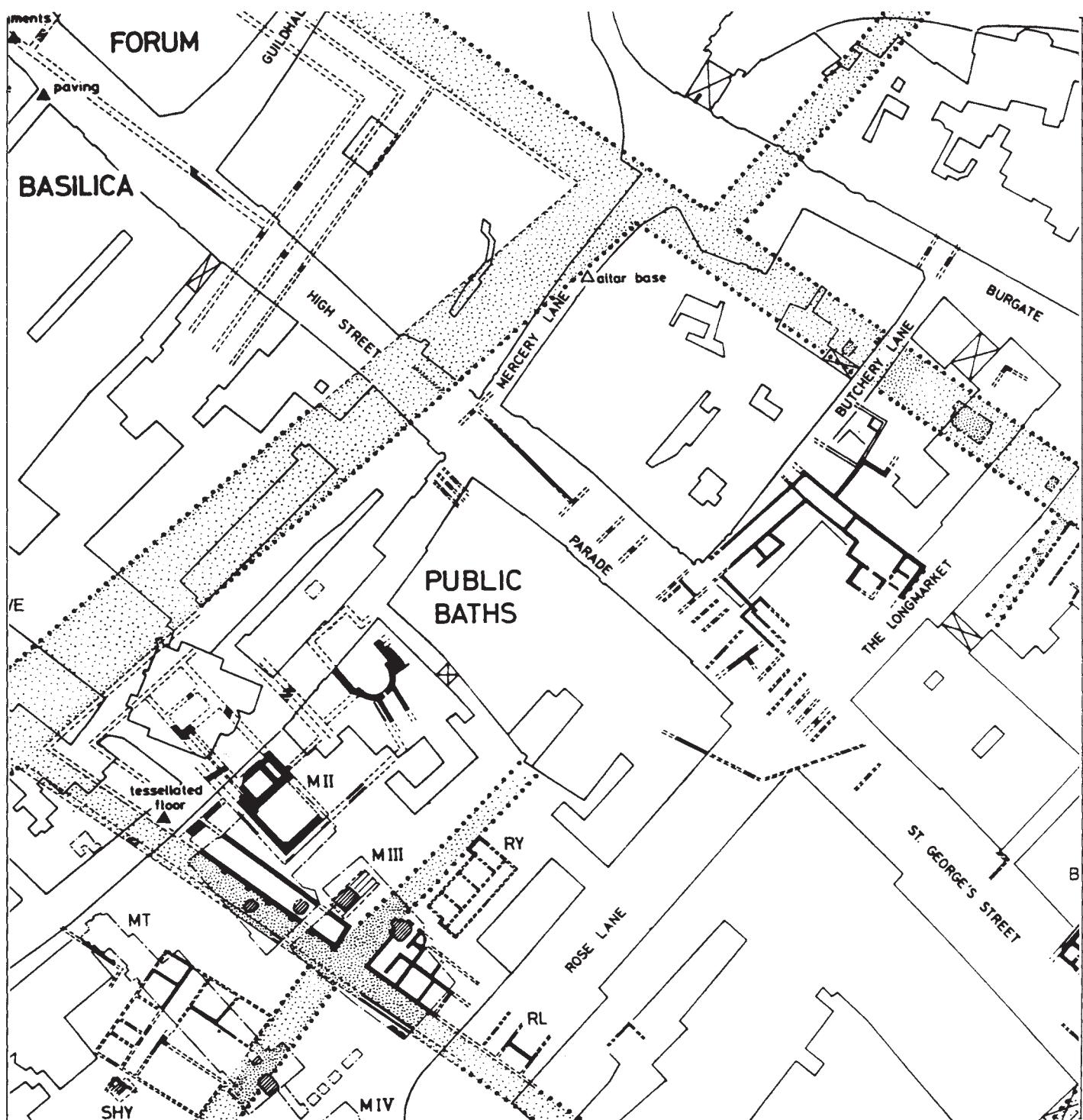
10 Longmarket, Canterbury

by Simon Pratt

The Anglo-Saxon and medieval deposits found during the 1990 excavations on the site of the new Longmarket development were described in last year's interim report.¹⁴ This article describes the investigation of the Roman and earlier levels.

Apart from finding some rather poorly preserved 'Belgic' and early Roman structures, the remains of a second-century bath-house were discovered. This had formed the north-east range of a Roman courtyard building, parts of whose southern and western wings and northern corridor were excavated by Audrey Williams in the mid 1940s,¹⁵ all but the southern range being incorporated into the Roman Pavement Museum in the mid 1950s. No additional evidence was discovered to support or

refute either of the two possible interpretations 'courtyard' house or mansio (inn) - which have been offered for this site. A second building complex, which Mrs Williams had been unable to investigate to any great extent, was partially uncovered to the north of the former Museum. This complex had undergone a particularly convoluted structural history, yet to be analysed in detail. Beyond lay a major east-west Roman road flanked by timber-lined drains. To the north of the road lay another property block, holding a series of buildings with clay floors timber and clay walls whose general plan could not be discerned in the limited area available for excavation.



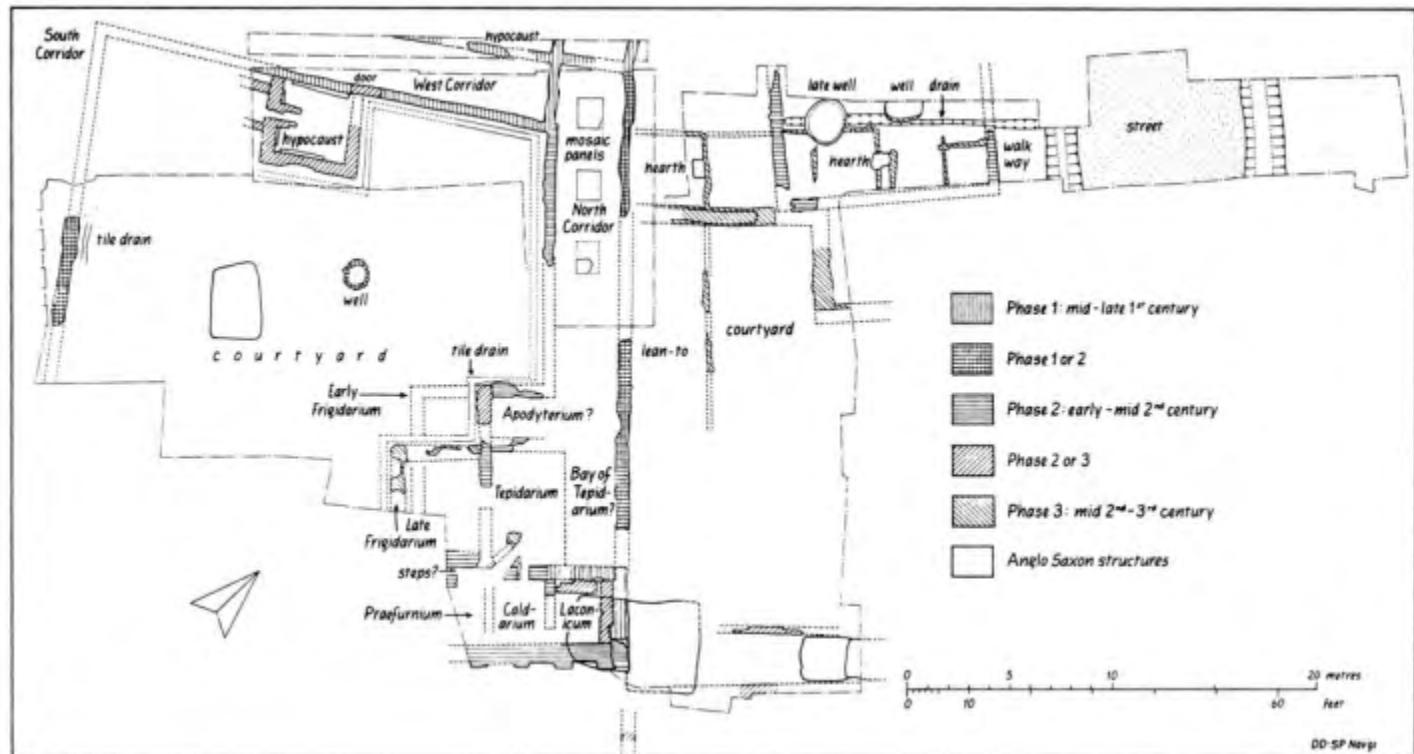
Longmarket: Location plan showing known and assumed (dotted) Roman buildings and streets.



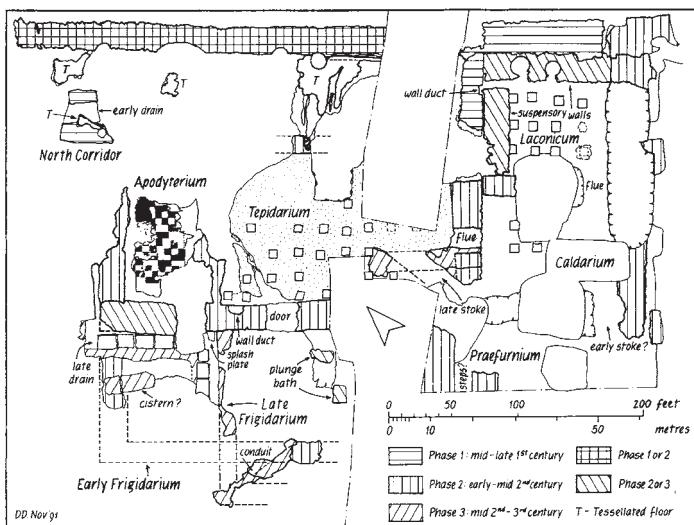
Longmarket: Timber-lined drain flanking the southern edge of the Roman street.



Longmarket: Tessellated floor with decorated panels from the southern property's north corridor, discovered 1945-6.



Longmarket: General Roman phase plan, including the positions of mid to late Anglo-Saxon buildings.



Longmarket: Plan of the southern property bath block.

The southern property

A line of substantial post-holes, probably dating to around the mid first century A.D., was found to the south-east of the former museum basement, flanking an east-west ditch of similar date. Each post had been dug out and replaced. The later set of posts had also been systematically removed, the ditch filled in and the ground made good before the first courtyard was laid over it in the third or fourth quarter of the first century.

On the extreme eastern edge of the excavated area, a clay-floored building with timber partition walls was erected some time in the first century. A one- or two-roomed structure was put up immediately west of this, at the north-east corner of the courtyard, in the late first century. It had substantial gravel foundations and flint walls which were probably covered in polychrome painted plaster (see below, note 18). The northern boundary wall of the southern property is likely to date to the same period as too is a flint-lined drain or conduit about 1.50 m. south of it. The earliest phase of the northern corridor itself, one side of which was formed by the boundary wall, may perhaps be as early as this though it is equally likely to belong to a mid second-century building phase. The earliest walls of the western wing, of brick-faced flintwork, were probably erected at the end of the first or the beginning of the second century.¹⁶ This wing held a wide corridor, bounding the courtyard, with a range of rooms along its western side. At least one of these rooms was provided with underfloor heating and a box flue-lined duct in one wall.¹⁷

The building in the north-east corner of the courtyard was largely demolished around the middle of the second century in order to make way for a bath-house.¹⁸ The clay-floored building to the east was also pulled down: its western margin was totally removed by the bathhouse whilst the rest was sealed beneath demolition debris and the area probably became a garden. The wide northern corridor, which may date to that or the preceding phase, connected the new wing to the western range. The eastern part of the bath house incorporated two hot rooms with hypocausts. The northernmost of these was probably a laconicum (hot, dry room) and the southernmost a caldarium (hot, moist room), probably with a hot plunge bath. South of the caldarium stood a sunken-floored room which was probably the praefurnium (stoke room and fuel store) and whose western end may have held a short, north-south flight of steps giving access from the courtyard. Beyond the steps lay the frigidarium (cold room). A doorway in the north wall of the frigidarium led to the tepidarium (warm room), west of which lay a small unheated chamber, perhaps a vestibule or apodyterium (changing room). The unheated area between the northern boundary wall and the hypocaust of the tepidarium may have been part of the tepidarium, an apodyterium or simply the relatively narrow terminal of the main east-west corridor.

The new walls of the bath-house were of coursed flint, with tile quoins and jambs, sometimes on rammed gravel, sometimes on coursed flint footings. The eastern perimeter was reinforced with at least four (probably five) external buttresses. The lower floor of the hypocaust of the tepidarium was of opus signum (crushed tile mortar), those of the hot rooms of crushed mortar and the pilae stacks which supported the upper floors of both were of clay-bonded tiles. Arched openings below floor level connected the hypocaust under the caldarium with those beneath the other heated rooms and, presumably, with the praefurnium. Tile-lined

flues set into the walls of the tepidarium and of the laconicum provided the draughts necessary to draw air through the heating system.

A small hypocaust room and praefurnium added on to the eastern side of the west wing¹⁹ may have belonged to this or a later phase, as too may a pair of tile-and-ragstone suspensory walls which helped support the upper floor of the laconicum. A short wall dividing the western corridor into two and another closing it off from the northern passageway are of similarly uncertain date: the former was of a rather indeterminate nature whilst the latter may have replaced an earlier partition.²⁰

The bath-house's original system of arched openings was subsequently rearranged so that the tepidarium could be fired directly, without needing to heat up the hot rooms at the same time. The frigidarium was also altered. Originally long and narrow, it was shortened and broadened to create an almost square chamber. It seems to have been equipped with a polygonal plunge bath associated with a flint-lined conduit feeding in from the south-west corner of the room.

A tile-floored drain or gutter following the walls of the re-modelled bath-house and west wing, was laid around the edge of the courtyard.



Longmarket: View of the north-east corner of a room opening off the western corridor, showing a tile-lined duct set in the wall.



Longmarket: The hypocausts of the caldarium and laconicum, looking north-west. The flue to the tepidarium is on the left, the laconicum wall duct is top right.



Longmarket: Part of the tepidarium floor, showing a wall duct and door to the frigidarium.



Longmarket: Part of the tepidarium hypocaust after the removal of the upper floor.

perhaps replacing an earlier series of plank-lined drains which crossed it diagonally from south-east to north-west. Finally, a structure was built on the courtyard side of the gutter, in the angle between the vestibule and frigidarium. Only a trace of one wall survived, of tiles bonded with opus signinum, and it cannot be interpreted with any certainty. The structure was probably quite small: a bench, step, cistern or aedicula (shrine) are amongst the possible identifications.

At some stage a channel had been cleared through the thick sooty deposits on the hot rooms' lower floors. This ran between the eastern wall and the easternmost line of pilae via the flue connecting the two rooms, then turned and followed the northern suspensory wall across and into a gap, between the north and west suspensors, which led to the wall duct. The material removed during this operation was thrown to one side, between the pilae. The aim of this work, conducted under very cramped conditions, was presumably to gain access to the wall duct in order to unblock it.

More or less well-preserved areas of tessellated flooring were found in most of the rooms in the western wing and bath-house as well as in the corridor which connected them. It could not be proven that any given floor was necessarily contemporary with the walls of the room in which it was found, so that a partial or general re-flooring of the building at a later date cannot be excluded. Traces of wall plaster were also present in some rooms.

The heated room west of the western corridor had a black or dark grey tessellated upper floor and red wall plaster with a quarter-round moulding of opus signinum at the base. A red tessellated floor was found in an adjacent chamber and a grey one in the western end of the corridor itself. The upper floor of the hypocausted room projecting into the courtyard did not survive.

The floor of the northern corridor consisted of a grey tessellated field with regularly spaced geometric mosaic panels running along the centre. All that remained of this paving outside of the existing museum area were, unfortunately, a few small scraps of the plain background (but see below): the rest had been destroyed by the large number of intercutting rubbish pits, cess tanks and wells dug in the back gardens of the medieval properties along Butchery Lane.

The hypocaust of the tepidarium was covered with a dark grey tessellated floor as too was the unheated area to its north. A trace of plaster rendering survived against the inner face of the northern boundary wall in this area and there was a scar from an opus signinum moulding at its base. A minute fragment of a geometric mosaic panel which survived over the northern revetting wall of the hypocaust of the tepidarium may have marked the position of a doorway between the two areas, if these were partitioned, or else it must have been a decorative feature near the centre of the chamber. Part of the border of another panel was found just in front of the door which gave onto the frigidarium from the tepidarium. The vestibule was paved with large red and dark grey tesserae laid in a simple geometric pattern. All the ground level floors lay on opus signinum bases.

Several patches in the tessellated floors bore witness to the degree of wear and tear to which they had been subjected, especially around the doorway between the tepidarium and the frigidarium.

About a fifth of the estimated area of the central courtyard was excavated to the east of the former museum basement and a flintlined Roman well discovered beneath the former museum. The courtyard

consisted of three or four major phases of paving, each with occasional patches and separated from each other by levelling dumps of clay. The main metallings consisted of hard poured mortar levels liberally studded with gravel and pebbles. A faint east-west linear depression in the surface of the first phase surface, just south of the south-east angle of the late frigidarium, may have been a wheel rut.

The northern properties

A sequence of Late Iron Age and early Roman clay floors with associated hearths, post-holes, beam slots and ditches was found just north of the bath-house. Only a small area had survived and it was not possible to reconstruct the overall layout of the buildings which had stood there.

The earliest building, dating to the mid first century A.D., between the former museum and the Roman road was represented by an opus



Longmarket: Part of the tile-lined gutter flanking the courtyard. The door between the frigidarium and the tepidarium can be seen in the foreground.



Longmarket: Section through the Roman courtyards and Anglo-Saxon 'dark earths' below an early medieval wall.



Longmarket: Northern property clay wall with two phases of plaster rendering.

signinum floor surrounded by traces of beam slots for wooden-framed walls. This was superseded by a structure with ragstone dwarf walls on the exterior, flanked by a gravel-metalled courtyard to the east, by a (covered?) walkway flanking the road ditch to the north and by an area given over to rubbish disposal to the south. The internal divisions, of timber or timber and clay, were frequently altered and many of the small rooms on the building's east side contained hearths. The majority of the floors were of clay but cobbles or opus signinum were occasionally used. The small rooms opened westwards onto a corridor, holding a shallow gully or gutter, which ran the full length of the building. There were probably further rooms beyond the corridor and there was a well on the gully's western margin. The building was later extended south and east, the new east wall being of flint, and the gravel courtyard was replaced by one of rammed chalk. A long lean-to was built on the south side of the courtyard, against the southern property.

The main building and lean-to were destroyed by fire in the late second or early third century. The fire had probably spread from one of the hearths. One hearth yielded a curious circular dish-like vessel which was found still lying where it had been abandoned.²¹ The heat generated here had caused the plaster rendering of the clay wall behind the hearth to buckle and fall away and had partially vitrified the clay's exposed surface.

The debris from the fire was then levelled off and a new building, with flint walls, erected. Very little of its plan survived but it appears to have ignored the lines of the earlier buildings and may have been an extension of the southern complex. It was probably contemporary with a large rubble-lined well discovered to the west.

To the north of the bath-house, the middle and late Roman levels had been almost entirely destroyed by later disturbance, leaving only a pair of north-south gravel wall foundations and remnants of a series of clay and mortar floors subsiding into an earlier feature. Deep gravel foundations for an east-west wall, probably Roman, were briefly visible when the construction company extended the excavated area eastward by a couple of metres. Its precise position could not be plotted but it was seen approximately to continue the line of the east west corridor's north wall.

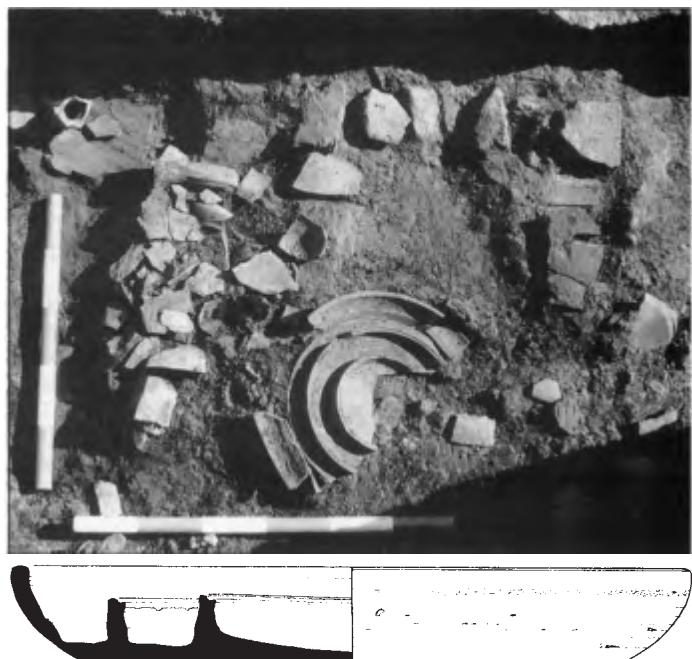
The end of the Roman structures

Generally, medieval and later disturbance had destroyed or obscured the evidence for the abandonment, demolition or robbing of the latest Roman buildings but some points of interest did emerge from the excavation of the bath-house and of the area immediately north of it. A pair of adjacent sunken-featured buildings, backfilled in the ninth or tenth century, were constructed right up against the gravel foundations of the more easterly of the north-south mid-late Roman walls immediately north of the bath-house,²² suggesting that it survived to some height well into the Anglo-Saxon period. The eastern wall (and probably also the internal partitions) of the hot rooms and praefurnium had been almost entirely robbed out to foundation level at a relatively early date, probably whilst the rest of the bath-house was still in use. By comparison, the wall separating the laconicum from the tepidarium remained standing well above floor level until the Anglo-Saxon or early medieval period and the north wall of the laconicum, which also functioned as a property boundary, stood long enough to serve as a wall of a ninth(?)-century sunken-featured building until this was extended farther south.²³ A second phase of robbing, predating the Anglo-Saxon extension and probably contemporary with the demolition of the north wall of the laconicum, removed the east wall of

the caldarium and of the praefurnium. This activity continued across the width of these rooms to dismantle most of such vestiges of the pilae and buttresses as the earlier robbing had spared. The hypocaust system of the tepidarium appeared to have been deliberately packed with soil some time before its western and northern walls were robbed out. The upcast from this robbing was thrown directly onto the remains of the tessellated paving, sealing a small post-hole (which contained a drop of quicksilver) and cut through the floor.

Given the above factors, the following sequence for the late history of the bath-house's structure may thus be proposed, though only tentatively and not yet tied to an absolute chronology. The laconicum and caldarium went out of use sometime in the third or fourth century, their hypocausts having already been isolated from that of the tepidarium, and those walls which were no longer of service were subsequently robbed out. The pilae and upper floor may also have gone at this stage whilst the retention of the north wall of the laconicum demonstrates that the property boundary still persisted. The tepidarium, and presumably the rest of the wing, continued in use after the demolition of the eastern rooms but at some point, probably sooner rather than later, the hypocaust was put out of commission and the wing ceased to operate as a bath-block though it was still occupied, perhaps by 'squatters', in the late Roman or early Anglo-Saxon period. The site was then effectively abandoned, becoming an occasional quarry for building materials, until reoccupation began in the mid to late Anglo-Saxon period. The Anglo-Saxon structures took advantage of the existence of standing walls here and there, but the Roman property boundary had clearly ceased to matter by the time the old north wall of the laconicum was knocked down and built over.

The entire excavation was funded by Land Securities PLC.



*Longmarket Partitioned dish found *in situ* on a hearth in the northern property: Drawing scale 1:4*



Longmarket: Northern property. A sequence of Roman clay floors overlying an opus signinum floor. Modern piles have distorted the layers on either side.

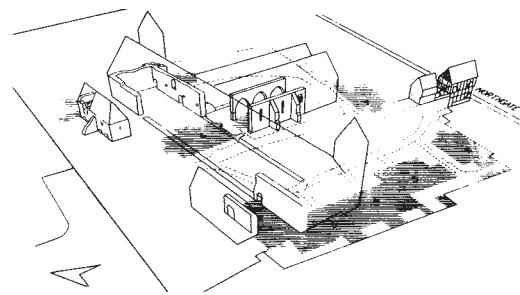
11 St John's Hospital North Reredorter, Canterbury

by Keith Parfitt

The site of St John's Hospital lies on the north-west side of Northgate street, opposite St Gregory's Priory. The land here slopes gently down towards the River Stour and stands at an elevation of between 8.75 m. and 7.25 m. above Ordnance Datum. The subsoil, at least on the lower part of the site, consists of river-deposited gravels and mud silts.

The overall plan of the original hospital complex is now tolerably dear. The medieval buildings were dominated by the vast dormitory (dorter) range, with overall internal dimensions of some 62 m. (northeast to southwest) by 8.45 m. (north-west to south-east), originally divided for men and women. Its long axis was parallel to Northgate and the river. Joining this dorter range centrally at a right angle on the southern side was the substantial double chapel, which still partially survives and is in everyday use. On the north-west side of the main dorter range were the two well-built masonry latrine blocks (reredorters), again, one for men and one for women. These were set some 5 m. back from the main dorter range. To the north-west of the southern latrine block lay another substantial masonry building, perhaps the kitchen. Above ground remains survive of all these buildings except for the possible kitchen block, which was first revealed by trial excavations in 1990.²⁴ The Hospital precincts originally continued down to the River Stour and were long used as nursery gardens, but most of this area has now been converted into a car park. The positioning of the hospital, upon the River Stour's flood plain may perhaps be regarded as being a somewhat marginal location, possibly occasionally prone to flooding.

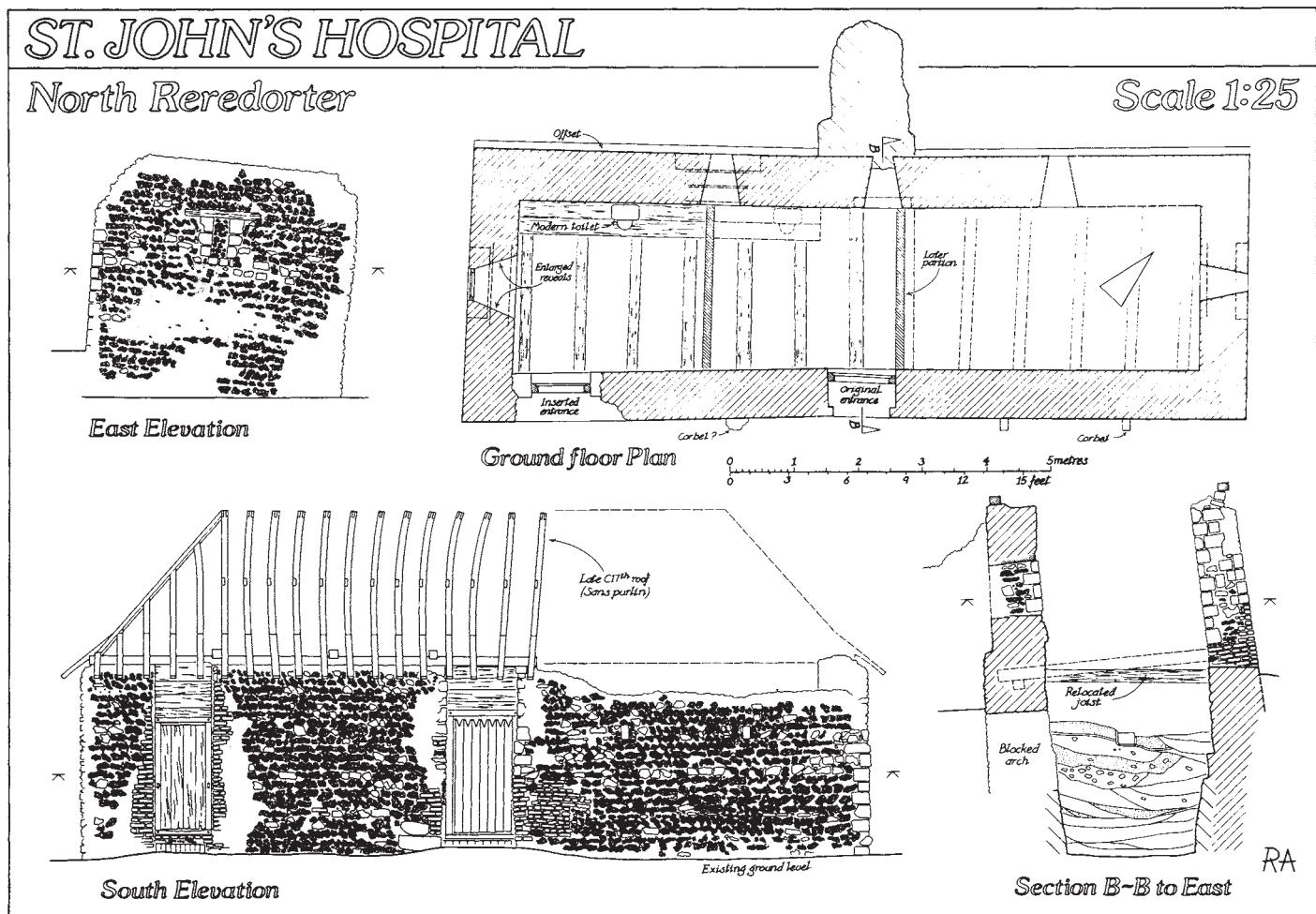
The hospital has continued in use until the present day. The survival above ground of substantial pieces of Norman walling, together with the continued occupation of the site has meant that there has been very little formal archaeological excavation on the site until that begun by the Canterbury Archaeological Trust in the 1980s.²⁵ The exceptionally well-preserved north reredorter block has now been the subject of a detailed study prior to its full restoration. The results of this work are briefly described below.



St John's Hospital: Perspective reconstruction from west showing extant medieval fabric.

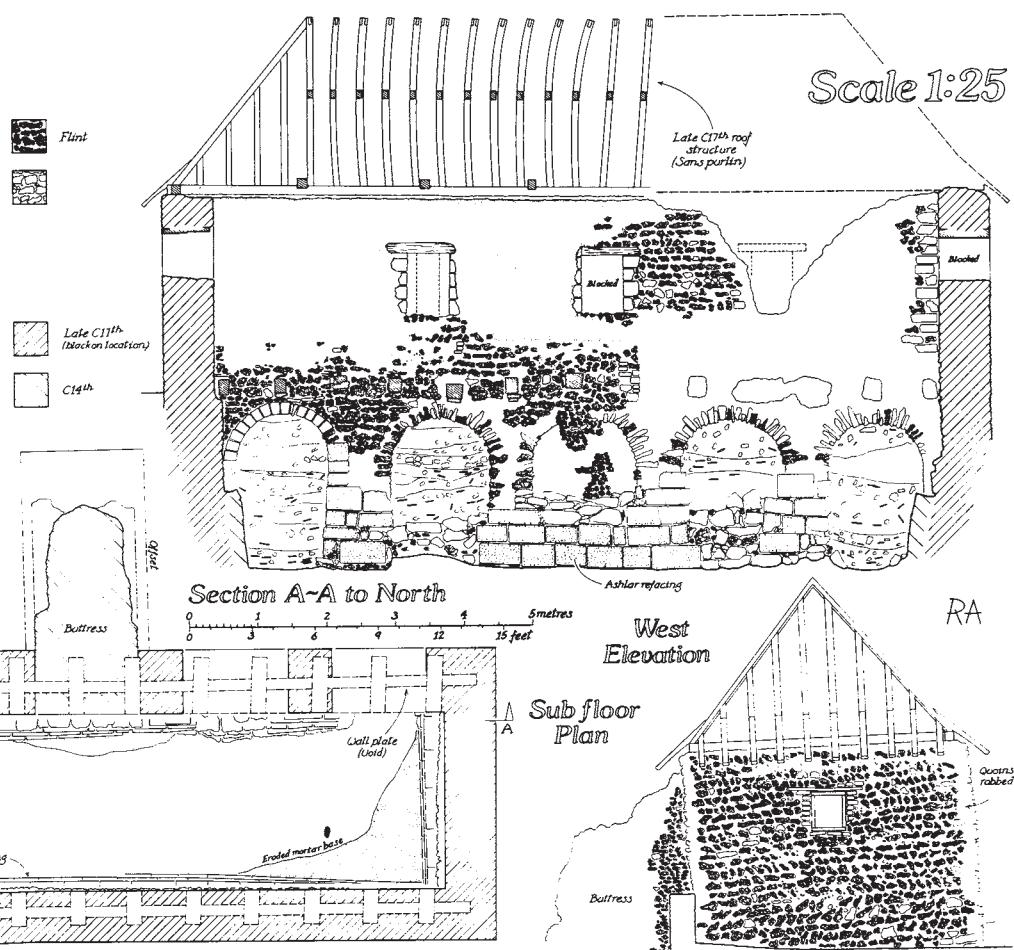


St John's Hospital: Northern reredorter. View from the south-east taken in 1978, showing the overgrown and ruinous state of the building.





St John's Hospital: Northern reredorter. Internal view of an original splayed window opening in the north-west elevation.



A survey of the surviving medieval remains of the hospital complex was undertaken by the Trust in 1983-84. The significance of the present building was quickly identified and a partial excavation of the filling of the structure was conducted at this time. This revealed an interesting sequence of soil deposits within the reredorter and further underlined the importance of the buildings.

After lengthy negotiations it was decided that the medieval ruins should be consolidated and that the well-preserved north reredorter block should be fully restored to serve as an interesting addition to remains available for public inspection. More detailed archaeological work on this building was then conducted between January and June 1991. This work took place in four phases:

- i) A complete survey of the existing structure, including a full rectified photographic survey
- ii) Survey of the roof structure
- iii) Excavation and recording of the deposits filling the reredorter below the floor level,
- iv) Environmental sampling of the lower deposits.

This integrated approach has provided a remarkable story concerning the continuous evolution of a piece of sanitary engineering over some 800 years. Following the archaeological work, the structure is being re-roofed and fully restored.

In January 1991 the structure was in a sorry state. The roof had been severely damaged by recent gales. The vegetation, cleared in 1984 was beginning to re-establish itself, and the interior was filled with unwanted garden tools and old furniture, all thoroughly soaked by water leaking through the damaged roof. Clearance work soon revealed a complex structure of several phases.

The bulk of the building was clearly Norman and no doubt contemporary with the hospital's original foundation date of c. 1084-5, with windows and a central doorway edged in characteristic Caen stone. The peg tile roof, although damaged, was supported by timber work still in a remarkably good state. From its construction this appeared to be of seventeenth-century date. An inserted doorway and alterations to some of the windows were of nineteenth-century date. Two internal wooden partitions, floor boards, a 'Vecta Straight Back' W.C., its associated

Burlington' cistern and wooden seat were also of nineteenth- or early twentieth-century date.

From a careful study of the building the following sequence for the evolution of the structure may be advanced.

Period f (c. 1085)

The north reredorter (together with its southern counterpart) was constructed as an integral part of the hospital complex. Initially, a large rectangular pit some 3.00 m. in depth was cut into the underlying river silts (to a depth of c 5.40 m. O.D.) a little to the northwest of the main dormitory range. This was then lined with solid masonry on three sides. On the fourth, north-western side, a series of five round-headed arches, each some 2.00 m. in height and about 1.40 m. in width, were built (three subsequently blocked). The masonry piers between these arches ranged between just 0.65 m. and 0.92 m. across, effectively leaving this side open for the removal of effluent. Implicit in this arrangement is the existence of some sort of excavation of a similar depth outside this wall. The ground here has not been examined in any detail, but it must be significant that the north-west side of the reredorter block faces the river, situated some 100 m. distant. It seems fairly certain that some sort of water flushing arrangement connected to the river was tied in with this building. The precise nature of this is not yet clear but the 1874, first edition Ordnance Survey map for Canterbury shows a network of open ditches or leats running from the hospital complex to the Stour. One of these runs from the north corner of the north reredorter block. It seems quite possible that this represents a successor to the original Norman arrangements which were perhaps otherwise similar. Heavy erosion of the chamber floor suggests that a substantial flow of water, which entered the westernmost arch, flushed the contents of the cess chamber before discharging through the easternmost arch. If this was the case, the three remaining arches would have been for ventilation purposes only. Some limited excavation work in the old nursery grounds to the north-west of the hospital complex has revealed further evidence for open leats in this area but precise details of the arrangement remain unclear.

Although the arrangements beyond the arches of the north-west wall remain uncertain, it is clear that the arch-tops lay just below floor

level in the original building. The floor itself was supported upon thirteen substantial square-sectioned timber joists, some 0.20 m. across. These ran across the width of the building and were set in deep wall sockets. Continuous wall-plates, measuring some 0.12 m. high by 0.16 m. across were built into the thickness of the north-west and southeast walls. These plates took the weight of the joists which were spaced at intervals of about 0.80 m. In the south-western half of the building substantial timber joists remained in situ. It is not yet certain if these are of Norman origin. If this is the case, they have certainly been repositioned in later times.

Above ground level the Norman walls stood mostly to their original height of around 2.60 m. and created a long, rectangular building measuring internally some 10.55 m. by 2.65 m., its long axis being parallel to the main dormitory range (i.e. north-east by south-west). Access was by means of a single, centrally-placed doorway in the south-east wall, facing a ground floor entrance into the dormitory range. This doorway was 1.07 m. wide, and several of its Caen stone jambs, including the rebates for an earlier door, are still visible.

The building was lit by five small squinted windows, also originally edged with Caen stone. Three of these were set at intervals along the north-west wall, whilst there was one centrally placed in each end wall. Original oak lintels remained over three of the windows. Nothing of the original Norman roof had survived, however.

The walls of the north reredorter block were generally about 0.75 m. thick with an external offset of some 0.10-0.13 m. along the northwest wall, just above ground level. They were constructed of large flint nodules, ragstone lumps and some lumps of Thanet Beds sandstone, roughly coursed and set in a fairly soft cream lime mortar containing frequent small flints, pebbles, and chalk lumps. There was some evidence that both the external and internal wall faces of the building were originally rendered. Apart from the quoins and window jambs, which are all dressed in Caen stone, no other worked stone was used. Consequently, the building is plain and undecorated.

Although a substantially constructed building, there was a major failing in its original design. The great weight of the north-west wall was mostly taken by only four narrow piers, founded upon soft river mud. The result, predictably, was a slow subsidence of the northwestern wall, which eventually caused the entire building to lean quite markedly. In its later stages the floor of the building would have had a very definite slope down to the north-west, especially at the north-east end.

Some time perhaps during the fourteenth century it appears likely that a fire devastated much of the Norman hospital complex. Archaeological evidence suggests something of the intensity of this fire. Many of the Caen stone edgings to doors and windows throughout the hospital complex show a characteristic pink tinge caused by severe heat. Such burnt Caen stone may be found on the remains of the main dormitory range. A charred wooden lintel still in situ over one of the doorways here provides further clear evidence of fire. The fire must have spread to other buildings in the hospital complex (origination in the dormitory seems most likely). The north reredorter appears to have been severely damaged as the fire spread.

Within the north reredorter burnt Caen stone blockwork occurs around the doorway and on three window surrounds, whilst a pinkish tinge to areas of original internal rendering is also likely to be due to the fire. Charred wooden lintels occur over two of the windows and five of the wooden floor joists showed areas of burning. From the variable position of this burning (sometimes on top, sometimes on the side and sometimes underneath) it seems clear that these joists had been later repositioned; indeed they could have been re-used here from elsewhere in the fire-damaged hospital complex. It seems highly likely that the original Norman roof was completely destroyed during this fire. Certainly nothing of it has survived.

Period II (fourteenth century)

Suffering from subsidence and severely damaged by fire, the north reredorter seems to have undergone major renovation work in the later fourteenth century. To stop further subsidence of the building a large rectangular buttress was added externally upon the northwestern side of the structure. This was centrally placed and completely blocked the middle arch in the north-west wall, together with the splayed window above it. At the same time, or a little later, the lower parts of the reredorter walls were relined internally, using massive blocks of squared ragstone. (Large quantities of very similar material were being used in the city walls at this time.) This relining no doubt helped to stop any further subsidence but principally seems to have been designed to reface the original Norman

masonry which by that time was presumably in a somewhat eroded state. The original Norman arch openings, with exception of the now blocked central arch, were retained, although two more were partially blocked sometime later.

Period III (seventeenth century)

During the seventeenth century much of the old medieval hospital complex was demolished and was soon replaced by a series of new timber-framed cottages for the residents. It is probably to this seventeenth-century rebuilding phase that the existing roof of the north reredorter relates. Implicit in this is the fact that the reredorter continued in use. Also at some stage (probably in the seventeenth century on the evidence of several inserted stone corbels on the outside of the south-east wall) it seems likely that the open yard between the then ruinous dorter and north reredorter contained at least two lean-to buildings, one built against each structure.

Period IV (nineteenth century)

Further large scale renovation work to the by then aged northern reredorter was undertaken during the nineteenth century when the existing flint-built almshouses were constructed. It would seem that by this time the north-eastern third of the building had lost its roof and fallen into disuse. The roofed, south-western two thirds of the building were now divided into two roughly square rooms separated by a central wooden partition. A new access doorway with brick jambs was cut at the western end of the south-west wall. Each room thus had its own door set in the south-east wall. Also at this time the still sloping floor of the building seems to have been properly rectified (perhaps for the first time). This was achieved by



St John's Hospital: Northern reredorter. View of the interior after excavation, looking south-east.

cutting down the joist sockets in the south-east wall until they were at the same level as those in the lower north-west wall. (The original socket voids were then filled with a white mortar of a type very similar to that used for the new doorway.) Taken together, it seems clear that the two new rooms created within the north reredorter mark a major change to the toilet facilities on the site. From Norman times the double hospital had always had a male and female latrine block. It would now seem that the southern block was abandoned and both sexes were accommodated in the northern block.

As part of the process of refurbishment a large quantity of soil, domestic rubbish and building rubble was tipped into the void under the floor of the structure. This dumped material totalled some 1.10 m. to 1.70 m. in thickness. One of the lowest dump deposits consisted of a substantial layer of loose purple-grey coal ash and cinder. This layer produced several Keiller's marmalade jars whose labels refer to the International Exhibition of 1862. This indicates a mid to later nineteenth-century date for the deposition of this material. Large quantities of china, glass and clay pipe fragments were also recovered from the dump deposits. The reason for dumping this material below the floor of the building is not certain, but it seems probable that it was intended as an easy, straight-forward way to give further stability to the structure. Moreover, the nineteenth-century deposits continued into the arches, indicating that these had remained at least partially open until then. Thus, the unpleasant and primitive belowfloor workings of the reredorter were finally sealed and shortly after two modern porcelain W.C. pans were inserted. These were set upon brick pedestals resting on the backfill deposits and were connected by ceramic pipes to the still extant sewerage system. Victorian sanitary engineering had thus been extended to yet another part of old Canterbury.

From accounts of older hospital residents it would seem that these Victorian facilities continued in use until c. 1948 when small brickbuilt bathrooms were added to the Victorian almshouses, thus making the

outdoor privy finally redundant. From then on the north reredorter was reduced to the status of a general garden shed and rubbish store. Vegetation engulfed the structure and its true nature remained largely unrecognised until work by the Trust in the 1980s.²⁶

The filling of the north reredorter

Following the removal of the floor boards and most of the internal fittings it was possible to excavate archaeologically the filling of the north reredorter. The north-eastern (abandoned) third of the building had been excavated to base level in 1984, leaving the remaining deposits to be dug in 1991. Upon removal of the existing nineteenth-century floor boards, a series of substantial wooden joists were revealed, totalling seven in number. Mortices, rebates, numerous dowel holes and areas of burning clearly indicated that these were re-used and it seems fairly certain that they are of medieval origin.

Below the floor joists was a void between 0.60 m. and 0.80 m. in depth. Below this the first stratified soil deposits occurred. These consisted of the mid to late nineteenth-century dump layers noted above, totalling some 1.10-1.70 m. in thickness. These dump layers sealed a series of earlier deposit totalling some 0.60-0.70 m. in thickness. The lowest of these layers rested upon a dark grey mud silt, clearly representing a pre building river-laid deposit, probably disturbed by workmen's feet during the medieval construction work.

The deposits filling the lower part of the reredorter generally consisted of interleaved layers of organic, cess-like material, and demolition deposits containing much crushed mortar, broken roofoile and flint lumps. These presumably relate to phases of minor repair work to the upper walls and roof. The organic deposits are clearly to be expected, given the nature of the building and over 2 tonnes of sample material were taken from the lower filling of the reredorter for study at the York Environmental Archaeology Unit. A thin cream mortar layer located upon the surface of the river mud at the foot of the north-east, south-east and south-west walls must represent the construction layer associated with the fourteenth-century relining of the structure.

A considerable quantity of pottery and other finds were recovered from the deposits filling the lower part of the reredorter. Unfortunately no original Norman deposits had survived and those excavated relate to the later phases of the use of the building when the inferred Norman water-flushed system has ceased to be completely effective.

The mortar construction layer at the base of the relined walls produced a few pot sherds dated to the period 1375-1450, confirming a late fourteenth-century or perhaps early fifteenth-century date for the relining. The lowest of the fill deposits yielded pottery of the period 1475-1550. Above this, layers containing sixteenth- and seventeenth-century pottery gave way to a final deposit with material of the early nineteenth-century. This was sealed by the later nineteenth-century dump deposits. Thus, a fairly long time span is contained within a fairly thin sequence. To what extent these deposits represent a continuous, unbroken sequence is not certain. It seems possible that other material may have been flushed away or dug out, leaving no trace. Nor it is clear to what extent the excavated deposits had been relaid by moving water. On balance, a fairly intact sequence seems to be represented.

The north reredorter block of St John's Hospital constitutes an almost unique structure surviving largely intact from the early Norman period. The extent of the remaining Norman work would in itself be remarkable, but what makes this building even more interesting is the great length of time (well over 800 years) that this basic structure served its original purpose. There can be no doubt that this building is a strong contender for the title 'the world's oldest continuously used privy'.

Nor has the building's life come to an end, for with its restoration it begins a new career as an education centre, illustrating the evolution of sanitary engineering - a vital component of urbanised life from earliest times.

The writer would like to thank English Heritage, Canterbury City Council and the Trustees of St John's Hospital for financing the archaeological and restoration work. On site, the present day sub-Prior of St John's Hospital, Mr Charles, took a lively interest in the operation and gave every assistance to the excavation team. Ms M. O'Connor, site architect and the building team from Messrs Fullers of Faversham also took a keen interest in the work and gave considerable help in a variety of ways. Finally the trust staff who undertook the excavation work must be thanked. Messrs Tim Allen, Kirk McKenna and Miss Sue Warne worked tirelessly on what turned out to be a deep, cold, wet and difficult excavation.



St John's Hospital: Northern reredorter. View of the seventeenth-century roof looking south-east.

12 St Nicholas Church, Thanington

by Paul Bennett and Trevor Anderson

In October 1990 damp proofing works against the north wall of the northern tower of St Nicholas Church, Thanington exposed part of a medieval masonry coffin with decorated Purbeck marble cover. Workmen undertaking the reconstruction work accidentally broke the cover at its west end. Subsequent removal of the broken section indicated that skeletal remains of perhaps two individuals were contained within. The discovery was reported to the Trust by the incumbent, the Rev. Len Cox, and permission was given for a more thorough inspection to take place.

The contractor's trench, located at the base of the tower's north internal wall, had exposed the north side of the coffin to its full depth. The burial which was hitherto unknown had been sealed beneath a Victorian glazed tile floor and a bedding of rammed chalk. Consent was given for the removal of additional floor tiles to reveal the entire coffin structure.

The coffin, cut from a single block of Caen stone of trapezoidal shape with vertical sides 0.32 m. deep, measured externally 2.10 m. east-west, 0.74 m. at the west end and 0.34 m. at the east end. The coffin walls and base were uniformly 9 cm. thick. A raised step with head niche existed at the west end of the coffin. The step 0.28 m. east-west with centrally located recess 0.23 m. wide was cut to just above the level of the coffin floor. The leading edges of the step and recess bore a 45° chamfer. The internal top edge of the coffin walls were simply chamfered.

Two 1 cm. diameter drainage holes pierced the base of the stone coffin, these set centrally, located under the pelvis of the primary burial. The holes were joined by six roughly-cut shallow grooves or channels which extended north and south of the hole portions. The interior of the coffin was well-finished with fine tool marks in evidence on all faces. The exterior was equally well-executed but here the toolmarks were at opposing angles and less fine, indicating that finishing was considered unnecessary.

The Purbeck marble cover, uniformly 14 cm. thick was cut to precisely fit the coffin. The lid was decorated with double cavetto mouldings 8 cm. wide and a high polish was evident on mouldings and parts of the lid surface. No evidence for further decoration or indentures for brasses or other metal fittings were discerned. Extensive scars in the surface of the lid were probably the product of general wear and tear. Although contemporary floor level was not established, it appeared likely that the coffin lid was set slightly above floor level, perhaps to almost the full thickness of the cover.

Besides the more recent break at its west end the lid had been deliberately cut. Diagonal and roughly parallel cuts executed with a fine-toothed saw subdivided the lid into three equal parts. This subdivision probably took place when the coffin was re-opened for the later interment.

The constructional details of the coffin and the decoration of the lid suggest that the primary burial may have been of fifteenth-century date. A date for the re-opening of the coffin was not established.

The two skeletons were practically complete although certain bones were very fragmentary. SK 1 (male: 35-45 years) was supine (lying on its back), fully articulated with arms by its sides. The right hand was positioned under the pelvis. Most of the feet bones were missing. SK 2 (male?: 30-40 years) was represented by dis-articulated bones, the long bones had been carefully (but not anatomically) placed at the sides of SK 1. Large fragments of wooden coffin were also included with the bones. The skull was placed at the head end, next to the right shoulder of SK 1. SK 2 was perhaps originally buried elsewhere in a wooden coffin and reinterred inside the stone coffin after some considerable time had elapsed.

So far it has not been possible to locate any documentary evidence which would identify the burials. There is some evidence of a familial relationship between SK 1 and 2 from the dry bones themselves. Both skulls display persistence of a suture of the frontal bone. This condition, known as metopism, has an incidence of c. 9-11 per cent in British material and is considered to be a hereditary character. z Both skeletons display unilateral, right-sided, os acromiale. The tip of the acromial spine of the scapula has remained unfused. Inheritance of this trait is uncertain, possibly a genetic susceptibility, modified by environmental factors. z\$

There was no evidence to suggest cause of death on either skeleton. SK 1 was suffering from degenerative joint changes of the lower spine and right wrist. The medical aspect of the left lower leg displays localised bone swelling; evidence of previous minor trauma. The ossified thyroid and cricoid cartilages were recovered. The only pathology on SK 2 was a well healed elliptical depression of the skull (right parietal). The lesion was c. 1 mm. deep and 17 x 9 mm. (a-p x m-l). It was sited c. 55 mm. from the parieto-temporal junction and c. 60 mm. from the occipital bone. The injury had healed with no evidence of infection and was probably inflicted several years before death.



St Nicholas Church, Thanington: Views of the burial during excavation. Looking east. Scale 2m.

13 The Church of St George-the-Martyr, Canterbury

by Tim Tatton-Brown



St George's Church: View of the church ruins in the late 1940's, looking north.

Photograph courtesy of Mr Paul Crampton.

Excavations in advance of major redevelopment of the former site of St George's Church by Land Securities began on 3rd June. By the end of the period covered by this report (July 1991) only the uppermost parts of the site had been excavated. A history of the church is given below, together with brief details of the archaeological levels exposed at this time.

In the small hours of the morning of 1st June 1942, the church of St George-the-Martyr in the eastern part of the city of Canterbury was totally gutted by fire during an infamous 'Baedeker' raid on the city by German bombers.³⁰ At the same time, almost the whole of the surrounding area in the small, tightly-packed, urban parish was also destroyed. Many of the buildings were medieval (and later) timber frames that burnt easily, and in the space of only an hour or so they were all reduced to smouldering rubble.

The church and parish of St George probably came into existence in the decade or so after the arrival in Canterbury in 1070 of the great Norman Archbishop, Lanfranc. By the middle years of the twelfth century, when St George is first documented in a cathedral rental,³¹ the city contained twenty-one stone parish churches, most of which were newly built and consisted of just a nave and small chancel. St George is no exception, and the earliest part of the church, the nave, lies just to the east of the surviving tower. To the east of the nave, the excavations have uncovered the curved rammed gravel foundation of the original apsidal east end. Part of the curved south wall of the original chancel has also survived, and it and the neighbouring south wall of the nave, are made of large coursed whole flints with occasional pieces of tufa. This suggests an early Norman date (late eleventh century).

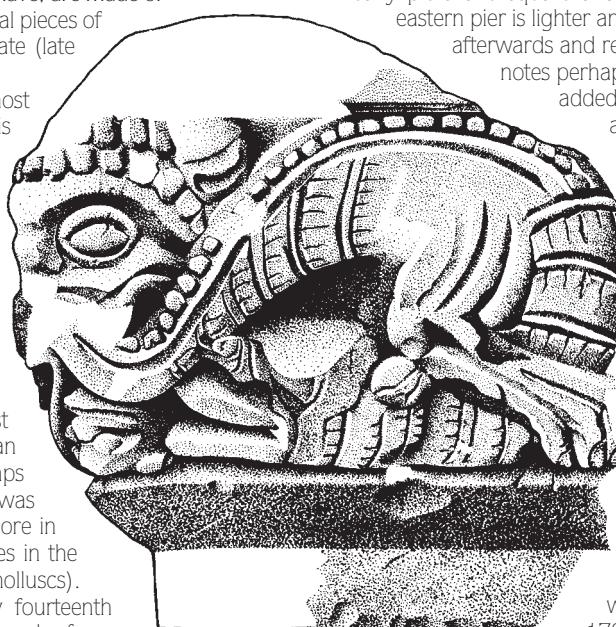
The surviving west tower was almost totally refaced after the war, so it is difficult to study the original masonry. However, the lower west face of the tower and the small restored doorway (made originally of Caen stone) both suggest an early to mid twelfth-century date, and it is probable that the western tower was built inside the nave (that had been extended in the twelfth century) in the fifteenth century. The tower is not quite as wide as the original nave. In the lower external west face of the tower, various re-used Roman bricks can be seen, as well as large lumps of the local Tertiary sandstone. This was almost certainly quarried on the foreshore in the Reculver area (there are many holes in the stone drilled by and filled with boring molluscs).

From the late twelfth to the early fourteenth century, the chancel was rebuilt in rectangular form in three separate stages.³² Only the foundations for the first two stages survived, but part of the south wall of the final stage (early fourteenth century) of

chalk blocks with a flint face was still in situ. The small vestry to its south-east must have been built at about the same time. It was demolished in the mid nineteenth century. The finest thirteenth-century feature in the church, which survived until the war, was the beautiful octagonal font. It stood on a central column, surrounded by seven smaller columns with moulded bell-shaped capitals and bases. On the west side there was a step and a wider space for the officiating priest. Sadly no trace of this has survived. As is well known, Christopher Marlowe was baptised here on 26th February 1564. His father John Marlowe lived a few doors down the road from the church.³³

On the north side of the chancel a Lady chapel was built, probably at the time of the second rectangular extension to the chancel in the thirteenth century, and to the west of it a north aisle had also been constructed earlier. The excavations have also shown that there was an earlier tower above the west end of the Lady Chapel. Only the massive foundations (perhaps of the later thirteenth century) had survived. Once these additions had been made (certainly before the Black Death), the church had reached its full size until the 1871 enlargements. In the late eighteenth century the historian Hastea describes the church as 'a large handsome structure, consisting of two aisles (sic) and two chancels, having a well-built tower steeple'.³⁴ Sir Stephen Glynne (brother-in-law to W.E. Gladstone) visited the church in the 1830's, and he noted that 'the nave is divided from the aisle by five pointed arches with some early piers one square and one circular, with a Norman capital ... the eastern pier is lighter and octagonal'.³⁵ (These were demolished soon afterwards and replaced by a series of iron columns.) Glynne's notes perhaps tell us that the north aisle had already been added in the twelfth century, no doubt because of an increasing population in the parish, which included all the buildings in the Dover Street area outside the city walls. Glynne also tells us that some of the windows were curvilinear. These must have been in the vestry or on the north side because all the windows on the south side and at the east end were perpendicular.

During the fifteenth century there was considerable remodelling at the church. All the windows on the south side, as just mentioned, were rebuilt in the perpendicular style with square hoodmoulds and a rood was inserted across the chancel and Lady chapel arches.³⁶ The new west tower was built and a new stair turret, with a spirelet for a roof, was added on the south-east. During pavement improvement this turret was pierced for a new pedestrian walk in 1788, and then demolished six years later after it became unstable. The small spire, with its 18½ pound weathercock was then transferred to the top of the main tower. The tower, which as we



*St George's Church: Romanesque engaged capital. Scale 1:2.
Drawn by Mark Duncan.*

have seen was rebuilt in the fifteenth century, was given a crenellated parapet and new windows. Inside it were five bells, four of them made in the seventeenth century, but one, apparently an early fourteenth-century bell inscribed 'sate georgi ora pro nobis' (St George, pray for us). The tower was heavily refaced, and the upper part completely rebuilt in the 1950s.

New crown-post roofs seem also to have been constructed in the fifteenth century, as well as a new rood screen which ran right across both aisles. Various wills of between 1464 and 1522 mention 'the light of the Holy Cross in the high roodloft'. We also hear of 'the Beme light of the Holy Cross in the Chapel of Our Lady'.³⁶ Many other lights were added at this time. They include lights of St Christopher, St Erasmus, St James, St John, St John-the-Baptist, St Loy, St Katherine, St Margaret, St Mary Magdalene and St Nicholas. There was also a light for the Brotherhood of St George, with the main altars at the east end being dedicated to St George and Our Lady. A piscina at the southeast corner of the nave indicates another altar here.

Richard Pargate's will of 1457 tells us that he was buried 'in the Chapel of the Blessed Virgin Mary, before the altar there'. He also paid for the 'paving of the aisle in the church where his father lies', and in 1496 Edward Pargate asked to be buried 'in the Chancel of Our Lady next unto the grave of my father and mother'. These burials presumably lay in the area beneath the front of the Victorian choir stalls.

Until 1871, when it was moved to the area in front of the new chancel, a fine brass commemorating the former rector, John Lovelle (who died in 1438), was situated in an indent in front of the original high altar.³⁷ It showed a priest in processional vestments with an inscription underneath it. The brass is now kept in the Cathedral Library. A list of most of the later burials in the church (with the inscriptions) can be found in Z. Cozens' *A Tour through the Isle of Thanet and other parts of Kent* (1793). There is a summary in Hasted.³⁸ The church registers are almost complete from 1538 and were transcribed, indexed and printed by J.M. Cowper in 1891.

The patronage of the church was in the hands of Canterbury Cathedral Priory, and after the Dissolution it passed to the Dean and Chapter. The post of Rector was fairly well endowed, and several important men are recorded in the list of rectors. After the Restoration, because of the decrease in value of church beneficiaries in Canterbury, an Act of Parliament was passed in 1681, fully supported by the Archbishop, Dean and Chapter, Mayor, Recorder, parishioners, etc., to unite the parishes of St Magdalene and St George; many other Canterbury parishes were united at the same time.³⁹ The parish of St Michael Burgate had already, in 1516, been united with St George, and St Michael's church had been pulled down.



St George's Church: The south front of the church in the 1920s. Photograph courtesy of Mr Paul Crampton.



St George's Church: Interior of the church shortly after the air raid of June 1942. Looking west. Photograph courtesy of Mr Paul Crampton.



St George's Church: The Canterbury Lane excavation in progress, looking north.



St George's Church: Reconstruction of the St George's area in the fifteenth century by JA. Bowen.



St George's Church: East end of the church. Easter 1923. Photograph courtesy of Mr Paul Crampton.



St George's Church: West end of the church following the fire-bombing of June 1942. Photograph courtesy of Mr Paul Crampton.



St George's Church: Excavation in progress at the east end of the church. Looking east.

North of the church a fine new Rectory house was built in about 1700, and to the east of this was the churchyard which ran down to the Lady Chapel and behind the east end of the church.⁴⁰ A passageway ran down the west side of the church with the White Lion Inn on its west side. This connected the Rectory with St George's Street.

During the eighteenth century the church was full of large box pews and a double-decker pulpit. These were apparently replaced by new pews in 1848.⁴¹ There was a gallery across the west end. During this period, the Rector continued to carry out services in both St Mary Magdalene and St George's. Then in 1866 St Mary Magdalene was closed and five years later it was demolished, except for the tower. Its columns and arches were taken to St George's and used for the new arcades. Several brass indent, from which the brasses had been stolen, were also taken to St George's.

In 1871 the population of both parishes is recorded as 1,639 (1,239 in St George's and 400 in St Mary Magdalene), and it was decided that by building a new north aisle at St George's about 500 people could be accommodated in the church.⁴² This was thought sufficient, and by using the old materials, it would only cost about £800. Consequently in 1872 the new north aisle was built, as well as a small extended chancel east of the old Lady Chapel. Two new arcades were constructed (in part using the old 'Transitional Norman' columns and arches from St Mary Magdalene), and the old east window of the Lady Chapel was moved to the west end of the new north aisle.

One of the oddities that once existed in the church was a panel painting in a frame (hung at the east end) of Guy Fawkes entering the Houses of Parliament. It was dated 1632 and inscribed 'in perpetuum papistarum infamiam'. Above it was a representation of the English and Spanish fleets (apparently at the time of the Armada in 1588). By the 1830s this painting was in the Vestry.⁴³

As we have seen, the church was gutted in 1942. The shell remained until the 1950's, but only a photographic record was made (by the National Buildings Record) before all the walls were pulled down. Only the tower was eventually saved and made good (with the top completely rebuilt), and a new clock was installed in its south face in 1955 (replacing the Victorian clock destroyed in 1942). In 1950, Dr William Urry tells us that it was still possible to see the piscina and sedilia (with the blocked up door into the vestry) in the south-east corner of the ruined shell.⁴⁴

Elsewhere, the excavation has to date revealed the remains of a bell casting furnace to the north of the church and the clay and beaten earth floors of medieval and post-medieval domestic timber-framed buildings against Canterbury Lane. Numerous rubbish and latrine pits formerly sited in back garden areas and a sequence of late Anglo-Saxon or early medieval clay floors have also been excavated. Below these early traces of domestic and perhaps industrial occupation are gravels possibly associated with an early to mid Anglo-Saxon street or yard. A Roman street and traces of Roman buildings have also been uncovered. These discoveries will form the subject of an interim report on the St George's excavation, next year.



St George's Church: Ligurian maiolica dish from near Genoa, Italy, c. 1575-1560, recovered from a Canterbury Lane rubbish pit.

14 Wingham Coin Hoard

by Ian Anderson

During 1990 three groups of late thirteenth-century silver pennies, totalling 484, were found at the same spot (TR 2275 5595) on agricultural land just west of the former site of Appleton Farm, now demolished, situated one mile south of Wingham.

The first discovery of 183 coins was made by two farm workers in March 1990. These have been identified and listed by Dr B.J. Cook of the British Museum. At a local inquest held at the Coroner's Court they were declared treasure trove and returned to the finders.

The second group was found on the 15th-16th September by Mr M. Presland with a metal detector and consisted of 204 coins. This discovery was brought to the attention of Canterbury Archaeological Trust and the coins were identified by the author before being handed in to the Coroner. At the request of the Director of the Canterbury Archaeological Trust, the landowner Mr H. Maude and the tenant farmer Mr S. Twyman gave permission for the Trust to conduct an investigation of the area in an attempt to locate the seat of the hoard and perhaps recover information relating to its original deposition. This work took place on the 8th-10th October during which time a further 97 coins were found, but no trace of the seat of the hoard was discovered.

The coins of all three parts consist of pennies struck in silver of 92.5 per cent fineness and are mainly of Edward I from mints in England and Ireland with some of Alexander III of Scotland. A breakdown of each part can be summarised as follows:

	Hoard I	Hoard II	Hoard III
English	163(89%)	175(86%)	86(89%)
Irish	4 (2%)	14 (7%)	3 (3%)
Scottish	16 (9%)	15 (7%)	8 (8%)

The table shows that the percentage breakdown of the English, Irish and Scottish series varies little from each discovery indicating that they are almost certainly parts of a common group or hoard. How much of the total hoard these 484 coins represent cannot be absolutely certain, but it is felt likely that most of the hoard has probably been retrieved.

The Wingham II group of coins were recovered by Mr Presland during a systematic search of a well-defined area measuring approximately 7.5 m. east-west and 13.5 m. north-south. Nearly all the coins were found clustered along the east side of this search area with a particularly heavy concentration of finds, including a number of clusters comprising 20-30 coins, in a 3.3 x 6.7 m. sector. During this operation Mr Presland thoroughly turned over agricultural topsoil to the level of the brickearth subsoil.

The Wingham III group recovered during the Canterbury Archaeological Trust's investigation of the site effectively represented a continuation of the search pattern inaugurated by Mr Presland. A more systematic

and archaeological approach was applied. This consisted of the careful removal of topsoil and cleaning of natural subsoil to reveal changes in colour, texture and content of the subsoil reflecting the presence of an archaeological feature. Excavated topsoil was checked by metal detector for stray finds. The area investigated by Mr Presland was sub-divided into a grid of 1 m. squares and all finds were plotted. No archaeological features were found cutting subsoil. Plough furrows were present across the entire investigated area and it became apparent that the original seat of the hoard must have been entirely removed by the plough. A number of test-squares were cut to the north, south and east of the main study area with limited success: only 9 coins were recovered from these satellite trenches. A final more widespread search of the area was undertaken with a metal detector. No further coins were recovered during this final operation.

In the final analysis it would appear that the bulk of the hoard was concentrated in an area approximately 3 m. eastwest by 9 m. northsouth (most plough furrows were aligned north-south). A few stray coins lay up to 3 m. outside the main scatter on all sides except to the east: here virtually no coins were detected. It is unlikely that any of the clusters in Wingham 11 represented the remains of the hoard in situ, since they were recovered from within agricultural topsoil which has been repeatedly turned over by ploughing. These concentrations were situated roughly along the same north-south alignment, following the line of ploughing and they appear to represent the gradual dispersal of the hoard by this means.

No definite trace of a container for the hoard was found. Although approximately a dozen late thirteenth- to early fourteenth-century pottery sherds representing three or four vessels were recovered during Wingham 11 and III it is unlikely that they are associated with the hoard. The absence of any tangible soil stains indicating the cutting of a pit or pottery indicative of a container suggests that the coins may have been deposited in a perishable receptacle such as a cloth or leather bag or a wooden box.

The latest coins of the Wingham hoard belong to the Class VIa (c. 1292-96) of which there are 5. The more plentiful coins of this period (Class VII c. 1294-99) are absent, indicating that the hoard was probably deposited before Class VII coins entered circulation, probably c. 1292-93. Also absent are continental imitations, which had been entering the country for some years and began arriving in much greater numbers from the mid 1290s. However, their absence could be due to deliberate exclusion from the collection as they were of a lighter weight.

At an inquest held at the Coroner's Court in November 1990, the second and third groups were also declared treasure trove. After the British Museum declined to keep any of the coins, the second group was returned to the finder and the third donated to Dover Museum in whose district the hoard was discovered.



Wingham coin hoard: A selection of silver pennies of Edward I from the hoard. These coins were struck at the Canterbury mint c. 1282-89.

15 Bench Street, Dover

by Keith Parfitt

As this interim report is being prepared, so a major new excavation project has begun in Dover. The impressive extent and preservation of the buried archaeological remains within the heart of this highly important ancient town and Cinque Port has been amply demonstrated by the extensive work of the Kent Archaeological Rescue Unit through the 1970s and 1980s.

The new work, which is being entirely funded by English Heritage, has been occasioned by the need to replace Dover's sewage system along the seaward side of the town, in advance of the construction of the new A20 linking Dover's Eastern and Western docks. The new sewer trenches are to be cut through some potentially highly significant parts of old Dover and in places will be in excess of 4 m. deep. Where possible, formal archaeological excavations are taking place ahead of the contractors cutting the sewer trench. Work is already well-advanced on a site on the western side of Bench Street.

Here, work on the site of the old Crypt Restaurant (formerly the Shakespeare Hotel) destroyed by fire in 1977, has revealed an interesting sequence of medieval and post-medieval levels and structures, over a thick deposit of natural wind-blown and waterdeposited sand which seems to have covered much of the seaward side of the town in post-Roman times. The principal structure so far located is part of a stone-built.medieval undercroft with part of its original vaulted roof surviving. This may well be one of a number of medieval basemented structures known to exist nearer to the Bench Street road frontage.

The excavation work being undertaken in Dover forms part of a larger research programme which is to include a detailed survey of historic documents relating to the town and also an environmental project which will be concerned with the examination of the evolution of the Dour estuary sediments. This latter part of the project, being undertaken by the Geoarchaeological Research Facility of the Institute of Archaeology, London, promises to be of special interest since the history of Dover is very much bound up with the gradual silting of the original harbour site (within the present day Market Square area) and its slow westward drift to the Western Docks areas, about 1,000 m. away.



Dover: Bench Street excavation in progress.



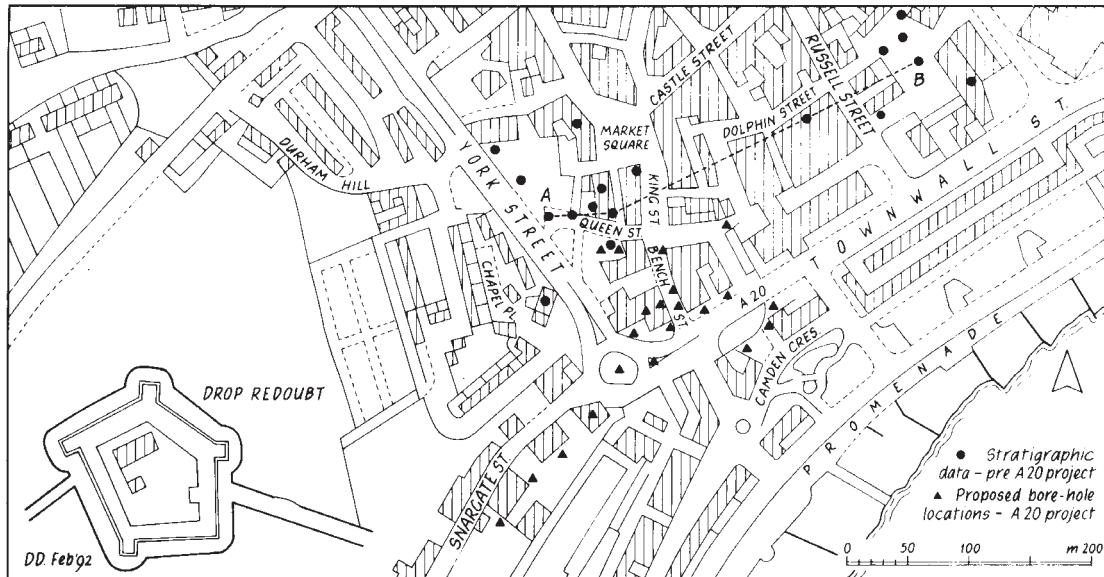
Dover: Sewer installation in progress.



Bench Street. Dover: View of the crypt.

16 Paleo-environmental Investigations in Dover

by Martin Bates, Geoarchaeological Research Facility

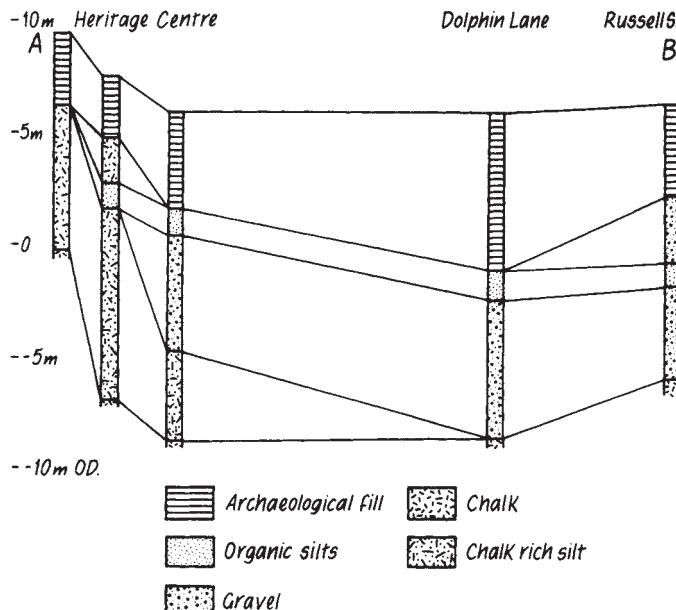


Dover: Plan of the Dover study area showing bore hole positions and line for reconstructed section A-B.

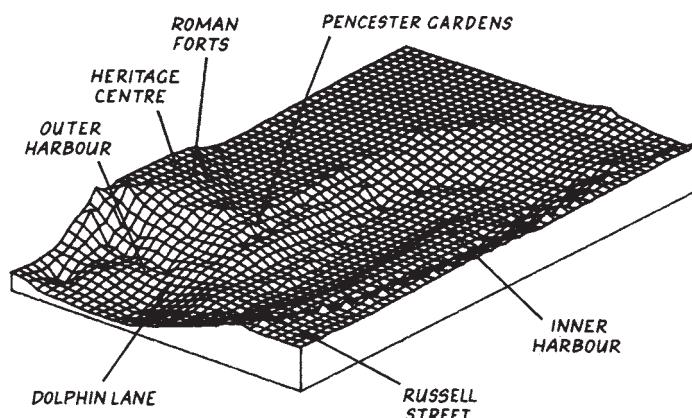
The presence of the Classis Britannica fort and associated harbour installations at Dover throws into sharp focus the major topographic changes that accompanied the infilling of the Lower and Middle Dour Valley. These changes, that must have had a major impact on human settlement and subsistence in the area, are the focus of on-going evaluation and research at the Geoarchaeological Research Facility (G.S.F.), University College London Institute of Archaeology. This project

couples conventional archaeological investigation and sampling (of sedimentary sequences providing detailed information relating to the nature of landscape change) with 'off site' stratigraphic assessments and sampling from bore-holes, test pits and extant information.

Previous research in the Dour Valley has focused on the excavation and recovery of material remains associated with Roman occupation of the town centre area, and particularly the Classis Britannica and Saxon



Dover: Stylised section A-B.



Dover: Topographic section through part of Roman Dover.

Shore forts. Deep stratigraphic sequences, of high palaeoenvironmental potential, consisting of sands, organic silts and peats have been noted by various authors, including Amos and Wheeler, as long ago as 1929. However, no attempt has been made to undertake a regional synthesis of these sequences in relation to the known archaeology. In 1990 work at the Institute of Archaeology, for Dover District Council, resulted in a summary of all known data from the area and an attempt was made to formulate a model for the development of the valley during the last 10,000 years. This model will be tested, modified and refined during the current work on the A20 project.

Within an urban context such as Dover recovery of laterally continuous profiles and sections is rarely possible due to redevelopment limitations. This results in difficulties of correlation and phasing between archaeological sites, on a regional (landscape) scale. Bore-hole data for intervening localities helps reduce these difficulties. Figure 1 shows the locations of all boreholes and archaeological excavation data spots for central Dover for which adequate stratigraphic data is available. On the basis of this information it is possible to construct a crude stratigraphic profile for central Dover from the Heritage Centre to Russell Street Car Park (Figure 2). Such data provides us with a simplified sequence of events relating to the evolution of the landscape.

Five major stratigraphic units are noted. At the base of all profiles hard Cretaceous Chalk is recorded. This forms the basement rock into which the river Dour has eroded. Stratigraphically above the chalk are chalk-rich silts that mantle the valley side beneath the Heritage Centre. Known as solifluction deposits these sediments are thought to have formed during the late-glacial (10-13,000 years ago) under cold climatic conditions. Similar sediments occur in the area of Archcliffe Fort and within Holywell Coombe at Folkestone.

Overlying these chalky silts and thickening towards Dolphin Lane are 5-6 m. of flint gravel, perhaps in part deposited by the river Dour during a period of low sea level at the end of the last glacial period. The surface of the gravels and chalky silts forms the land surface on which the Roman occupation took place. This land surface has been located throughout much of the Lower Dour area and it has proved possible to construct a three-dimensional topographic simulation of this surface (see Fig. 3). Clearly visible on this diagram are two basins forming the inner and outer harbours and an intervening area of higher ground (formed of chalky silt) on which the Roman forts and settlement were built.

Post-Roman development in Dover has been constrained by the nature and timing of the infilling of the old harbour areas. Deep sequences of waterlogged organic silts, peats and sands occur in the Market Square to Russell Street area and are of high palaeoenvironmental and archaeological potential. Pollen, plant remains, bones, insects and molluscs are frequently encountered in such sediments. Medieval settlement is well documented in this area, however the earliest evidence for colonisation of the infilled harbour remains to be documented. Interesting relationships between the natural deposits infilling the harbour and the post-Roman archaeology may occur in this region.

The uppermost unit (archaeological fill) potentially contains archaeological material that post-dates the infilling of the harbour and within which medieval and post-medieval buildings and deposits have been recorded.

The simplified sequence presented here in conjunction with threedimensional mapping of the deposits provides information on major landscape changes and becomes predictive in relation to where archaeological material may occur both in time and space, hence it is of use in planning and negotiation prior to redevelopment. The A20 project, currently being undertaken by the Trust and the G.S.F. should provide additional data on the three-dimensional distribution of these deposits, detailed information and samples from key areas of the town centre and allow integration of archaeological and palaeoenvironmental information from this area of south-east Kent. This project includes the controlled archaeological investigation of key areas and drilling for recovery of continuous stratigraphic profiles in advance of construction in addition to monitoring construction trenches for additional data.

IV WATCHING RECORDING BRIEFS

A number of watching recording briefs have been maintained during the course of the year. One of the most notable has been at Starkey Castle, during the construction of an extension to the fifteenth-century residence, reported on last year.⁵¹ Here, further elements of the basement northern wing of the manor house were recorded together with the plotting of the eastern wall of the wing, found during the cutting of a new drain. The discovery of the east wall now completes the ground plan of the northern wing.

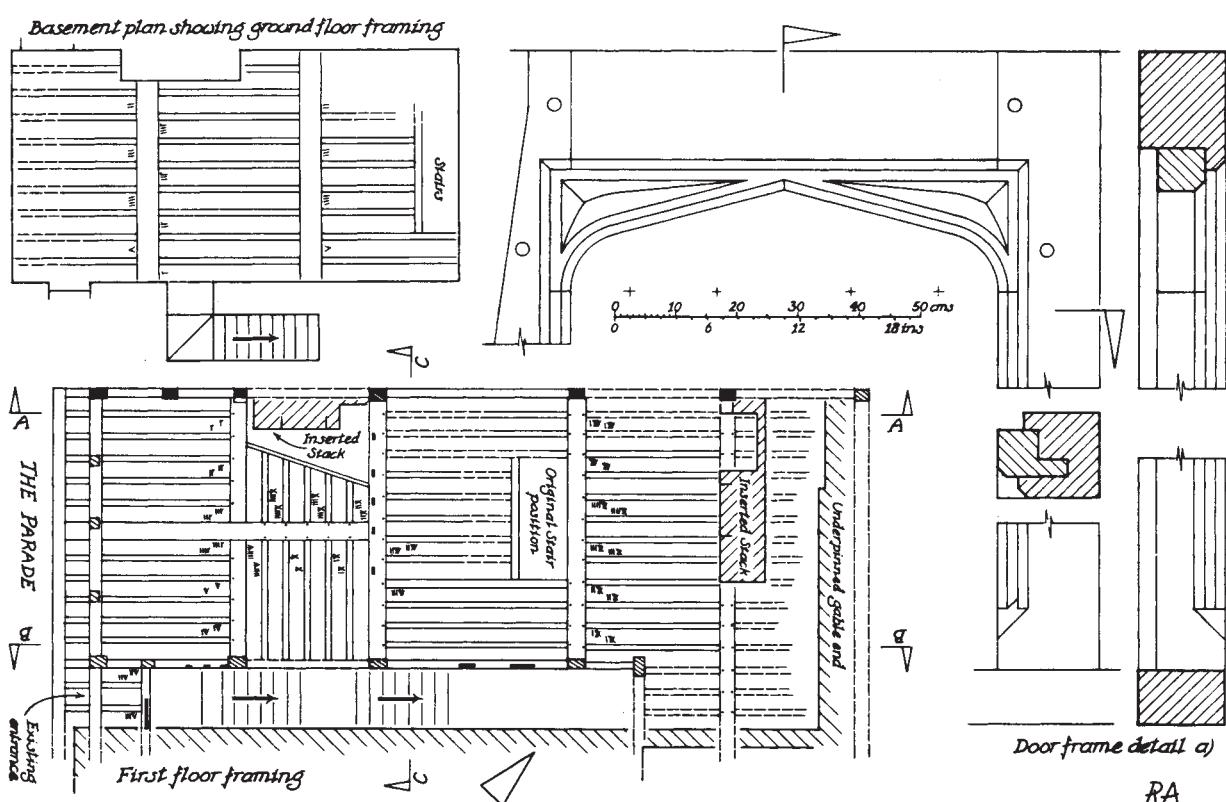
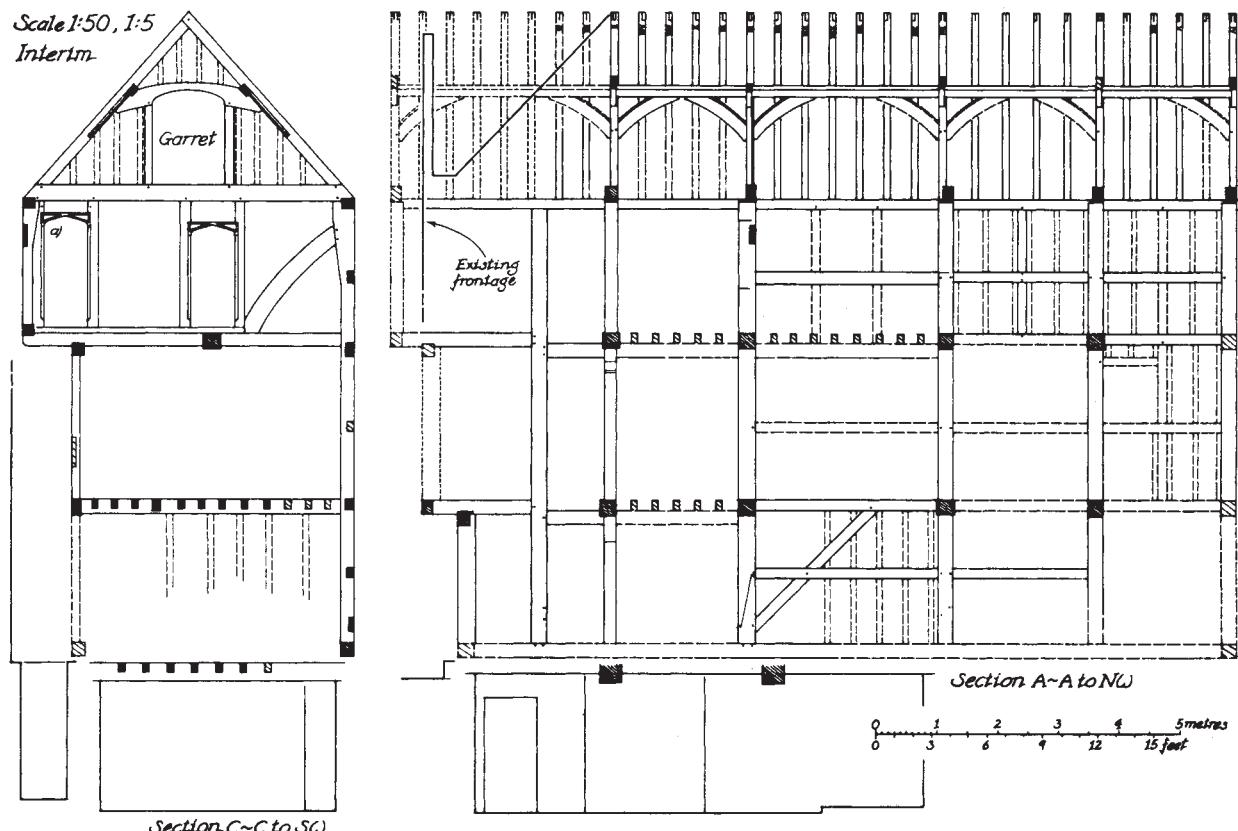
At Rochester small scale redevelopment in the garden of 'Southgate' (formerly part of the Bishop's Palace) revealed a section of the Roman

town wall. Only the core of the wall was exposed in a narrow construction trench for a new extension. Nearby, within Rochester Cathedral, the cleaning and recording of a new section of the thirteenth-century tile floor within the chapel of St John the Baptist, was undertaken shortly after its discovery by workmen during repairs to the post-medieval chapel floor. This floor was immediately north of the tomb of John de Sheppey (Bishop, 1353-60).⁵² Further work on the chapel floor is anticipated to take place next year and it is hoped that further discoveries will be made.

PART TWO

BUILDING RECORDING

A No. 3 The Parade, Canterbury
by Rupert Austin



No. 3 The Parade: Details from the survey.

This city centre property, which until recently was occupied by Amos and Dawton estate agents, is currently undergoing an extensive period of refurbishment and renovation before opening as a new branch of the Leeds Permanent Building Society. Prior to this work the Trust undertook a comprehensive survey of the building, including detailed drawings of the surviving medieval fabric.

In common with many of Canterbury's historic buildings, this property's attractive but relatively modern facade conceals a considerably older structure. Despite several centuries of additions and alterations, the principal elements of a substantial timber-framed building of the late sixteenth to early seventeenth century still survive largely intact.

In its original form the three storey building, which was jettied towards the street on both floors, ran north-east from the Parade for five bays. A clasped side-purlin roof complete with wind braces extends for the whole length of the building. This roof, which appears to be contemporary with the framing below, has suffered only minor alterations. A decorative parapet, added to the front of the building in the nineteenth century, necessitated the rebuilding of the first bay gable to a hipped end. Each pair of principal rafters retains a carpenter's mark. These number one to six from front to rear. It seems likely that the roof space, which is floored, was used for storage or garret accommodation. A simple opening, embellished by carving the collar into a four-centred arch, is framed through the extant studding in the second truss.

As one would expect, the building is of typical box-frame construction. Jowled storey posts, which rise from ground to eavesplate, support tie-beams at each bay division in the usual manner. There appear to be several differences in framing between the northwest and south-east elevations. A mid-rail interrupts the secondary posts and studding in most bays along the north-west elevation whereas the opposite elevation is framed without recourse to a midrail. Curved bracing is used throughout the south-east elevation whereas only one, rather crude, straight brace is observed in the opposite frame. A single-light window, flanked by two braces, still survives in the south-east elevation, in the third bay at second floor level. The north-west elevation was obviously constructed against an existing building, whilst the opposite frame, now flanked by the Midland Bank, was an external elevation.

Two cross-ranges, the remnants of which still survive in the firstfloor framing, extended from the front and rear bays into the space now occupied by the Midland Bank. There is insufficient evidence to conclude whether these ranges extended to a further building, contemporary or otherwise, fronting Butchery Lane. In either case, a partially or completely enclosed courtyard would have been created to the south-east of the main building. The extremely narrow depth of the front range suggests that it was intended to bridge the gap between the buildings, possibly forming a covered entrance to the courtyard, rather than provide any significant accommodation space.

The central bays of the south-east elevation are quite deeply jettied over the courtyard at second floor level, but rather surprisingly there is no jetty to these bays at first floor level. The second floor joists in these central bays are aligned across the building to accommodate the jetty, whilst the remainder run with the axis of the building. This pattern is partially reflected in the arrangement of the first-floor joists, although no jetty is formed at this level. Construction of the Midland Bank has subsequently enclosed the space under the jetty, which now forms a stair-well to first floor level. A window opening, flanked by two tension braces, survives in the third bay at second floor level along the courtyard elevation.

Most of the first floor framing is still intact, and mortices indicate that a stud partition separated the first two bays from the rear of the building at ground floor level. This could indicate that the front of the premises was used for retail purposes. A break in the secondary joists in the third bay locates the original stair position which has since been relocated on several occasions. Carpenters' marks, clearly visible on the floor joists, are numbered in pairs from the front of the building.

Very little of the building's original detail can be found. However, two door frames, of which one is completely intact, are still visible at second floor level. These provide access to the rooms occupying the first two bays of the building. One doorway still retains an attractive carved doorhead with sunken spandrels in its two-centred Tudor arch.

The appearance of this property has been substantially altered, both internally and externally, by many years of modification and reconstruction. A nineteenth-century rebuild of the building's facade, complete with decorative parapet, has removed virtually all traces of the original jettied frontage. A substantial rough stone wall now underpins the entire rear elevation, although elements of the rear framing are still visible, fossilised in the masonry. Rather surprisingly the last bay of the building has fallen into complete disuse. Both side elevations have lost all their secondary studding rendering this bay open to the elements, with only the later stone wall remaining to support the roof above. This abandonment is probably due to severe failure in the frame at ground level, causing subsidence of over a foot in the last two bays. This failure can be attributed to the use of scarfs, splayed with under-squinted abutments, at the base of the main storey posts along the north-west elevation. These scarfs, which seem an unnecessary inclusion, must have failed at quite an early date. Two brick stacks have also been inserted through the original timber frame.

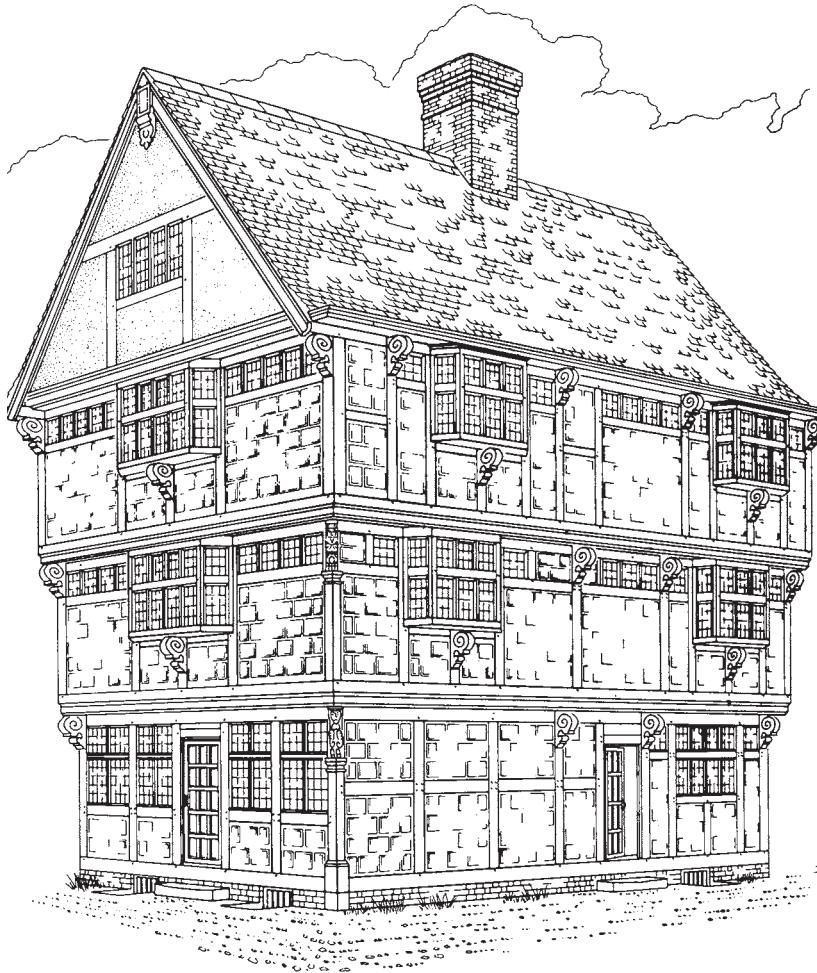
Despite many alterations this building provides an interesting example of a late sixteenth to early seventeenth-century timberframed town-house. It is not certain whether the existing structure formed part of a larger building or was simply squeezed into the available plot between other properties. In either case some enclosed courtyard space seems likely to the south-east of the main range.



No.3 The Parade: View of the clasped side-purlin roof structure.

B No. 28 Palace Street, Canterbury

by Rupert Austin

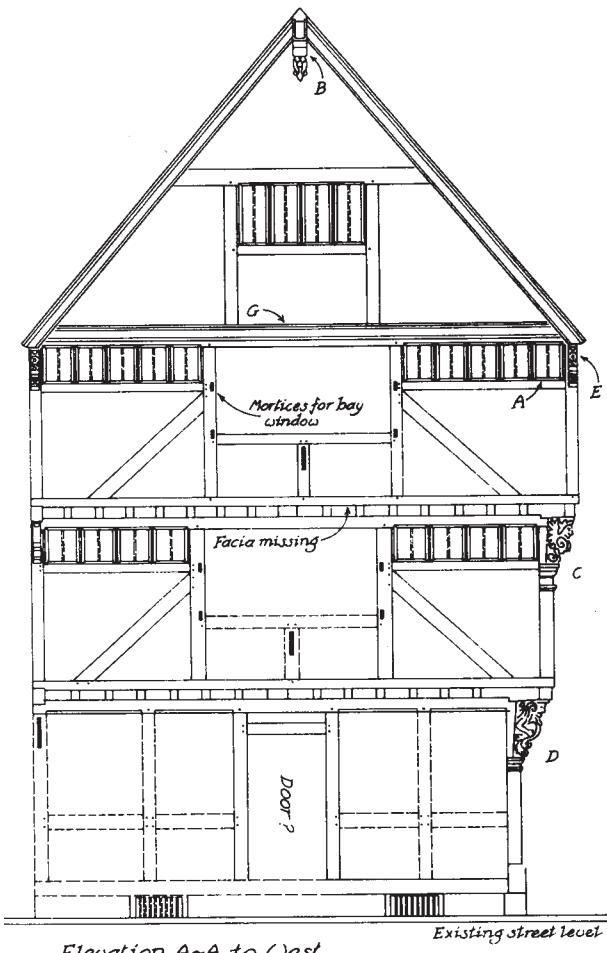


No.28 Palace Street: Perspective reconstruction showing the building in its original mid seventeenth-century form.

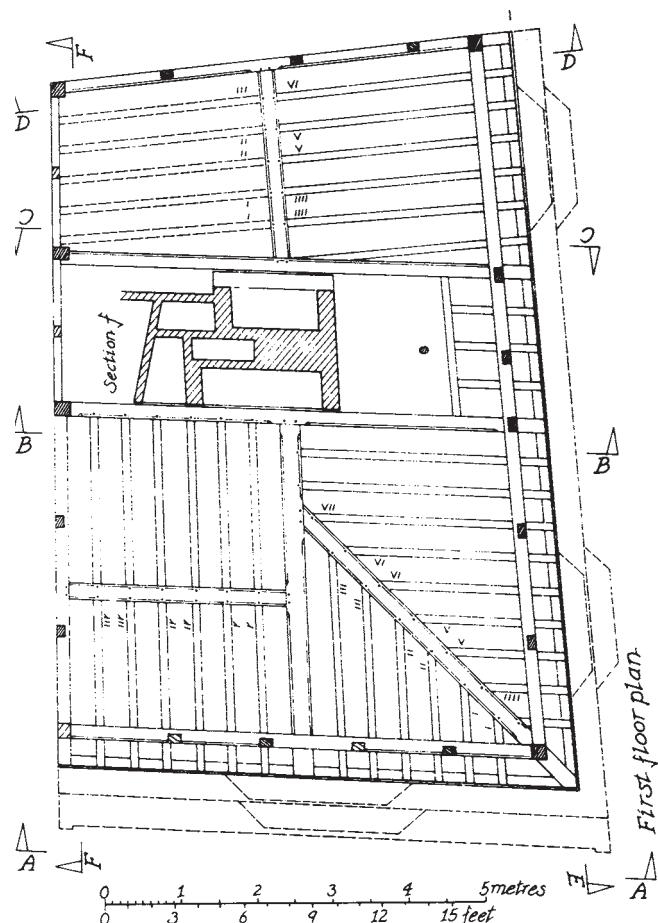
This building, until recently the King's School Shop, has been the subject of recording work by the Trust on several occasions in past years. A structural survey detailing the failures and movements in the frame was prepared several years ago by John Bowen, prior to restoration work. Further recording of the original chimney stack was undertaken at a later date in anticipation of urgent remedial repairs to its failing brickwork. Unfortunately the stack collapsed leaving only our hastily gathered notes and a pile of rubble. Towards the end of 1991, once full restoration was underway and the building completely stripped out, a more detailed archaeological survey became possible.

No. 28 Palace Street is a fine seventeenth-century timber-framed building of three storeys, double jettied towards Palace Street and King Street. With scaffolding in place it was possible to examine the street frontages in more detail. Both elevations, at first and second floor level, were originally lit by large bay windows. Angled mortices for cills and transoms, still visible on the external faces of the window jambs, clearly indicate the shape and dimensions of each bay window. Decorative brackets located below each opening provided extra support to the projecting windows. Additional fenestration flanks the upper lights of each principal opening, running almost continuously around each elevation. All mullions, cills, and jambs are ovolo moulded to facilitate glazing, which at this date was probably fabricated using square quarries.

Numerous decorative devices are used to enhance the external appearance of the building. Carved brackets are used below the jettied floors and gable, in particular two finely executed figures which adorn the dragon posts on the ground and first floors. Moulded fascia boards, once rebated into the underside of the jetties, were used to conceal the ends of the common joists. The gable is finished with moulded barge boards and a carved finial, which on close examination appears to be dated 1647. All the exterior panels were infilled with relief plasterwork, formed into imitation stone blocks. Lead-lined wooden guttering would have been essential to prevent rainwater ruining the surface of this ornamental plasterwork.



Elevation A-A to West



No.28 Palace Street: Details from the survey.

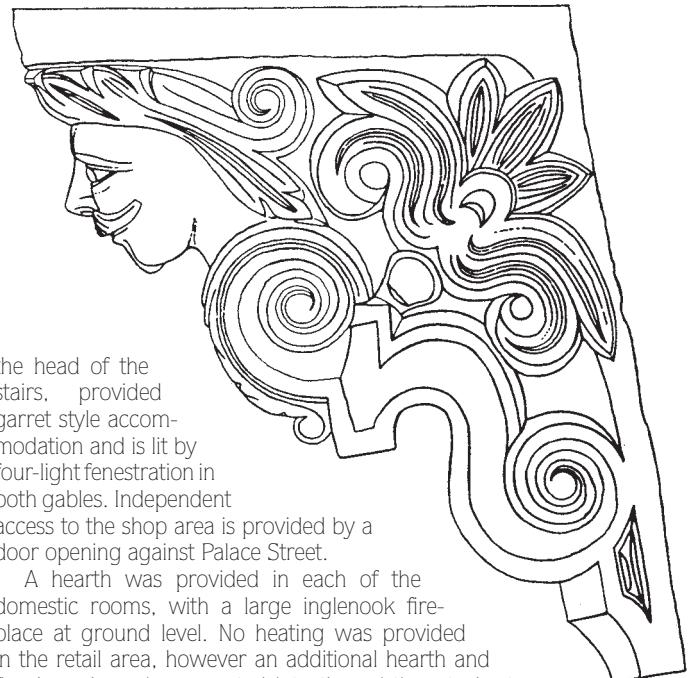
Although the original shop front has been replaced, examination of the underside of the jetty-plate indicates a central door flanked by two openings on either side. It is not clear whether these openings were glazed or shuttered, however rebates on the jetty-plate above each window could be evidence for planted frames.

The rear and party elevations, which are plain and unjettied, do not incorporate any of the fenestration or detailing that decorates the street frontages. Exploration of the void that now exists between this building and the adjoining property revealed several areas of tile cladding, still in evidence on the outside face of the party wall. This was obviously an exposed external elevation at some point, with perhaps a passage between No. 28 and an earlier adjacent property.

From a construction point of view the building is a typical example of a box-framed seventeenth-century town-house. The timber framing is built above a brick cellar with a substantial contemporary brick chimney stack located in the third bay. The roof is of staggered butt side-purlin type with collars between the principal rafters. Jowled posts support the roof tie-beams in the usual manner, and divide the building into four bays. Mid-rails and secondary posts infill most of the panels without fenestration, however a few contain curved tension braces. None of the bracing is exposed externally as this would disrupt the appearance of the decorative plasterwork.

Dragon beams at first and second floor level support jetties over Palace Street and King Street. Only the principal floor joists, hollow chamfered with plain run-out stops, are exposed with all secondary joists ceiled by lathe and plaster. All the joists, except those forming the attic floor, are numbered in adjacent pairs, presumably to avoid excessively large Roman numerals.

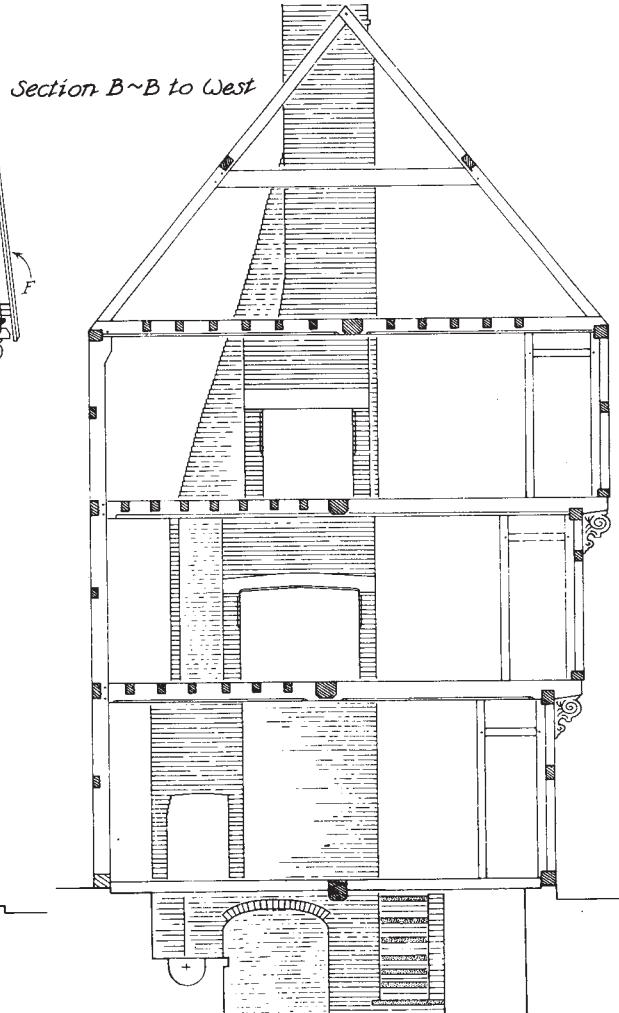
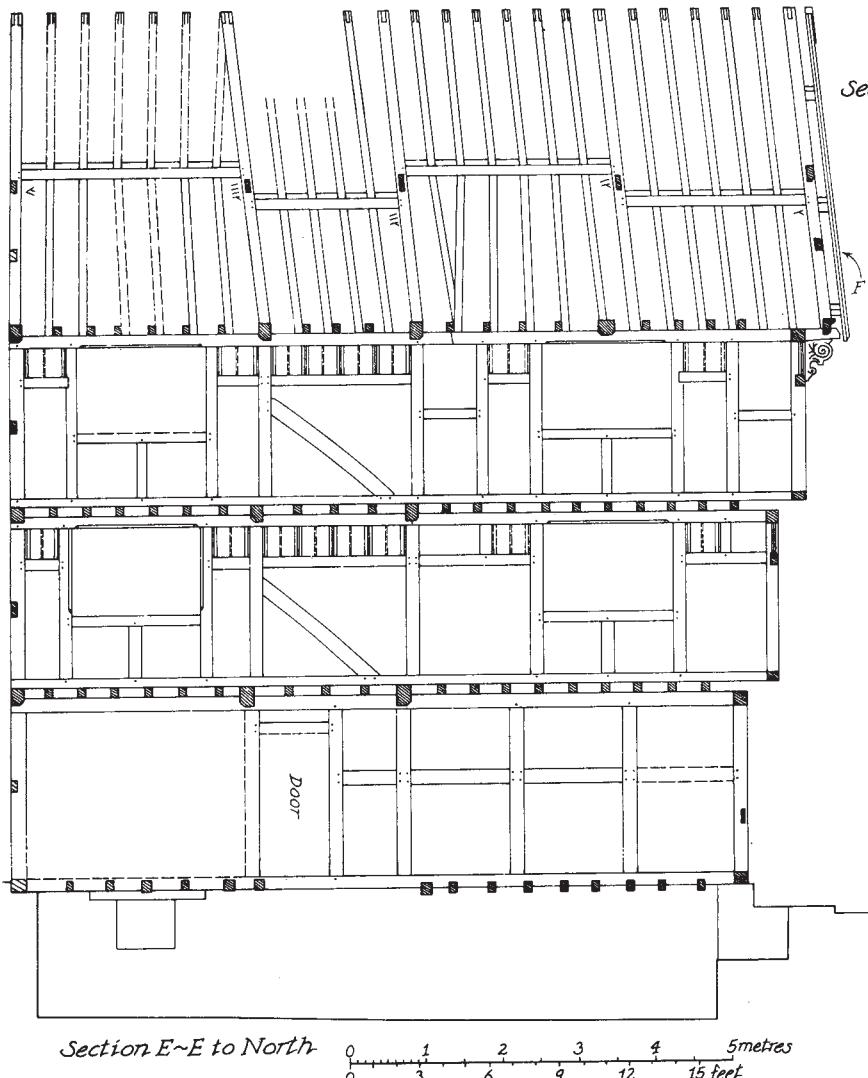
Access to the domestic parts of the building is through a lobby entrance from King Street. This is situated in the third bay and leads immediately to a staircase which rises against the chimney stack. All the upper floors are reached from this staircase, whilst doors from the lobby afford entry to the ground floor rooms and cellar. The floored roof space, which is reached at



the head of the stairs. provided garret style accommodation and is lit by four-light fenestration in both gables. Independent access to the shop area is provided by a door opening against Palace Street.

A hearth was provided in each of the domestic rooms, with a large inglenook fireplace at ground level. No heating was provided in the retail area, however an additional hearth and flue have been incorporated into the existing stack at a later date. A later doorway was cut through the centre of the groundfloor inglenook to provide direct access to the rear room. This latter insertion destabilized the stack causing many of the structural problems evident in the building today.

Despite many alterations to the historic fabric of the building, No. 28 Palace Street still retains its original form and character, providing one of the best examples of its type in Canterbury.



No.28 Palace Street: Top right: detail of the first floor decorated dragon beam bracket. Above: details from the survey.

C The Bull Inn, Canterbury

by Rupert Austin

No. 4 Butchery Lane, presently the Canterbury Model Shop, was severely damaged by fire earlier in the year. Although this property did not merit an archaeological survey, removal of fire-damaged fabric along its north-east elevation revealed framing belonging to 'The Bull', which adjoins the Model Shop to the north-east. The Bull, which is now occupied by several properties at the corner of Butchery Lane and Burgate Street, is a substantial timber-framed building constructed during the mid fifteenth century by Christ Church Priory. A large proportion of the property seems to have been divided into separate lodging chambers, possibly up to thirty-eight, with shops along the street frontages at ground floor level. Although much of the building is cellared, these are in fact the remains of a considerably earlier stone building built by the Priory on this site in the late twelfth century.

Most of this structure has already been surveyed and drawn by the Trust in previous years.⁵³ Although only a small fraction of the inn was

recently uncovered, further details always provide useful additions to our knowledge of the building. The exposed fabric forms the end-frame to the Butchery Lane range of 'the Bull', which at this point is of two storeys and jettied towards the street. The building clearly terminates in a gable end at this point, with no continuous return range into a courtyard space to the rear. No fenestration is incorporated into the elevation at gable or first-floor level, only studds and bracing were revealed. Unfortunately a modern brick wall, which underpinned this elevation, obscured any details of the framing at ground-floor level. A crown-post with two tension braces was uncovered in the roof space. The end bay associated with this elevation appears to have been largely removed and replaced with a completely new roof and floor structure. Considerable weathering on the outside face of the timbers suggests that this end elevation was not concealed until the construction of No. 4 Butchery Lane.

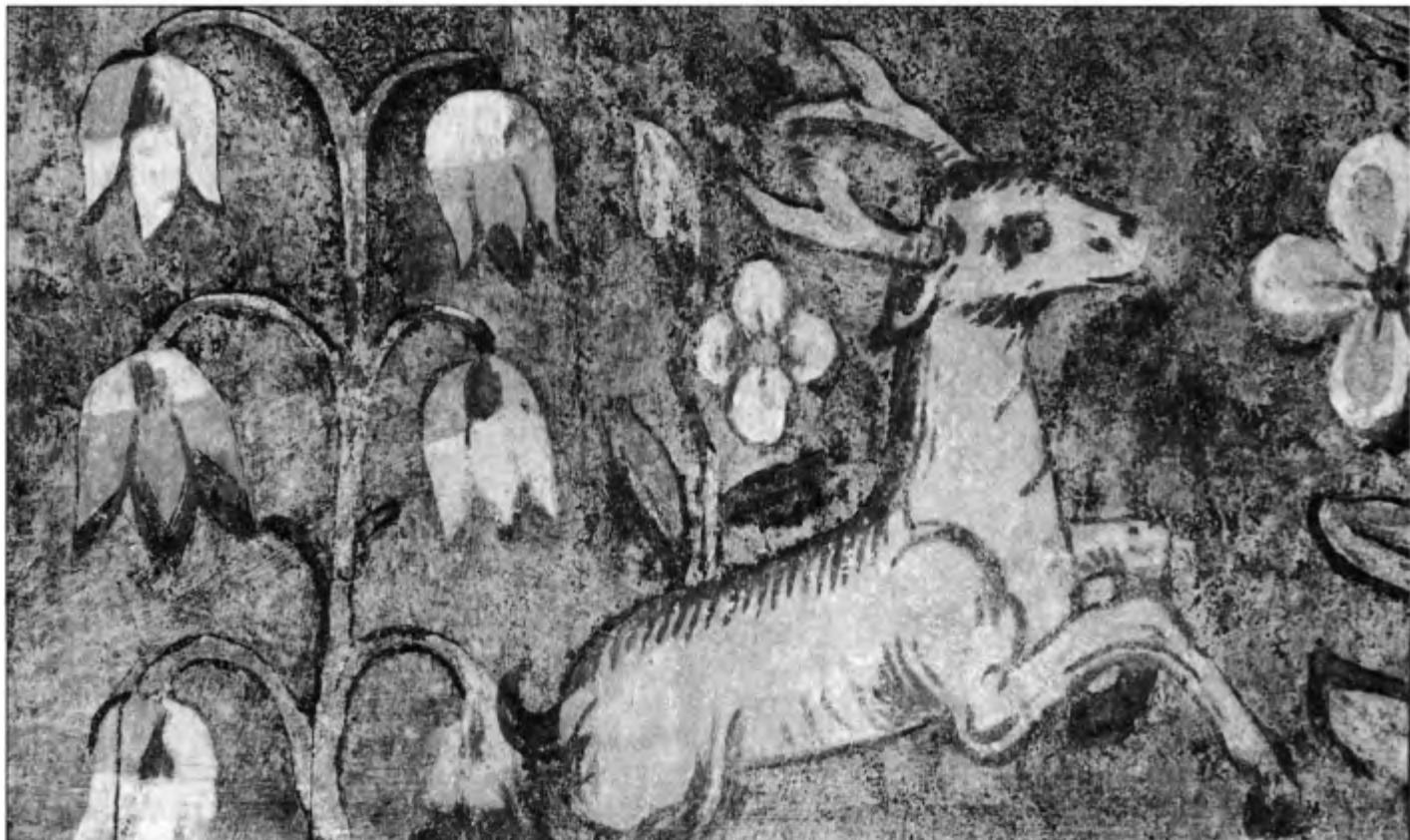
D St Dunstan's House, St Dunstan's Street, Canterbury

by Rupert Austin

St Dunstan's House is located on the west side of St Dunstan's Street approximately 60 m. south of St Dunstan's Church. The earliest elements of the building are medieval in date although numerous alterations and additions have virtually transformed the appearance of the building. All the external elevations are now clad in brickwork which probably dates from the late sixteenth to early seventeenth century. There is a large enclosed garden to the rear.

An early wall painting has been in evidence in one of the first floor bedrooms for many years. During recent decorative repairs to the first floor rooms, several more areas of painting were discovered beneath later wallpaper and cladding. The Trust was commissioned by Canterbury City Council to produce a photographic record of the paintings before any conservation work was undertaken.

St Dunstan's House: Right: View of the street frontage of the house. Below: Detail of a sixteenth-century hunting scene from the rear bedroom.





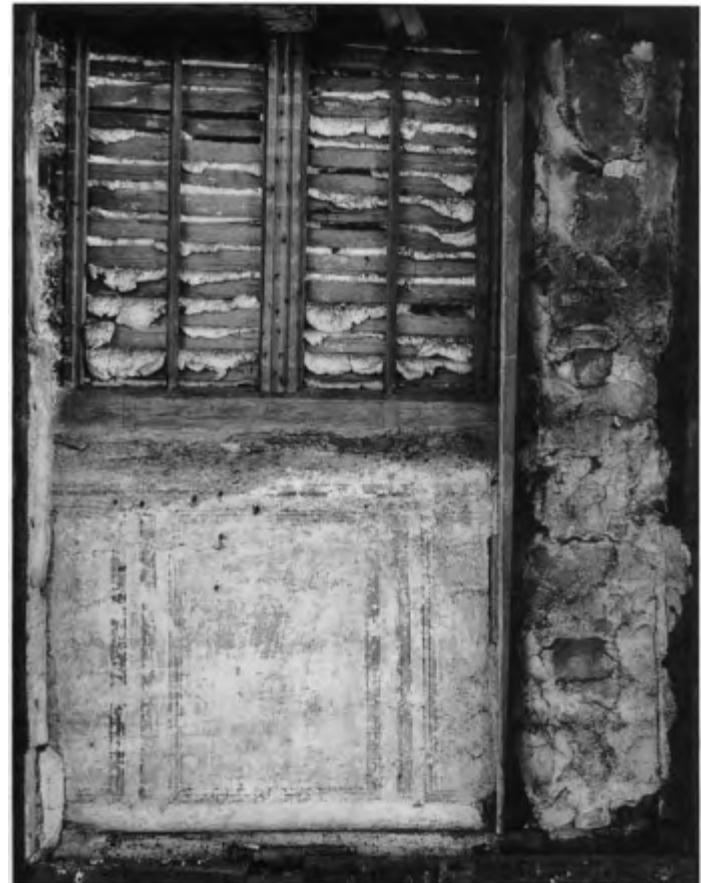
Although the condition of most of the paintings is extremely poor, the detail, colour, and patterns can still be discerned in many places. A well-preserved hunting scene and frieze measuring approximately 230 x 110 cm. has been exposed in one of the rear bedrooms for many years. This was probably executed in the early sixteenth century and gives the impression of a tapestry hanging. The adjoining rear bedroom has recently been stripped out revealing large areas decorated by a red foliate pattern with black outlines and green leaves and stems. This is applied to a lime plaster which overlies early brick in ill. A third room at the front of the building is decorated along one wall with a repetitive floral pattern. This wall is timber-framed with lathe and daub infill. The painting has been applied to a thin layer of lime and horsehair plaster which overlays the lathe and daub. Exposed timbers which fall into this area are simply painted over and included in the design. Finally a small area of exposed plasterwork beneath an early blocked window in the adjoining room has been painted to give the impression of wooden panelling.

It is rare to find wall paintings such as these in a building of this type, particularly in Canterbury. Despite their poor condition, these paintings represent an unusual discovery. Hopefully their conservation should preserve them for many years to come.

St Dunstan's House:

Left: detail of a floral wall painting in the front bedroom.

Below: Early blocked window with painted imitation panelling below.



E St John's Hospital Reredorter, Canterbury

by Rupert Austin

A detailed drawn and photographic survey of this structure was incorporated in the excavation report (p.20-23). undertaken. A summary of the results of this survey has been

F Cooling Castle

by Rupert Austin

Following a disastrous raid by a force of French and Spanish troops in 1379, who sailed up the Thames burning and looting unprotected villages, John de Cobham, then Warden of the Cinque Ports, was prompted to obtain a licence to crenellate and fortify his manor house at Cooling. Permission was granted by King Richard II who sent his own architect, Henry de Yvele to superintend. Yvele was responsible, amongst many other works, for much of the nave of Canterbury Cathedral and the construction of Canterbury's West Gate.

Cooling Castle, which was started in 1381 and finished in 1385, was probably the last genuine castle ever built in England. The machicolated outer gate still retains its original enamelled copper inscription declaring that the castle was built 'in defence of the Country'.

The castle comprised two adjoining enclosures, surrounded by a figure-of-eight shaped moat. Both enclosures, or wards, had defensive round towers at each corner. The outer ward, which was the larger of the two, provided a safe enclosure for cattle in times of trouble, and contained the cow-sheds and dairy. This was entered through the outer machicolated gateway which stands at the south-west corner of the ward. Access to the inner ward was through a second gateway via a drawbridge and portcullis from the outer ward. The inner ward contained the earl's stone house, of which only the undercroft remains, together with his retainers' lean-to wooden houses around the rest of the walls.

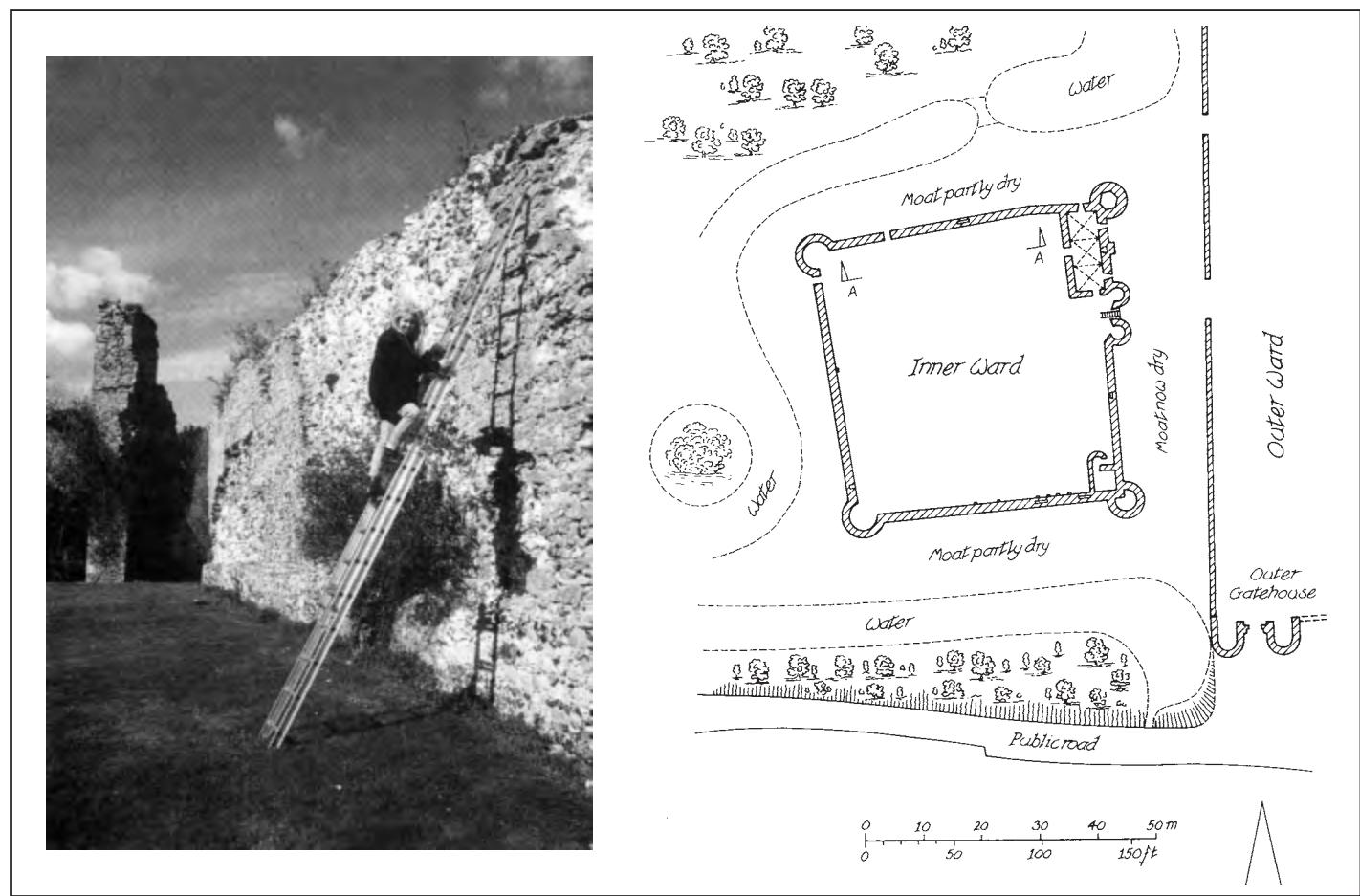
Unfortunately the castle fell into disuse at the beginning of the seventeenth century and is now in a ruinous state. Consolidation and repair of the crumbling walls has been undertaken on numerous occasions in recent years. Plans to repair elements of the north wall, inner face, inner ward have been preceded, on this occasion, by an archaeological survey. Rectified photographs of the elevation were taken using the Trust's large format camera and enlarged to a scale of 1:20. A stone for stone drawing of all the surviving facework was prepared using the photographs as a base. Additional hand survey of the north-east tower is still to be undertaken.

The north elevation, which survives to a height of about 20 ft, is approximately 157 ft in length from tower to tower. It is constructed with a chalk rubble core and faced almost exclusively in ragstone and flint. A great chamber, of which only the undercroft survives, adjoined the eastern limit of the wall. The north-east tower, which communicates with the undercroft, has virtually disappeared although the remaining fragment indicates that its base had a hexagonal internal plan. This tower was completely enclosed in masonry whereas the north-west tower incorporated a timber brattice at the rear.

It is generally accepted that the east wall of the inner ward, including the gatehouse and chamber, was constructed shortly after the other elevations. The junction of this phase with the earlier fabric of the north wall occurs some 35 ft from the north-east tower where a slight change in alignment can be discerned.

Only the earlier phase of the north wall was recorded in detail. Four rows of putlog holes, which penetrate the full thickness of the wall, are still visible in both core and facework. Two construction horizons can be discerned, dividing the wall into three lifts. Only the lower horizon coincides with a row of putlogs. A row of corbels, of which two survive, are positioned approximately 8 ft above the existing ground level. These would have supported the principal floor joists of several timber-framed buildings, constructed in a lean-to manner against the existing walls. Further evidence for these structures is provided by a rectangular drain shaft which descends through the core of the wall before emptying into the moat. A flue has also been cut into the surface of the wall at a later date to provide a small hearth a first floor level. Presumably these buildings provided some form of domestic accommodation. A large opening some 32 ft from the northwest tower, possibly an original feature, has been blocked in the last forty years by repair works.

It is hoped that future repairs to this historic monument, which has never been surveyed in detail, will see further recording work by the Trust.



Cooling Castle: Location plan of inner ward with inset showing recording work in progress.

PART THREE

POST EXCAVATION

Introduction

This year saw the start of the post-excavation study of three major field projects, the Longmarket, the Eurotunnel sites and St Gregory's Priory. These very large sites will take a long time to complete, but armed with a 'plan of campaign' for each project, the post-excavation team has made good progress in tackling these large and important sites.

The new field work at St George's Church, Dover and elsewhere has given us an opportunity to review and revise (where necessary) the ways in which we excavate and record sites, process finds and pottery, study and analyse the material and prepare reports for publication.

The whole post-excavation team is now involved in this methodological review, which by articulating the reasons why we use various archaeological techniques, will allow us to have a better understanding of the processes of excavation and analysis and thus to concentrate our efforts on the interpretation and explanation of the archaeology.

The fruits of this review will take some time to become apparent, but ultimately will mean that sites will be able to be written up more quickly and efficiently, based on logical and accessible site archives, using clear and unambiguous principles and procedures.

We have been greatly helped in improving our approaches to postexcavation studies by our continuing investment in computer technology. The purchase of Desk Top Publishing software has meant that we can produce detailed archaeological reports of a high quality in-house, which can be printed on demand for other archaeologists and students. These reports, which will be included in the National Archaeological Bibliography, will free us from the need to publish large amounts of detailed specialist data in more traditional publication formats, allowing us to concentrate on synthesis, interpretation and explanation.

A range of four different stratigraphic analysis programs is now available, each with its own applications; site plans can be electronically stored so that different ideas can be tried out 'on-screen' and phase plans easily prepared and printed out during the course of writing up. New software means that all the site data can be entered on to computer, where it is automatically cross-referenced and accessible to everyone working on the project: finds specialists can retrieve all the finds data, in

any configuration they desire, at the touch of a button; and then call up information on the stratification, including the site plans and matrix, all on the same terminal. Likewise, the stratigraphic analyst has full access to all the finds data, potentially including finds illustrations and photographs, as the site is being written up. This simple access to site information will not only speed up the process of report writing, but also, by integrating more closely the work of different team members, enhance the quality of our work.

Other areas where computing is making an impact are in project management, statistical analysis and financial administration. Naturally, the move to a computerised unit must be a slow one: not only do machines and software need to be purchased, but people must get used to new technology and new working practices. As archaeology becomes more competitive and more professional, and the pressures on the team to deal with large amounts of data quickly and effectively increase, the move to computerisation is less of a luxury and more a necessity. Our goal is a networked computer system within the Trust offices, with a terminal on practically every desk; far from turning us into square-eyed computer programmers, this will bring us together and allow us to concentrate on our real job: the exploration and explanation of the past.

It is the archaeology that is our real interest; the use of more sophisticated methodologies and computer technology is merely a means to that end. Our current projects have given us the opportunity to study many interesting and exciting aspects of the history of Canterbury and East Kent; the great Augustinian Priory of St Gregory's, with its snap-shot of the people of medieval Canterbury found in its cemetery; the long chain of settlement over several millennia found at the Eurotunnel terminal near Folkestone; the ebb and flow of urban life retrieved from Longmarket and now at St George's in Canterbury, with the possibility of a previously unknown Anglo-Saxon church; and the exploration of the as yet little known history of post-Roman Dover.

These are just a few of the many strands of our work and research; much remains to be done before we shall be able to publish the results. In spite of the problems of recession and change facing all archaeological units, the gradually unfolding history of Canterbury and East Kent remains a fascinating and engrossing study.

1 A Re-appraisal of Prehistoric Pottery from Canterbury

by Nigel Macpherson-Grant

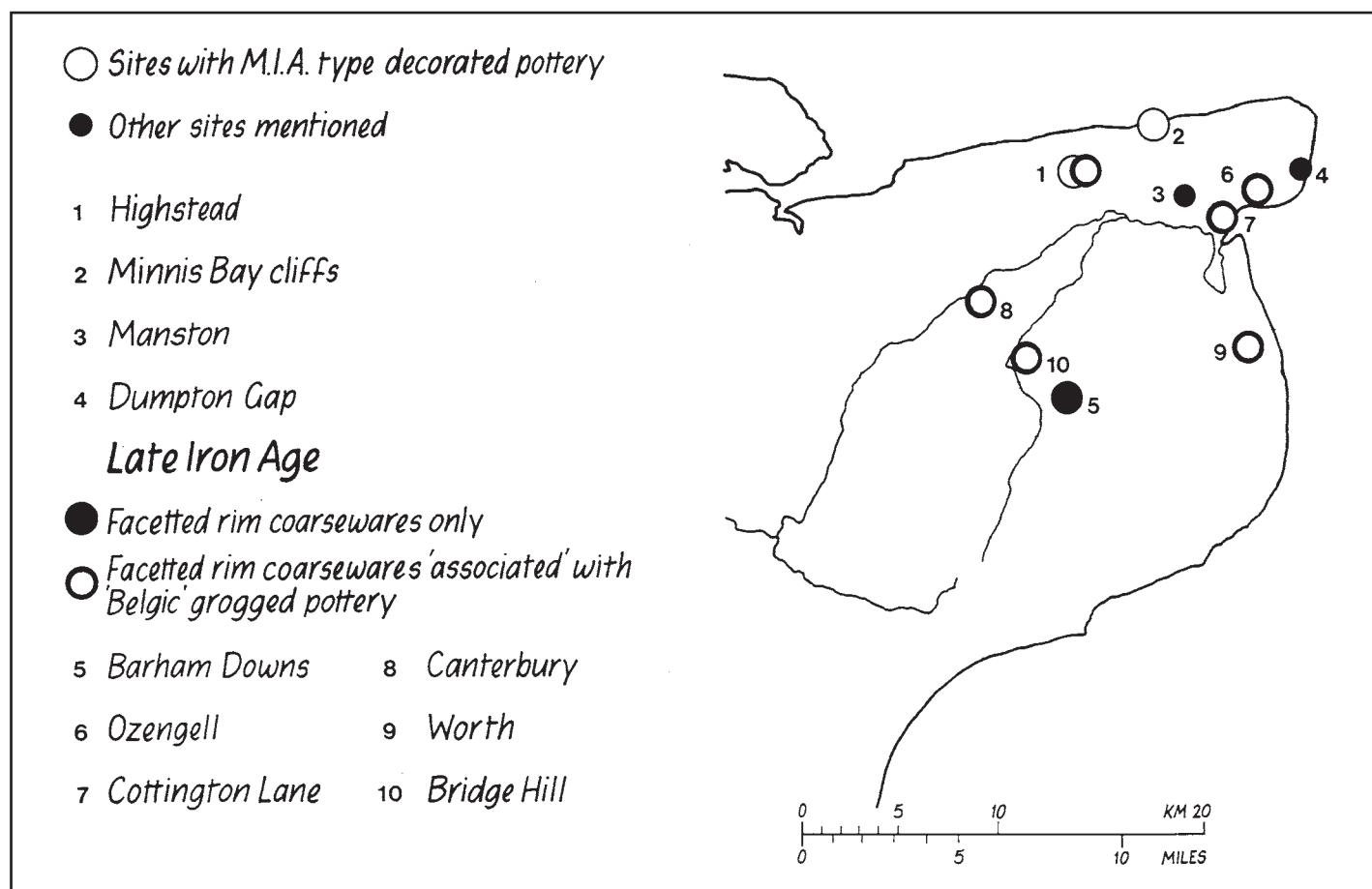
In last year's issue of Canterbury's Archaeology this section included notes and a map illustrating how work on a number of recent and u rrent multi-period projects throughout the region was inter-related

providing very positive contributions toward our understanding area 's ceramic history, particularly for the Late Bronze Age/Early Iron Age transition and Early Iron Age periods. Note 3 of that ssue stated The analysis of Highstead and Folkestone ceramic assemblages has also prompted a re-analysis of Canterbury's prehistoric pottery: there is a strong possibility that the Iron Age enclosure found against St John's Lane in 1986 is perhaps of seventhsixth century B.C. date.⁵⁴ This study included a thorough reassessment of the material from the late Dr F. Jenkins's 1950 excavations at nos 10-11 Castle Street.⁵⁵

Both the 1950 and 1986 excavations at the above sites produced tantalisingly small ditch segments, at the base of each excavated sequence. Both segments, on alignment and the bulk of their ceramic content, are considered to be contemporary, and together probably represent part of a sub-circular enclosure. In the 1950s and 60s the pottery from the Castle Street ditch terminal was placed into the Early Iron Age and given a date of c. 250-200 B.C.,⁵⁶ based on the available comparative evidence and dating at that time. Its main significance lay in the realization that even if

there was no evidence for continuity, parts of the city-area had witnessed earlier pre-'Belgic' occupation. What has changed as a result of the 1991 re-assessment is that the original dating is no longer tenable, that the 1950 assemblage represents not one, but two phases of occupation, and that the whole question of pre-'Belgic' settlement at Canterbury needs reviewing.

Using information from the above assemblage, other finds from the city, together with a number of examples from rural sites, the following is an outline of recent developments and some key ceramic trends within the region from the Late Bronze Age/Early Iron Age transition to the Late Iron Age/'Belgic' transition. It must be stressed that this article is not meant to be a comprehensive overview, and for the later Mid-Late Iron Age periods in particular, should not be seen as an accurate reflection of all ceramic developments. There is much information, both unpublished and published, from museum collections and recently excavated city and rural assemblages that needs to be digested and integrated before such a claim could be made. Its sole purpose is to highlight the hitherto unsuspected degree of pre-'Belgic' occupation in Canterbury, to illustrate some of the ceramic types associated (or likely to be associated) with it, and to present any implications this material has for the city and the region as a whole.



Bronze
nail-headed pin.
Scale 1:1

1. Late Bronze/Early Iron Age transition: c. 850/750–600 B.C.

The bulk of the pottery from the 1950 Castle Street site was from well-sealed deposits and its homogeneity-condition and quantity indicate that the pottery assemblage was contemporaneous. Over 100 fine and coarse ware vessels are represented. Amongst them are a number of key traits:

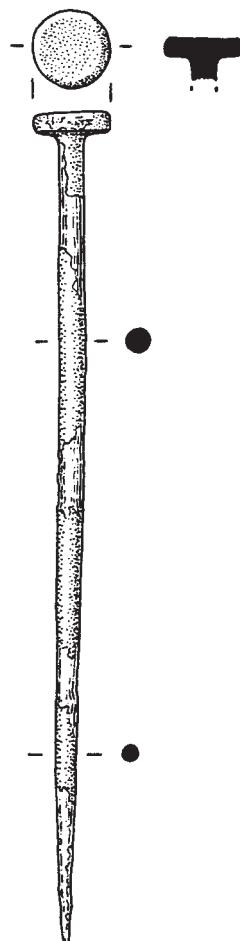
- a. Thin-walled fine ware bowls generally typified by the fairly profuse addition of finely-ground flint temper;
- b. Most of these bowls have acute-angled lower-body walls, gently curving shoulders and simple upright/everted slightly flaring rims;
- c. Some have shoulders decorated with a band of incised lines;
- d. Other fine ware sherds are from much larger thick-walled vessels, including one decorated as above;
- e. Coarse ware jars are typically thin-walled, high-shouldered, and short-necked;
- f. Both ware classes have examples of heavily-gritted under-bases, from being made on beds of crushed flint.
- g. At least one coarse ware jar has remnant coil-pinch finger-presses beneath a superficial surface smoothing.

These have been intentionally itemised, because it is precisely these manufacturing, formal and (with slight variations) decorative attributes that can be closely paralleled, principally from a Late Bronze Age/Early Iron Age enclosure at Highstead, near Chislet,⁵⁷ but also to varying degrees from all the sites indicated on the accompanying map. Much of the Castle Street material is rather fragmentary, and is best illustrated by more complete examples from Highstead (see figure, p.41). However, its condition does not diminish its importance. It represents the sixth site that can be linked together by a specific combination of interestingly mundane constructional characteristics (indeed the more basic the parallel, the greater likelihood of contemporaneity), and the fourth where these traits are so similar as to suggest either that they represent the work of one workshop or, more probably a strongly regionalised potting tradition. Further, it is derived from the first enclosure that can be directly linked, on the basis of ceramic content, to the Highstead sequence. At Highstead the

pottery from Enclosure A24 has been placed into Period 2 of the overall Highstead sequence and dated to c. 850/750-600 B.C. A particular aspect of this phase is the evidence for bronze metalworking, including the presence of clay moulds for the manufacture of bronze pins.⁵⁸ An example of the type of pin probably produced is illustrated here. Together with Highstead, two other sites, Northdown and Monkton Farm, produced evidence of metalworking. The Monkton material includes part of a bronze 'hoard', metallurgical debris and pottery, apparently in direct association with an occupation site.⁵⁹ Though lacking diagnostic forms, the manufacturing traits of the fine and coarse ware sherds present are identical to those from Highstead, Northdown and Castle Street. Elements in the 'hoard' itself can be dated c. 900/800-600 B.C., though deposition closer to c. 700 or 600 B.C. may be more likely. The provisional dating of the Monkton bronzes considerably strengthens the ceramic dating of Highstead Period 2 and, in turn, the pottery from Castle Street.

Implications

a. It is now increasingly certain that the region witnessed, during at least part (if not all) of this period, a relatively uniform ceramic tradition. Within this sub-trends may already be emerging, with Canterbury, Highstead, Monkton and Northdown belonging to one, and Folkestone, Hacklinge⁶⁰ and possibly Mill Hill, Deal⁶¹ to another.



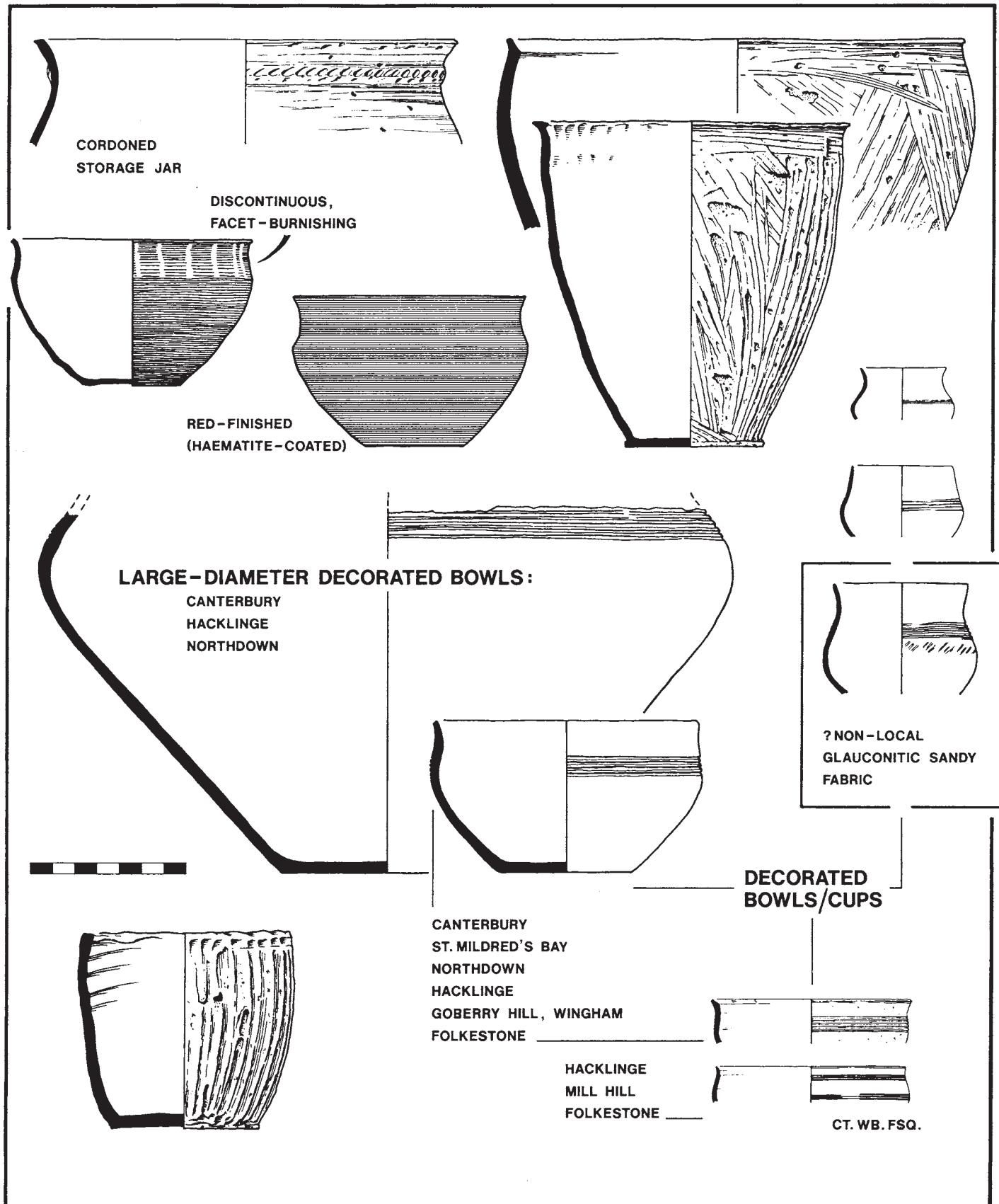
POST EXCAVATION

There is material from other settlements in the area: Mill Hill itself, Minnis Bay, Kingston Down⁶² Eddington Farm⁶³ and Newington village, Folkestone, of Later Bronze Age date, which is likely to chronologically dove-tail into the above, though how closely depends on further assessment of their ceramic content.

b. The growing evidence for bronze metallurgy, associated with some of the above sites, coupled with the potential for mutually reinforcing dating, is going to provide a good basis from which to explore more fully, not

only the material nature of the contemporary culture and the degree of localised / inter-regional similarities, but also to determine more precisely the ceramic transition to the Iron Age proper.

c. Working backwards, and in conjunction with a much-needed review of Middle and Late Bronze Age metalwork, it may now be possible to bring greater clarity to the problem of local ceramic trends during the Mid-Late Bronze Age.



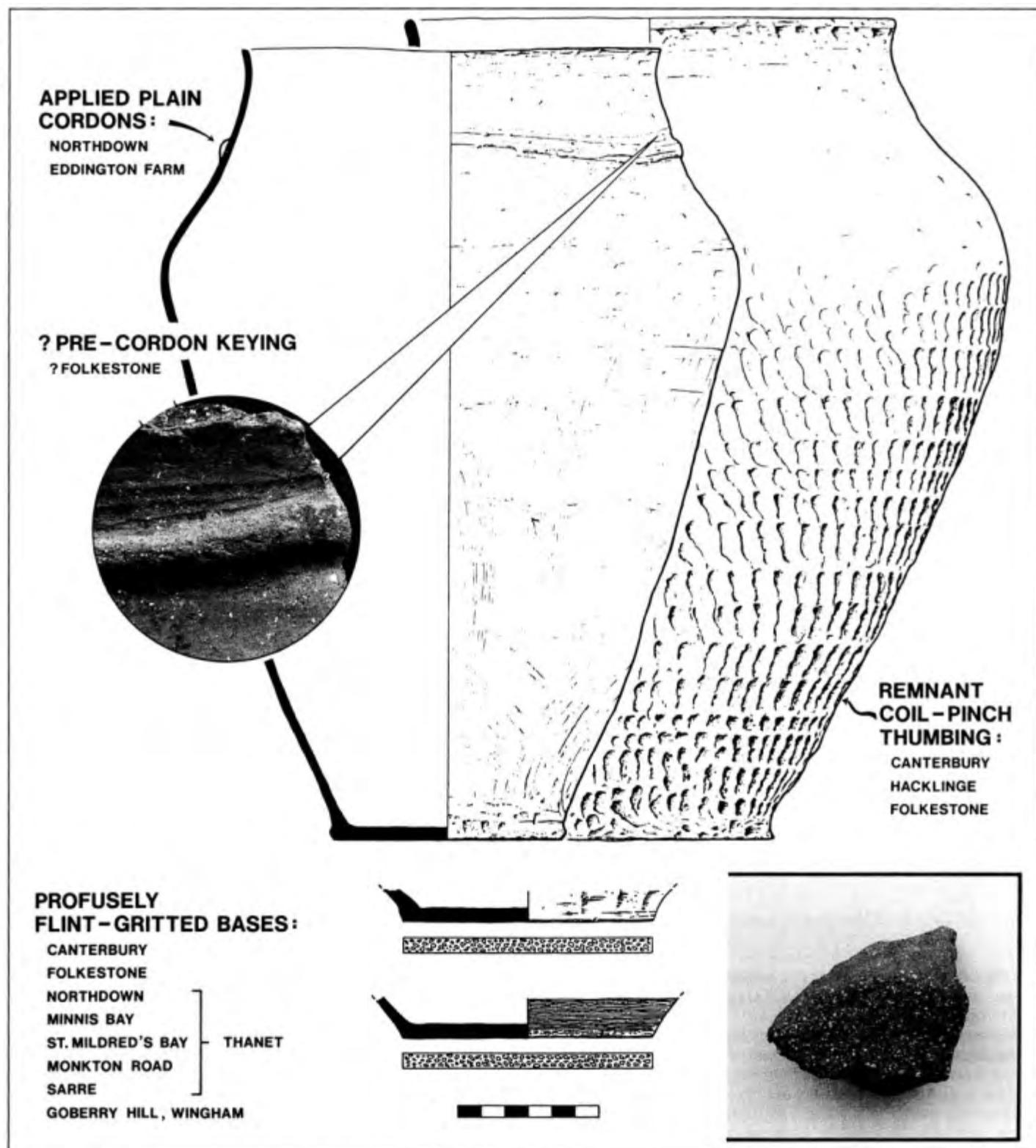
Highstead: Transitional Late Bronze to Early Iron Age fine and coarse ware pottery and East Kent parallels. Scale in centimetres.

2. Late Bronze/Early Iron Age 'interface': c. 600–550/500 B.C.

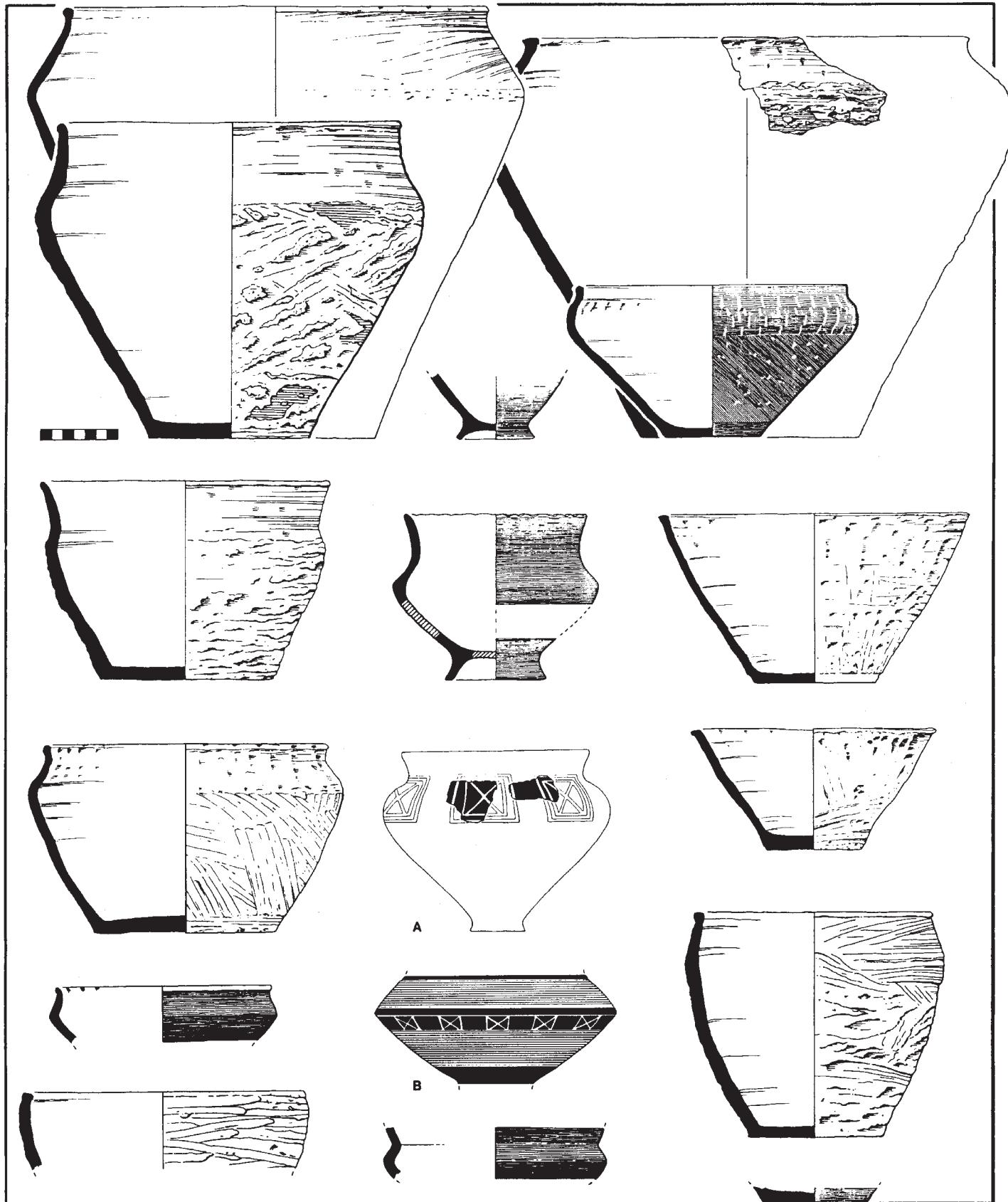
Highstead is the only site to date producing reasonably clear evidence for continuity, from the preceding period through into the Iron Age proper (though elements of the (CT WB FSQ) assemblage west of Dolland's Moor, Folkestone may also represent this phase). Essentially, this 'interface' is a late phase within the Late Bronze Age/Early Iron Age transition, marked in Highstead's Period 3A by features containing pottery with attributes of both the preceding Period 2 and the following Early Iron Age Period 3B. It is characterized by the occurrence of small quantities of rusticated pottery (the deliberate application of additional clay to vessel surfaces), a continental tradition epitomizing Highstead's Early Iron Age phase. This 'interface' does not appear to be represented at Canterbury.

3. Early Iron Age: c 550-1500-400 B.C.

Associated with the main 10-11 Castle Street assemblage was a small quantity of sherds whose fabrics, flint temper-size and wall-thickness attributes ensure that this material does not belong with the earlier pottery. The key factor is the presence of two sherds with rustication, a finishing technique applied to the exterior of vessel walls, generally below the shoulders (see photo and figure). As noted above it is a characteristic of definitely continental origin,⁶⁴ becoming dominant in Period 3B of the Highstead sequence and dated as above. A particular feature of the later material, as here, is a tendency for thicker-walled pots, in marked contrast to earlier Periods 2-3A products. These traits confirm the placement of these later Castle Street sherds firmly into the Early Iron Age. However,



Highstead: Transitional Late Bronze to Early iron Age storage jars and manufacturing attributes with East Kent parallels. Scale in centimetres.



Highstead: Early to Mid Iron Age fine and coarse wares including bichrome (A: Barham Downs) and polychrome (B: Highstead) decorated vessels. Scale in centimetres.

the upper limit for the use of rustication has not been securely established and a longer date bracket up to c. 350/300 BC. might be wiser for the Canterbury group.

Again the illustratable 1950 sherds representing this period are rather unprepossessing and the general period character of the group is best represented by examples from Highstead and other East Kent sites (above). Amongst these are examples of red-finished fine ware bowls and jars: external surfaces being coated with haematite powder either overall or in zones to form panels of alternating, natural untreated (black) and

applied dark red (shaded) colour, with, sometimes, the additional use of white/pale buff paint as panel borders or simple linear designs. Within the region, the use of haematite to decorate fine ware vessels, does occur earlier in Late Bronze Age/Early Iron Age assemblages, notably Highstead Period 2 and Minnis Bay, but its occurrence is not, to date, widespread, and its use as an element in bichrome or polychrome decoration (as illustrated) appears to be a specifically Early-Mid Iron Age phenomenon.

The significance of this ceramic package, represented by the specific combination of rusticated coarse wares and decorated redfinished fine

wares, was outlined in an earlier issue of Canterbury's Archaeology,⁶⁵ where a distribution map of rusticated pottery sites showed their strong eastern Kent distribution, sufficient to envisage the existence during this period of a 'rusticated province', a distinct cultural entity with close continental ties. That map is reproduced here with further recent finds, reinforced by the known distribution of Early-Mid Iron Age red-finished fine wares.

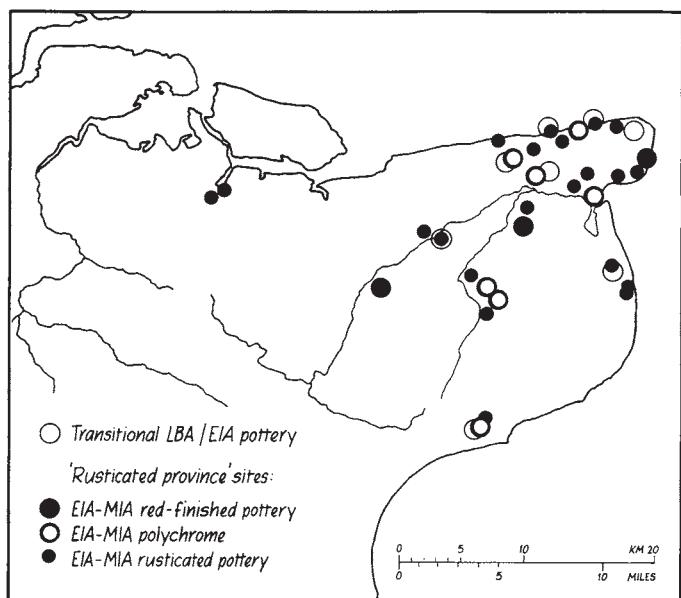
Implications

a. It is recognised that the Castle Street group is small, and that only two rusticated sherds does constitute rather limited evidence, but their identification is quite definite, and apart from one doubtful scrap from another intra-mural site, are the only examples of their kind from city assemblages examined to date. However minimal the data this distinctly different pottery does indicate a degree of reoccupation in this area of the city at some point during the fifth-fourth centuries BC.

b. Again, in this period, the region was settled by people apparently sharing a fairly uniform ceramic tradition. Much more comparative interassemblage studies need to be done to determine how consistent the transition is or whether they are localised subtraditions beneath an 'umbrella uniformity'. Rather more important, Castle Street is one of an increasing number of 'rusticated province' sites which have a close topographic association with earlier occupation of transitional Late Bronze Age/Early Iron Age date. This consistent trend may indicate re-occupation with no really significant time-lapse between each phase, and it is precisely this lapse that ought to be represented by Highstead's Period 3A interface. The implication is that, despite the changes in ceramic style the whole region experienced a form of cultural continuity throughout the Late Bronze Age/Early Iron Age transition and the Early Iron Age.

4. Middle Iron Age: c. 400-200/150 B.C.

It was mentioned above that the demise of rustication, at least in its characteristic and frequently employed Early Iron Age form, had still to be defined. Some help may come from the publication of the Iron Age assemblages from Manston⁶⁶ and Dumpton Gap,⁶⁷ both of which, whilst still being essentially Early Iron Age in character with affinities to Highstead's Period 3B do contain elements that make these sites marginally later, with an arguable emphasis between c. 450-350 BC. Similarly a re-appraisal

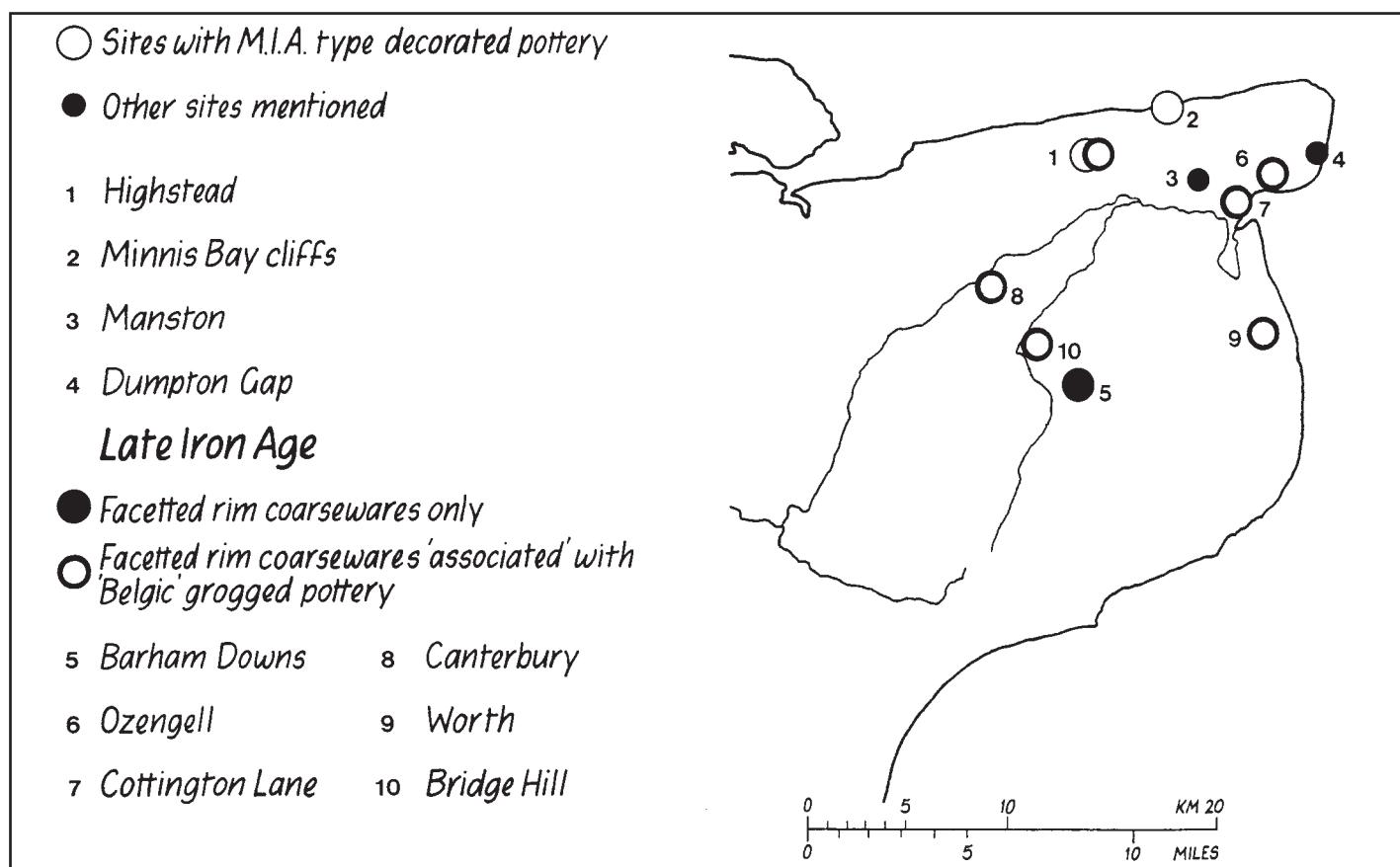


East Kent: Early to Mid Iron Age sites.

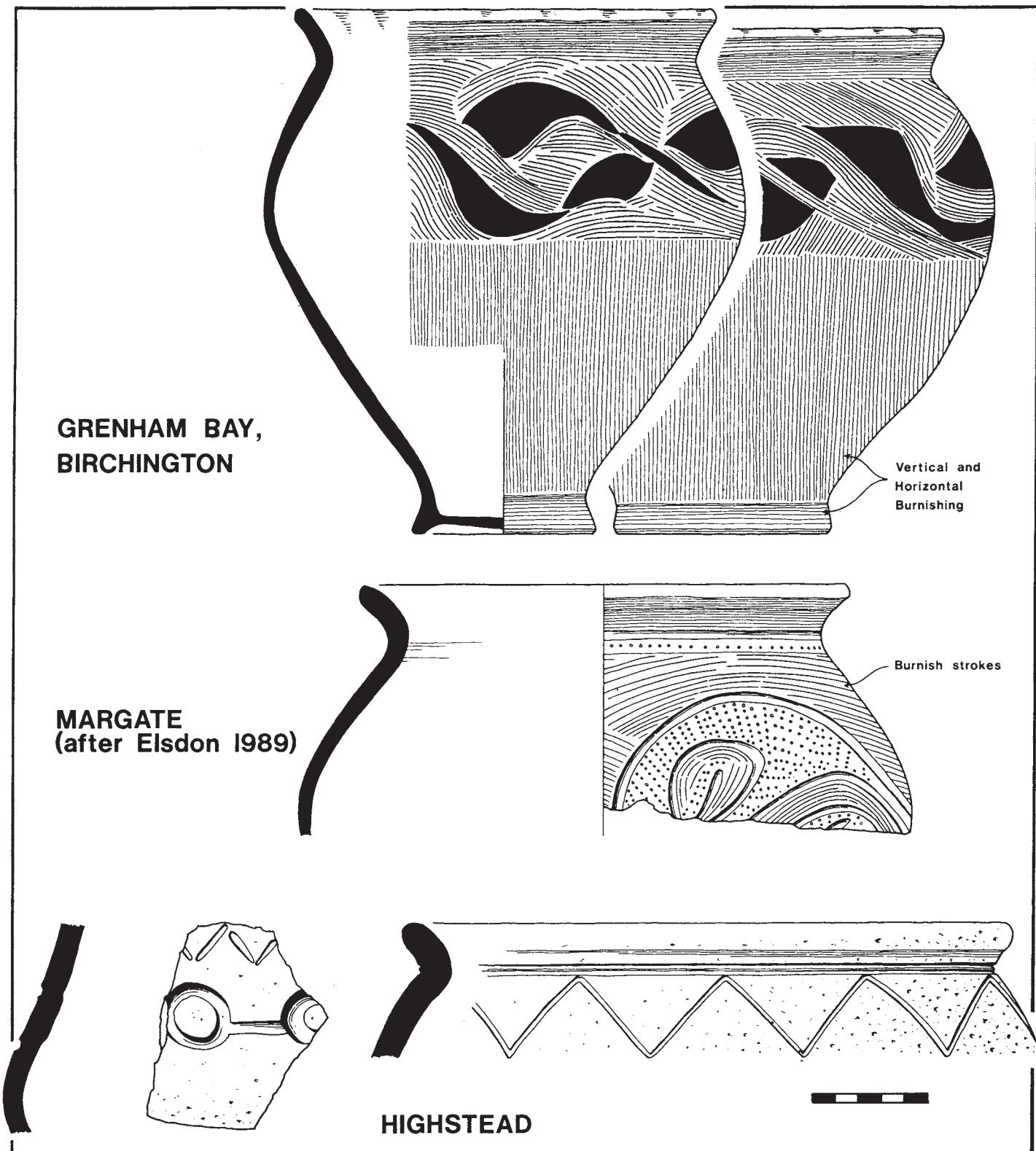
of other Iron Age assemblages, e.g. Stourmouth, Studding Lane, near Canterbury, or Coldharbour Lane, Bridge, where rustication is either less dominant or absent, may help to refine its chronological range.

To date, neither the Middle Iron Age, nor the pre-'Belgic' Late 1 Iron Age is well represented by regional material. In other areas of southern, central and eastern England the general trend (from c. 300 BC onwards) is for more round-profiled vessels, often topped by short everted rims, coupled with the increasing use of La Tene-style curvilinear decoration on finer wares. At Highstead there is a break in occupation for much of this period, with only a few decorated pieces (above) that may reflect the main national trend, but probably arriving late and closer to c. 200/150 B.C. than before. Two decorated jars from Birchington (Grenham Bay and another from Margate) typify the period better, but again the associated material requires proper study.⁶⁸

For Canterbury, there is little or no evidence to date, and though one or two coarse ware sherds in the later Castle Street group could, with some



East Kent: Early to Mid and Late Iron Age sites mentioned in the text.



Decorated Mid to Late Iron Age pottery from East Kent sites. Scale in centimetres.

effort, be potential representatives for this period, they are too indefinite in character to be reliable indicators. A degree of continuity is possible, but not proven.

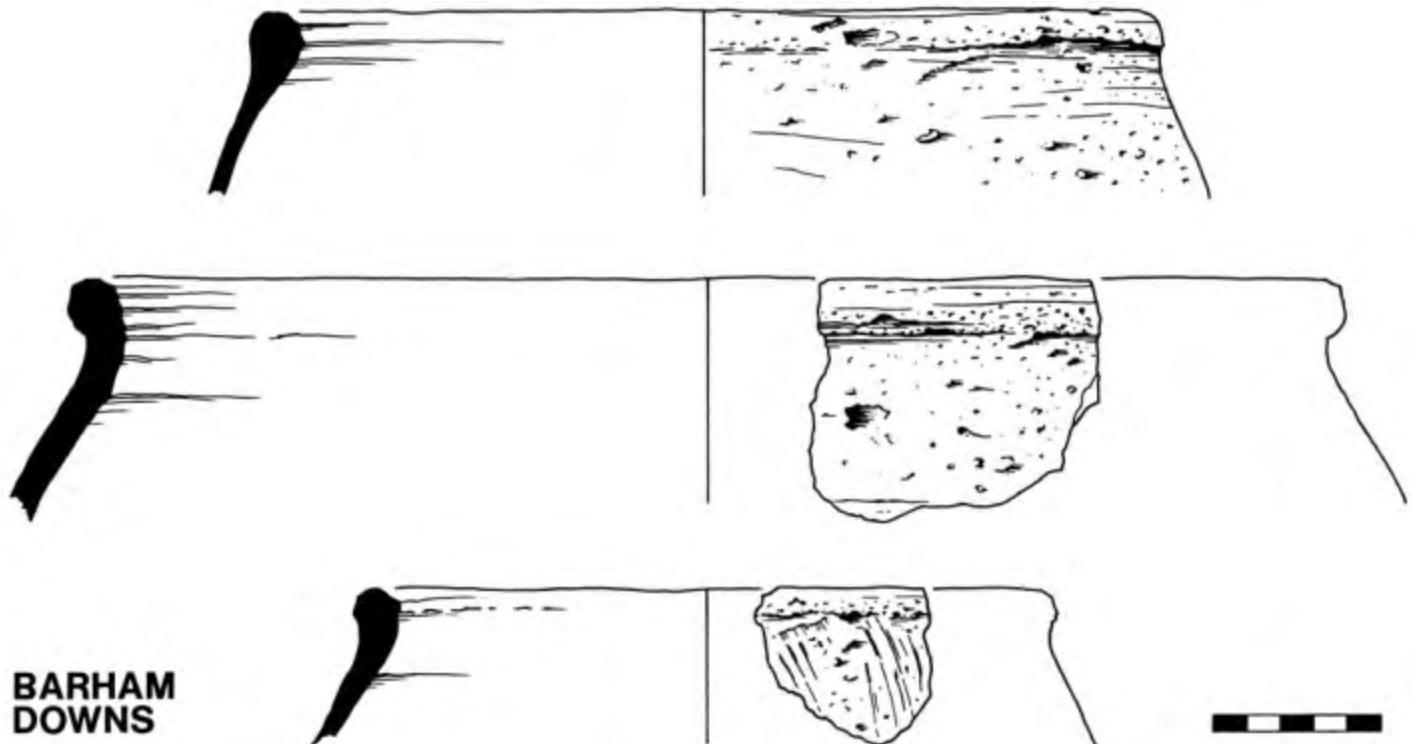
5. Late Iron Age: c. 150–100175 B.C.

Again a difficult period with very little material that can be firmly assigned to these years. One site at Barham Downs excavated in 1971, produced material that Professor Barry Cunliffe felt could be placed between c. 500–350 B.C., but cautioned that ‘the dating offered ... should be regarded as highly tentative’.⁶⁹ Subsequent regional work clearly shows that most of the material has been appropriately assigned. However, two contexts

produced the illustrated jar rims. Their manufacturing traits are consistent: fabric rather heavily loaded with coarse moderate-sized flint temper, similar closed thickened-rim forms, with rim top/inner lip smoothed horizontally leaving a highly distinctive faceted finish. So far, this combination has not been noted from other Early or Middle Iron Age sites. The main point here is that no early style ‘Beigic’ grog-tempered pottery was found either in association or from the excavation as a whole.

6. Late Iron Age and ‘Beigic’: c. 75–50125 B.C.

It is not the purpose of this overview to discuss or illustrate in detail the full fusion of these two ceramic traditions: one flint-tempered (Late



Pre-'Belgic' Late Iron Age pottery from Barham Downs.

Iron Age), the other grog-tempered ('Beigic'), for which there is ample evidence both from Canterbury and the region, and represented by Late Iron Age/'Belgic' transitional wares (flint tempered wares with specifically 'Belgic' (grogged)-style forms and decor, or flint-and-grogged vessels in purely 'Beigic' (grogged)-style forms).⁷⁰ Arguably, this fusion process was probably at its height between c. 50 or 25 B.C.-A.D. 25. What is least understood is the mechanics of interchange and adoption, which to date has been reinforced by not clearly knowing what indigenous flint-tempered ceramic types were current prior to the introduction of purely grogged pottery. The following are possible sign-post contributions to resolving this problem.

a. From the Castle Street-Stour Street area of Canterbury (specifically site CBR 1), Bridge Hill, Highstead, Worth (near the temple site), Cottington Lane and Ozengell, Thanet⁷¹ come a number of closedform thickened rim coarse ware jars with faceted rim finishes. Of the Highstead examples, and by extension the rest, Dr Isobel Thompson has agreed that whilst accepting that these could occur primitively in a grog-tempered fabric ... they might be earlier and therefore pre-'Be Igic'.⁷² All of these are virtually identical to the potentially purely Late Iron Age examples from Barham Downs. The significant difference is that all come from sites producing (mostly) pre-Conquest style 'Belgic' grogged wares. Unfortunately none of these sites provide hard evidence of any stratigraphic relationships. Despite this the topographic association is so consistent that even without any other evidence, the relationship cannot be entirely coincidental: they have to either shortly precede, or be partly contemporary with, the associated grogged wares. In Canterbury despite the fairly wide spread of Iron Age-type flint-tempered pottery from much of the intra-mural city area (map p.47), this distinctive material is confined entirely to a few rims from the site mentioned. None was recovered during the 1981 excavations at Bigberry hillfort,⁷³ but assemblages from earlier work have still to be re-assessed.⁷⁴

b. A few of the above rims can be loosely associated by form to a second group of material about which (for the Highstead examples) Or Thompson has further said that they 'would not look odd in a grogtempered fabric, but which for any individual vessel are not necessarily contemporary and might be earlier'.⁷⁵ Related types again come from Canterbury (on a much wider city basis, but particularly the Marlowe area sites), Bridge Hill, the above-mentioned Thanet sites, and also Bigberry. Some of these forms can be linked to pre-Conquest 'Belgic' types in the region, in either transitional Late Iron Age/'Belgic' fabrics or in the standard, grogged fabric (not necessarily wheel-made). Though still requiring better stratified evidence, the (a) group, via (b) material, does seem to be linked to earlier 'Belgic' types.

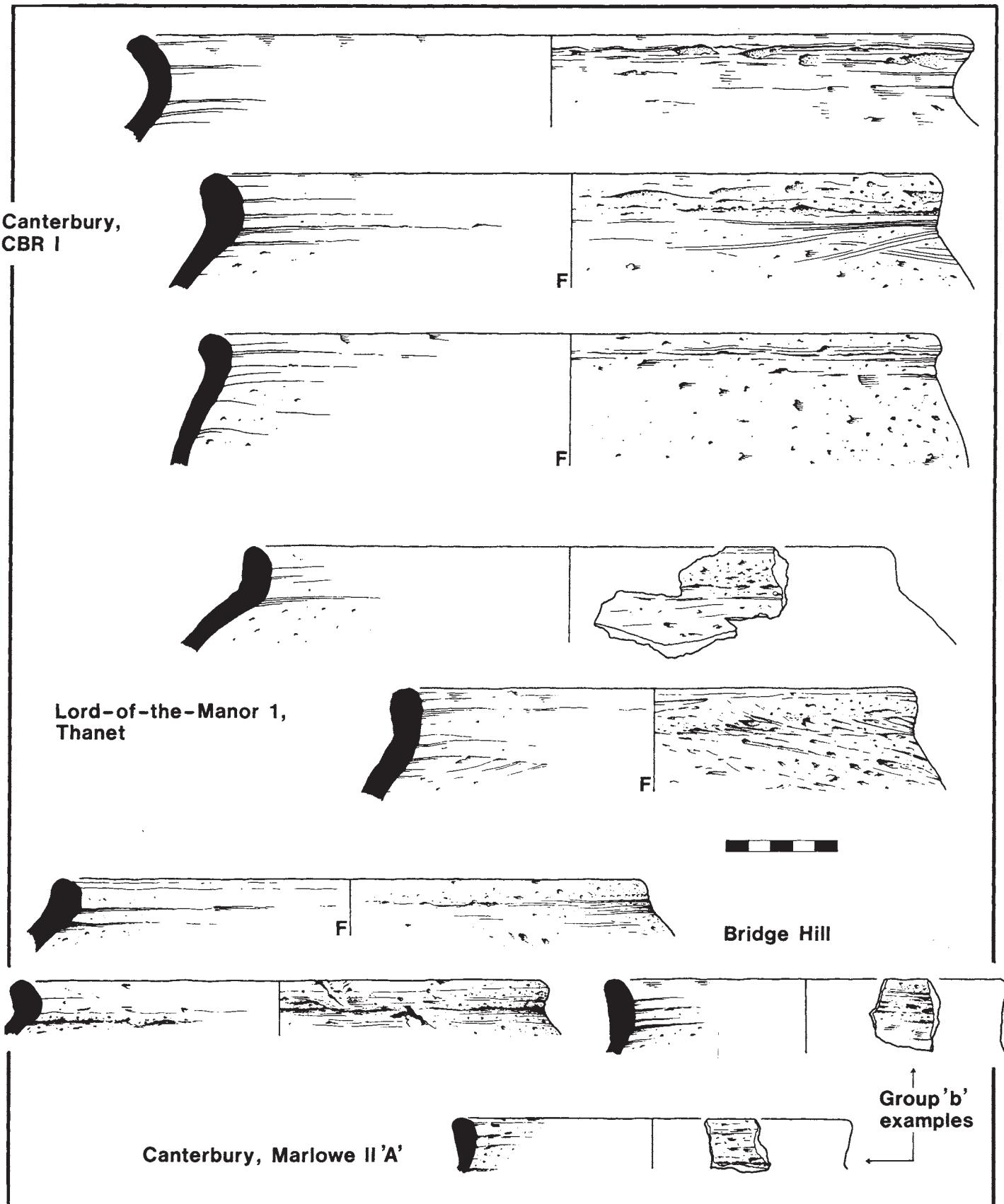
Dating either group, and thus by extension, the earlier possibly purely Late Iron Age group of faceted rims from Barham Downs, is much more difficult, and depends upon such aspects as when grogtempered pottery was adopted in the region, the likely local dating of imported Dressel 1B wine amphorae and inevitably the distribution and associations of various types of Late Iron Age coins. These are all points engendering much academic debate, and because there are considerable ramifications to the various aspects involved, represent an arena which it is not proposed to fully enter here. But with reference to the present material, there are some points that need to be made as a contribution to this debate:

i. The accompanying figure illustrates sherds from four decorated fine and coarse ware vessels from various parts of the city (for distribution see map, p.47). The style of decoration is essentially Late Iron Age and can be broadly placed between c. 100-25 B.C. or marginally later. The finer dating of these and any future examples is dependant upon a detailed assessment of any associated indigenous flint- or 'Belgic' grog-tempered material.

ii. Two of the above come from the Marlowe area excavations, and presumably derived from at least the initial phases of the multipleditched enclosure found there, established in the late first century B.C. (i.e. c. 25 B.C. plus). Group (b)-type non-faceted rim indigenous wares were associated with this enclosure. Allowing for the fact that these are related by form to earlier 'Belgic' grogged types, but might in some instances be marginally earlier than the latter, an arguable bracket of c. 30-15 B.C. for their currency in Canterbury seems reasonable. By extension this dating could, initially, be applied to all similar examples from the region.

iii. Some Canterbury and regional group (b)-types are related to a few group (a) faceted rims from Period 4A/B contexts at Highstead, where internal evidence suggested that some faceted-rim forms might still be in use between c. 50-25 B.C. This independently determined dating, based on that site's sequence, does therefore appear to link reasonably well with the dating proposed for the group (b) forms, reinforcing the relatively firm formal links already established.

iv. There are links to fairly mainstream 'Belgic' grogged coarse ware forms. Some of the group (a) faceted-rims on the other hand, if they are indeed related to the grogged tradition, are more likely to be linked to primitive elements in it, which on traditional dating ought to take them close to mid first century B.C. However, since these faceted- are almost certainly indigenous, they could well originate within the first half of the first century B.C. arguably between c. 75-50 B.C., which takes them close to the upper limit proposed for the Barham Downs group (assuming that the latter is isolated and significantly earlier (than the grogged tradition) and not an assumption based on recovery-bias).



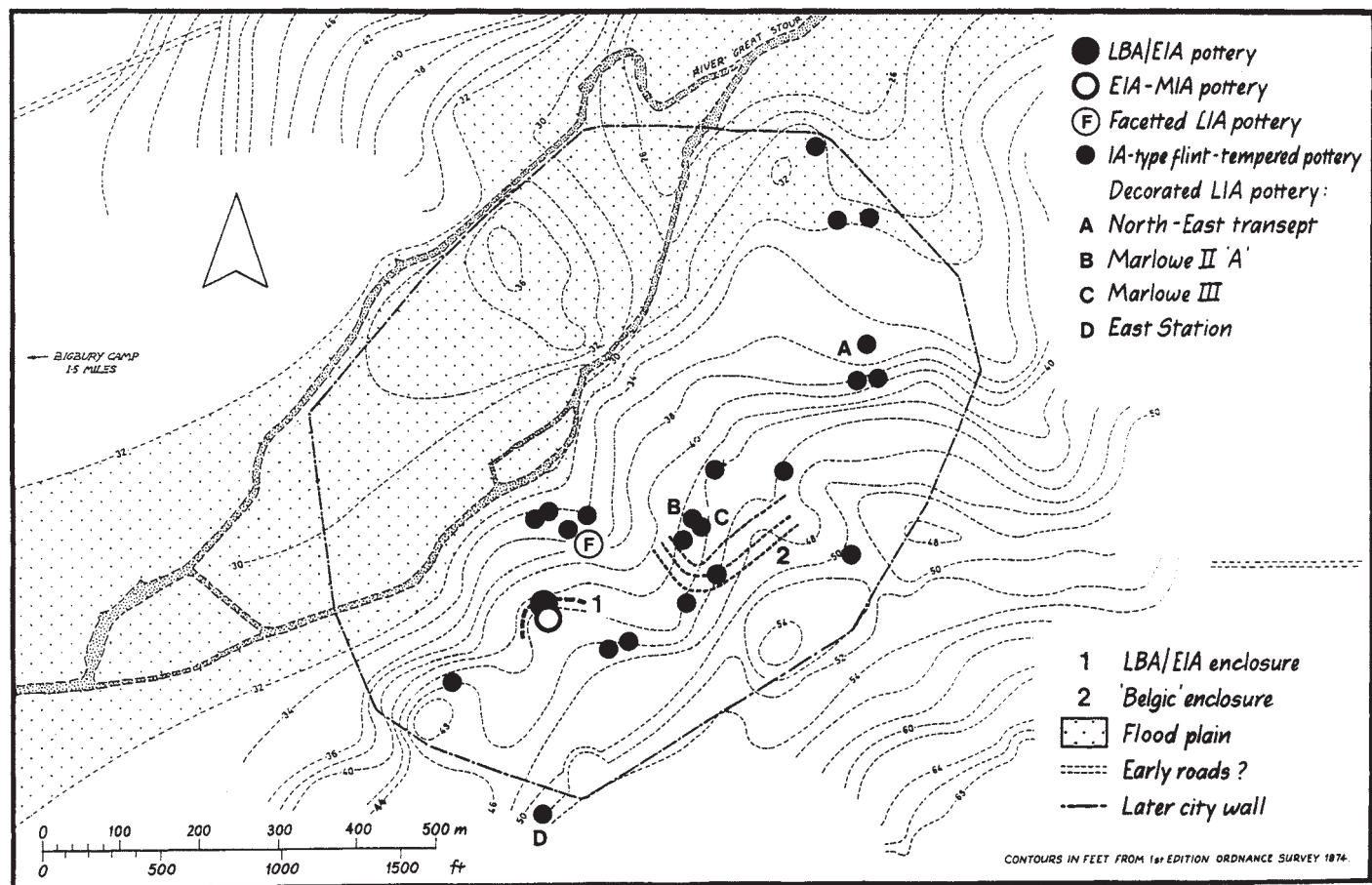
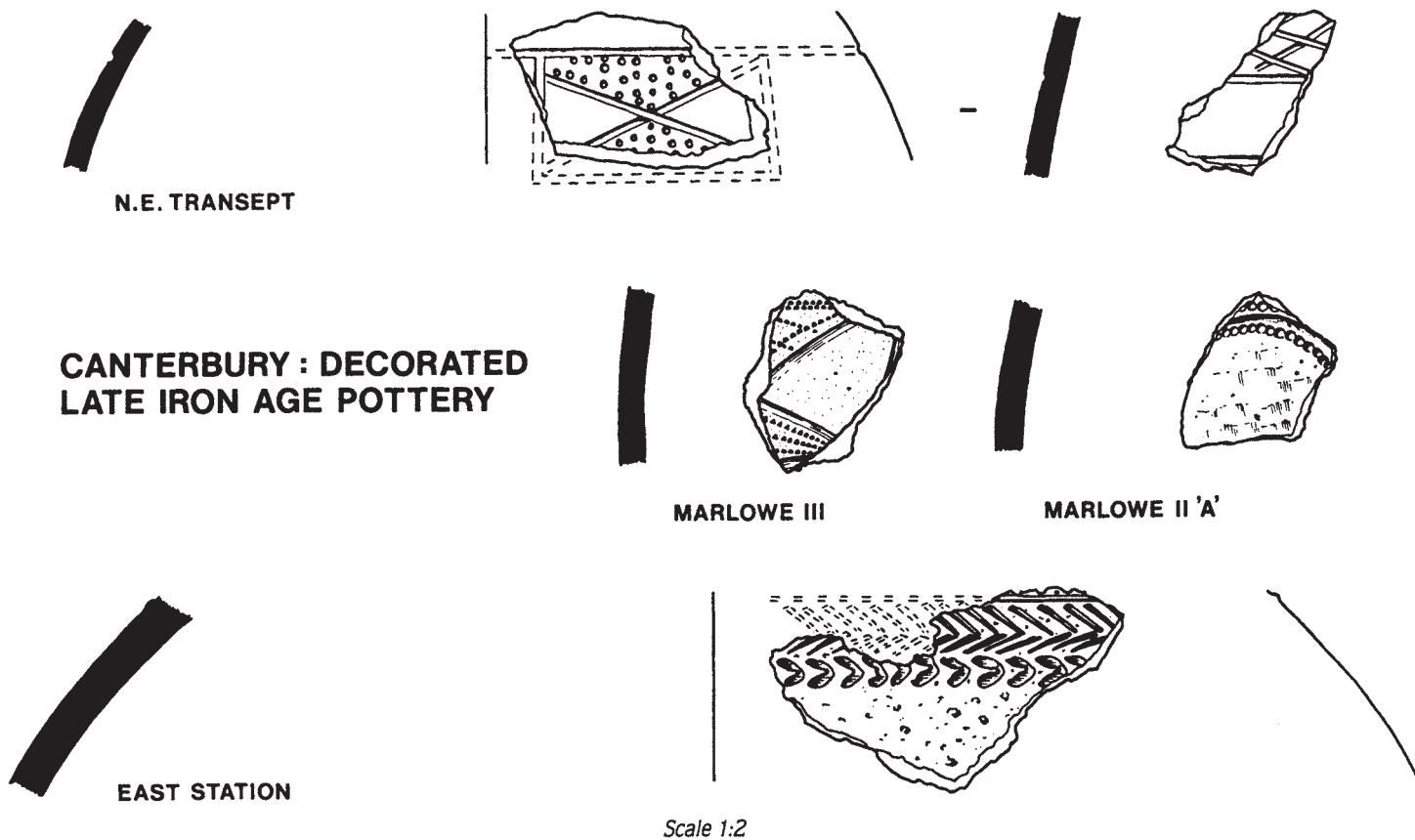
Late Iron Age to 'Belgic' transition: some indigenous coarseware forms; F = with faceted rim. Scale in centimetres.

v. On this line of evidence, therefore the faceted rims from the Canterbury CBR 1 site could be placed between c. 50-25 B.C. and as such is independently derived confirmation (i.e. without recourse to other finds types) for the existence of occupation in this part of the city, appreciably earlier than the establishment of the Marlowe enclosure.

vi. Whilst the dating of the Marlowe sequence is unlikely, or may not even need, to be modified, the above dating for indigenous wares is derived solely from this sequence and does not take into account two other significant developments. One is, that at Baldock and Silchester⁷⁶

the grogged tradition appears to begin prior to c. 50 B.C., and the other is that Dressel 1 B amphorae may be consistently arriving in this country as early as c. 70-50 B.C., rather than mostly post-Caesar.⁷⁷ Whilst the first may be due to different regional developments, both this and the revised thinking for amphorae importation dates need to be borne in mind when finalising the date of the Late Iron Age and 'Belgic' occupation in the Castle Street-Stour Street area of the city. If the earlier dating for the arrival of grogged wares elsewhere in south-eastern England is a consistent overall trend, then this will automatically lengthen the currency of group (b) non-

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Prehistoric pottery in Canterbury: interim distribution map and assessment.

facetted material, and push facetted-types back into the first quarter of the first century B.C., if not earlier still.

Overall implications for Canterbury

The re-dating of the 1950 Castle Street pottery considerably lengthens Canterbury's history as an important fording-point of the river Stour, on the North Downs trackway, with a transitional Late Bronze Age/Early Iron Age enclosure between c. 800/750 - 600 B.C. followed probably by a relatively short-term gap in occupation, with renewed activity between c. 550-350/300 B.C. An appreciable lapse seems to have followed with no further significant activity until at latest, c. 50-25 B.C. and possibly from earlier within the first half of the first century, but perhaps (on ceramic assessments alone) not before c. 75 B.C.

What is interesting is that despite an apparent fairly major hiatus in the Mid-Late Iron Age, the same general area of the city was used in each phase of settlement and this has to imply a constantly used focus-point (such as a main river fording-point), however intermittent any associated occupation may have been.

The accompanying map, again based entirely on the ceramic evidence illustrates the main likely settlement foci discussed in this article (1-2, and F). It does not take into account the known wide intramural distribution of pre-Roman 'Belgic' occupation. It does, however, map the spread of indigenous Late Iron Age pottery, and though this is only an interim plot, the distribution is much wider than anticipated even a year ago. It is now particularly important to thoroughly reassess all finds of Iron Age-type pottery from intra- and extra-mural sites, not only in terms of location and quantity, but also in relation to dating evidence from other artefact types.

Overall implications for the region

Prior to 1988, conceptions of Late Bronze Age-Late Iron Age ceramic trends in East Kent were hazy and lacked concrete form. The first significant move toward clarity was the plotting of Iron Age sites with rusticated pottery, and though the term 'rusticated province' and all it implies, is my responsibility, the foundation was laid by Peter Couldrey's work on the Highstead pottery. The dating he was able to provide from parallel continental evidence provided our first relatively stable 'date platform' for the region's prehistoric ceramics.

We now have another such 'platform' for the Late Bronze Age/Early Iron Age transition, not quite so widespread in terms of site distribution and requiring a lot more evidence before we can perceive clearly demarcated cultural zoning, but a reliable and useful basis is emerging. One aspect of the Early Iron Age 'province' is the borderzone nature apparent in the Folkestone area, with no rusticated pottery known in East Sussex. Since a transitional Late Bronze Age/Early Iron Age site at Folkestone

repeats the topographic trend mentioned above for closely related Late Bronze Age/Early Iron Age and rusticated sites it will be interesting to see whether this border-zone aspect can now be extended back into the end of the Late Bronze Age, if not earlier. Further, since strong continental ties are evidenced for rusticated Iron Age ceramics, it is very tempting to speculate whether the increasingly tangible cultural province of the latter is a reflection of much earlier, and ultimately perhaps equally tangible antecedents. In this respect it is worth highlighting that the multiple-mould method of pin production in Highstead's Late Bronze Age/Early Iron Age Period 2 is closely paralleled at Fort Harorard, Eure, in northern France.

These are significant advances in our knowledge with considerable potential for future regional studies. One of these will be to determine the decline in the currency of rustication, and in doing so to see whether the strongly unified character apparent for Early Iron Age ceramics in the area continues into the Middle Iron Age, or whether, at least so far as ceramic style-zones are concerned there is divergence into less well-knit regional sub-groups. The point is raised because both the preceding periods appear to have witnessed continuing contact with the continent, and whilst this may not have been the sole reason for the existence (and maintenance) of consistent fairly widespread ceramic traditions in the region, it almost certainly acted as a major stimulus, and since current research tends to suggest that continental contact was significantly reduced after c. 400 BC.,⁷⁸ this possibility has still to be proved as far as the under-studied Mid to Late Iron Age ceramics of East Kent are concerned.

It is, again, very tempting to speculate, whether the detectable limit of the rusticated province survived, in one form or another, through the Middle Iron Age and into the post-Caesarian period, which is why so much stress has been laid in this article on trying to close the chronological and knowledge gap for Late Iron Age ceramics. If the dating and sequence for the latter, proposed above, can be modified or stabilised, particularly in association with the region's Late Iron Age coin evidence it may at last be possible to provide a reasonably sound and continuous framework for the region's ceramics back as far as c. 1,000 or 900 BC., and moreover to see this potentiality in terms of distinct cultural, albeit artefact-based, entities, rather than the vaguely comprehended spread of dots on a map, which we have had to endure for so long.

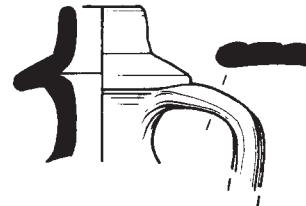
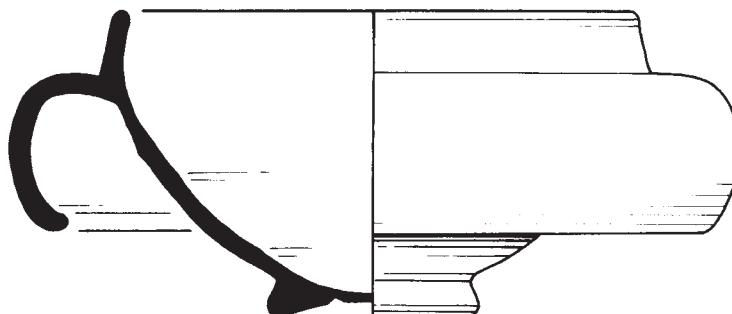
In Memorium

It seems so pertinent that a significant proportion of these real and potential advances should derive from work associated with the late Dr Frank Jenkins's excavations at nos 10-11 Castle Street, work begun in April 1991. He has always been a loyal supporter of local archaeology and frequently contributed in a constructive and positive way to my enthusiasms, and those of others. I am more than saddened that he will no longer be able to share in the stimulating developments that are now taking place.

2 A chance find of Ceramique à L'éponge at Stodmarsh

by Andrew Savage





Left.. 'A l'éponge' bowl.

Above: Upchurch-type flagon. Scale 1:2

Chance finds made and reported to the Trust by members of the public provide an invaluable source of useful and often surprising information. One such find, made recently in Trenley Park Wood, Stodmarsh, about one and a half miles from Canterbury, brought to light a rare and virtually complete imported fine ware pottery bowl of a late third or fourth-century type known as Ceramique a L'éponge. The ware is so-called because of the distinctive blotchy or 'sponged' appearance of its glossy orange-red slip. Production sites have not been identified, but distribution of the ware suggests a source somewhere in the Poitiers region of France, between the rivers Loire and Gironde. Although the Stodmarsh vessel - a bead-rim bowl with deep flange - is the most common e'ponge form, it is the most complete example yet found in this country (Beth Richardson pers. comm.).

Late Roman fine wares found in Canterbury are almost exclusively British in origin, coming mostly from the giant pottery industries of Oxfordshire and the Nene valley. Analysis of material from late Roman levels on the Marlowe sites identified only twenty-eight sherds of continental origin out

of a total of 855. There was only one sherd of Ceramique a L'éponge. Distribution of the ware in Britain is confined mainly to the south and west and is heavily concentrated in the Southampton area, reflecting its western Gaulish source and likely transportation route, by sea around the coast of Brittany and up the English Channel. Finds of other late Roman imports of eastern Gaulish origin, tend to concentrate in the south and east. It is usually found in fourth-century contexts.

Upon examination, the heavily-disturbed Stodmarsh find-spot yielded a much decayed flange-rim flagon rim and handle-stub in a fine oxidised fabric of Upchurch type. It may have accompanied the bowl, possibly in a funerary context, a fresh break at the neck and the absence of body sherds suggesting that it was also deposited intact, the body having been recently removed.

The Trust is grateful to Mr M. Mitchell for bringing the find to our attention and to Beth Richardson of Canterbury Museums for her comments.

3 The Medieval Pottery and Tile Industry at Tyler Hill

by John Cotter



Figure 1: Tyler Hill Ware jugs, c. 1275-1350, discovered in a well against Canterbury Lane. (On display in Canterbury Heritage Museum. Copyright)

In March and April 1991 a field-walking survey was conducted by members of the Trust in the Tyler Hill-Broad Oak area, little more than a mile to the north of Canterbury. The aim of this was to identify sites of archaeological importance well in advance of any future development in the area, particularly the proposed new reservoir whose construction could provide an opportunity to investigate part of the extensive medieval ceramics industry centred on Tyler Hill (see above, p.2-6).

The results of the field-walking campaign proved to be very promising and several important new archaeological sites and features were discovered all of which will be investigated more closely in due course. Evidence of prehistoric and Roman activity in the area was encountered, but the most extensive traces to survive were those associated with the medieval pottery and tile industry. Within the survey area the highest concentration of ceramic debris and wasters (reject pottery and tile) came from fields near the crossing point of the Sarre Penn stream and the Hackington Road at Tyler Hill. The existence of medieval kilns at this location had been known for some time⁷⁹ but the 1991 survey mapped out its extent for the first time and most significantly discovered a large pit of thirteenth-century pottery wasters indicating an undiscovered pottery kiln nearby. A follow-up visit after ploughing in November resulted in the location of two previously unknown tile kilns and the collection of numerous fragments of plain and decorated medieval floor tiles.

Over the years a considerable amount of archaeological work has taken place around Tyler Hill and the Forest of Blean, but remarkably little of this has been published and there is still no general account of the pottery and tile industry available to interested members of the public. In view of recent fieldwork this seems a convenient point to remedy this situation and it is hoped that the following rather selective summary will go some way towards filling this gap.

The Tyler Hill Pottery Industry

Forgotten for centuries, the medieval pottery industry had a rude reawakening one morning in June 1942 when a German bomb fell in the woods near Cheesecourt Gate, Tyler Hill, and landed on the site of a medieval pottery kiln. Masses of pottery wasters were recovered from the crater and a sample of these was published soon afterwards. This 1942 article⁸⁰ still remains the most important account of the industry although much has been learnt since then.

Tyler Hill was a natural location for a medieval ceramics industry. Locally outcropping London Clay was ideal for pottery, water was plentiful and there was an abundant supply of wood for fuel to hand from the Forest of Blean. Domesday Book (c. 1086) records that in the time of King Edward the Confessor (1042-1066) the parish of Hackington (which included Tyler Hill) was held by the burgesses of Canterbury. Thus from an early date the fortunes of Tyler Hill and Canterbury were closely entwined and it was undoubtedly the demand for pottery in the city that sparked-off the whole process.

Exactly when pottery was first made at Tyler Hill is not known but petrological analysis has shown that the fabric (i.e. clay) of late Saxon pottery in Canterbury is very similar to that of medieval Tyler Hill ware which suggests that pottery production could have begun there as early as the ninth century A.D. The activities of medieval potters rarely attracted the attention of scribes or chroniclers so that medieval documents tend to be of very limited use in reconstructing the history of pottery and tile making. However, we do at least know the names of a few potters who were working in Hackington in the early thirteenth century: Edulf, Godwin and Wimund le Poter ('the potter') are all mentioned in the Kent Feet of Fines for the year 1215. The name Tyler Hill is itself an obvious reference to pottery and tile making although it is not recorded before 1304, by which time we know from archaeological sources that there had been a ceramics industry in the area for at least one hundred and fifty years.

The earliest evidence of pottery production in the Tyler Hill area comes from Brittoncourt Farm where earlier fieldwork has revealed pottery wasters and kiln debris dating to the middle of the twelfth century. This type of pottery is generally known as early medieval sandy ware. Plain cooking pots with typically medieval sagging bases were the commonest products. Fig. 1 is an example of this found in Canterbury and probably dates from the period c. 1075-1125 (slightly predating the Brittoncourt Farm kiln). Some of the Brittoncourt pots are particularly interesting as they show a strong north French influence in the form of their collared rims and roulette decoration (Fig. 2). Quite possibly they were copying the wares of a French potter who operated a kiln in Pound Lane, Canterbury at around the same time,⁸¹ or they were copying imported French pottery.

Spouted pitchers identical to those from Brittoncourt Farm have been found beneath buildings erected c. 1160-1165 in the precincts of Canterbury Cathedral suggesting that their production could have been underway by the 1140s or 1150s. A few of the Brittoncourt pieces are glazed and thus represent the earliest dated examples of glazed wares produced in Kent. Evidence of the growing importance of Tyler Hill during the twelfth century is provided by the presence of Brittoncourt-type pitcher's on an increasing number of Kentish sites including Dover, Folkestone, Stonar, Wingham and Romney Marsh.

Towards the end of the twelfth century a better quality fabric was manufactured, still sandy but less porous than before. One curiosity was the production of cooking pots dusted with crushed marine shell (Fig. 3, 1200-50). This effect seems to have been purely decorative and probably copied the genuinely shelly fabrics which were popular elsewhere in Kent.

Most local pottery of this date was probably hand-made but finished-off on a turntable. It was not until c. 1200-1250 that Tyler Hill potters seem to have been fully proficient with the faster type of potter's wheel capable of producing wheel-thrown pottery. This had the advantage of allowing neater, more symmetrical pots to be produced as well as taller forms such as jugs. At the end of the twelfth century, the pottery type that is commonly recognised as Tyler Hill ware began to be made. This has a hard sandy fabric, generally orange or brick-red but not infrequently dark grey or even patchy orange and grey. It is often glazed either orange or a patchy dark green. Jugs (Fig. 4-8) formed a large part of the overall output and were traded greater distances than more utilitarian products such as cooking pots, bowls and frying pans (Fig. 10-12). Jug shapes are typically medieval, tall and baluster-shaped, pear-shaped or squat and globular and almost always with deeply thumbed and frilled bases.

Decoration took many forms. Earlier jugs are characterised by combed decoration and broad strap handles with deep stabbing and thumbed edges (Fig. 4, c. 1200-1225). Contrasting white clay (slip) could be added to the surface either as an all over-paint, which was then green glazed, or more usually as applied or smeared-on strips arranged in simple geometric patterns (Fig. 5, c. 1225-50 and Fig. 8, c. 1275-1350). Rows of thumbed impressions on the body were also common (Fig. 6) and plain horizontal grooves, possibly imitating metal vessels were always very common (Fig. 7, 8). Unusual forms such as face jugs (Fig. 5, 9) were made by applying extra pieces of clay and modelling them to the required shape. Earlier jugs are a little more individual reflecting a mixture of influences from outside the county. There are influences from North France seen in the strip decoration and bridge-spout of Fig. 5. Other influences came from London (Fig. 6) and perhaps the north-east of England where face jugs were very popular in the thirteenth and fourteenth centuries (Fig. 5, 9). But sometimes a mixture of influences occur on the same jug showing that Tyler Hill potters were not too bothered about producing accurate copies of anything in particular but picked and mixed outside fashions to suit their own or their customers' tastes.

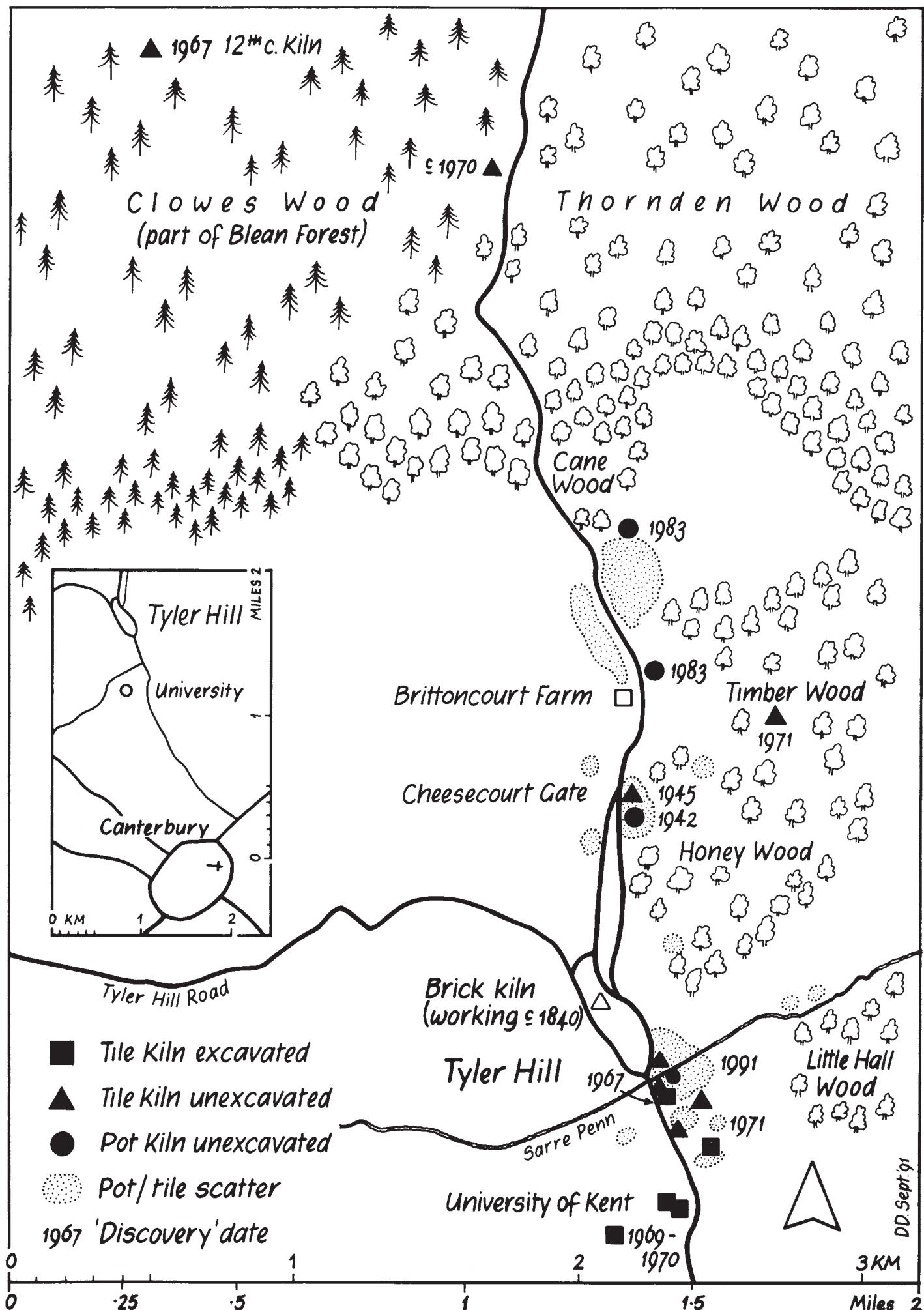
Between c. 1275 and 1350, Tyler Hill ware moved into a phase of mass production. The vast majority of jugs were plain and utilitarian with few concessions to aesthetics (Fig. 7). While the fabric became gradually harder the colouring (firing) was much more irregular. Patchy orange-greys became common and vessels were often slightly warped or scarred by contact with other vessels in the kiln stack; all suggestive of inadequate kiln control and a concentration on quantity rather than quality.

Although several tile kilns have been excavated in the area and we know the site of one twelfth-century pottery kiln (see above), no definite example of a medieval pottery kiln has yet been excavated at Tyler Hill. This is odd given the otherwise abundant evidence of pottery production here. One suggestion is that the tile kilns found could have served for firing tile and pottery. Although unusual, this practice is documented elsewhere and could just as easily have happened here. This might account for the decrease in quality of Tyler Hill ware in the later thirteenth and fourteenth centuries; more pots could be fired but perhaps it was more difficult to control a large tile kiln than a smaller purpose-built pottery kiln.

Jugs would mainly have been used for serving wine and fetching water. We can be reasonably sure of the latter function owing to two remarkable discoveries in recent years of complete Tyler Hill jugs from medieval wells.⁸² One well in Canterbury yielded over seventy restorable jugs while another well at Worth near Deal yielded at least twenty.⁸³ These apparently had been lowered on ropes but economically important. The

Figure 2 (opposite):
Medieval and later kiln sites in the Tyler Hill area.

POST EXCAVATION



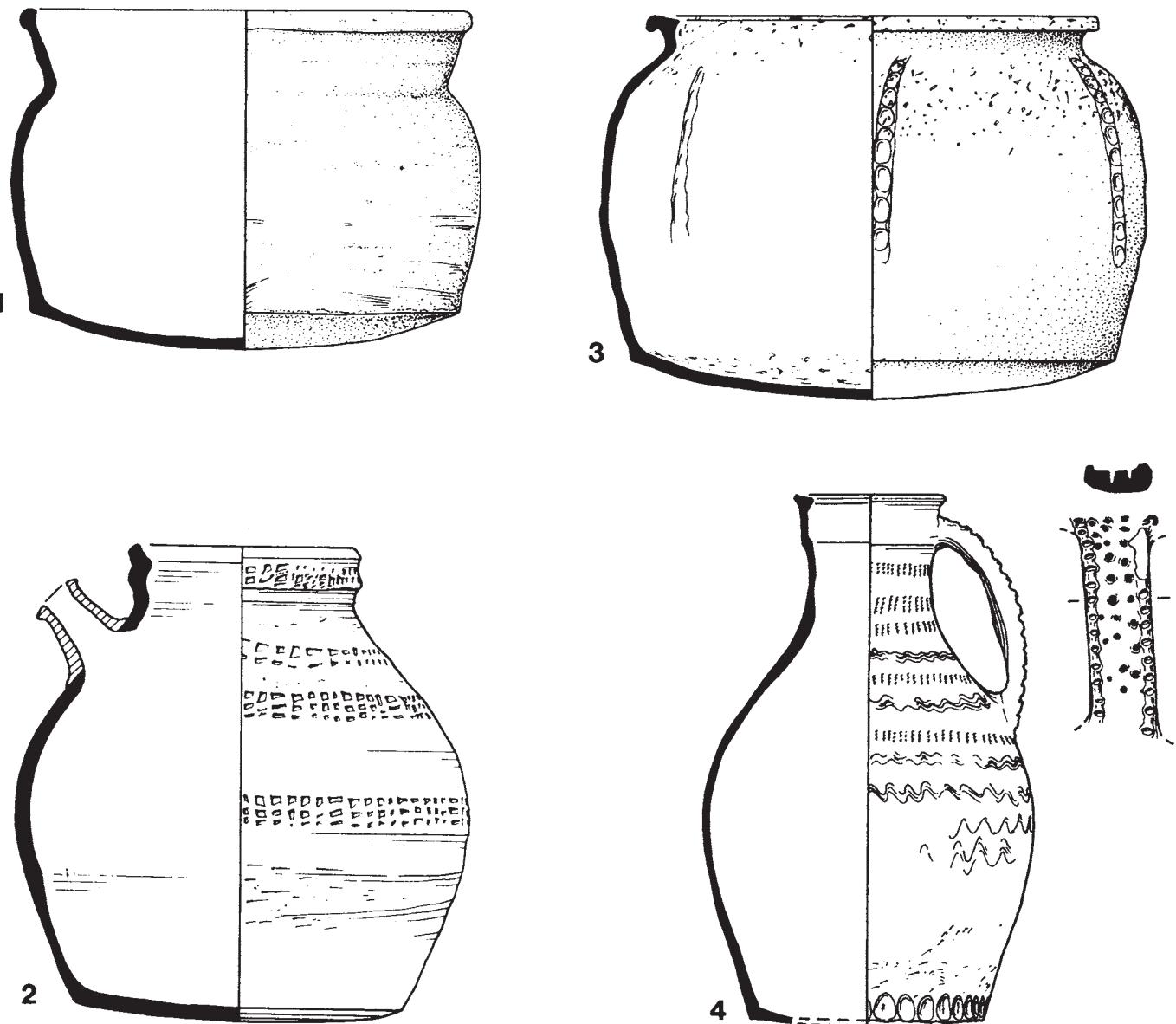


Figure 3: Examples of early medieval Tyler Hill wares. Scale 1:4.

continent already had its own highly inevitable over the years many jugs became broken as they hit against the stone-lined sides of the well.

Cooking-pots, and to a lesser extent bowls, (Fig. 10-11) were also very common. Thumbed strips of clay were often fixed to the sides and even across the undersides of the larger vessels to give them extra strength (Fig. 10).

Several quite unusual vessel types formed part of the output of the Tyler Hill kilns. Particularly notable was the production of frying pans (Fig. 12), chimney-pots (Fig. 13) and candlesticks (Fig. 14) as well as louvers or roof-ventilators and fire-covers. Another idiosyncratic trait of Tyler Hill ware is the profusion of stabbing or pricking found on rims, handles and sometimes all over the body of some vessels (e.g. Fig. 10-11, 13-14). This was a functional rather than decorative feature, being designed to facilitate adequate drying-out of the clay so as to avoid the explosion and wastage of vessels in the kiln. Nevertheless its excessive use at Tyler Hill is particularly distinctive and a useful aid to identifying this ware.

Tyler Hill was undoubtedly Kent's most important medieval pottery industry. At its peak (c. 1275-1350) it had a virtual monopoly over east Kent. Smaller quantities have been identified 20 miles away to the south-west in the Romney Marsh and as far away as Dartford, 40 miles to the north-west suggesting that some Tyler Hill ware could have reached London.⁸⁴ West of Canterbury and Faversham there was competition from other smaller potteries such as Potter's Corner, Ashford⁸⁵ and possibly Maidstone,⁸⁶ while south-west Kent was served to some degree by the Rye kilns (Sussex) just as north-west Kent was served by wares from London and Surrey. Overseas trade in Tyler Hill ware is likely to have been on a casual basis and was not developed pottery industries and Tyler Hill ware could never have been much of a threat. Nevertheless, as it was

so common at the important medieval ports of Dover and Sandwich, a scatter of Tyler Hill finds along the opposite coastline of France and the Low Countries is only to be expected. This seems confirmed by the discovery of a late medieval Tyler Hill jug at Gravelines in northern France.¹¹⁷ There are even reports of another pot at Hamburg in Germany.

Late Tyler Hill ware (c. 1375-1500) is often very hard, over-fired and dark grey with a dark brown lustrous glaze. The fabric is characterised by reddish inclusions of 'grog' or poorly mixed clay. Decoration in general became rarer. Jugs were normally squat or globular but small conical drinking-jugs were also made. There were large jars called cisterns made to hold ale or other liquids; these had a bung-hole near the base so that the liquid could be drawn off by removing a stopper or turning a simple tap. Cooking pots and other jars continued to be a staple product of the industry. By now however, the earlier types of squared or 'hammer-head' rims (Fig. 3 and 10) were joined by new types of internally hollowed rim designed to take a lid (Fig. 15) while some cooking pots made a curious return to the simpler rim forms of the eleventh and twelfth century.

A new range of unusual vessel forms came into production (or became commoner in this phase of the industry), some of these were deliberately industrial rather than domestic in function. Among the new forms available were chafing dishes (Fig. 16), a sort of early platewarmer or portable stove which burned charcoal or glowing embers from the fire. Then there was a variety of small dishes or trays for table condiments such as a salt and pepper or other spices (Fig. 17-18). Vessels unconnected with food or its preparation included neatly interlocking drain-pipes, and occasionally money boxes (Fig. 19) with a narrow slit to take the thinner hammered coins of those times. Strangest of all, perhaps, were those vessels with a purely industrial function such as Fig. 20 which was probably a distilling

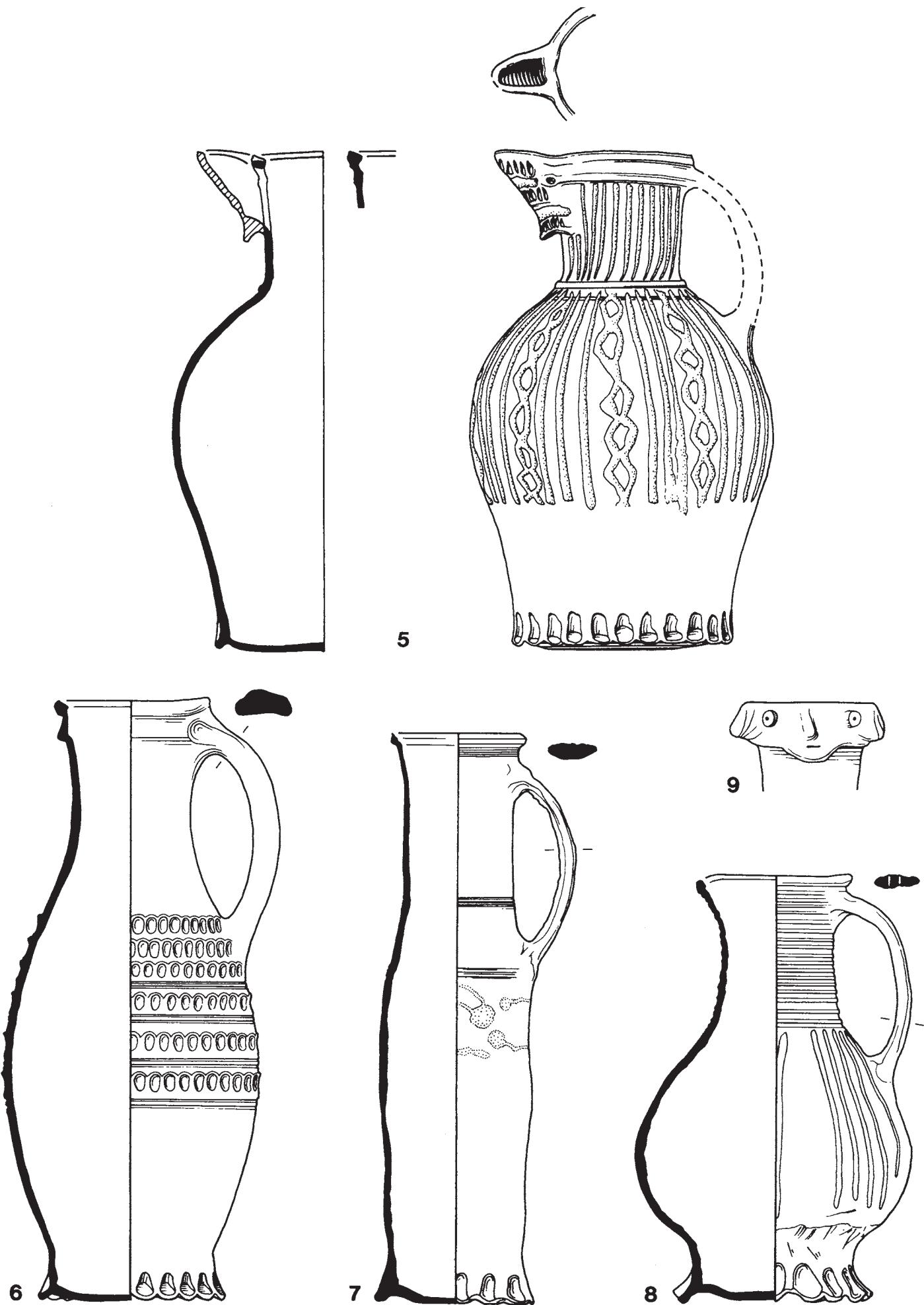


Figure 4: Examples of medieval Tyler Hill Ware. Scale 1:4.

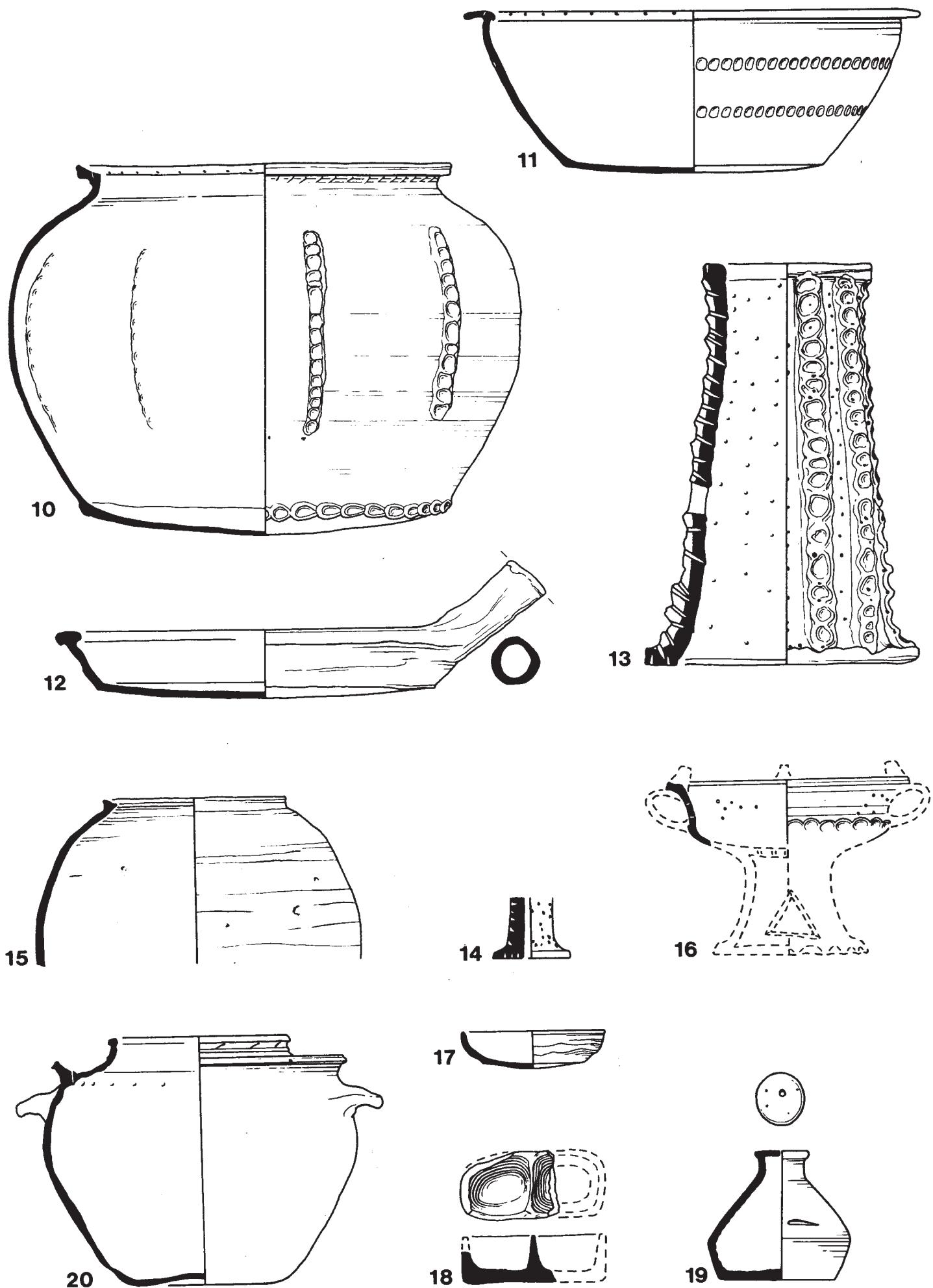


Figure 5: Examples of medieval and later medieval Tyler Hill Ware. Scale 1:4.

jar used by alchemists and apothecaries for the preparation of chemicals including acids, alcohol and medicines. Some curious trough-like vessels may have been used for making candies.⁸⁸

As the fifteenth century progressed pottery making at Tyler Hill appears to have declined until by the early sixteenth century it ceased altogether. Smoother, lighter, less sandy red wares were gaining in popularity over much of south-east England at this time and the older sandy ware industries suffered as a consequence. Possibly the new smooth wares were produced at Tyler Hill for a short while but perhaps the clays there were unsuitable and the potters moved on.⁸⁹ Changes in social habits, in cooking and fashion all had repercussions for the pottery industry. Metal vessels were now cheaper and more easily available than before and then there were more serviceable and attractive stoneware vessels imported from Germany in ever greater numbers. All of these factors played a part in the decline of old and decadent pottery industries such as that at Tyler Hill.

Brick and tile-making at Tyler Hill and the Blean

This, if anything, was even more highly developed than the pottery industry and long outlived it, surviving well into the post-medieval period. Tyler Hill is best known to archaeologists and art historians for its medieval decorated floor tiles, even though these must have formed only a small proportion of the total ceramic output.

For most of the medieval period the main output of the Tyler Hill kilns consisted of plain roof tiles or peg tiles. The revival of tile-making in the Canterbury area is as old as any documented in the country. After a disastrous fire at Canterbury Cathedral in 1174 which spread from the thatched roofs of nearby shops, the monks of Canterbury ordered that hence forward all new shops near the cathedral must be roofed with noncombustible tile. These earlier roof tiles would almost certainly have been made at Tyler Hill where the pottery industry was already well established.

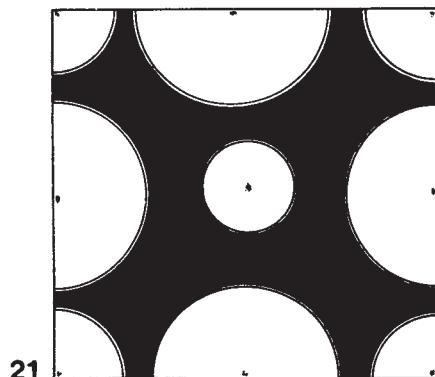
Decorated floor tiles were first produced locally at a kiln in Clowes Wood, a little north of Tyler Hill. Clowes Wood tiles combine inscribed decoration with the use of white slip and clear glaze (Fig. 21-22). There is some dispute as to the dating of these tiles but the latest research favours a date in the 1170s and 1180s.⁹⁰ Remarkably this would then make the Clowes Wood workshop one of the earliest in Europe to produce whiteslipped floor tiles. Tiles of this group are known from a number of religious houses in Canterbury and also from Faversham Abbey.

The Clowes Wood tiles represent an isolated precursor of the main Tyler Hill decorated floor tile industry which did not appear until a full century later. This second factory was probably established c. 1285-90 almost certainly by a group of Parisian tilers who settled at Tyler Hill at the behest of the church authorities in Canterbury.⁹² The floor tiles have a red sandy fabric which provides a contrast for stamped designs inlaid with white slip and then glazed (Fig. 23-26). Square and segmental mosaic tiles are also known as well as plain glazed floor tiles. Slip-decorated floor tiles show a great variety of designs prominent among which are geometric, heraldic and mythological designs as well as plant, animal and occasional human representations. Some Tyler Hill designs (e.g. Fig. 25) are exactly paralleled at the Abbey of Saint-Germain-des-Pres, Paris,⁹³ while others such as the Fleur-de-Lys (Fig. 23) also show French influence. With time the continental influence grew more dilute and new combinations and patterns emerged that are now recognised as typically Tyler Hill.

Production of slip-decorated floor tiles at Tyler Hill was confined to the 'boom' period c. 1285-1350 during which time the tiles had a distribution covering most of Kent and reaching as far as London and Essex.

Tiles of all sorts would have been in constant demand for the refurbishment of Canterbury's many religious houses. Some of these held large tracts of land in the neighbourhood including Christ Church Priory which had its own 'tylehost' (tile workshop or kiln) at Hackington in 1363. At least five medieval tile kilns have been excavated at Tyler Hill, three of them in the grounds of the University of Kent, and the locations of several others are known dotted around Tyler Hill and the Blean Forest. None can definitely be associated with the production of decorated floor tiles but it seems obvious that some kilns must have produced these alongside the larger volumes of plain roofing tile. All the kilns excavated so far were constructed of roofing tiles bonded with clay. No kiln survived to any great height but in some cases the tile arches supporting the firing chamber survived intact. In plan some kilns were of the usual rectangular type but some of the University kilns had an unusual bottle-shaped plan, possibly a cross between a tile kiln and a pottery kiln.⁹⁵ Those discovered so far are thought to date to the later thirteenth or early fourteenth century. One of the University kilns has an arrhaeo-magnetic date of A.D. 1300+ - 25.⁹⁶

Manufacture of plain roofing tiles and floor tiles outlived the medieval fashion for slip-decorated floor tiles. Brickmaking arrived relatively late on the local scene in the late fourteenth and fifteenth centuries. Brick kilns certainly existed locally by the fifteenth century but were not confined to Tyler Hill. In 1545 the churchwardens' account of St Dunstan's,



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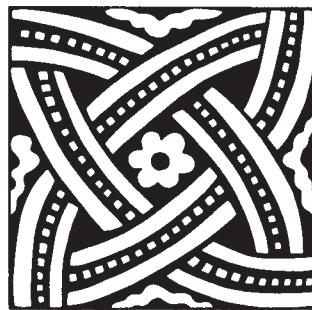
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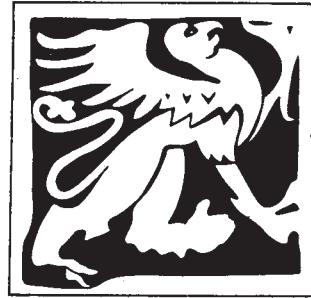
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Figure 6: Medieval decorated floor tiles: 21-22 Clowes Wood group; 23-26 Tyler Hill group. Scale 1:4.

Canterbury, record the delivery of brick and tile from a certain 'Hamond at Tyler Hylle'. In the seventeenth century Sir John Hales is said to have had a tile kiln on the south bank of the Sarre Penn stream at Tyler Hill. Other documents of the seventeenth to nineteenth centuries, including tithe apportionment awards, are known to contain scattered references to tilers and brick-makers in the area but these have yet to be researched in depth.

Ceramic activity of one sort or another continued at Tyler Hill for around eight centuries, and perhaps as much as a thousand years. One of the recurrent themes that makes Tyler Hill so interesting is its French connection, but perhaps this is hardly surprising given Canterbury's proximity to the French mainland and its long tradition of contact with that country. It was however an English industry evolving out of a late Saxon potting tradition. But already by the ninth or tenth century local potters were producing pottery in the continental fashion including spouted pitchers decorated with a grid of burnished lines ('trellis burnishing') that could be mistaken for genuine imported pieces. In the mid twelfth century the link was renewed when North French-style spouted pitchers with roulette decoration were made at Tyler Hill, while at least one French potter had a kiln within the city walls of Canterbury itself. A century later, in the 1280s, a group of tilers from the Paris area were induced to settle at Tyler Hill and produce decorative floor tiles for the cathedral and other religious houses. Thereafter foreign influence is less obvious; there may have been occasions when the odd French pot was imitated but certainly for the last 150-200 years of its life Tyler Hill was pretty much indistinguishable from any other medieval English pottery industry.

Nowadays Tyler Hill is a pleasant rural hamlet but it may not always have been so. In former times, with its sprawl of workshops, stockpiles of brick, tile and fuel, its waster heaps and constant clouds of wood-smoke, it may have been regarded as something of an eyesore. The impact the industry had on the medieval landscape must have been considerable, but of all this only subtle traces now remain. Those sand and clay pits that were not completely filled in survive now only as ponds or hollows in the fields. Other hollows, bumps and terraces in the sloping fields above the Sarre Penn mark the site of an extensive complex of unexcavated kilns and workshops. In Honey Wood there are low ivy-covered mounds, some of them composed entirely of discarded medieval roofing tiles, and near the war-time bomb-crater pottery wasters from the obliterated kiln still litter the ground.

The medieval ceramics industry at Tyler Hill and the Blean took the form of a north-south ribbon development alongside the Hackington Road. It was largely concentrated on Tyler Hill itself but pockets of the industry were strung out over an area of at least two miles. Given this considerable geographic extent it is unlikely that the remains of the industry will be much affected by any one development project. If current proposals for development in the area come to fruition, then any work will hopefully be preceded by a campaign of excavation and fieldwork which should form the basis of a thorough and methodical study of the industry and its products. At the same time it is hoped that some areas of archaeological importance may be protected so that archaeologists of the future, armed with more sophisticated techniques, might have their own opportunity to re-evaluate this important centre of medieval industry.

4 Human Bone Studies

by Trevor Anderson

Since last year's report, the study of human bones has progressed very successfully. The bone department has continued the recording of the huge corpus of medieval skeletons (over 1,300) from St Gregory's Priory. More recently, we have been fully occupied with the bone material from the St George's excavation. We have taken our first, tentative, steps towards computerising our records, which will enable us to use our vast catalogue of data more efficiently. Over the year, improvements have also been made in our storage facilities.

St Gregory's Priory

Since last year's report a further three burials have been recovered from the still undeveloped site. This brings the total of skeletons from Priory and cemetery to 1,342. At the time of writing (August 1991) 200 of these burials are still uncleared. Detailed analysis has been completed on c. 400 of the burials, with provisional ageing and sexing of a further 487. Almost a quarter of this sample failed to reach adulthood, with 15 children dying before their first birthday. Most child burials were aged between 1-6 years (n 78); slightly fewer aged 6-12 years (n 58). Juveniles accounted for 7.4 per cent of the total sample. From the 670 adult skeletons examined to date males and females are equally represented: males accounting for 53.4 per cent of the sample.

Infant mortality of 30-50 per cent is a normal finding in medieval burial grounds. The slightly lower figure from St Gregory's could be due to the very intensive use of the cemetery. Many small child graves may have been totally destroyed by the digging of later graves. Examination of the disarticulated bones (the so-called 'loose' bones) may give us a clue to the true infant mortality. At the moment, the number of male and female burials are practically equal. When all the burials have been examined it will be interesting to see if there are any demographic changes from the earliest levels of the late eleventh century to the final use of the cemetery in the mid sixteenth century.

It would be too time consuming to analyze manually the data so far generated from detailed examination of 400 skeletons. Consequently, until the records are fully computerised, no attempt will be made to interpret overall patterns of morbidity. Neither would it be feasible to assess sexual dimorphism in bone measurements, non-metric traits, pathology or oral health until all the data has been collected.

However, mention must be made of a very important and exciting palaeopathological finding which was recognised earlier this year. This concerns an elderly (45-55 years) male (SK 968). The skeleton in question is poorly preserved; practically the entire skull is missing and the upper left side is represented by only small rib fragments and an incomplete



Figure 1: SK 968: right ilium, with pathological bone deposit. Evidence of metastatic carcinoma, probably originating in the prostate.



Figure 2: SK 968: right rib, displaying a similar lesion.

elbow joint. Most of the available bones are incomplete and fragmentary especially the spine and the pelvis. Stature is estimated to be 1.68 m. (5 ft 6 ins). Stratigraphic evidence and associated finds suggest a fourteenth-century burial date.

There are deposits of new bone on the pelvis, ribs and skull. The pathological bone on the right ilium is clearly visible; it is uneven and roughened with a coral-like, spiculated surface (Fig.1). An identical, but smaller, lesion is visible on the left ilium. Both right and left ribs display similar roughened deposits on their visceral (inner) surfaces (Fig.2). All the available bones were X-rayed. The pelvis, ribs, sternum, spine and proximal femora (upper legs) were all abnormal with altered bone texture. The rib and cranial lesions were studied by scanning electron microscopy (SEM).

The combination of dry bone evidence, the radiographs which were interpreted by Dr Adrian Carter and the SEM findings provided by Dr Jennifer Wakely all support a diagnosis of metastatic carcinoma (malignant tumour which has spread from its original soft tissue focus). The nature of the deposits, predominantly bone forming, as well as the age and sex of the skeleton, suggest a primary focus in the prostate.

Very few examples of metastatic carcinoma are known from archaeological contexts. Practically all of the reported cases display reduced bone quantity or a combination of bone increase/decrease. Prior to our example, only two cases display increased bone quantity, suggestive of a prostatic focus. One example involves an elderly male from medieval Switzerland.⁹⁷ The other is from Svendborg, Denmark and was buried in a wooden coffin, dated to c. A.D. 1470.⁹⁸ This means that our example from Canterbury is the first evidence for prostatic carcinoma in British archaeological material.

St George's Church

The much delayed excavation of St George's Church finally began in June. During the first six weeks, the parts of the cemetery threatened by the proposed foundations (pile caps) were examined. These areas (four 3 x 1 m. rectangles) were excavated to a depth of 1.5 m. The uppermost cemetery levels were encountered at 1.2 m. Thus, only 3.6 cubic metres of soil from the burial ground was available for study. Ninety-two articulated skeletons (all post-medieval) were recovered from these small trenches. At the time of writing, burials are just beginning to be uncovered within the church. The present report will therefore concentrate on the small cemetery sample.

The 92 skeletons recovered from the cemetery are quite fragmentary. The vast majority are incomplete, either being cut away by later burials or else extending outside the excavation area. Only three skeletons: a child (SK 91); a juvenile (SK 81) and a young adult female (SK 84) are practically complete. A further ten burials are well-represented, over three quarters complete. However, only eighteen skeletons have both skull and pelvis present for examination. 40 per cent of the sample, thirty-seven skeletons, are represented by incomplete limbs or by miscellaneous bones.

Demography

It must be stressed that such a small sample need not be representative of the whole cemetery. Bearing this in mind, 21.7 per cent of the sample failed to reach adulthood. Only one child under one year was recovered (SK 23). The greatest infant mortality occurred between 2-5 years. No children between 6-10 years of age were discovered. Juvenile mortality was relatively high, some 12 per cent of the total sample. There were 38 male; 33 female and an unsexed adult burial. The incomplete nature of the remains meant that many could not be aged, except to say that they were fully grown. However, there is some evidence that, on average, females lived longer than males. This is a normal finding in modern populations. In earlier societies males have a longer life expectancy.

Metric Analysis

A large battery of measurements (n 143) have been taken on each skeleton, where available. Several of these are helpful in sexing the burials. At the time of writing, no detailed study of the data and the generated indices has been undertaken. However, using the formulae of Trotter and Gleser,⁹⁹ stature has been assessed from long bone lengths (Fig.3). The skeletons from St George's church are slightly taller than a post-medieval sample from Rochester¹⁰⁰ (Males: 1.69 m., 5 ft 6 1/2 ins; Females: 1.57 m., 5 ft 2 ins). There is very little difference between the average height of the St George's material and modern day stature.

	avg. stature	range
Male	1.73m (5ft 8ins)	1.64 – 1.88m (5ft 5ins – 6ft 2ins)
Female	1.60m (5ft 3ins)	1.51 – 1.70m (4ft 11.5ins – 5ft 7ins)

Figure 3: Table showing stature of skeletons from St George's Church

Non-Metric Variation

Non-metric variants, also known as discontinuous traits, refer to anatomical, non-pathological anomalies. Many workers, assuming a genetic causation, have used an incidence of the traits to separate different population groups or have attempted to define familial relationships. Data has been collected on 37 cranial and 29 post cranial traits. Preliminary examination has failed to reveal any clear pattern of incidence. Due to uncertainty in their mode of inheritance, coupled with the small size of the sample no further study of the non metric variants has been undertaken.

Palaeopathology

Congenital

No major congenital anomalies were encountered in the St George's material. In one case (SK 83: Male, adult) the twelfth thoracic ribs were congenitally absent. There were two examples of supernumerary ribs. One was found on a first lumbar vertebra of an elderly female (SK 56), the other on the seventh cervical vertebra of a 12-14 year old child (SK 88). The small cervical rib itself was recovered (Fig.4), quite a rare occurrence in archaeological material. The absence of lower thoracic ribs or the presence of lumbar ribs is usually asymptomatic. Cervical ribs, however, may compromise the nerve supply and lead to weakening and loss of sensation in the lower arms and hands.



Figure 4: SK 88: right cervical rib. Scale 2:1

'Arthritic' conditions

a. Primary degenerative joint disease (DJD)

Formerly known as osteo-arthritis, primary WD is an extremely common finding in both modern and archaeological populations. The causation is not fully understood but its incidence does increase with advancing age. Excessive usage and repeated stress, so-called 'wear and tear' will predispose a joint to DJD. Consequently, the pattern of joint involvement may provide clues to life-style and occupations.

At St George's the hip (three cases) and the knee (two cases) are most commonly involved. The following sites: shoulder, medial and lateral clavicle; elbow and hand are all represented by a single occurrence. As is to be expected, DJD is more common in the older individuals. Both males and females appear to be affected equally. A similar predilection for the hip and knee is found in modern day medicine.

b. Vertebral degeneration

Each vertebral joint was examined (there are 142 articular surfaces in a complete spine) for signs of DJD. Other evidence of spinal degeneration, including osteophytic development and Schmorl's node formation was also investigated. A total of 38 spines (18 male; 20 female), many incomplete, were available for examination.

DJD was recorded in 61 per cent of male and 65 per cent of female spines, with the earliest onset occurring in a 25-30 year old male (SK 61). In both sexes the lower thoracic and the lumbar vertebrae are sites of predilection. Cervical involvement is more common in men, but this is probably due to the fact that only a few elderly females cervical spines were recovered. In general, spinal DJD is more extensive and widespread in females. In males only 5.3 per cent of the available articulations

(8311554) are involved; the figure for females being 7.9 per cent (130/1645).

Osteophytic outgrowths, a sign of disc space narrowing, were found in 44 per cent of male and 60 per cent of female spines. The osteophytes were most frequent in the lower thoracic and the lumbar vertebrae, the area of greatest joint degeneration. In one case (SK 79), the florid osteophytic outgrowths had resulted in widespread vertebral fusion, which is highly suggestive of Forestier's disease or DISH. Schmorl's nodes, circular or crescent-shaped depressions on the superior or inferior vertebral body, were found in 61 per cent of male and in only 10 per cent of female spines.

Osteophytes are known to be more frequent in areas of greatest curvature: lower cervical; lower-mid thoracic and mid lumbar. A statistically significant male predilection has been reported.¹⁰⁰ They are thought to be a response to excessive pressure on the spine and thus are indicators of mechanical stress. Schmorl's nodes occur due to the herniation of the soft tissue intervertebral disc into the vertebral body. Their development is related to mechanical, compressional forces. Most workers have found that they are more common in males.

A single case of kyphosis, increased posterior curvature of the spine, was found in a young female (SK 82). A juvenile female (SK 63) displays evidence of scoliosis, increased side to side spinal flexion. The latter may be the result of poor posture or possibly a congenital condition. These findings, coupled with the widespread DJD and osteophytic outgrowths suggests that female spines were subject to greater stress and strain than male. However, the low incidence of Schmorl's nodes in females does not support this view. A similar low frequency of Schmorl's nodes, 11 per cent, was found in female spines recently excavated at Rochester.¹⁰²

Further mention must be made of the florid spinal osteophytes encountered in an elderly male (SK 79). The outgrowths are quite spectacular and have resulted in bony fusion of ten thoracic vertebrae (TV3-12) (Fig.5). The smooth, molten candle wax appearance of

the overgrowths and their thoracic location, sparing the cervical and lumbar spine, is diagnostic of Forestier's disease.¹⁰³ When associated with extraspinal bone overgrowths the disease is known as DISH (Diffuse Idiopathic Skeletal Hyperostosis).¹⁰⁴ In the present case there were no extra-spinal outgrowths, thus the term Forestier's disease is preferred.

The causation of the disease is poorly understood and for many years it was confused with ankylosing spondylitis. However, it is predominantly a disease of the elderly and is more common in males. Modern medicine suggests that there may be a relationship between diabetes, obesity and DISH. Thus, its presence in archaeological contexts may be evidence of a well-nourished individual. It is not an uncommon finding, quite frequently occurring on monastic sites. Indeed, Bishop Giso, the last Saxon Bishop of Wells suffered from DISH.¹⁰⁵



Figure 6: SK 79: examples of intervertebral disc calcification.

What is of particular interest in our example is the partial calcification of the upper thoracic intervertebral discs (Fig.6). Five, thin, semi-circular calcifications were recovered. Disc calcification does occur in the rare hereditary metabolic disorder, alkaktonuria. However, calcification has been reported in Forestier's disease, no doubt due to reduced mobility of the spine. The fact that the St George's skeletons are relatively recent has meant that the calcifications have been preserved. It is uncertain how representative the St George's sample is of the general population. The available material suggests that DJD was common in both sexes and that vertebral pathology was quite frequent, especially in the lower spine. The overall pattern of joint involvement is similar to that found in modern day populations.

c. Secondary DJD

Secondary DJD refers to joint degeneration which occurs secondary to an existing disease, including infection; developmental defects or secondary to trauma. It is never as frequent as primary DJD and unlike the former it can occur at any age and will display a different pattern of joint involvement. There was one convincing case of secondary DJD. This involves a young, 25-30 year old, male (SK 61), who had broken his lower right arm in a fall. The distal radius displays porosity and roughening, evidence of degeneration. Primary joint degeneration would be unusual in the wrist of such a young person. Thus, it is probably a consequence of the injury.

d. Rheumatoid Arthritis

There are two possible cases of rheumatoid arthritis, both occurring in adult females (SK 10, 69). The latter, an elderly woman, was suffering from gross deformities of hands and feet. All metacarpal-joints of both hands display marked loss of contour and collapse due to juxta articular cavitation (Fig.7). The diseased joint surfaces are porous and eburnated (polished). The available wrist bones are very porous and exhibit reduced bone quantity. The metatarsalphalangeal joints of both feet are involved but the picture is confused by postmortem damage. However, both fifth metatarsal heads have been completely destroyed by the disease process. The other possible case (SK 10) consists of only a lower right arm and wrist. Both elbow and wrist display juxta articular cavitation. Most advanced at the elbow, with marked cavitation of the medial aspect of the proximal ulna.

The morphology of the lesions as well as their bilateral nature in both hands and feet in SK 69 is highly suggestive of rheumatoid arthritis. As for SK 10, represented by only one lower arm, a definite diagnosis is more difficult. However, rheumatoid arthritis is a strong possibility. In SK 69 the marked destruction of the joints has lead to subluxation with resultant deviation of the fingers, restricted movement and loss of manual dexterity. Even her simplest tasks would have been difficult and painful.

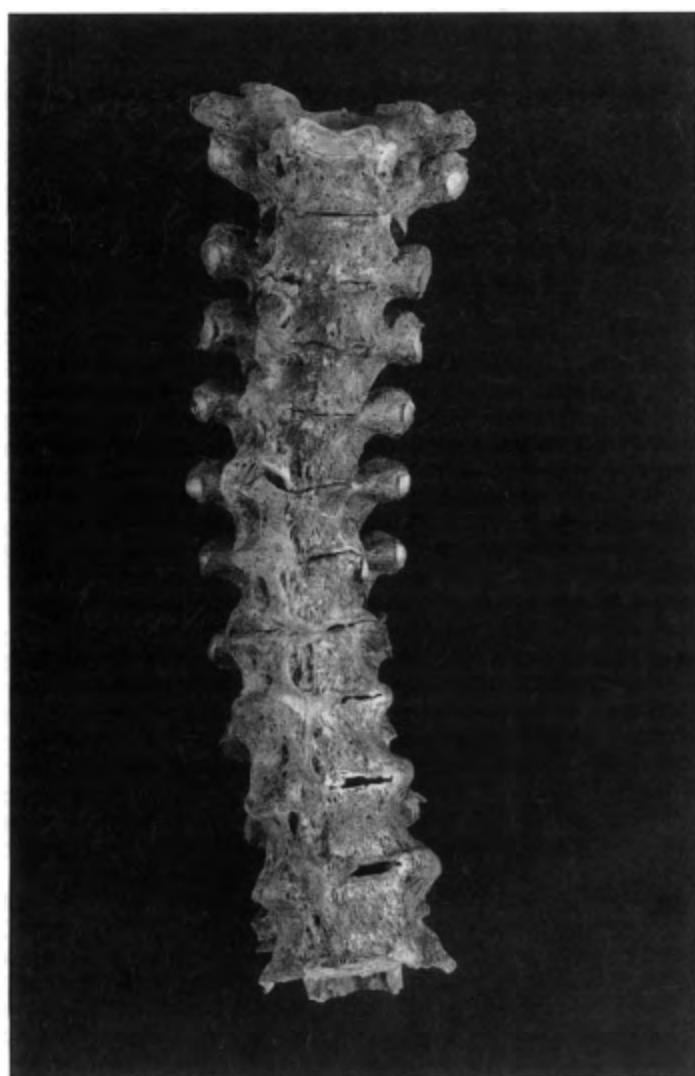


Figure 5: SK 79: vertebral column showing florid osteophytes and bony fusion of thoracic vertebrae 3-12.



Figure 7: SK 69: left hand and right hand carpal-phalangeal joints showing gross deformity, probably the result of rheumatoid arthritis.

Rheumatoid arthritis is much more frequent in females than in males. It is generally earlier in onset than primary DJD. It has been reported to affect c. 3 per cent of modern day populations. However, there are very few convincing examples of the disease in archaeological remains. This has led to the view that rheumatoid arthritis is a modern disease, possibly originating in the seventeenth century.¹⁰⁶ The paucity of palaeopathological examples is probably related to the difficulty of diagnosing rheumatoid arthritis based solely on dry bone lesions. The weakened, diseased, bone will be particularly liable to postmortem damage. Also the rheumatoid changes may be masked by secondary DJD. The presence of rheumatoid arthritis in a post-medieval context is not surprising; however it is a rare finding in osteo-archaeological research.

Trauma

After degenerative joint disease, evidence of trauma is the most commonly encountered pathology in archaeological material. The term trauma includes broken bones caused by accident or by direct violence, as well as inflicted weapon injuries. Surgical operations, including trephination and amputation have also been discovered in excavated material. In the St George's sample there were six examples of traumatic injury, all fractures.

One case is probably the result of direct violence. This involves a 30-35 year old female (SK 5) who had suffered a broken lower jaw (mandible). The fracture occurred on the right side of the mandibular body just anterior to the angle of the ramus (Fig.8). There was no sign of a corresponding

injury on the damaged left side of the lowerjaw. The fracture had begun to heal: reparative new bone is clearly visible on the buccal surface, directly below the injury. However, the fracture is not fully re-united. The two parts were still separated in life by soft fibrous tissue. The right lower molars and premolars were lost during life, possibly as a result of the injury. There does not appear to be too much displacement, consequently the victim may have been spared neurological complications.

There were two examples of fractures due to indirect violence. In one case (SK 61) the right wrist (distal radius) had been fractured and displaced anteriorly, a so-called Smith's fracture. It typically occurs due to a fall on a flexed wrist, it is less common than a Colles fracture with posterior displacement. As noted above the wrist had undergone degenerative disease as a result of the injury.

An elderly male (SK 43) displayed fractures of left upper arm and lower leg. The humerus was broken just below the neck and had firmly re-united with posterior angulation of the proximal portion. The fibula was fractured just below its head and was well-healed without deformity. The location of the humeral fracture suggests a fall on the limb. In modern practice it is most frequently seen in elderly women. The oblique fracture of the fibula, at its weakest point, is probably due to indirect violence. It is possible, but not certain, that both fractures occurred at the same time, due to a fall onto the left side.

Other evidence of trauma includes two cases of fractured ribs, both in elderly females (SK 15, 16). It is difficult to ascertain the causation of costal fractures since direct injury, minor accidents or even violent sneezing or



Figure 8: SK 5: lower jaw (mandible) fractured during life. Healing has occurred, but the fracture is still un-united.

coughing can result in rib fracture. Since both have healed successfully it is unlikely that they occurred secondary to an underlying disease (pathological fracture).

An interesting, unusual fracture is evident in the left wrist of a young (20-25 year old) male (SK 39). The hook of the hamate, the hamulus, has fractured during life and failed to re-unite. This is a very rare finding, less than a hundred cases have been reported in the world literature.¹⁰⁷ As far as I am aware this is the first palaeopathological example. In modern medicine it is predominantly seen as a sports injury, especially in baseball, golf and tennis.¹⁰⁸ Unfortunately, the right hand was not available for examination; thus a rare, normally bilateral, anomaly in which the haemulus remains as a separate element (*os hamuli proprium*) should be considered as a differential diagnosis.

Infection

Various infectious diseases including tuberculosis, leprosy and syphilis can exhibit bone alteration in their more advanced stages, but there was no evidence for these diseases at St George's. From the 92 skeletons studied so far, 11 present with bone infection, a prevalence of 12 per cent. There were three cases of tibial osteitis (8 per cent). Other sites of infection included mandible; mastoid; clavicle; humerus; spine; femur and foot. Normally only chronic infection will present with bone involvement. Thus, the possible infection in a 3 year old child is an unusual finding. Infection is clearly more prevalent in men (23.7 per cent) than in women (3.3 per cent). The fact that less than 10 per cent of infections display hard tissue involvement suggests that infection was widespread in our sample.

Nutritional

Chronic malnutrition, scurvy (vitamin C deficiency) and rickets (vitamin D deficiency) can be recognised from skeletal remains. Cranial porosis, caused by expansion of the diploe, is possible evidence for anaemia. A similar finding in the eye sockets, cribrum orbitalia, could have the same causation or else it may be evidence of scurvy.

There are six cases of cranial porosis in the St George's material: this represents c. 26 per cent of available crania. The porosity is very mild and not diagnostic of anaemia. There was no evidence of cribrum orbitalia in the small sample of adult orbits (n 6). Only two children (SK 27: c. 4 years; SK 90: 4-6 years) had well-preserved eye sockets, both displayed cribrum orbitalia. Previous work, based on much larger samples, has found that cribrum orbitalia is much more common in children than in adults.¹⁰⁹ No doubt this is due to the children with severe nutritional problems (visible cribrum orbitalia) dying before adulthood. No evidence of scurvy or rickets was found in the articulated skeletons. There were two possible cases of healed rickets in the disarticulated bones (layers: 1064; 1451). The former contains a left tibia which has bowed medio-laterally. The latter contains a bowed left femur and a right tibia. Rickets would affect both legs; thus, a definite diagnosis is difficult on isolated bones.

Circulatory Disturbances

The only evidence for vascular disruption were two cases of osteochondritis dissecans. The aetiology of the lesion is not fully understood, sometimes, but not always, there is a history of trauma. The lesion develops due to a small, often circular, bone fragment separating from the articular surface of a joint. The most common site is the knee (medial condyle of the femur). It has been recorded less frequently at the elbow; hip; ankle and foot. It is typically a problem for adolescent and young adult males. In time the loose, necrotic bone fragment may re-unite, leaving an uneven bone contour.

The two examples from St George's occur in an adult male (SK 29) and a 13-15 juvenile (SK 81). In both cases the lesion is in the typical site. Based on the available medial femoral condyles, this represents an incidence of 3 per cent. The adult case has healed with fusion of the necrotic fragment. In the juvenile, the circular bone ossicle is still separate, but has been recovered (Fig. 9).

Adult oral pathology

Adult oral pathology is based on seventeen upper and twenty-four lower jaws in which 331 teeth were available for examination. The standard of oral health was very low. The overall ante-mortem tooth loss was 23.8 per cent (149/626) which is much higher than that found in medieval samples. Females suffered a more serious loss: 36.6 per cent, compared to 13.2 per cent for males. The same finding is well attested in both modern and

archaeological populations. In this small sample, the mandible displays greater loss (28 per cent) than the maxilla (17.6 per cent).

Examination revealed that 18.8 per cent of the available teeth were carious. Both upper and lower jaws were affected equally; there was a slight but insignificant female bias. Such a high level of disease would be unusual in the medieval period. The cavities are very large, often destroying the entire crown. Also the occlusal (biting) surface, normally spared in archaeological samples due to heavier attrition, is frequently involved. The severity and early onset is quite marked. A juvenile female (SK 63) displayed carious destruction of four mandibular teeth. It must be remembered that caries was widespread in the post-medieval period. In eighteenth /nineteenth century Norwich just over a third (33.8 per cent) of teeth were diseased.¹¹⁰

Abscess cavities affected 4.3 per cent of erupted tooth positions. The term erupted positions is used because teeth lost during life can still be scored as having an abscess, the cavity being visible in the jaw bone. It is noteworthy that abscesses were much more common in men: 7.4 per cent of erupted positions compared to 1.1 per cent in women. A similar male bias was noted in the recently excavated skeletons from Rochester.¹¹¹

With the exception of one female in her early twenties (SK 36), there was evidence of calculus, calcified plaque, on all the available dentitions. Many of the deposits were quite marked. Calculus buildup was more frequent in the mandible (69.4 per cent) than the maxilla (54.9 per cent). A similar finding has been reported in both modern and archaeological populations. There was no significant sexual difference. The overall incidence was 62.8 per cent, this is slight lower than that found at post-medieval Rochester (78.6 per cent).

Hypoplastic defects in the enamel of the teeth occur while the tooth is developing. If widespread, they probably signify a period of malnutrition, or systemic illness during the growth period. Once formed they remain visible throughout life. By measuring their position it is possible to calculate how old the child was when the defect occurred. Hypoplasia was found in 45.8 per cent of available dentitions, both sexes were affected equally.

In two cases the defects are very marked and widespread. One involved a female in her early twenties (SK 36); the other a 4 year-old child (the unerupted permanent teeth were present). Although the molars are somewhat similar to the 'mulberry' molars of congenital syphilis, the typical changes in the incisors (Hutchinson's teeth) are absent. Further work may provide a definite diagnosis for these marked hypoplastic defects.

Mention must also be made of the abnormal wear pattern encountered in the upperjaw of an adult male, aged 30-40 years (SK 46). The anterior teeth on both sides are worn down to the roots. The central incisors are also worn, but the mesial portion of their occlusal surfaces has been largely spared (Fig. 10). The causation is as yet uncertain; it is not due to smoking a clay pipe since the lower teeth are unaffected. It appears to be due to repeated chewing of tough objects. Possibly there is an occupational link, such as chewing leather to soften it.

Sub-adult oral pathology

Only eleven sub-adult dentitions were available for study. Four of them displayed evidence of caries. Based on 178 available teeth the sub-adult caries incidence was 5.6 per cent. Childhood caries experience is higher in modern societies, approximately a third of children suffer from caries. The St George's figure is low in comparison to medieval samples: 9.2 per cent at the Hirschel¹¹² and 12.2 percent at Cuddington.¹¹³

There was no evidence of marked periodontal disease, abscesses or calculus in the children (those under twelve years of age). All four



Figure 9: SK 81: right knee; osteochondritis dissecans (with loose ossicle shown to right).



Figure 10: SK 46: abnormal wear of the upper teeth.

juvenile dentitions displayed some evidence of calculus; two presented with carious cavities. Only one (SK 63, female 17-20 years) had lost any teeth during life. The overall standard of oral health in this small sample was very good.

In conclusion, our work so far has revealed a fascinating insight into the state of health of a small section of Canterbury's post-medieval community. Arthritic conditions are common, especially in the legs and lower back. Infection is also widespread, especially in the men. There is evidence of direct violence as well as accidental injuries. There is less evidence of nutritional problems but adult oral health is very poor. Overall the dry bone evidence suggests that the state of health had deteriorated since the medieval period.

St Nicholas Church, Thanington

The report on the two skeletons from St Nicholas Church, Thanington is included in the account of the excavation at the church.

Computerisation

Over the year the Trust has been fortunate enough to engage the services of Jules Batson in writing a computer program specifically for the human bone recording and analysis. At the moment the program is not yet completed. However, we have started entering information from the smaller sites of Stonar and, more recently, St George's. Once the initial teething troubles have been overcome and the necessary additions are made to complete the program, we will be able to effectively utilise the vast corpus (over 14,000 pages) of data from the St Gregory's excavation.

Bone Storage

The recovery of over 1,300 skeletons as well as thousands of disarticulated human bones from St Gregory's presented the Trust with a major storage

problem. Mr Colin Strickland kindly placed storage facilities outside Canterbury at our disposal. However, this temporary arrangement was not ideal since the bones were not readily available for study or inspection.

Thanks to many months of hard work by Brian Smith, the Dover Street store is now ready to receive all the human bones. Brian has single handedly reassembled the 13,000 square feet of dexion shelving (kindly provided by Mr Peter Warr). New boxes have been specially made to fit the new shelves. At the time of writing, the skeletons are being re-boxed, labelled and returned to Canterbury. By the end of the year all the human bone will be neatly stored, in correct order and instantly accessible.

Conclusion

The bone department has been kept very busy over the last year. I am very grateful to Brian Smith for all his help especially in overseeing the smooth running of the bone cleaning and also the fitting out of the Dover Street store. The injection of funding from St George's has permitted Lynne Bowdon to become a part-time member of Trust staff in the bone department. Both her services and those of Louise Jessup, my unpaid assistant, are greatly appreciated. A thank you is due to the loyal band of volunteers: Catherine; Diana; Margaret; Mary; Pauline; Valerie and Peter, who have given up many hours of their own time to help with the bone recording.

The interpretation of various bone lesions is assisted by the X-ray facilities kindly provided by Audrey Paterson and her staff (Ruth; Keith; Peter and Stuart) of the Department of Radiography, Christ Church College. I should also like to thank Mr Adrian Carter, Consultant Radiologist at Kent and Canterbury Hospital, for the interest he has shown in our work and his interpretation and discussion of the radiographic evidence. Jennifer Wakely, Lecturer in anatomy and palaeopathology at Leicester University, kindly undertook scanning electron microscopy (SEM) examinations of our dry bones. Her findings greatly strengthened our diagnosis of metastatic carcinoma from St Gregory's (SK 968).

On this note of fruitful co-operation I am, once again, looking forward to another active and productive year in the bone department.

PART FOUR

EDUCATION

1 Schools Education

by Marion Green

The story so far

The Canterbury Archaeological Trust education service has been operating in its present form for about eighteen months. For the most part we have been reactive, responding to requests from the teaching profession. We are progressing gradually, building upon our existing foundations and getting to grips with the new National Curriculum requirements. Through liaison with other educational bodies we are now consolidating certain elements of our work while planning a more proactive approach in other areas.

Last year's Annual Report (1989-90) described how we began to develop our programme, essentially by introducing a specially designed schools excavation visit at the Longmarket site; by producing a teacher guide to be used in association with a visit and to assist schools in planning an archaeological element into the curriculum; and by expanding the Work Experience programme. We continued to provide classroom 'theme' sessions on request and involved more Trust staff to assist in this area.

An on-going service: 1990-91

Excavation visits (see Annual Report 1989-90)

When the Longmarket excavation closed an assessment was made of schools' response to what had been something of a "trial run". The nature of the site and its facilities had provided an excellent testing ground and the results were very encouraging. During the excavation period, schools came from the Canterbury area, Faversham, Whitstable, Folkestone, Challock, New Romney, Dover, Tunbridge Wells, Sittingbourne and Chatham, together with two from outside the county.

Building on our experience from the Longmarket, Alan Pope and I are now planning visits to the St George's Church site (September/ December 1991). Alan is my principal assistant in our education programme and has particular responsibility for schools excavation visits. We are paying specific regard to the demands of the now published National Curriculum History Order. We hope to show teachers how they can use a site visit to help meet all three Attainment Targets in their programmes of study in a graphic, tangible and exciting way for all parties.

Classroom sessions

A steady flow of requests for 'theme' sessions has continued throughout the past year, again springing from National Curriculum considerations. Schools visited were located in Swalecliffe, Headcorn, Herne Bay, Adisham, Ashford as well as several in the Canterbury area. In particular there are requests for 'Roman' sessions from primary schools, this being a period of history now integral to two Core Study Units spanning primary and lower secondary education. Other themes have been 'Aspects of Medieval Life', 'How do we know?' (archaeological processes) and 'Ourselves' involving the evidence of osteo-archaeology and how it helps in building a picture of past societies. Most of these classroom sessions have been in primary school while some local sixth form groups have requested talks on the broader subject of Archaeology.

In all theme sessions emphasis is placed on local evidence: pupils are introduced to the nature of archaeological investigation and are given opportunities to handle and examine artefacts. Slides, drawings and photographs are also used as appropriate to demonstrate the nature of evidence. The attraction of these sessions is the 'hands-on' element and the 'local ness' of the material examined, which make the presentation pertinent and of personal interest.

In the spring of this year we also accommodated a rather unusual request from the Abbey School at Faversham. A project had been initiated by the secondary school with the objective of observing differential teaching methods with 10 and 11 year olds at the Boughton Methodist Primary School. The broader aim was to strengthen links between teaching methods applied to upper junior and lower secondary school children.

Principally due to the personal interest of Ken Duffy at the Abbey School, an archaeological context was chosen for the exercise to engender interest and excitement and to coincide with an "Early Man" project at the Boughton School. The Trust's input involved assisting with the excavation and recording of a mock 'dig' in the school grounds and beginning some work with the finds. The event was an extremely active and lively one with the practical experience maintaining children's interest throughout most of the day.



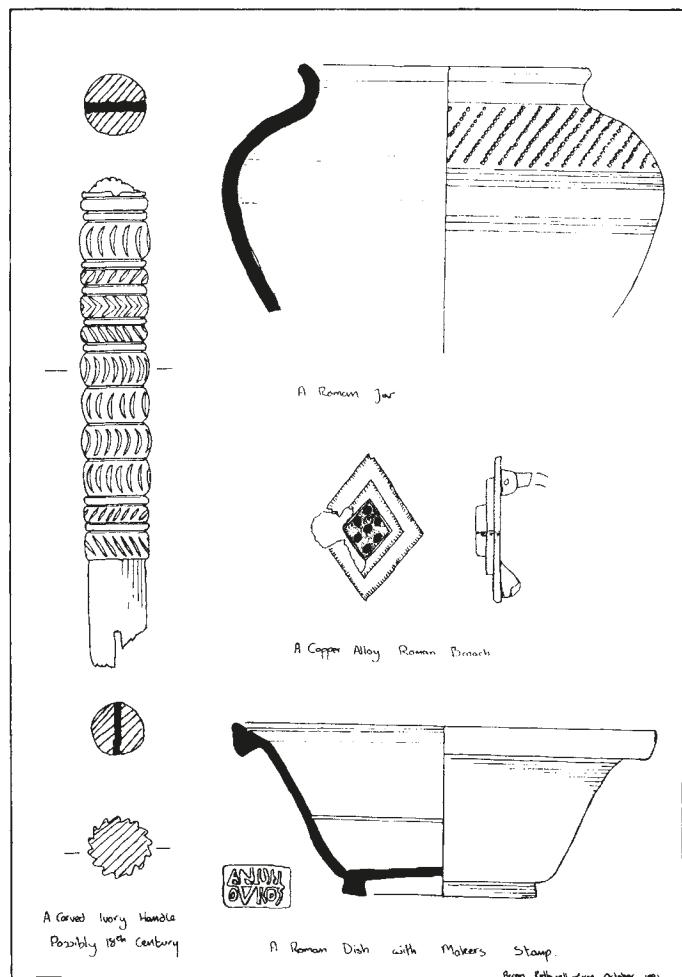
Primary school children engaged in a "How do we know?" excavation visit.



"Hands-on" experience of archaeological processes in action undertaken in the school field of Boughton Methodist Primary School.
Photographs courtesy of the Kentish Gazette.

Visits to 92A Broad Street

Our offices have expanded at an impressive rate over recent years, providing much more working space for post-excavation projects. The additional provision of an Education Room would be ideal! Alas we cannot currently receive large groups of children to see the 'back room' work of the Trust. However, exceptionally, last autumn we did accommodate three Canterbury classes of 11 year olds from St Thornas' R.C. Primary School to see evidence of man's use of rocks as seen in the archaeological record. This was linked into a project on natural forces in the school (National Curriculum Science).



Work experience: Finds illustration is one element of the student's programme.

Work Experience programmes (see Annual Report 1989-90)

Where applications for placements with the Trust began as a trickle, the demand has now increased to a steady flow and we are finding that due to limitations of space and staff resources, we are occasionally turning people down. We can accommodate only two students at any one time so teachers are advised to book well in advance, ideally the term preceding that of placement. Since we developed our Work Experience programme we have placed students from Cobham, Maidstone, Sandwich, Sevenoaks, Tonbridge, Rochester, Dover, Paddock Wood, Herne and particularly from Canterbury. A particular interest has grown among the sixth form students

Canterbury Archaeological Trust September 1991

EXCAVATION

St George's Church

The church of St George-the-Martyr is situated in the east part of Canterbury. It is thought that the church came into existence after the arrival of Archbishop Lanfranc in 1070 A.D.

The church was bombed in 1942. The shell remained until the 1950s. Only the tower survived and was renewed and a new clock was installed in 1955.

Traces of domestic and industrial occupation can be seen on the site. Anglo-Saxon or early medieval can also be seen. A Roman street and traces of a Roman building are visible in the sides of the deeper cuttings.

OPEN:
MONDAY TO FRIDAY 9.00-5.00.
SATURDAY 8.30-5.00.

ADMISSION FREE
but donations welcome.

SITE TALK, POTTERY DISPLAY
SHOP with a range of souvenirs.

ENDS MID NOVEMBER

Work experience: Designing a visitor information leaflet for the St George's excavation.

of the Simon Langton School for Girls, some of whom come on a regular half-day voluntary basis for a term or longer.

In addition, earlier this year we provided a one day teacher placement with the Trust as part of the 'Teachers into Industry' programme (Enterprise and Education Initiative). A local teacher requested a day with us, shadowing members of staff to assess the Work Experience exercise in an archaeological context.

Recent developments

Over recent months there have been some exciting and some encouraging developments in the area of Canterbury Archaeological Trust Education.

Funding

Recent applications to Kent County Council Education department for grant aid have been unsuccessful. We hope that proven countywide demand for our services, and our increasing ability to react to the demand, will encourage a more favourable response.

Our efforts had been noted by the Kent Archaeological Society who, in February of this year, voted to grant £2,000 to maintain the service during a difficult end of financial year period. The initiative to help in our Education programme was taken by Dr Alec Detsicas who has since formed a joint Kent Archaeological Society/Canterbury Archaeological Trust Education Working Group. Relations with the Society continued to develop and in the new financial year a further £4,000 was granted to help maintain the current service and plan for the future. I extend many thanks to the Society for their interest and for this much needed support which hopefully with additional aid from other quarters will eventually put the service on a more stable financial footing.

I would like to thank Mrs Marjorie Lyle for her contribution of £800 towards the schools programme; this sum comes from lecture fees received by Marjorie over the past year (see below).

With a view to seeking other sources of Education funds, a workshop entitled 'Applying to Companies' was attended in April. This was organised by the Directory of Social Change. The Directory is an educational charity which undertakes research and provides information, publications, training and advice to charities and the voluntary sector. Topics include fund-raising, financial management, taxation, and management and effective use of charitable resources. It was soon evident that any fund-raising campaign would involve a labour intensive commitment on someone's part and at present we do not have the available resources to follow this one through. However, as a result of the workshop, we are now armed with a sound body of practical guidance should we decide to venture down the path of corporate funding. I would like to thank the Friends of the Canterbury Archaeological Trust for financing my place at the workshop.

The National Curriculum

The National Curriculum History Working Group Interim Report (D.E.S. 1989) stated:

'Archaeology also offers valuable assistance to school history. The work of archaeologists past and present not only yields important evidence to historians, but archaeological methods are closely related to those of historians particularly their respect for and interpretation of evidence. School history has already established fruitful connections with archaeology and these should be strengthened'.

These comments of two years ago were very encouraging. A key requirement of the now published National Curriculum History Order is that both in primary and secondary education,

'Pupils should have opportunities to use a range of historical sources including ... artefacts ... buildings and sites...' (D.E.S. 1991).

Archaeology clearly has an integral role to play and, looking at the Order in detail, appears particularly appropriate to the 5 to 14 age range.

An archaeological site and its material evidence (artefacts, building foundations, etc) provide a valuable historical source for schools to experience; on its own and when compared with other historical sources (documentary evidence for example) it can help pupils to meet all the Attainment Targets set by the curriculum Order while also contributing towards Core Study Units (Invaders and Settlers for 7 to 11 year olds; The Roman Empire for 11 to 14 year olds for example).

In planning visits to the current St George's excavations we are concentrating on the needs arising from the Attainment Targets set. Similarly we will consider National Curriculum requirements in planning other, future resources.



Archaeology and National Curriculum History

What is Archaeology?

It is the excavation and study of the material remains of history in order to discover how people of the past lived.

You might like to think of archaeological evidence in three strands:

- the evidence of the archaeological site itself
- the artefactual evidence recovered from the site
- the processes by which the evidence is recovered and examined

These strands can be approached on various levels, depending on age and ability and with different emphases depending on your study programme.

How is it relevant to the curriculum?

Throughout the Key Stages, the History Order requires that "Pupils should have opportunities to use a range of historical sources including ... artefacts ... buildings and sites..." (DES 1991).

An archaeological site and its material evidence is a valuable *primary* historical source for you to experience. On its own and used in conjunction with other sources (eg documentary evidence) it can help children to meet all three *Attainment Targets* while also contributing towards *Core* and *Supplementary Study Units*.

Archaeology seems particularly appropriate to the programmes designed for pupils in *Key Stages 1 to 3*.

Hands-on Archaeology: Why use it?

A practical approach gives children all the benefits of experiencing something first-hand.

For example it gives them opportunities to:

- see new historical knowledge being discovered
- actually use the primary materials (eg artefacts) from which history is drawn
- see practical examples of the benefits and limitations of archaeological evidence
- all of which help you to meet the needs of the National Curriculum.

How might you build a practical approach into your History programme?

Some suggestions:

- visit an excavation in progress with someone available to explain what is happening on site. N.B. When answering the question "How do we know?", the knowledge and understanding of archaeological processes gained from visiting a local site will be as relevant to learning about the Ancient Greeks as to learning about local history.



History and the National Curriculum

Winter term 1991

Canterbury Archaeological Trust is excavating at the St George's Clocktower site, St George's Street, Canterbury. Schools are invited to book visits and see more of the city's history being uncovered! Visits to last year's dig at the Longmarket were very popular and resulted in many cross-curricular activities.

How does Archaeology relate to the National Curriculum?

Throughout the Key Stages, the History Order requires that "Pupils should have opportunities to use a range of historical sources including ... artefacts ... buildings and sites..." (DES 1991).

An archaeological site and its *material evidence* (artefacts, building foundations, etc) is a valuable historical source for you to experience. On its own and compared with other sources (e.g. documentary evidence) it can help children to meet all three *Attainment Targets* while also contributing towards *Core* and *Supplementary Study Units*.

How can a site visit help to meet curriculum needs?

Attainment Targets: Canterbury's history can now be traced back at least 2,000 years. Archaeologists can help pupils to answer the question "How do we know this?" It is their business to excavate, record and interpret *primary material evidence*.

Through a specially designed session, children will:
Observe the nature of an archaeological site (in model form and actuality), its excavation and recording processes. Learn about the benefits and limitations of archaeological excavation. (AT 2, 3)

Learn something of the history of the area and handle some of the artefactual evidence, both enabling 'then and now' comparisons. (AT 1, 2, 3)

History Study Units: We expect to find evidence at St George's dating back through the Victorian, Medieval, Anglo-Saxon and Roman periods so a visit could add a very tangible quality to CSU programmes, e.g.

KS 2: Invaders and settlers; KS 3: The Roman Empire, The Medieval Realm;
and SSU programmes, e.g.
KS 2: local history unit.

Younger children (KS 1) also have much to gain from the first-hand experience if pitched at a suitable level.

In-service training for Kent teachers (INSET). Examples of two information leaflets prepared by the Trust to help meet the needs of the National Curriculum.

Liaison with other educational bodies

The History Order is certainly extremely useful in helping Canterbury's 'History' services to focus attention on the specific needs of teachers and pupils. National Curriculum developments have in recent months encouraged liaison between five local services in particular: the Trust, Canterbury Heritage Museum, Canterbury Urban Studies Centre, the Canterbury Tales centre and the Cathedral education service. We all feel it is important that:

- a) The teaching profession sees us as a body of historical resources each with a considerable contribution to make to schools education, and,
- b) that we are aware of each other's facilities and how they might be usefully integrated. With all the collective demands of the curriculum generally, we want to avoid a situation where teachers are faced with unnecessary repetition or conflicting information.

As a result of our discussions, these five services are now jointly planning an I.N.S.E.T. (in Service Training) day for local teachers. The project was initiated by Fay Blair at the museum and the aim is to introduce our service and the resources that each can currently offer. If this proves successful more development days will follow.

I am also very pleased to have made contact with Rachel Shaw, Education Officer with the Northamptonshire Archaeology Unit. Jan Coulson, Kent County Advisory Teacher for History, had spoken to me about her work. Rachel began to develop her education service from small beginnings some years ago and she now operates full-time with an assistant and has built up an extensive programme of resources for schools in her county. I recently attended an Education Open Day at the Stanwick Roman villa site in Northants where on site work with juniors was very impressive. The English Heritage site had been running for several years although the provision for schools was a fairly recent development. The nature and size of the site allowed children to actively participate in excavation and post-excavation work and the programme had clearly been well designed and, as a result, well received. The Stanwick exercise was perhaps exceptional while such opportunities for on site participation in an urban rescue context are unlikely and in Canterbury we must be aware of our limitations.

Further developments have also occurred in the area of further Education. Kent University has approached us to jointly design an annual one-week 'practical history' module for first year undergraduates as part of a course in medieval history. The module would involve working at the Trust and at the Cathedral masons' and stained glass workshops. We were approached to act as link between the two organisations and to plan the Trust input. A draft proposal was accepted by the University and then by D.E.S., the funding body. We are also planning for M.A. placements with the Trust, for students from the department of medieval history.

Plans for the future

The recent support received from the Kent Archaeological Society has meant that we can begin to make plans but we have a long way to go before the service is on a sound financial footing.

The advent of the National Curriculum History Order and subsequent discussion arising out of the newly formed Kent Archaeological Society/Canterbury Archaeological Trust Education Working Group mean that we can focus our efforts on selected objectives. Aside from the on-going service, in the short-term we plan to up-date and print professionally the introductory teachers guide first produced for the Longmarket excavation (Annual Report 1989-90). There are also plans in hand for the production of sherd handling kits and slide packs and eventually a series of I.N.S.E.T. days for Kent teachers, which would ideally, in the longer term, accommodate the whole county.

Given the part-time nature of the Trust's Education service, I hope that we will manage to develop at a gradual pace, not becoming overambitious in our endeavours: It will be important to continue to assess demands and responses from the teaching profession for some time to come.

Design a Mosaic Competition (see Annual Report 1989-90)

During last year's Longmarket excavations a competition was set up for children between the ages of 8 and 16 to design a mosaic with a twentieth-century theme. The idea was inspired by the Roman mosaic panels found at the Longmarket site at the end of the Second World War. The competition closed at the end of August 1990.



In-service training for Kent teachers (INSET). Examples of two display panels prepared by the Trust to provide an insight into archaeological processes.

There was a good response to the competition with some schools submitting entire class entries. Many children had clearly put a lot of effort into their designs, resulting in a wide range of themes and design techniques. The judging took place at the Broad Street offices with representatives from Land Securities Building Design Partnership, Canterbury City Council Environmental Arts department and the Trust making up the panel.

The judges were most impressed by the entries from the younger age groups (8-10 years and 11-13 years) many of which showed great vitality. First, second and joint third places were selected and these received cash prizes generously donated by Land Securities. It was agreed that the first prize should in fact be split into cash and artist's materials and our chief illustrator, Mark Duncan, and I had a good time choosing paints, crayons and sketch pads for a 10 year old.

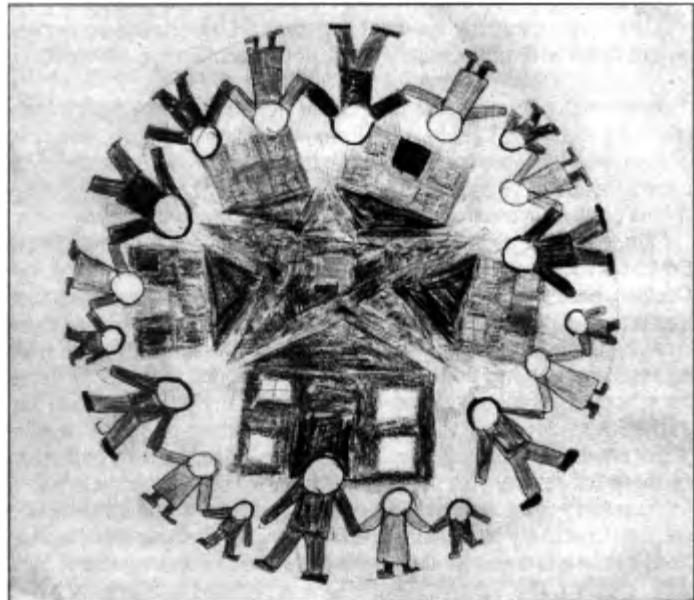
In addition, the Trust gave books of an archaeological nature to the winners of the three age groups.



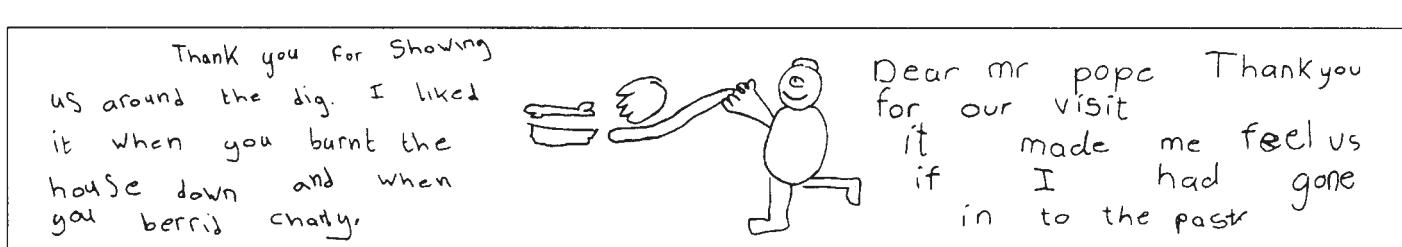
Some of the many entries from school children for the Longmarket 'Design a mosaic' competition.

Land Securities were also looking for a design to incorporate into their new development. They found one with elements they considered suitable for adaptation and this entry is now being considered by a commissioned mosaicist.

Shortly after the judging, the presentation took place at Broad Street with local press coverage and Paul giving the prizes. The winning designs were displayed on panels in the newly-restored back room, now a very congenial place for such an event. The guests and their families were then shown recent finds from the Longmarket excavation and taken on a tour of the building to see some archaeological work in progress. To conclude the event, winning mosaic designs were on display at the Longmarket site until the end of September.



The winning mosaic design from Louise Jones, aged 10 years.



2 Adult Education and Lectures

by Marion Green

The educational work arising from the Trust's activities (in terms of visits, lectures, etc.) has, over recent years, fallen comfortably into two categories: schools education and adult education. While myself and Alan Pope are now largely responsible for the schools element, the variety of lectures and courses for the local adult population is provided by other Trust staff and Marjorie Lyle.

Working largely independently Marjorie continues to draw the crowds, offering them a range of themes. She has also completed two courses for the School of Continuing Education at Kent University, 'Canterbury's History and Archaeology' and 'Monastic Orders in Canterbury and after'. Marjorie's generous donation to the schools education programme, resulting from lecture fees, is much appreciated.

Once again many lectures on the Trust's recent activities were presented to local and national societies and other interested bodies. It is no surprise that the most requested themes were the 'Longmarket' and 'Channel Tunnel' excavations and Paul's popular 2,000 years of Canterbury's history'. Additionally there were talks on Medieval Canterbury Urban Cemeteries, Pilgrim Canterbury and Aspects of Early Canterbury. Andrew Savage made his debut at the Herne Bay Wine Circle with his 'Canterbury and the Ancient Wine Trade' which, by all accounts, was very well received, not entirely due to the free flowing wine in the 'hospitality room'.

Other venues for lectures included the Wingham Local History Society; Kingston Village Society; the Men's Ecumenical Fellowship; Ashford Archaeological and Historical Society; Pilgrim's Language School, Canterbury; East Kent Group of the Institute of Advanced Motorists; Whitstable Historical Society; Canterbury and District Open University Students Association; the local branch of the National Association of Decorative and Fine Arts Societies; South-east England Tourist Guides Association; East Kent Federation of Townswomen's Guild; Ashford Medical Society and the Kent and Canterbury Hospital.

As usual a series of guided tours of the city was arranged, in conjunction with the Friends, as part of the Canterbury Festival.

Finally, Mrs Barbara Rogers has recently revealed her talents as a course director, by setting up a Practical Archaeology programme based at our Broad Street offices. Her first course ran from April to June this year and was very well attended. Each of the ten sessions was presented by different Trust members and topics covered were: excavation and non excavation techniques; finds processing and animal bones; pottery; post excavation and recording; documentary evidence; field walking (lecture and walk); conservation; human bones; and building recording. The course was intended mainly as an information and public relations exercise, but succeeded in raising nearly £200 for the Trust after expenses.

PART FIVE

THE TRUST

SHOPS

1 The Roundabout Shop

by Marjorie Lyle

The four new students who moved into the refurbished flats in September 1990 so appreciated the improved amenities that they have maintained everything to a much higher standard than their predecessors and have signed on for a second year to June 1992. Summer lets have proved harder to secure but we have had three residents, one a worker from the Trust, Andrew Hutcheson.

A glance at the Accounts will reveal how much the building works cost and this sum is unlikely to be recovered in a selling price while the present housing slump lasts. The property has recently been valued for us at £100,000 a satisfactory figure despite the moneys spent on it over seven years since we bought in 1984 for £38,000 and discharged the bank loan in under three years.

Trade has continued briskly but in present conditions of consumer resistance we have been unable to increase our prices in line with costs and inflation, so this year's profit is less. The recession has, however, made our commission service even more appreciated by the mothers. They lament the impending end of the shop without themselves being able to take it on.

After more than seven years my helpers want to stop. Many are busy people with other charitable commitments; many are feeling their years; some have left the district and voluntary replacements cannot be found. My own lecturing and family commitments oblige me to say that 1992 must be the end. I have sought a replacement for six months but the commitment of regular time and responsibility are unattractive without a wage which would make a commission shop uneconomic to run. My invaluable deputy, Barbara Rogers, finds her other work for the Trust as Membership Secretary of the Friends as much as she can undertake. Of our paid helpers, Mrs Clifford was away with leg trouble and now can offer only three mornings a week and dressed the window following an accident to Mrs Hayes whose artistic displays have been so much appreciated. However, she has been away with recurrent illness throughout the autumn.

The Management Committee, unwilling to sell in such an unfavourable economic climate, is seeking ways to retain the student flats and sub-let the shop. As of August 1991 some possibilities are emerging.

The Roundabout Shop at 72 Northgate.

Meanwhile, it is good to know that the Trust is appreciated for a unique service to young families and that we provide a useful sum to the Trust's finances, a reasonable home to four students, and a sense of camaraderie among ourselves as each day brings its problems, its laughs and its satisfactions in the never dull carousel which is 'Roundabout'!



2 The Longmarket Shop

by Elizabeth Rothwell-Eyre

Our first real venture into the world of retailing during the Longmarket excavation proved to be an overwhelming success with a net profit in excess of £12,000 and £3,500 worth of stock paid for. We had much praise from the general public for our exhibition, our shop and for the guided tours with often as many as nine or ten a day taking place at the height of the visitor season. Many people visited the site regularly to inspect our progress and there was genuine regret

when we had to close our gates for the last time. The response in the younger visitors was very gratifying. All this would not have been possible without the help of the volunteers who assisted with both the shop and the guiding.

During the winter months a temporary shop and display was set up at 92A Broad Street. This proved to be reasonably successful with many people buying their Christmas presents from us.

3 The St George's Shop

by Elizabeth Rothwell-Eyre

At the time of writing a shop and exhibition has been set up in the corner of the St George's Church excavation, west of the church tower against St George's Street. The exhibition features information on the Trust. With text, diagrams and photographs it explains aspects of finds processing, conservation and small finds research and the preparation of reports. It also has a board depicting the Roman burial, discovered a few years ago, to help explain about the study of human

bones. A portion of the exhibition displays photographs of St George's Church before and after the air-raid of 1942.

I would like to thank Beryl Chalk and Richard Chapman for providing excellent reproduction pottery for sale in the shop.

Special thanks are extended to Bridget Russell and all the volunteers and of course to Jon Billington, my assistant, for his continuing help and support.

PART SIX

THE FRIENDS

The Friends of the Canterbury Archaeological Trust

by Lawrence Lyle

Last year I highlighted the help Friends gave on the Longmarket excavation. Apart from the unquantifiable pleasure and instruction the tens of thousands of visitors enjoyed, the financial result was most encouraging - a profit from the shop and from donations of over £13,500. This summer our efforts were transferred to the St George's Church site where thousands of visitors had the site explained to them and patronised the shop and exhibition. Liz Rothwell-Eyre and Bridget Russell devised a rota of twenty-two Friends; takings in the shop and donations averaged about £600 per week in the first few weeks.

During the winter we had lectures from John Cotter and Maggy Taylor about their work on ceramics and finds processing. Jon Rady described the preliminary results of the Longmarket and Richard Eales gave us a stimulating account of the Norman castles of Kent. Paul Bennett's review of the work of the Trust in 1990 attracted the usual audience of over 200 members and friends. The Christmas Party was held in the Trust's headquarters in Broad Street, enabling Friends to see the transformation that has been wrought in the accommodation for the staff. It also gave me the opportunity of talking about three pioneers of the Trust, Jim Hobbs, Donald Baron and George McVittie, who are commemorated by plaques in three of the rooms.

Two visits were paid to the Longmarket site and one to the St George's Church site. In April Jim Bradshaw led an excursion to the Isle of Thanet pointing out archaeological sites en route; Dave Perkins, the Director, outlined the work of the Trust for Thanet Archaeology. In June we had a fascinating visit to a small area around Rochester Castle, Bridge and Cathedral, led in his inimitable fashion by Tim Tatton-Brown.

A new initiative, the brain child of Barbara Rogers, was a ten week course in practical archaeology in which members of staff instructed a group of twenty Friends. This was so successful that another course is being planned.

One of the most encouraging features of our membership of 375 is the high proportion (66 per cent) who covenant their subscriptions, enabling Jean Dawson, our tireless Covenants Secretary, to claim tax refunds amounting currently to over £900 per annum. Our buoyant financial position has enabled us to make two substantial grants to the Trust this year. These are a camera and darkroom equipment which are already proving invaluable both on and off site, and a contribution towards the cost of desk-top publishing equipment, a further step towards the computerisation of the Trust's work to which the Friends have already made a grant. Smaller grants have been made to enable staff to attend day courses and a number of books have been bought for the Library. Peter Clark, our new Assistant Director (Post-excavation), was awarded a Donald Baron Bursary to enable him to attend a three day conference in Birmingham on 'Archaeology in Britain 1991'. The income of the invested Fund is sufficient for the purchase of books for the Library to be added to the award of bursaries to the staff.

Pressing commitments, some of them archaeological, have obliged my wife Marjorie to resign from the Committee. However, we have been joined by Meriel Connor, Elizabeth Rothwell-Eyre and Robert Shine. My expression of thanks to all the Committee for their enthusiastic support is no mere formality.



PART SEVEN

ADMINISTRATION

Building and renovation work at our offices have been progressed since the publication of the last annual report. Although much of this new work has taken second place to excavation maintenance and the stripping out of buildings prior to archaeological surveys, a considerable amount has been achieved by John Boulden and Alan Pope occasionally assisted by other members of staff.

Our new small finds office is now complete with work benches, cupboards and ample storage facilities. Much of the fitting out was executed with re-used materials salvaged from the Longmarket shops shortly before their demolition. Our thanks are extended to Land Securities and their demolition contractors, McWeney Smallman for allowing us access to remove timber and carpeting, which has been put to very good use. This wing of our office complex is constructed against the city wall. The first floor office containing the ceramics department is supported by vaulted brick piers. Between the arches the coursed flintwork of the city wall has been cleaned and attractively lit by concealed lighting. Adjoining the office is a new photographic dark room which has been fitted out with equipment purchased for us by the Friends of the Trust. The entire ground floor of the wing is now a fully equipped, well-provisioned, attractive office for staff to work in.

In the past months a lightweight glazed lean-to building has been

Acknowledgements

We gratefully acknowledge contributions and payments over the course of the past year from the following:

English Heritage for supporting various post-excavation and building recording projects.

The following organisations are thanked for grant aid in support of the Trust:

Kent County Council
Canterbury City Council
The British Museum Kent Archaeological Society

The following organisations are thanked for funding various evaluation, excavation, watching brief, post-excavation and building recording projects:

Kent County Council
Christ Church College
The Dean and Chapter of Canterbury Cathedral
The Channel Tunnel Group
The Baron and Baroness of Twynham
Land Securities Plc
Sloggett's (Builders) Ltd
Portfolio Properties
Eythorne Parish Council
Southern Water Services
Dover District Council
Dean and Chapter, Rochester Cathedral
Laughing Water Hotels Limited
St Nicholas Church, Sevenoaks
Sunley Holdings PLC

... and the many members of the public who generously made donations to the Trust during the course of excavations at the Longmarket and St George's Church.

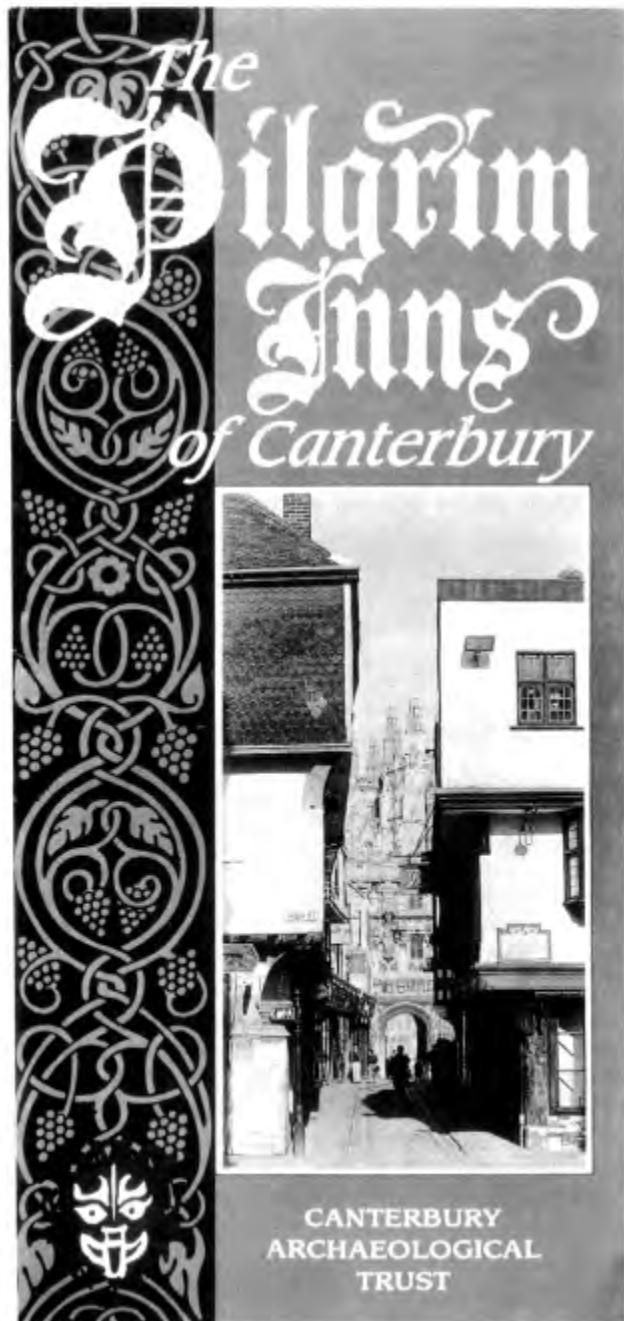
The Pilgrim Inns leaflet. This recently published full colour leaflet whose compilation as a by-product of a long-term study of Canterbury's medieval buildings by the Trust, was in part funded by Mr Martin Starkie, Director of Canterbury's Chaucer Festival. The leaflet was produced to highlight the survival of a number of important later medieval timber-framed inns at the heart of the city. Other 'lost' inns referred to in documents are discussed. The leaflet, with text by Tim Tatton-Brown, also contains two reconstruction drawings of the High Street and Buttermarket areas by John Bowen. The leaflet is available direct from the Trust or from local booksellers. price 95 pence.

constructed between the small finds and administration offices. Although not complete at the time of writing, this structure, together with the rear lobby of the office, will provide staff room facilities for the entire complex. At the present time, work has commenced on the conversion of a large shed occupying much of the yard space, to a new finds processing department.

Much of the material to be used for the conversion of this building was salvaged from the former shops on the St George's site prior to their demolition.

My thanks are extended to John Boulden, Alan Pope and all those members of staff who have assisted with building renovation works in the past year.

In addition to our premises at Broad Street, the Trust currently leases a number of City Council owned properties for use as hostels, stores and offices, together with a privately-owned house at Whitstable. Our thanks are extended to the City Council for the help they have given us with accommodation in the past year. Special thanks are again extended to Mrs Culver, manager of the Bekesbourne Lane campsite, for assisting us with seasonal accommodation for our European, North American and British volunteers.



PART EIGHT

ACCOUNTS

The following financial statements represent a summary of the audited accounts of the Canterbury Archaeological Trust Limited for the year ended 31st March 1991. A full set are available at the Registered Office.

Report of the Directors

The Directors have pleasure in presenting their report for the year ended 31st March 1991.

Review of the Business

The company was incorporated on 2nd August 1979 and acquired all the assets and liabilities of the unincorporated association 'Canterbury Archaeological Trust'. The principal activities of the company remained unchanged from those of the unincorporated association, that is to advance the education of the public in Archaeology and to acquire and promote knowledge of the past of and in Canterbury and the surrounding area.

Results

The results of the Trust for the year ended 31st March 1991 are as follows:-

	1991	1990
	£	£
Main Account	4,039	259
Publications Account	1,029	380
Shop Account	2,122	13,134
Friends Account	5,599	5,830
Donald Baron Bursary Fund	1,016	788

Directors

The Directors during the year were:-

Dr Walter Frank Jenkins (Chairman)
Francis Harry Panton
Tempest Hay

Secretary

The Secretary during the year was Lawrence D. Lyle.

Registered Office

92A Broad Street, Canterbury, Kent.

Auditors

Chantrey Vellacott, Chartered Accountants, have indicated their willingness to continue as auditors of the Trust and a resolution to re-appoint them will be proposed at the Annual General Meeting.

BY ORDER OF THE BOARD

Lawrence D. Lyle
Secretary

5th August 1991

Report of the Auditors

To the Members of Canterbury Archaeological Trust Limited

We have examined the financial statements set out herein which have been prepared on the historical cost basis of accounting.

In our opinion, these financial statements give, on the historical cost basis of accounting, a true and fair view of the state of affairs of the Trust at 31st March 1991 and of the excess and the source and application of funds of the Trust for the year ended on that date, and the accounts comply with the Companies Act 1985.

CHANTREY VELLACOTT
Chartered Accountants

7 Dane John
Canterbury
Kent CT1 2QS.

5th August 1991.

Main Account

Balance Sheet	31st March 1991
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Assets Employed

	1991	1990
	£	£
Freehold property	135,000.00	135,000.00
<i>Current Assets</i>		
Bank Accounts, Float and Debtors	109,680.60	115,265.64
	<u>244,680.60</u>	<u>250,265.64</u>
<i>Current Liabilities</i>		
Overdraft, Loan, Creditors and Shop Reserve	62,723.65	72,347.59
	<u>181,956.95</u>	<u>177,918.05</u>

Financed by

Trust Capital Account	5,824.63	5,824.63
Income and Expenditure Account	176,132.32	172,093.42
	<u>181,956.95</u>	<u>177,918.05</u>

Income and Expenditure Account for the year ended 31st March 1991

Income	1991	1990
	£	£
I English Heritage (H.B.M.C.) projects	77,701.35	72,616.74
II Other Income, Fees, Grants, Donations and Projects	619,820.58	297,994.95
	<u>697,521.93</u>	<u>370,611.69</u>
<i>Expenditure</i>		
I English Heritage (H.B.M.C.) projects	104,935.40	97,019.37
II Non H.B.M.C. projects	579,214.60	262,754.74
III Other Expenditure; Loan Interest, Repairs, Publications	9,306.03	10,578.57
	<u>693,483.03</u>	<u>370,352.68</u>
Excess for year	<u>4,038.90</u>	<u>259.01</u>

Publications Account

The full set of financial statements are available on request.

Income and Expenditure Account for the year ended 31st March 1991

1991	1990	
	£	£
Income	1,029.10	379.56
Expenditure	-	-
	<u>1,029.10</u>	<u>379.56</u>
Balance brought forward	1,393.88	1,014.32
	<u>2,422.98</u>	<u>1,393.88</u>
<i>Balance sheet</i>		
Represented by:		
Bank Accounts	<u>2,422.98</u>	<u>1,393.88</u>

ACCO U N T S

The Friends Account

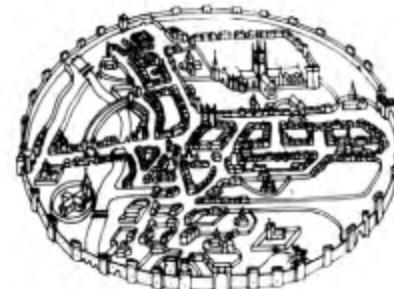
Balance Sheet		31st March 1991	
	1991 £	1990 £	
Current Assets			
Bank Accounts	11,025.55	11,676.86	
Sundry Debtors	1,817.69	2,817.21	
	<u>12,843.24</u>	<u>14,494.07</u>	
<i>Less: Current Liabilities</i>			
Sundry Creditors			
	<u>12,843.24</u>	<u>14,494.07</u>	
<i>Financed by:</i>			
Income and Expenditure Account	<u>12,843.24</u>	<u>14,494.07</u>	
<i>Income and Expenditure Account for the year ended 31st March 1991</i>			
	1991 £	1990 £	
Income			
Subscriptions	5,780.05	5,108.78	
Other income:			
Donations, Events, Interest	2,335.12	4,135.47	
	<u>8,115.17</u>	<u>9,244.25</u>	
Expenditure			
Stationery, Postage, Printing, Advertising,			
Bank Charges, etc., Sundries	2,516.25	3,413.82	
	<u>5,598.92</u>	<u>5,830.43</u>	
<i>Excess of Income over Expenditure for the year</i>			
Payments on behalf of Canterbury Archaeological Trust			
Main Account		50.93	
To Balance Sheet	<u>5,598.92</u>	<u>5,779.50</u>	

Shop Account

Balance Sheet		31st March 1991	
	1991 £	1990 £	
Fixed Assets			
Freehold Property: 72 Northgate, Canterbury, Kent.			
	45,125.41	45,125.41	
Current Assets			
	21,504.69	19,629.27	
	<u>66,630.10</u>	<u>64,754.68</u>	
<i>Less: Current Liabilities</i>			
Sundry Creditors			
	-	246.65	
<i>Net Assets</i>			
	<u>66,630.10</u>	<u>64,508.03</u>	
<i>Financed by:</i>			
Profit and loss account			
Contribution to Main Trust Account and to Appeal Fund Account			
	-	(777.51)	
	<u>66,630.10</u>	<u>64,508.03</u>	
<i>Trading and Profit & Loss Account for the year ended 31st March 1991</i>			
<i>Sales</i>			
	17,357.42	13,786.08	
<i>Other Income:</i>			
Rents, Fees, Interest			
	6,571.83	6,920.04	
	<u>23,929.25</u>	<u>20,706.12</u>	
<i>Expenditure:</i>			
Wages, Services, Repairs, etc.			
	21,807.18	7,572.50	
Net profit for the Year			
	<u>2,122.07</u>	<u>13,133.62</u>	

Donald Baron Bursary Fund

Income and Expenditure Account for the year ended 31st March 1991			
	1991 £	1990 £	
Donations received	600.00	600.00	
Interest received	415.73	287.57	
	<u>1,015.73</u>	<u>887.57</u>	
Transfer to Main Account	-	(100.00)	
	<u>1,015.73</u>	<u>787.57</u>	
Balance brought forward	2,512.06	1,724.49	
	<u>3,527.79</u>	<u>2,512.06</u>	
<i>Balance sheet</i>			
	31st March 1991		
Represented by:			
The Charities Deposit Fund Account	<u>3,527.79</u>	<u>2,512.06</u>	



**CANTERBURY
ARCHAEOLOGICAL
TRUST**

PART NINE

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AND STAFF

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Finds Processor (bones)	Lynne Bowdon		
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Ceramics Analyst/Photographer	Andrew Savage		
Ceramics Assistant	Mark Davey		
NUMISMATIST	Ian Anderson		
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Draughtsman	David Dobson		
Illustrator	Sue Barnett		
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Finds Assistants	Wendy Murphy Andrew Hutcheson Wendy Edwards*		
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RETAIL MANAGER	Robert Edwards*		
RETAIL MANAGER	Elizabeth Rothwell-Eyre		
Retail Assistant	Jonathan Billington		
BUILDING MAINTENANCE OFFICERS	John Boulden Alan Pope		* indicates no longer employed by the Trust

ENDNOTES

1. *Arch. Cant.*, xcii (1976), 238-40; xciv (1978), 275-7; xcv (1979), 270-2; xcvi (1980), 406-10; xcvi i (1981), 279-81; c (1984), 47-56; cvii (1989), 283-6; C.A.T. *Annual Report* 1984-5, 12; *Canterbury's Archaeology 1988-89*, p.2; *The Archaeology of Canterbury* vol. vi, forthcoming.
2. *Arch. Cant.* cvi (1988), 132-4.
3. P. Bennett, 'Excavations at 16-21 North Lane, Canterbury'. *Arch. Cant.* xciv (1978), 165-194.
4. New Street, St Dunstan's area: *Arch. Cant.* xciv (1978), 149-52; *Arch. Cant.* cii (1985), 247-8; *Arch. Cant.* ciii (1986), 222-3; Arrh. Cant. civ (1987), 313-4; P. Bennett in *The Archaeology of Canterbury* vol. viii (1987), 54 and 56-73; Linclen Grove: *Arch. Cant.* cvi (1988), 132-4; for Whitehall Gardens area see note 5 below.
5. Whitehall Gardens area: R.A.H. Farrar in *The Archaeological News Letter* vi No. 5 (1958), 126; F. Jenkins, *Arch. Cant.* xxiv (1960), 151-161; 5.5. Frere in *The Archaeology of Canterbury* vol. viii (1987), 45-53;
6. *Arch. Cant.* civ (1987), 317; *Arch. Cant.* cvii (1989), 295-9; *Arch. Cant.* cviii (1990), 205-6.
7. *Ibid.*
8. *Arch. Cant.* xcix (1983), 247-51; *Arch. Cant.* ci (1984), 294-5; *Arch. Cant.* ciii (1986), 79-117; *Arch. Cant.* cvi (1988), 135-6; *Arch. Cant.* cviii (1990), 212-6.
9. E. Hasted, *A History and Topographical Survey of the County of Kent* (2nd edition. Vol. XI, 1800) facing p.77.
10. A. Stocker, *The Parish Church of St Nicholas, Sevenoaks Nineteenth-century Restorations* (1980).
11. Thanks are due to Dr J. Williams for noting this point.
12. A. Stocker, *op. cit.* note 10, p.5.
13. *Ibid.* p.7.
14. *Arch. Cant.* cviii (1990), 218-226; *Canterbury's Archaeology* 1989-90, 15-19.
15. A. Williams and 5. Frere, 'Canterbury Excavations, Christmas 1945 and Easter 1946, *Arch. Cant.* lxi (1948), 145.
16. *Ibid.*, 8, 18.
17. Parts of this and another room were brought to light in a narrow trench cut along the Butchery Lane frontage of the Roman Pavement Museum in the final stages of the 1990 campaign.
18. The north and west walls of the bath-house's laconicum were, at least in part, survivals from the earlier building and the wall separating the laconicum from the caldarium also stood on early foundations. Included in the lower floors of these hot rooms was a great quantity of polychrome painted plaster, presumably derived from the earlier building.
19. *Op. cit.* note 15, 14, Fig.2, Fig.6. This room's construction appears to have necessitated the closure of a doorway from the corridor into the courtyard.
20. *Op. cit.* note 15, 9-19, Fig.2. Of the southern wing, only a short stretch of the northern wall and robbed out gutter were uncovered in 1990: there was no sign of the dogleg nor of the 'period 3' structure indicated in *Ibid.*, 16-17, Fig.2.
21. The function of this vessel has not been positively identified.
22. *Arch. Cant.* cviii (1990), 221.
23. *Loc. cit.*
24. *Arch. Cant.* cviii (1990), 226-231.
25. *Arch. Cant.* ci (1984), 300-1; *Arch. Cant.* cii (1985), 248.
26. *Ibid.*
27. G. Hauser and G.E de Stefano, *Epigenetic variants of the Human Skull*, Stuttgart: E. Schweizerbart'sche Verlagsbuchhandlung, (1989), 42.
28. T. Anderson, *Post-Cranial Non-Metric Variation: The Examination of a Neglected Subject*, M.A. Thesis, Sheffield University (1987), 10.
29. William Urry, 'St George's Church, Canterbury'. *Canterbury Local History Pamphlet* no. 3. (K.C.C. undated, but reprint of an article written in 1950).
30. William Urry, *Canterbury Under the Angevin Kings* (1967). Charter XIX of c. 1153-67.
31. The foundations of the first two stages show a chancel that was less wide than the nave, unlike in the final stage.
32. William Urry, *Christopher Marlowe and Canterbury* (1988).
33. E. Hasted, *A History and Topographical Survey of the County of Kent* (2nd ed. 1800) XI. 225-9.
34. S.R. Glynne, *Notes on the Churches of Kent* (1879), 20-1.
35. L.L. Duncan, *Testamenta Cantiana* (East Kent) (1907). 50.
36. *Ibid.*
37. CY. Tonks, *The Parish Church of St George the Martyr: a brief historical guide for the use of Pilgrims* (no date, but c. 1930). The Purbeck marble leger for this brass has been rediscovered during the excavations.
38. Hasted, *op. cit.* note 33, 225-7.
39. *Idem.*, 210-12.
40. This churchyard was perhaps only first created in the post Reformation period. Earlier wills seem only to mention burial within the church.
41. Tonks, *op. cit.* note 37, 7.
42. *Idem.*, 4.
43. Glynne, *op. cit.* note 34, 21.
44. Urry, *op. cit.* note 29. A photograph of this and the blocked door into the vestry can be seen in the records of the Council for the Care of Churches.
45. *Arch. Cant.* cviii (1990), 244-52.
46. *Arch. Cant.* xxiii (1898), 306.
47. *Arch. Cant.* ci (1988), 185-7; *Arch. Cant.* cvii (1989), 366-7.
48. *Canterbury's Archaeology* 1989-90, 44-5.
49. F. Jenkins and J. Boyle, 'Excavations at 10 and 11 Castle Street, 1950', *Archaeological News Letter* vol. ill, no. 9 (March 1951), 145-7. The re-assessment will appear in P. Blockley, 'Excavations at St John's Lane 1986', forthcoming; the Level 111 report is available on application to the Trust's offices.
50. Jenkins and Boyle, *op. cit.* note 55, p. 146 and E. Jenkins, *Men of Kent Before the Romans*, Canterbury Archaeological Society Occasional Paper no. 3. (1962), 4.
51. N. Macpherson-Grant, *Excavations at Highstead near Chislet, Kent, 1975-1977* (forthcoming).
52. S. Needham, 'The Highstead Metallurgical Debris' in Part 11 of Highstead forthcoming, see note 57 above.
53. Information from Mr D.R.J. Perkins.
54. K. Parfitt, 'A Prehistoric Site at Hacklinge Holes, Worth', forthcoming.
55. T. Champion, 'Settlement and Environment in Later Bronze Age Kent', in J. Barrett and R. Bradley (eds), *The British Later Bronze Age*, B.A.R. British Series no. 83(i). (Oxford, 1980), 236, nos 8-9.
56. N. Macpherson-Grant, 'Archaeological Work along the A2: 1966-1974', *Arch. Cant.* xcvi (1980), 146-151 and 174-79 (for dating comments by B. Cunliffe).
57. *Canterbury's Archaeology 1989-90*, 24.
58. P. Couldrey, 'The Pottery' in Part 11, fig. 47, Highstead forthcoming, see note 57.

ENDNOTES

65. *Canterbury's Archaeology 1988-89*, 63.
66. A. Clark and P. Couldrey, forthcoming.
67. T Champion, forthcoming.
68. I am grateful to Mr D. Howlett, Curator, Powell-Cotton Museum, for permission to illustrate the two jars from Grenham Bay. The illustrated Margate sherd is an adaption from S.M. Elsdon, *Later Prehistoric Pottery* (Shire Publications, 1989), fig. 16.5.
69. B. Cunliffe, *op. cit.* note 62, 179.
70. R.J. Pollard, 'The Flint-tempered Wares' in *The Archaeology of Canterbury v* (forthcoming). It should also be noted that the use of grog (in addition to flint) does occur in earlier Iron Age ceramics, but associated assemblage characteristics are usually sufficient to correctly date the material.
71. Lord of the Manor Site 1 (1977), D.R.J. Perkins and N. Macpherson-Grant (forthcoming).
72. I. Thompson, pers. comm.
73. K. and P. Blockley in 'Interim Report on Excavations in 1981', *Arch. Cant.* xcvi (1981), 287-292.
74. R.F. Jessup and N. Cook, 'Excavations at Bigberry Camp, Harbledown', *Arch. Cant.* xviii (1936), 151-168, and F.H. Thompson, 'Interim Reports on Excavations at Bigberry' in *Arch. Cant.* xciv (1978), 279-280; *Arch. Cant.* xcv (1979), 301-3; *Arch. Cant.* xcvi (1980), 411-3.
75. I. Thompson, pers. comm.
76. C. Haselgrave, 'The Later Iron Age in Southern Britain and Beyond' in M. Todd (ed.) *Research on Roman Britain 1960-1989*, Britannia Monograph Series no. 11 (1989), 14.
77. I. Thompson, *Grog-tempered 'Belgic' Pottery of South-eastern England*. B.A.R. British Series no. 108 (Oxford, 1982).
78. R. Bradley, *The Social Foundations of Prehistoric Britain*. (London, 1984), 132.
79. B.J. Philip, 'A medieval kiln site at Iyler Hill, Canterbury', *Kent Archaeological Review* 36 (1974), 175-181; T.W.T. Ibtton Brown, 'Recent fieldwork around Canterbury', *Arch. Cant.* xcix (1983), 127-131.
80. R.J. Spillet, W.P.D. Stebbing and G.C. Dunning, 'A pottery kiln site at Tyler Hill, near Canterbury', *Arch. Cant.* iv (1942), 57-64.
81. N. Macpherson-Grant, 'Interim note on a twelfth-century pottery kiln from Canterbury', *Medieval Ceramics* 10 (1986), 49-55.
82. M. Wilson in S.S. Frere and S. Stow, *Excavations in the St George's Street and Burgate Street areas*. The Archaeology of Canterbury vol. vii (1983), 240-50.
83. J. Gaunt, 'The excavation of a medieval well at Worth', *Kent Archaeological Review* 44 (1976), 94-98.
84. D.C. Mynard, 'Medieval Pottery from Dartford', *Arch. Cant.* lxxxviii (1973), 192.
85. A.D.F. Streeter, 'Potters, kilns and markets in medieval Kent: a preliminary study', in P.E. Leach (ed.), *Archaeology in Kent to A.D. 1500*, C.B.A. Research Report no. 48 (1982), 87-95.
86. *Ibid.*
87. Identified by the author, from excavations of Mons. Yves Beauchamp.
88. J. Thorn, 'The pottery' in G.H. Smith, 'The Excavations of the Hospital of St Mary of Ospringe commonly called Maison Dieu' *Arch. Cant.* xcv (1979), fig. 44.107.
89. There were potters at Boughton-under-Blean in the eighteenth century but whether or not they represent the descendants of Iyler Hill potters is unknown.
90. W. Urry, *Canterbury under the Angevin Kings* (1967), 194.
91. M.C. Horton, 'Medieval Floor Tiles 1972-78 and earlier' in D. Sherlock and H. Woods, *St Augustine's Abbey Report on Excavations 1960-78* (K.A.S. Monograph Series IV, 1988), 144-176.
92. E.C. Norton and M.C. Horton, 'A Parisian workshop at Canterbury', *Journal of the British Archaeological Association* cxxiv (1981), 58-80.
93. *Ibid.* fig. 4.
94. Dean and Chapter archives, Canterbury Cathedral.
95. G. Cramp, 'University of Kent medieval kiln', *Kent Archaeological Review* 19 (1970), 27-8.
96. *Op. cit.* note 92, p.79.
97. D.J. Ortner and W.G.J. Putschar, *Identification of Pathological Conditions in Human Skeletal Remains* (Washington: Smithsonian Institution Press, 1985), 395, 396.
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100. Table 1, p.99 in A. Ward and T. Anderson, 'Excavations at Rochester Cathedral', *Arch. Cant.* cviii (1990), 91-152.
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102. *Op. cit.* note 100, p.108.
103. J. Forestier and R. Lagier, 'Ankylosing hyperostosis of the spine', *Clin. Orthop.* 74 (1971), 65-93.
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112. S.A. Williams and M.E.J. Curzon, 'Observations on dental caries in primary teeth in some medieval British skeletal material' in (eds) E. Cruwys and R. Fohey, *Teeth in Anthropology* B.A.R. S291 (1985), 201-213.
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