



# CANTERBURY ARCHAEOLOGY

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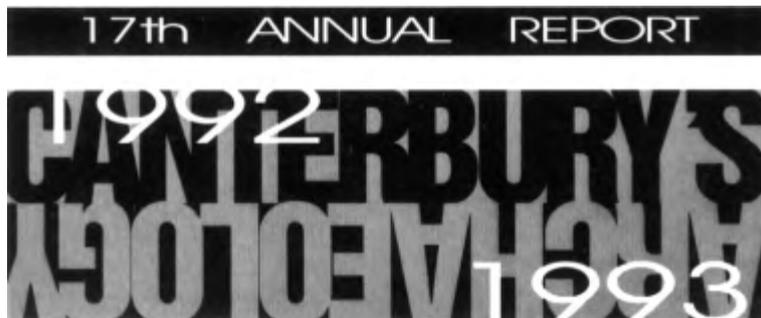
# Canterbury Archaeological Trust Ltd

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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.

Further copies of *Canterbury's Archaeology* can be obtained from our offices at 92a Broad Street, Canterbury, Kent, CT1 2LU.

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# Foreword

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*This has been a most exciting and memorable year for the Trust. Two of our major projects have achieved finds of national and international archaeological importance.*

*The remarkably well preserved remains of the Bronze Age boat found at Dover, probably the oldest such structure found in this country and one of the oldest in the world, is of great significance, and is now being thoroughly researched and assessed. Eventually it is hoped that it will be preserved and displayed at Dover and we shall play our part in assisting the Dover Council and other authorities in providing a Dover Boat Trust fund for this purpose.*

*Excavations in Canterbury Cathedral, in advance of repaving the floor and modernising the heating system, proved to be exceptionally rewarding. A remarkable sequence of structures was revealed dating back perhaps to the seventh century, and our knowledge of the series of Anglo-Saxon, Norman and medieval structures on the site has been substantially enriched. For instance we may now say with some authority, that the Anglo-Saxon Cathedral in the early years of the eleventh century would have been ranked among the largest in Northern Europe.*

*In addition to these two major projects, the C.A.T. has carried out over forty other investigations and assessments of varying size and importance in Canterbury, Dover, Folkestone, Maidstone, Rochester, Chatham, Hythe, Fordwich, Ash and other parts of East Kent, and these are also recorded in the pages of this report. Quite apart from the two major discoveries mentioned above, this represents a body of important*

*contribution to the archaeology of Kent. Our workload for the year has remained at the same high level as previous years. However, it is clear that the implementation of English Heritage's guidance document, on archaeology and land development, P.P.G. 16, is changing the face of archaeology.*

*The emphasis is on trial digs and assessments in attempts to structure development plans to avoid, to the maximum extent possible, disturbing the archaeological resource. We may doubt whether in the practical implementation of development plans the archaeological resource is not damaged, but in any event the end result is that fewer large scale digs may be available. Then, too, commercial contracting is leading some archaeological units to bid for jobs outside what was once their local area of activity and knowledge. This is particularly true of Kent, where much road and rail work is contemplated or in progress.*

*The C.A.T. has therefore (and perforce) adopted a more commercial approach to all its activities in order to bid for contracts inside Kent against Units from outside. Such an approach means, inter alia, an increased emphasis on continuously adjusting the workforce to meet the existing and perceived workload.*

*We do not complain about this, though we do fear commercialization of archaeology may tend to harm academic standards of the work. For its part the C.A.T. will do its utmost to ensure that this does not happen.*

*The Director and all his staff are to be congratulated on a most gratifying year of splendid achievements.*



F.H. Panton

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# Introduction

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*The pages of this Annual Report recount an annus mirabilis in the fortunes of the Trust. Two very special discoveries were made last year; a Bronze Age boat at Dover, most complete of its kind and one of the oldest boats in the world; and the location of the Anglo-Saxon Cathedral at Canterbury, including fragments of perhaps St Augustine's first church, and substantial parts of what must have been the largest late Anglo-Saxon structure in England. The boat was located in late September of last year and the Cathedral in the following January.*

*Different Trust teams participated in both discoveries, therefore most of our staff have been closely involved with excavations termed the most important in this century. Articles on both discoveries appear in these pages, together with a wide range of others in East Kent extending from Canterbury to Rochester. Our greatest concentration of work however still rests within Canterbury City and district and we would wish this situation to continue.*

*We are as ever immensely grateful to all those who have supported us in the past year. Particularly*

*the members and officers of Canterbury City Council, our stalwart friends of the C.A.T. and the many companies, organisations, societies and individuals who have contributed to this successful year.*



*The continuing development of archaeology within the county districts of Kent is entirely due to the work of the County Archaeologist, Dr John Williams and his staff. I would like to take this opportunity to extend our congratulations to them for the tremendous changes they have made to protect the county's heritage and to thank them for the help they have given us in the past year.*

*I am equally grateful to the Trust's excellent and hard working staff, who in recent months, in particular, have sustained a very heavy workload with fortitude and considerable competence.*

*Despite the great achievements of the past year, the effects of recession, particularly in the redevelopment sector continue to have a marked impact upon the Trust's workload. Nevertheless, we look towards the forthcoming year with great optimism.*

Paul Bennett

Photo: Trust Director with the only pot sherd found during the Dover Boat excavation!

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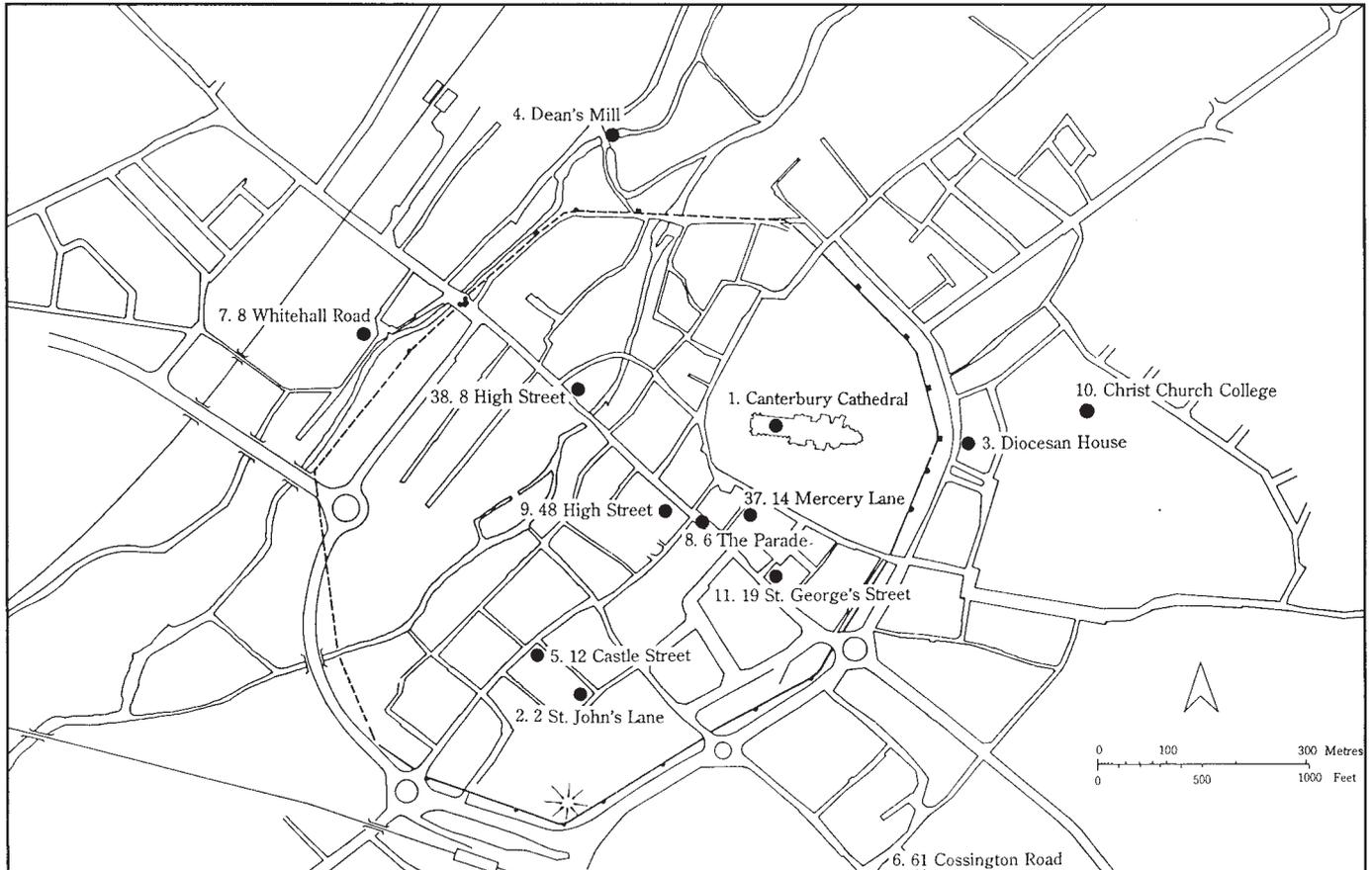
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# Fieldwork

## I Sites in Canterbury



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

### 1 Canterbury Cathedral

Kevin Blockley & Paul Bennett

Canterbury Cathedral's nave and south-west transept were the scene of a major project between 4th January and 29th April 1993. Excavations, in advance of re-flooring and the insertion of a new heating system, were conducted on behalf of the Dean and Chapter revealing a most remarkable sequence of structures.

Excavation was restricted largely to the removal of eighteenth century deposits, laid down after the removal of most of the burials before the laying of a new floor in 1786.

#### Romano-British deposits

Only limited traces of Romano-British layers were recorded, but sufficient to indicate a 3.5 m. wide



Pl. I Roman levels at east end of nave.

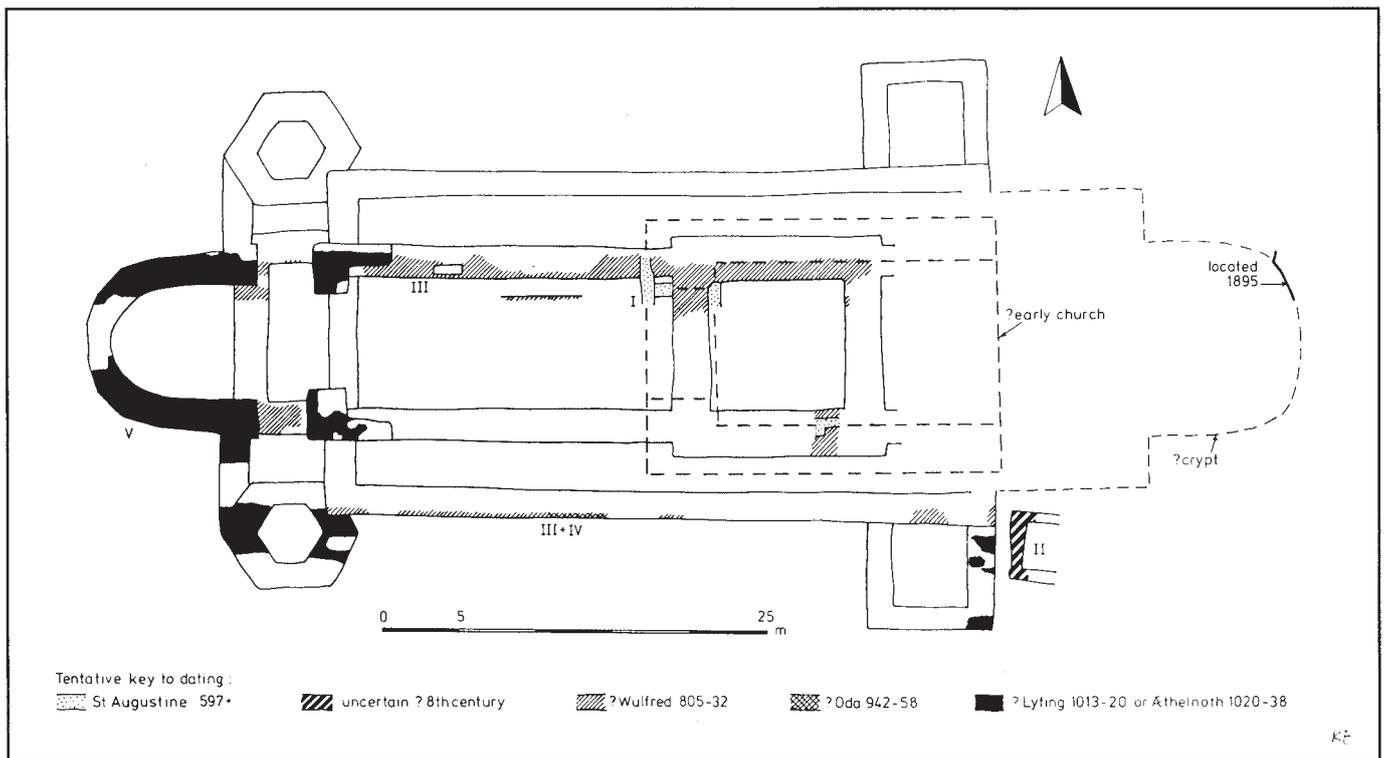


Fig. 1 Plan of the Anglo-Saxon phases of the cathedral.

pebbled street running north-east/south-west beneath the cathedral. Fronting onto the street were timber-framed buildings and a masonry structure, as yet undated. The building reported by Frank Jenkins to the south of the cathedral (Jenkins 1990) may also have fronted onto this street, and is undoubtedly also of Romano-British date.

### Anglo-Saxon Cathedral

By far the most important find was the remains of the Anglo-Saxon cathedral, just 0.20 m. below the 1786 floor. The remains may be divided into four main phases. The earliest, Phase 1, is represented by narrow wall foundations at the east end of the

nave. These foundations cut into post-Roman 'dark earth' deposits which sealed the Romano-British deposits. They may well be part of the original church of St Augustine constructed soon after his arrival in A.D. 597, which comprised a nave with possible narthex to the west and porticus to the north and south. The foundations were of re-used Roman stone with mortared stone and Roman bricks above. The plan and scale of the building are similar to the early church of St Peter and St Paul at St Augustine's Abbey (Sparks 1990, 8).

Phase II consisted of a partly subterranean masonry structure with a tile floor 1.2 m. below contemporary ground surface and walls rendered

in *opus signinum*. Situated to the south-west of the Phase 1 foundations, it may have been an addition since it overlay an earlier wall. Its function remains uncertain, but it might have been a mausoleum.

During the ninth or tenth century the early church was demolished and a larger structure (49 m. by 23 m.) was built with a squared end (Phase III). This building had substantial aisle foundations. An integral grave was found constructed in the north aisle close to the west end. The location of a central square tower was indicated by two cross walls and a 3 m. wide foundation on the south side. It is tempting to ascribe this phase to Archbishop Wulfred (805-32), and a subsequent rebuild, marked by an offset tile course on the south wall, to Archbishop Oda (942-58).

The next phase (Phase IV) saw the demolition of the squared western end and its replacement with a major westwork (the Oratory of St Mary). A substantial part of this west-work was uncovered in the excavations, in the form of a deep polygonal apse with flanking hexagonal stair-towers. The Archbishop's cathedra or throne would have been sited to the rear of the apse with the altar to the Virgin set in front, towards the nave. At the same time the arcade walls were strengthened and towers added to the eastern corners - one of which was located in the south-west transept, and may be the tower of St Gregory (Brooks 1984, 39). These remains may have been built by Archbishops Lyfing (1013-20) or Aethelnoth (1020-38) after a Danish army,



Pl. II West-work, final phase of Anglo-Saxon cathedral.



Pl. III Hexagonal stair-tower of the west-work.

led by Thorkell the Tall and his brother Hemming, plundered and burnt the city and cathedral in 1011 (Woodman 1981, 15). Parallels for Phase IV are to be found in the Ottoman Romanesque churches of the tenth and eleventh centuries in France, Germany and Switzerland.

The excavated remains of Phase IV measured 58.5 m. by 30 m. However, the cathedral was 'bipolar' having both eastern and western apses. It may, therefore, be postulated that to the east of

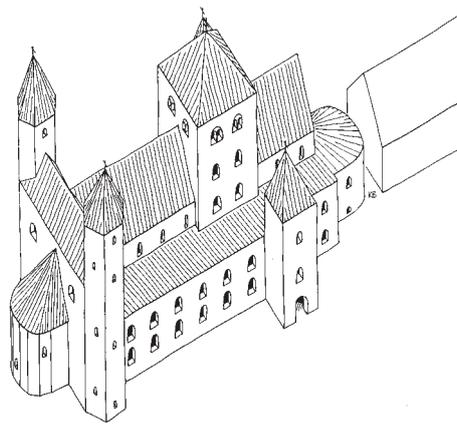


Fig. 2 Tentative reconstruction drawing: Final phase of the Anglo-Saxon cathedral before the fire of 1067.

the excavated area was a large ring crypt, possibly housing the remains of St Dunstan. The original church may have been around 75 m. in length, bringing the east end close to the fragments of masonry found below the crypt floor in 1895 (Strik 1982, fig 3). Undoubtedly the cathedral in the early years of the eleventh century would have ranked among the largest in Northern Europe.

The cathedral was badly damaged by fire on 6th December 1067 and saw no further construction work until Archbishop Lanfranc came to Canterbury in 1070.

### Archbishop Lanfranc's Norman Cathedral

From 1071–77 the rebuilding of the cathedral was underway. Analysis of the foundations suggests

that this work was done in stages, with the west-work left standing until the east end was largely built. We are informed of this by Eadmer the monk, who tells us that burials were stored at the west end of the old cathedral whilst the eastern end of the Norman church was constructed. The new cathedral was aligned on the previous one, but set some 5 m. or so to the south.

We now have a good ground plan of most of the Norman cathedral's foundations and details of the stone floor, the bedding mortar of which preserved the impressions of each slab. The floor, of Marquise limestone, survived until 1786 when it was removed and a Portland floor laid. Some small traces of the original Norman floor remain intact, sealed below later pier bases. Scars of the Norman cruciform pier bases also survive below the overlying, but more slender, pier bases of the later fourteenth century cathedral. In the southwest transept was found a substantial masonry foundation for the central pier which supported a tribune bridge and organ loft. The foundations for a central flight of steps, running north below the pulpitum, were found. They presumably link up with central, blocked, entrance in the west wall of the crypt (Strik 1982, fig 5). The steps saw repairs, probably during the twelfth century, and went out of use in the fifteenth century, when they were backfilled and a tunnel created through to the Martyrdom transept.

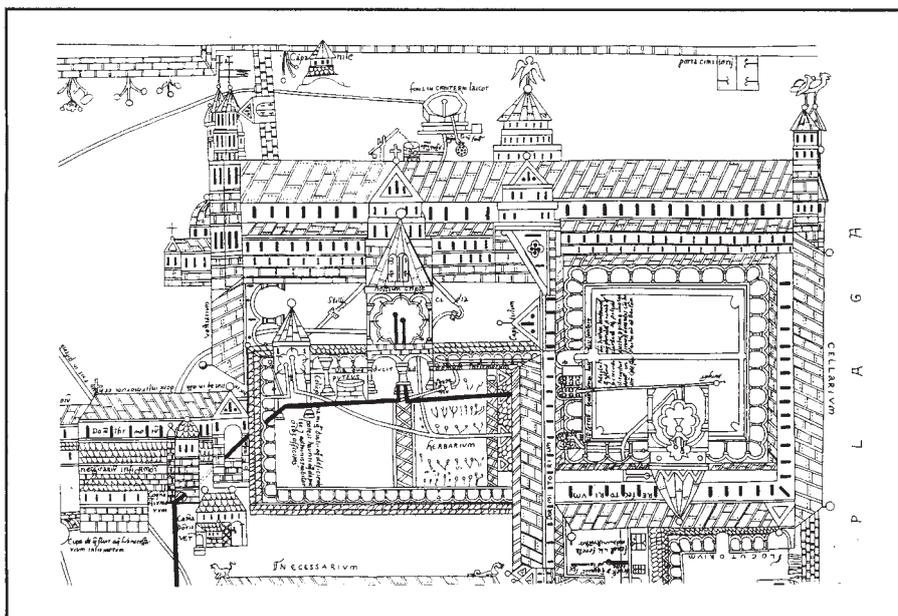


Fig. 3 Detail from Prior Wibert's waterworks drawing of c. 1165 showing the north side of the early Norman cathedral.



Pl. IV Recording in progress: west end of south aisle, looking east.

Publication of the Norman work will draw together and analyse all previously reported fragments of the fabric in the roof of the present cathedral.

A finely-dressed stone coffin in the north aisle may be that of Richard of Dover (1173-84) and noted by Somner in his *Antiquities of Canterbury* (1640). It was evidently found whilst inserting another grave and also badly disturbed, and opened, during the 1786 reflooring.

### The later Cathedral

New information on the fourteenth-fifteenth century fabric include the location of the floor of the Lady Chapel in the north transept, and its doorway to the cloisters. Several medieval burials were also located including those of Archbishops Islip, Anselm and Whittlesy, and Sir William Lovelace in the arcade walls, and Bishop Buckingham in the

centre of the nave. None of the burials was intact since they were all removed in 1786, before laying the new floor.

Numerous brick vaults and three lead coffins were found, which had been left intact during the extensive work of 1786.

## 2 St John's Lane

Mark Houlston

During the first two weeks of June 1992 evaluation work was undertaken in the car park of 2 St John's Lane, Canterbury (The Job Centre) in advance of a proposed extension. The work was funded by the developer, the Department of Health and Social Security. The excavation provided evidence of occupation from a number of distinct periods: The Late Bronze Age/Early Iron Age, the Roman, and the Early Medieval. The most important discovery made was a soil horizon of the Late Bronze Age/Early Iron Age which has supported speculation that a settlement of that period existed in the area.

A single trench, measuring 4 m. by 2 m., situated approximately halfway between Nos 2 and 19 St John's Lane, was excavated. The trench was set back from the street by approximately 6.5 m..

At a depth of approximately 2 m. below ground level, and beneath the soil layers, a horizon of truncated features and layers was uncovered. The top surface of natural brickearth was uncovered over most of the excavated area, at a level 2.90 m. below the existing car park (at 11.48 m. O.D.). The natural gravel terrace under this was not

exposed. At the south-west end of the trench safety considerations prevented the full excavation of a large pit. This pit, bottomed at a point 0.95 m below the top of brickearth, 3.90 m. below the modern ground surface, was the deepest feature excavated.

The earliest feature was a shallow depression cutting the brickearth at the north-east end of the trench. Filling this and covering the subsoil south-west of it was a deposit, 0.10 m. – 0.25 m. thick, comprising at least four layers of silty

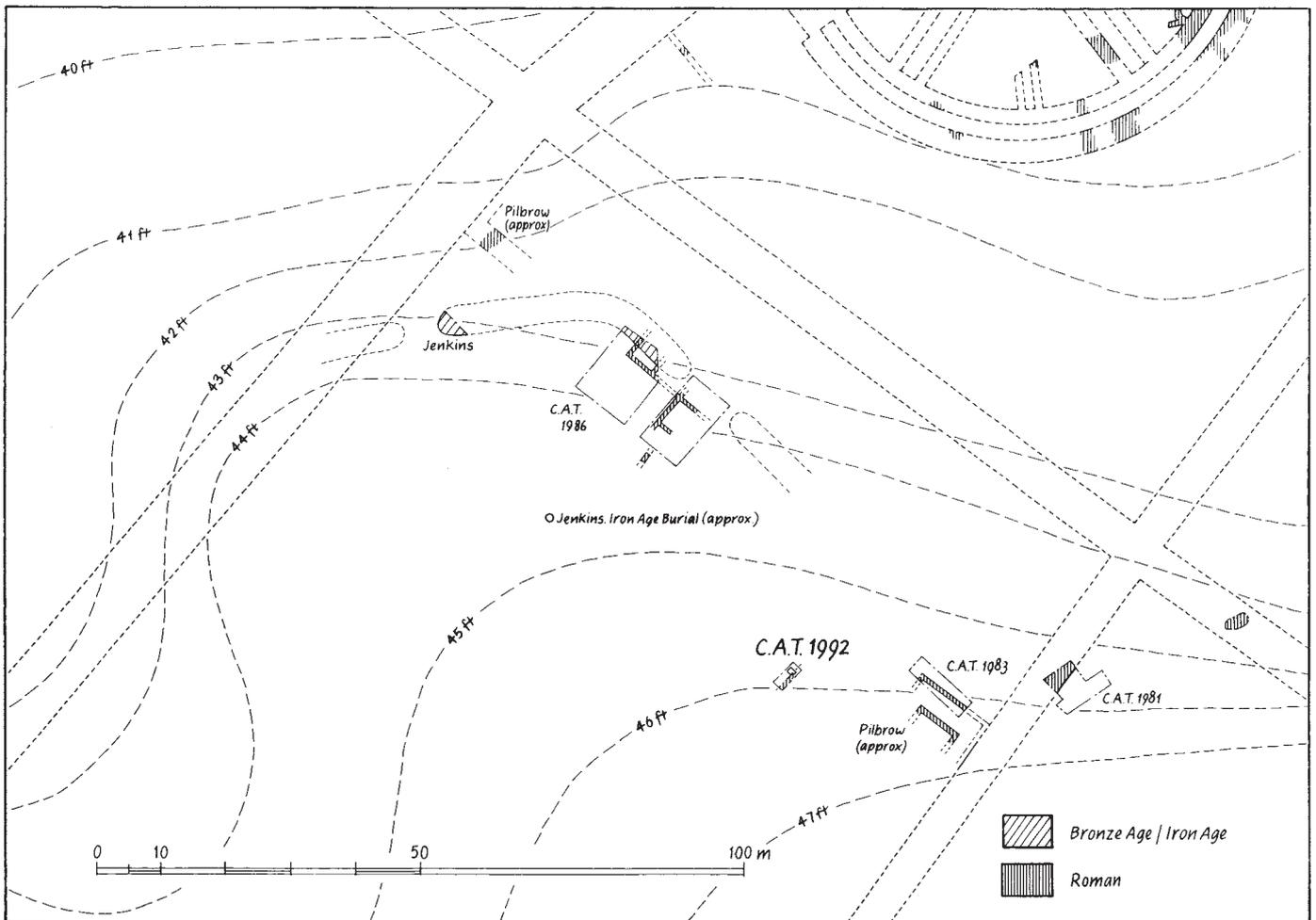


Fig. 4 Plan showing Roman/Bronze Age discoveries.

clay-loam. These layers thickened as they tipped into the depression. The deposit contained small quantities of carbon flecks, small pebbles, daub, and twenty sherds of prehistoric, flint-tempered, pottery (c. 850/750 - 600 B.C.) which included a large-diameter thin-walled storage jar rim and several sherds from two fineware cups or bowls. A larger area will have to be sampled before the depositional history of these layers is clearly understood. However, despite not having a high silt content, the thinness of the layers and the fact they thickened with depth, suggests the deposit may have been formed by colluvial action. The presence of pottery sherds and daub in the deposit suggest there was probably occupation nearby.

The fabrics, temper size range, finishing traits and forms of the sherds were identical in type to the pottery recovered from 10-11 Castle Street (Jenkins and Boyle 1951), and from the smaller collection recovered from the recent C.A.T site at the north-west end of St John's Lane (Blockley in preparation). Recently, following excavations notably at Highstead near Chislet, developments have been made in the study of prehistoric pottery in the region (MacphersonGrant forthcoming), which have led in turn to a reassessment of the large Castle Street assemblage (MacphersonGrant 1991). A date of c. 850/750 - 600 B.C. is now suggested, earlier than previously believed. All three St John's Lane sites have produced contexts containing uncontaminated assemblages of this date range, whereas similar contexts are unknown from elsewhere in Canterbury. It seems probable that some form of occupation took place in the area around 850/750 - 600 B.C., the period of transition between the Late Bronze Age and the Early Iron Age. On each of the sites excavated at the north-west end of St John's Lane ditch segments were uncovered. The positions of these segments in relation to the ground contours of the area (taken from modern O.S. maps) has allowed a very tentative suggestion for the shape of a settlement of that period to be made. The layer identified during the recent evaluation falls within the boundaries of this suggested settlement.

A portion of a large pit took up most of the southwest half of the trench and cut the prehistoric deposit. Only a short length of the north-east side of the pit, and truncated portions of the east corner and the south-east side, fell within the area of excavation. Safety considerations prevented excavation below a depth of 10.50 m. O.D. 13.90 m. below the top of the trench). Despite being only partially excavated an interpretation of the

function of the pit can be made by examining similar features excavated nearby. These include two deeply cut pits located approximately 6 m. south-west of the evaluation trench, discovered during underpinning work conducted at the rear of 19 St John's Lane earlier in the year. Large features cutting brickearth were also uncovered 20 m. east of the trench during excavations in 1983 (Rady 1 987b), and 50 m. to the south-east during excavations in 1986 (Blockley in preparation). The relative thickness of the brickearth deposits in this area of Canterbury has led to the suggestion that these pits were cut for clay extraction. The excavated feature may also have been cut for this purpose.

The lowest excavated fill of the pit consisted of redeposited brickearth and might have formed following a collapse of the sides of the trench. If so, two facts about the pit are suggested. The pit was not immediately backfilled, and the bottom of the pit did not lie far below the deepest point excavated. The remainder of the pit was filled with laminated 'bands' of silt-loam. Although these bands contained small quantities of material probably derived from domestic waste, and small amounts of Roman building rubble, they were predominantly clean, and do not suggest nearby occupation. The pit was sealed by a layer of homogeneously mixed loam, interpreted as a Roman topsoil horizon.

A major road, which was in existence by the early second century, probably passed 30 m. to the south-east of the site, running south-west to north-east. Evidence from the 1981 excavation (Rady 1987a) suggests the area north-west of the road at this point remained open ground until the late second or third century. This combines well with ceramic dating evidence retrieved from the pit and the topsoil deposit, indicating that the two distinct phases of activity they represent occurred prior to the third century A.D.. It seems reasonable to conclude that the site of the evaluation trench lay within an area of open ground.

Land use changed significantly in the late second or third century, when which the area underwent a period of structural development. Within the evaluation trench the development was represented by remains of wall foundations. The excavated width of this foundation, 0.90 m., was similar to the widths of the late Roman wall foundations excavated 25 m. to the east in 1981 (Rady 1 987a). Neither the recent evaluation nor the 1981 excavation has allowed close dating of these Roman structural phases to be made,

though both developments appear to have taken place in the late second or third centuries.

The absence of early Roman development in this area of Canterbury is in contrast to developments recorded during excavations at the other end of St John's Lane (Blockley in preparation) where structures, probably of a light industrial nature, were in existence from the first century onwards.

Evidence of both fifth-century occupation and pre-Anglo Saxon abandonment have been discovered in the area, most notably during excavations conducted at Marlowe Avenue (Rady 1987a). Although no material from these important periods was uncovered by the recent evaluation the presence of such evidence in the development area can not be ruled out. No sign of Anglo Saxon occupation was found on the site, which confirms the view obtained from previous excavations that in the Anglo Saxon period this region of Canterbury lay outside the main focus of occupation.

Apart from one feature cut from a higher level all the remaining excavated features were the truncated lower portions of pits of early medieval date. These features contained evidence suggesting domestic occupation nearby; one in fact may have been used as a latrine. A small dwelling could have existed in the area located between the north-east end of the trench and St John's Lane, which is known to be in existence by that time. Thus evidence parallels that obtained from previous excavations - rubbish pits from this period were discovered during the 1981 excavations (Rady 1987a). The presence of a church nearby, dedicated to St John the Poor, also suggests that during this period the site lay within a development area.

Records made of the trench sections prior to their encasement in shuttering indicates that the medieval pits and the uppermost Roman deposits lay, truncated, beneath a thick sequence of horizontal, dark brown loam deposits. It seems likely that the truncation horizon was created by agricultural activity associated with the formation of the first of these soil horizons. Dating evidence obtained from the excavated features suggests the layers of loam started to form some time after the first quarter of the thirteenth century. A later date is perhaps suggested by documentary records (Urry 1967). These indicate that in 1349 the parish of St John the Poor was incorporated into that of St Mary de Castro, possibly as a result of the depopulation of the area in the aftermath of the Black Death.

No evidence was obtained from the evaluation to suggest the site was re-occupied before the present century. A brief examination of the

available cartographic evidence supports the supposition that the surrounding area of St

John's Lane remained unoccupied throughout the medieval and post-medieval periods.

### 3 Diocesan House Andrew Hutcheson

Two excavations at 'Diocesan House', 26 Broad Street were carried out between April and October 1992, in advance of deep new foundations for an educational resource centre.

Initially an evaluation trench was dug in the north-west corner of the area. This uncovered a superb sequence of deposits of unexpected quality and depth, particularly for a site outside the city wall. It became apparent that a larger scale excavation of the entire area was necessary and a full excavation commenced between August and October. Both the evaluation and the excavation were funded by the Church of England, Diocese of Canterbury.

Preliminary analysis of the excavation records indicates five phases of deposits, beginning in the Late Iron Age and continuing through to the present, with every major period represented. This was all packed into a small L-shaped trench, about 25 m. in length and 5 m. wide. Most of the original area had been destroyed by Victorian basement building.

#### Phase 1: Late Iron Age – Roman

The archaeological sequence began with a soil layer, broadly dated to the Late Iron Age or Early Roman period. This may have been a Belgic agricultural soil which continued in use throughout the early Roman period. Samples were taken of this soil for environmental information. A similar deposit was found 100 m. to the south at Nos 7 and 8 Church Street (Frere et al. 1987), suggesting that a large portion of this area, immediately east of the city, may have been farmland during the Late Iron Age or Early Roman period.

A ditch ran east to west in the north-west corner of the trench. The ditch was only 0.43 m. at its deepest and appeared to have been quickly filled in using a combination of soil and natural, with no trace of silting. This apparently was a boundary marker perhaps relating to the Belgic field system.

#### Phase 2: Later Roman

Post-dating this agricultural phase were seven inhumation burials, two of these cutting the

boundary ditch, showing a change of land use sometime in the early Roman period.

As inhumation burials, it seems very likely that they date to the third century or later. Further up in the sequence a redeposited cremation urn was found, suggesting that the cemetery started sometime prior to the third century, before inhumation burial became the fashion. This part of the cemetery was then sealed with a layer of soil, probably representing a hiatus in the use of this part of the site as a cemetery. Overlying this soil was an intricate complex of layers and cuts.

The north-western corner of the site continued to be used as a cemetery, criss-crossed with metalled paths, apparently in and out of use over short periods of time. One of the paths was cut by two burials, one of which contained the skeleton of a man who died between the ages of 19 and 23. To the south of these were two more burials. One held the remains of a woman in her early twenties. The other was also female, a teenager. She was found with three bronze bracelets on her right wrist. Her left wrist was missing, but where it had lain



Pl. V Burial with grave goods in situ.

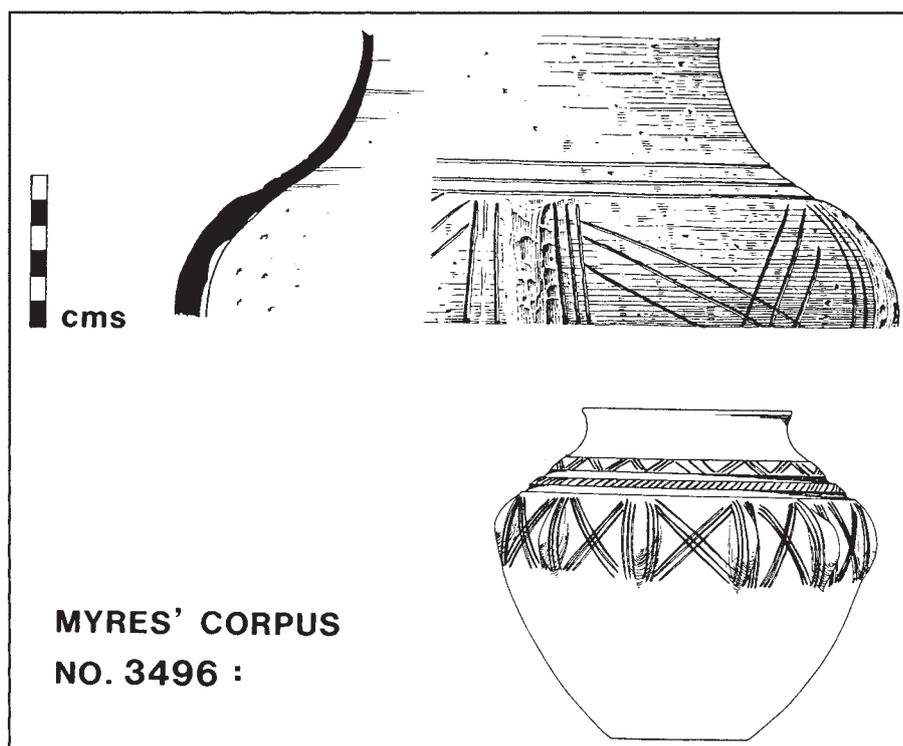


Fig. 5 Early Anglo-Saxon pottery. Top: Part boss-decorated with incised linear ornamentation Bottom: General parallel from Newark, Nottinghamshire.

across her pelvic girdle were three more bracelets, two more of bronze, and one of wonderfully well preserved shale. Where her left hand would have been was a fine silver ring, set with a comelian stone with an intaglio figure of a hound carved into it. All her jewellery was characteristic of the third to fourth centuries A. D..

The north-east of the area was almost entirely cut through by a ditch, about 3 m. in width and 0.4 m. deep, running in a north-south direction. In all likelihood this was a boundary ditch. What the boundary represents is unclear. It has been suggested by Simon Pratt that it effectively marked the division between the city and its hinterland. Eventually the ditch was filled by processes of silting and erosion of the sides, and capped by a layer of metalling. The metalling could have been a courtyard, or represent a small and short-lived road at right angles to a larger road, running from the Quenin gate towards the outlying fields.

Scattered between these features, but concentrated in the south, were a number of post-holes and rubbish pits.

### Phase 3: Late Roman – Early Saxon

Most of the area, including the cemetery, was then covered by a 'dark earth' layer of soil, found as an extensive deposit in many British towns of the period. This particular deposit was unusually deep at c. 0.6 m.. A 'dark earth' of this depth might be expected in a town centre but not outside the city wall. Found within this soil was an assemblage of decorated pottery, including a boss-decorated vessel and fragments of Kentish chevron-decorated pottery. Both of these are characteristic decoration types of early Jutish or Saxon vessels of the late fifth or early sixth century A.D.. The assemblage is exceptionally fine for an extra-mural site, only equalled by groups from city centre sites at Stour

Street and Marlowe Car Park. This may suggest a high status residence near by.

Later, a series of pits and post-holes were cut into this soil layer and two hearth structures constructed on top. Pottery from these pits ranges in date from the middle to late Anglo Saxon periods. This activity may represent small scale industrial activity on the site, perhaps associated with the early monastery. Further to the south east, within what is now Christ Church College, there is ample evidence for industry at this time.

### Phase 4: Medieval, Monastic

At the end of the Anglo Saxon period the area was again covered with an horticultural soil. This was pitted with features, the lowest of which produced pottery of eleventh century A.D. date. We know from documentary sources that from the second quarter of the thirteenth century A.D. this land was the site of St Augustine's Almonry, where the monastery provided for the poor, twice daily distributing food sent from the Abbott's table; it also functioned as a hospital for the laity. We know the date range because Abbott Hugh II (1226-51), in a surviving letter, assigned the earnings from the church of Northbourne and the profits of the Abbot's mill tithes as income for the Almonry (Boggis 1901, 176-77). There then followed a period characterised by extensive pitting. These pits were then filled, levelled off, and later pits cut.

Essentially, the area appears to have been used as a rubbish and cess disposal area by the Almonry and nearby dwellings. Found within these pits was an extensive and interesting assemblage of medieval ceramics, which should help illuminate the socio-economics of the Almonry and the residences bordering onto it. Of particular note was a rare example of a decorated stove tile, of German provenance – discussed in detail by John Cotter in his contribution to this volume.

### Phase 5: Post Dissolution

With the dissolution of St Augustine's Abbey on July 30th 1538 the Almonry became the property of the crown. This land, and the rest of St Augustine's, was given into the custody of Sir Anthony Sentedger between 1540 and 1556, at which time Queen Mary gave it to Cardinal Archbishop Pole. In 1563, the property was leased to William Brooke, Lord Cobham, Warden of the Cinque Ports. His son, Henry, renewed the lease but lost it when he was disgraced in 1603. The lease was taken over by his brother in law, Robert Cecil, later Lord Salisbury. Robert was succeeded in 1612 by his heir Edward, Lord Wotton and Lord Lieutenant of Kent. His wife, Lady Wotton, stayed at the palace through the Civil War, until she died in 1658; afterwards it ceased to be a residence (Sparks 1980).

Between the mid fifteenth and mid seventeenth centuries several cottages were built on the street frontage between the corner of Lady Wotton's Green and the Brewer's Delight public house. These dwellings can still be seen in a photograph taken during the 1920s. Cellars were constructed in the Victorian period and, as mentioned above, these removed most of the archaeological deposits fronting onto Broad Street.

The cottages appear to have been destroyed during World War 11, leaving only rubble-filled cellars which were later landscaped over.



Pl. VI *Post medieval cottages. From the Principal Monuments Record box 4.*

## 4 Dean's Mill, The Causeway

Tim Allen & Paul Bennett

known, was certainly one of the mills referred to in a letter written by Henry 11 (1154–1189) at the request of the monks of Christ Church. This letter, sent to the Bailiffs of Canterbury, demanded that 1 all mills within and without the City of Canterbury should be tried and measured, as they were in the time of King Henry, my grandfather' (this refers to Henry 1, 1100–1135). The monks' complaint

concerned the 'raising' of mills in order to increase the head of water. This adversely affected the head of water powering the mills (granted to Christ Church) situated down river.

The first direct documentary evidence for the existence of a mill on or near the present site of Dean's Mill is found in one of the Eastbridge

Charters (No.A46) dated to the reign of Richard 1 (1189–1199). This records the sale of 16d rent from ground next to land owned by Gerard, a miller, outside Westgate towards 'Scepeshotesmelne'. Approximately 105 years later an ecclesiastical dispute occurred between the Prior and Canon of St Gregory's and the vicar of Holy Cross Church, Westgate. In this 1 composition', dated 1347, the



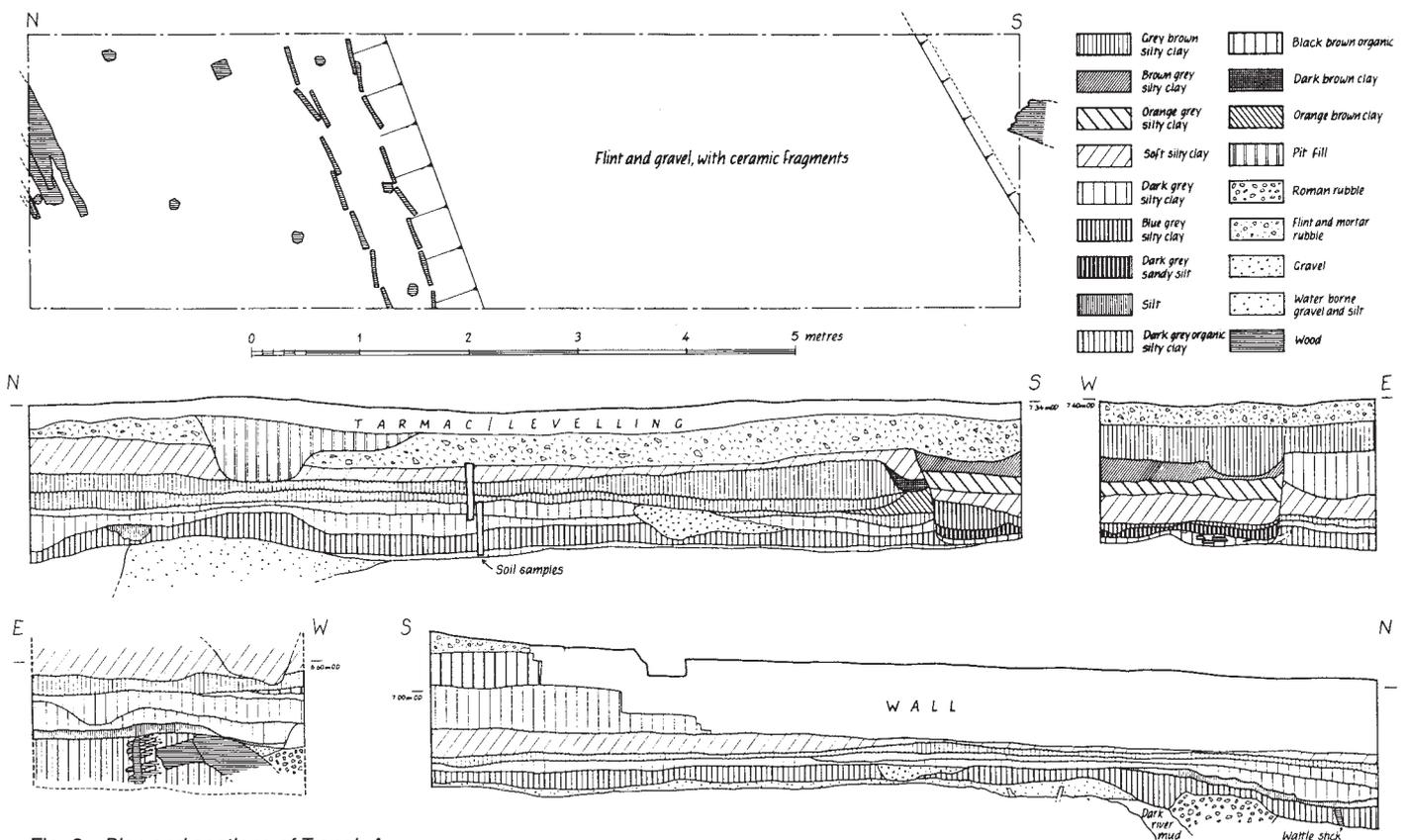


Fig. 8 Plan and sections of Trench A.

order to avoid confusion with the nearby Dennes Mill. From that time until its destruction however, it was always popularly known as Hooker's Mill.

A variety of magazine articles and oral accounts give a relatively full account of the development of the mill in the latter part of the last and the first part of this century. Prior to 1891 the two mill leats had contained two breast-shot water wheels driving eight pairs of 4 ft diameter wheels. This arrangement or something similar had probably been in use since at least 1752 when the double leat system was shown to already be in place on the Doidge plan.

Some little time after the mill was acquired by W. Hooker and Sons in 1891 the northernmost leat was adapted in order to install a water turbine producing 45 hp with a good head of water. This was still functioning up to the time of the destruction of the mill in 1954. By the 1930's a stationary horizontal steam engine had also been installed (by Messrs Marshall of Gainsborough) in the brick building immediately to the south of the mill leats. A small 'Lancashire' type boiler had also been installed in a brick building with a tall brick chimney located further to the east. This boiler provided power in conjunction with the water turbine to which it was connected by belt

and pulley drives. This was required to supply the shortfall of energy when the river was low.

Before 1921 the whole mill building had been modified in order to install up-to-date machinery. All the old machinery was removed and the internal structure of the building altered in order to accommodate a 'five sack roller mill plant'. This work was carried out by Messrs Henry Simon Ltd of Manchester. The new machinery was powered partly by the one remaining breastshot mill wheel (15 hp), partly by the turbine (45 hp) and partly by the horizontal steam engine (60 hp). In the late 1930's a 60 hp electric motor was installed which in conjunction with the water turbine, supplied all the power required from then on.

### The Survey

As the historical background given above suggests the archaeological survey, conducted by the Trust in August and September 1992 prior to redevelopment was expected to provide reliable evidence concerning the evolution of a mill from medieval times to the twentieth century. However as no large-scale excavations were included within the schedule of archaeological works it was clear that this evidence would necessarily be limited.

The main component of the archaeological earthworks comprised the non-destructive stripping of modern levelling and debris deposits that covered the site. Initially the area to be developed was cleared of undergrowth allowing all upstanding structural remains to be recorded photographically and on plan. This was followed by monitored machine stripping of modern tarmac, demolition debris and topsoil in order to expose the surviving foundations of the mill complex and any other features of archaeological significance. At the same time a deep trench was cut in the south of the cleared area for the purpose of palaeo-environmental study (see Trench A, fig.7). This provided a large quantity of data pertaining to alluviation in the flood plain of the Stour from the Norman period onwards.

The site strip resulted in the exposure of an extensive range of bonded brick foundation walls and gravel and brick courtyards probably representing the full extent of the mill complex in its latest and last phase. Further investigation revealed that several earlier phases of construction were either incorporated within or covered by this latest phase. Consequently a detailed brick and mortar survey was undertaken in order to identify these phases. The remaining upstanding structures situated around and over the two mill leats in the

north-west part of the site were included within this survey.

An annotated plan of the mill complex was made, recording both the brick and mortar types of individual walls and their chronological relationships on the principle of abutment. Subsequently, this information was correlated with information gleaned from historical research enabling reasonably precise dates to be attributed to most of the phases identified.

During the course of the demolition of part of the upstanding structures situated between the mill leats, a large mass of bonded brick was removed to a depth of approximately 1.30 m. and this made a brief study of the deeper stratification possible in that area. The unstable condition of the pit resulting from the removal of this mass made detailed recording of the exposed stratification impossible, but it was clear that medieval floors and occupation layers survived at that depth. In the fourth and final week of the survey the deep trench cut for the purpose of palaeoenvironmental study (see Trench A, figs. 7 and 8) was recorded photographically and in section and plan (see fig. 8) in as much detail as the waterlogged conditions allowed.

As a result of the work described above the strong documentary evidence for an early medieval mill on the Dean's Mill site was supplemented by archaeological evidence wherever stratified deposits were exposed. The site strip indicated that these deposits survived intact at least between the two mill leats and in the area to the north.

Wall foundations constructed of brick and mortar of Tudor and Jacobean type were exposed in most areas occupied by the later mill and also further to the south. This corroborated evidence provided by the 1752 Doidge map, but suggested that the buildings shown may already have been old when the map was published.

## 5 12 Castle Street

Simon Pratt

The foundation trench for a new extension to the rear of this property was examined on 20th May 1992. No significant archaeology was revealed.

Dated key stones in the brick bridge giving access to the site from St Stephen's Road provided a date of 1790 for that bridge's construction. This also provided an approximate date for other examples of this type of brickwork. These were so widespread as to suggest a very major renovation. Photographic and other evidence indicated that at least part of an earlier timberframed building survived this renovation to be incorporated within the new mill complex.

The next major phase of modification accompanied the introduction of steam, diesel and finally electric power soon after 1891. In order to accommodate the various engines and other associated machinery, substantial changes were made to the 1790 mill complex. This process of adaption of an essentially late eighteenth-century building continued until the mill was destroyed in 1954.

The deep trench cut on the south of the site for the purposes of palaeo-environmental study exposed a complete and undisturbed stratigraphic sequence. This sequence proved to be of great archaeological as well as palaeoenvironmental interest as it extended from the Roman to the late medieval periods and contained large quantities of ceramic and other materials.

Well-preserved timber structures were also exposed. These proved to be of medieval and Roman date. The Roman structures almost certainly represented the Roman river frontage. These comprise the only positive evidence locating the course of the Great Stour in Roman times, a most important discovery. The many fluvial and man-made deposits within this trench also provided important information about the changes in the flow and course of the river. These deposits were rich in both micro- and macroorganic remains. These are undergoing detailed analysis at present but a general summary of the findings is provided below.

## 6 61 Cossington Road

Simon Pratt

The foundation trench for a new extension to the rear of this property was examined on 29th May 1992. Apart from a small area of (possibly

## Summary of the Palaeo-environmental Assessment

The lowest deposits observed in the base of the 1 palaeo-environmental' trench (see fig.7) comprised relatively poorly sorted sandy gravel. The rock fragment inclusions were predominantly angular flints. It is probable that this deposit represented river gravels deposited during the late glacial period (c. 1100-8000 B.C.).

Overlying the basal gravel was a complex series of sediments of highly diverse character. These were associated with two east-west aligned timber structures in the south of the trench. One consisted of a double row of planks containing irregularly-spaced posts, the other a series of post, planks and wattle. The sediments associated with these structures ranged from fine organic silts and peats to sands and poorly sorted flint gravels. They closely resembled sequences already observed in the City of London and known to be related to the Roman and post-Roman waterfronts. Ceramic and coin evidence within the Dean's Mill sediments confirmed that this sequence was also of that period.

The sediments described above were judged to have been deposited variously by river action, by the activity of man and by a combination of both. The upper sediments sealed the timber structures and were considered to have been deposited as a result of widespread river flooding in this area. Cutting the upper sequence of sediments in the north of this trench was a group of well-preserved timbers with iron fittings. This group was associated with an area of general disturbance of uncertain significance. Ceramic evidence showed the timbers to be of medieval date. One timber was recovered for analysis. It had the appearance of a shutter or gate and may possibly have been associated with the medieval mill.

redeposited) natural chalk close to the house, the earliest deposits encountered consisted of upcast from a nearby railway cutting.

## 7 8 Whitehall Road

Simon Pratt

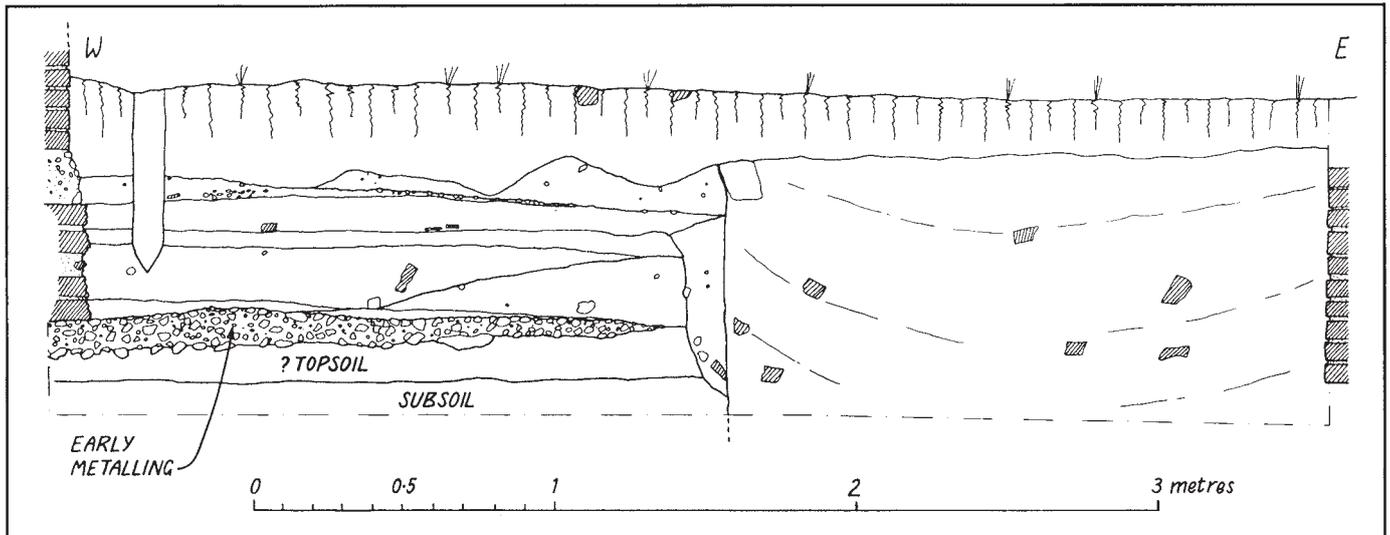


Fig. 9 Section across road metalling.

The foundation trenches for an extension at the rear of No. 8 Whitehall Road were examined in June 1992. Several eighteenth- to nineteenth-century buildings grouped around a farmyard had occupied much of the area prior to the construction of semi-detached houses in the 1960s.

The northern trench followed the line of the rear of the property, which had itself followed the outer wall of one of the farm buildings. Towards the east, modern disturbance cut well into the subsoil. Elsewhere, the natural brickearth was covered by some 0.10-0.15 m. of loamy clay, typical of early Roman topsoil or levelling in Canterbury.

Several fairly large flints had been pressed into the surface of the clay, providing the basis for a compact metalling of flint pebbles and gravel. The surface of the metalling had been disturbed by a foundation trench for the farm building, removing all subsequent early stratification. The same general sequence was seen in the western trench, where a post-medieval track was also noted, whilst post-medieval disturbance had removed all early deposits in the eastern.

The position of the site rendered it of particular interest as it lay exactly midway between Roman Watling Street and the Roman predecessor of St

Dunstan's Street. It was thus on the projected line of the axial road which, to the southeast of the Stour, had separated the insula containing the public baths from that holding the theatre. The presence of the early metalling suggests that this road continued north-west from the junction of the forum and temple precincts and into the industrial suburb which occupied this part of Canterbury in the Roman period.

## 8 6 The Parade

Simon Pratt

Southern Water cut a trench less than a metre square in the Parade, outside No. 6 (Boots), on 22nd March 1993 in order to deal with a mains leak. Most of the sides consisted of modern backfill, but the southern, beneath 0.7 m. of modern surfaces and brick rubble, contained a series of light pebble and gravel metallings, separated by layers of gritty silt, containing many fragments of Roman tile, painted plaster and opus signinum. The metallings became slightly heavier beneath 1.0 m. below the modern road surface and appeared to continue down beyond the bottom of the 1.4 m. deep trench. Only a cursory inspection was possible in the few minutes that

the hole was accessible for examination, and no pottery or bones were apparent. The metallings lay approximately 12 metres from the corner of Mercy Lane and the Parade, immediately to the south of an east-west Roman wall recorded by the Trust during the digging of a sewer tunnel in 1982 (Bennett 1987, 100, fig 33 (wall 18)).

St Andrew's Church stood on the site from at least the twelfth century until its removal in the eighteenth century (Urry 1967, 210, 243, maps 1b5 & 2b6), at which time the brick rubble may have been deposited. The metallings therefore cannot be medieval in date though it is possible

that they are Anglo Saxon (especially the lighter upper layers). The presence of much Roman building material could be consistent with a purely Anglo Saxon date range but, given the thickness and number of deposits, it seems likelier that the lower deposits at least were earlier.

The surfaces might have represented a Roman courtyard (though a courtyard sequence was seen north of the eastwest wall reported by Bennett) but could also be interpreted as street metallings. More work in the Parade would be needed before a meaningful interpretation of this evidence could be attempted.

## 9 48 High Street

Keith Parry

During late March and early April of 1992, the Trust excavated a small evaluation trench behind the premises of the Abbey National Building Society, 48 High Street, in advance of a proposed extension to the building. The objective was to determine whether any significant archaeological

levels survived in the area, which lies at the centre of Roman and Medieval Canterbury.

A trench measuring 8.80 m. x 3.00 m. was cut in the area of the proposed extension, and excavated to a maximum depth of 3.5 m.;

pre-medieval deposits or natural brickearth were not encountered. Nearly all medieval deposits had been removed by a sequence of later cellars.

## 10 Christ Church College

Alan Ward

Evaluation trenches prior to larger scale excavation within the grounds of Christ Church College uncovered foundations of part of the cellars range of St Augustines Abbey. Early

Anglo-Saxon pits and post-holes were uncovered below the gravel courtyard between the cellars and brewhouse ranges. A more detailed report by Martin Hicks of the larger scale excavations

presently taking place will appear in next year's report.

## 11 19 St George's Street

Andrew Hutcheson



Pl. VII Excavation in progress.

A program of groundworks was carried out at 19 St George's Street during February and March 1993. This was in advance of the construction of new premises for W.H. Smith. Previously an archaeological conservation scheme had been arranged between the Canterbury Archaeological Trust and the architects John Strong & Partners. This scheme or 'mitigation' was modelled on recommendations made in the York Development and Archaeological Study (Ove Arup *et al* 1991).

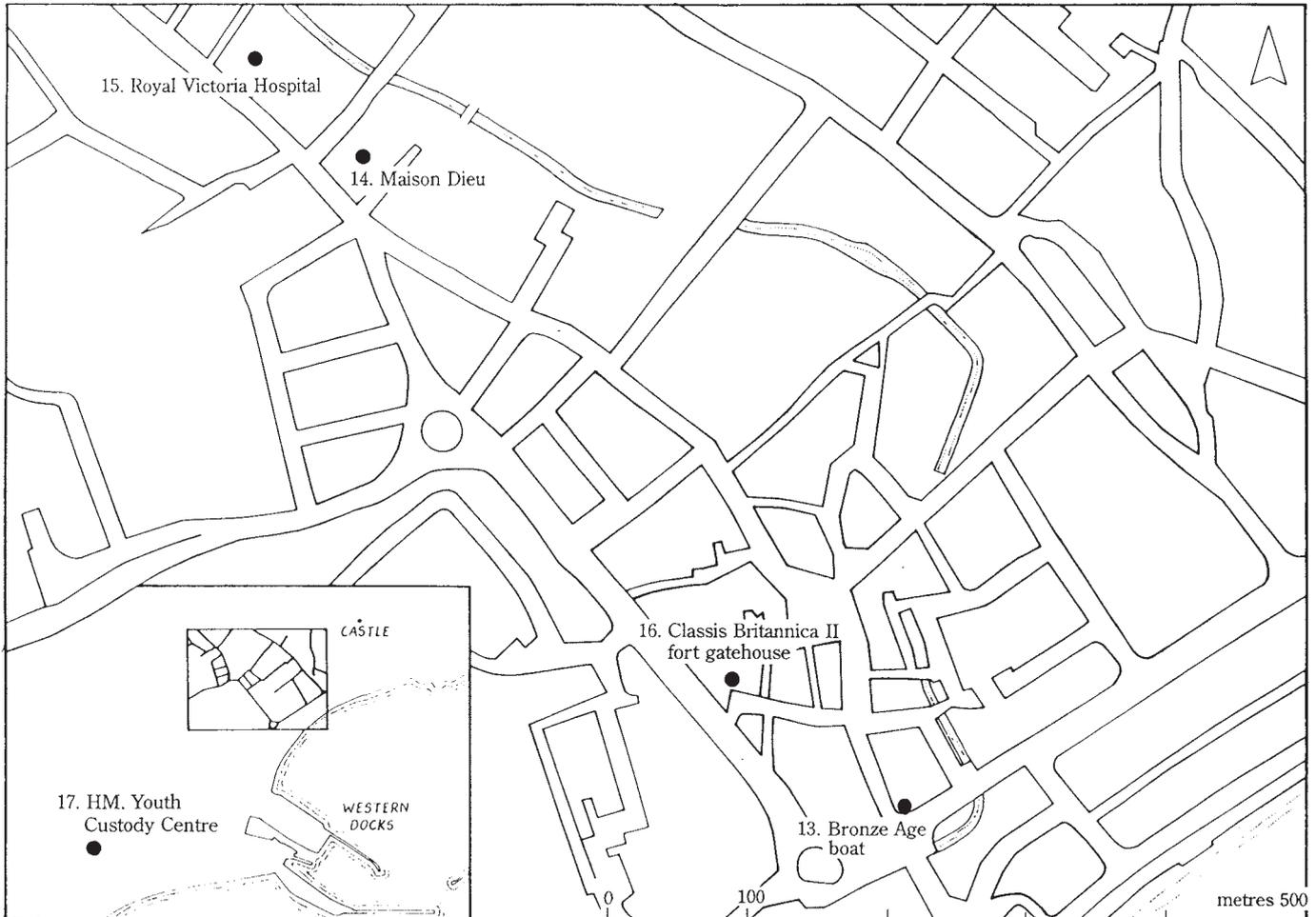
Prior to the final placement of piles a ground test was undertaken using a 'dynamic probe' method, checking that solid archaeological features would not be encountered by the piling drill. In the event several pile positions were changed because the probe encountered solid material, necessitating the redesign of the foundations.

Piles were drilled down to the solid chalk using a continuous flyte auger rig with a central tube

drilling tool. This directly pumped concrete into the voided area immediately after the drill was removed, to avoid the possibility of subsidence or erosion. The excavation of the pile cap positions and the ground beam trenches afforded glimpses of the upper archaeological layers where they had survived. Much of the central strip had been destroyed by the building of the foundations for the previous W.H. Smith's shop.

Archaeology survived in a number of locations. A 'dark earth' was observed in the sections of one pile position that unfortunately did not produce any artefacts from the small area exposed. There were also a number of medieval structural phases present consisting of chalk, flint and mortar walls and several floor layers both of clay and crushed chalk. These were exposed in several of the pile positions and ground beam trenches, showing that they survive over quite an extensive area. A few medieval pits could be seen in section, but not in the density which might be expected for an off-street location. All this bodes well for the survival of earlier materials in the south-eastern sector of the site. Nearer to the St George's Street frontage, approximately 10 m. back from it, a post-medieval cellar wall was exposed in several locations. The earliest parts of this date back to the eighteenth century. Across much of the site there were extensive layers of post-war demolition rubble.

## II Sites in Dover



Dover sites: Excavation projects discussed in this years report.

## 12 The A20/Dover Sewers Project

Keith Parfitt

Work on the A20 at Dover, funded by English Heritage, continued throughout 1992–93 and many new discoveries have been made. The bulk of the operations in the last twelve months have been concentrated around Bench Street and Townwall Street.

### The Medieval Town Wall

Significant traces of Dover's lost Medieval town wall have been exposed in contractor's excavations between the River Dour and York Street roundabout. Traces of the Boldware Gate and Butchery Gate were also discovered (see below). In places, the 2 to 3 m. thick curtain wall

survived just below pavement level and still stood to a height of almost 5 m.

The southern (seaward) face of the wall was constructed from large, neatly shaped greensand blocks. The lower facing stones were water worn, demonstrating that the sea once washed the foot of the curtain. It seems probable that the wall was constructed on the original Medieval foreshore, below the high water mark.

Details of the wall's foundation were recorded east of the Boldware Gate. The southern side of the wall stood upon a line of timber beams supported by closely spaced timber piles. Under the core of the

wall there was a shallow mortared foundation of large chalk and flint lumps but no timber-work.

Evidence for at least three breaches of the curtain wall by the sea were recorded. At the Boldware Gate the entrance passage had been greatly enlarged by wave attack. Immediately to the east was a second breach in the wall and another was recorded some 50 metres west of the Boldware Gate.

Despite the later damage, it is clear that the construction of Dover's Medieval defences was a major undertaking, with large quantities of stone being imported from neighbouring Folkestone.



Pl. VIII *Fallen Boldware gate.*

### The Boldware Gate

The remains of the Boldware Gate were discovered at the southern end of Bench Street. No contemporary illustrations survive and its form was unknown before work began. The surviving remains were fairly meagre and it was clear that the major part of the structure had been destroyed by the sea, the ruined site subsequently being buried under the Elizabethan Customs House and Three Gun Battery. (Significant traces of these sixteenth century structures were also recorded).

The gateway seems to have originally consisted of a square or rectangular tower, projecting northwards (i.e. inland) from the main curtain and pierced by a single entrance passage. Part of the western side of the gate-tower remained, although the masonry had collapsed and when discovered it was leaning at an angle of about 30 degrees from the vertical. On the eastern side of the fallen fragment, cut into a column of large, squared ragstone blocks was a well defined vertical slot, clearly for a portcullis. A shingle-filled breach in the main curtain wall, running for some 5 m. from the remaining western side of the gate tower must include the site of the main entrance passage and eastern side of the gate-tower, all traces of which had gone. It is clear that extensive marine erosion had taken place before the construction of the sixteenth century gun battery.



Pl. IX *Statue from Boldware gate.*

The level of the passageway through the gate-tower could not be determined precisely but it probably lay around +2.25 m O.D. Interestingly, the highest water worn blockwork on the exterior of the adjacent curtain wall was at +3.50 m. O.D. suggesting that the gate passage could have been flooded to a depth of about a metre or more during at least some high tides. The passageway was also considerably lower than the contemporary Medieval occupation levels revealed in Bench Street, only some 20 m. inland, implying that the ground here sloped down quite markedly towards the water, with the town wall being constructed at the foot of the slope.

Beach shingle abutted the town wall on the seaward side and this contained frequent lumps of fallen masonry derived from the curtain and

gate-tower. Several massive lumps were seen and one fragment proved to be part of the upper gate tower, including a section with portcullis slot and the start of the passageway arch. Part of a carved statue was found in rubble adjacent to the gate. This may once have been set in the face of the wall above the passageway.

It seems clear that the Boldware Gate was a water gate giving access from the town to the harbour. This implies that the water front lay immediately outside the gate. In this context a series of substantial timbers found just in front of the main curtain may be significant.

### The Butchery Gate

This substantial tower once spanned the River Dour and remained largely intact until the early nineteenth century. In the late eighteenth century William Pattenden made a useful pen and ink drawing of the structure and several representations of it appear on early maps. Following the tower's demolition in 1819, significant remains seem to have survived below ground level until the 1960s when the construction of the new Townwall Street dual carriageway led to the total destruction of a complete Medieval arch spanning the River Dour (formerly known as the 'Hole in the Wall'). Initial examination of the site in 1991 suggested that nothing of the Butchery Gate could now survive.

With the removal in 1992 of the 1960s concrete road bridge, preparatory to the laying of a new branch sewer across the river and the complete reconstruction of the bridge, traces of the gate-tower and the adjacent curtain wall were unexpectedly revealed. In the river bed, under a thin layer of modern river gravel, the eastern edge

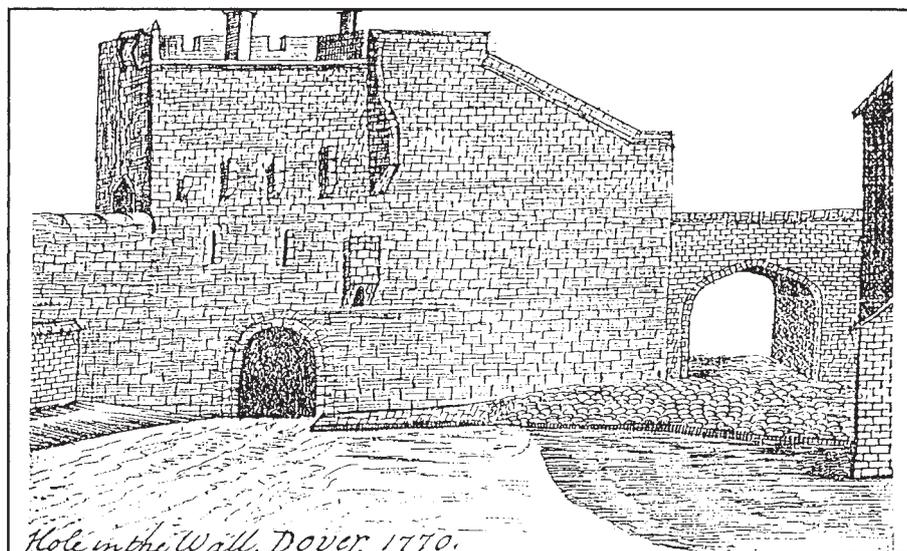


Fig. 10 *Drawing of the Hole in the Wall.*

Pl. X *River: Hole in the Wall.*Pl. XI *Roman Quay.*

of the original Medieval 'Hole' through the town wall was recorded.

### The Roman Harbour Wall

In a deep contractor's excavation at the junction of Bench Street and Townwall Street a short section of a large timber structure was exposed. This apparently formed part of a massive timber box

framed harbour wall of typical Roman construction. Two horizontal side timbers aligned roughly east-west formed the southern wall of the structure and horizontal cross-beams braced it laterally. The timbers were set within a construction trench 0.77 m. deep but the upper parts of the structure had been subsequently removed, presumably by marine erosion. The surviving top of the timbers was at +0.559 m. O. D.

The structure is of a very similar build to a more extensive harbour wall discovered in 1855-6, off Dolphin Lane (Rigold 1969, 90). The new discovery lay on roughly the same axis but was located about 180 metres to the south-west of the previous find, on the other side of the present river. It clearly represents a completely separate and otherwise unknown harbour structure and greatly modifies our view of the extent of the Roman harbour works at Dover.

## 13 The Discovery of the Bronze Age Boat

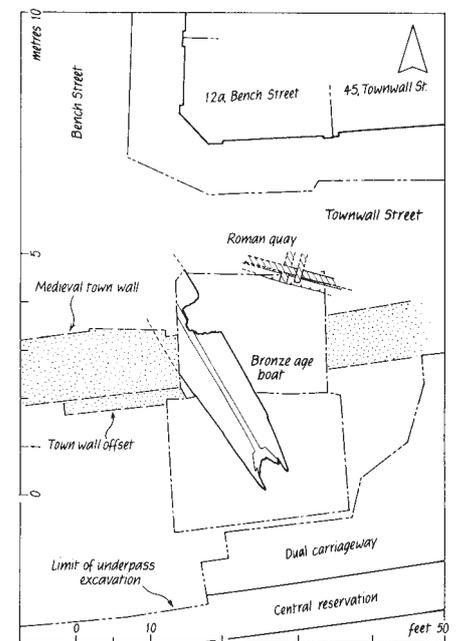
Keith Parfitt

Pl. XII *General view of the excavation.*

In September 1992, more timbers were revealed at a lower level in the same contractor's pit that contained the Roman harbour wall. The timbers lay some 6 m. from ground level, just below Ordnance Datum and a rapid inspection indicated that they formed part of a boat preserved within the waterlogged deposits. The use of twisted withies

within the construction, and the associated tufa and peats, suggested that the vessel was prehistoric. It was soon obvious that the lower portion of the boat was largely intact.

Initial investigations revealed that the timbers extended for some 6 metres across the full width

Fig. 11 *Location plan.*

of the pit and it became clear that they represented the substantially complete mid-section of a very well-preserved prehistoric plank-sewn boat, a find of international significance.

Since the boat would have to be removed to allow the contractors to excavate even deeper

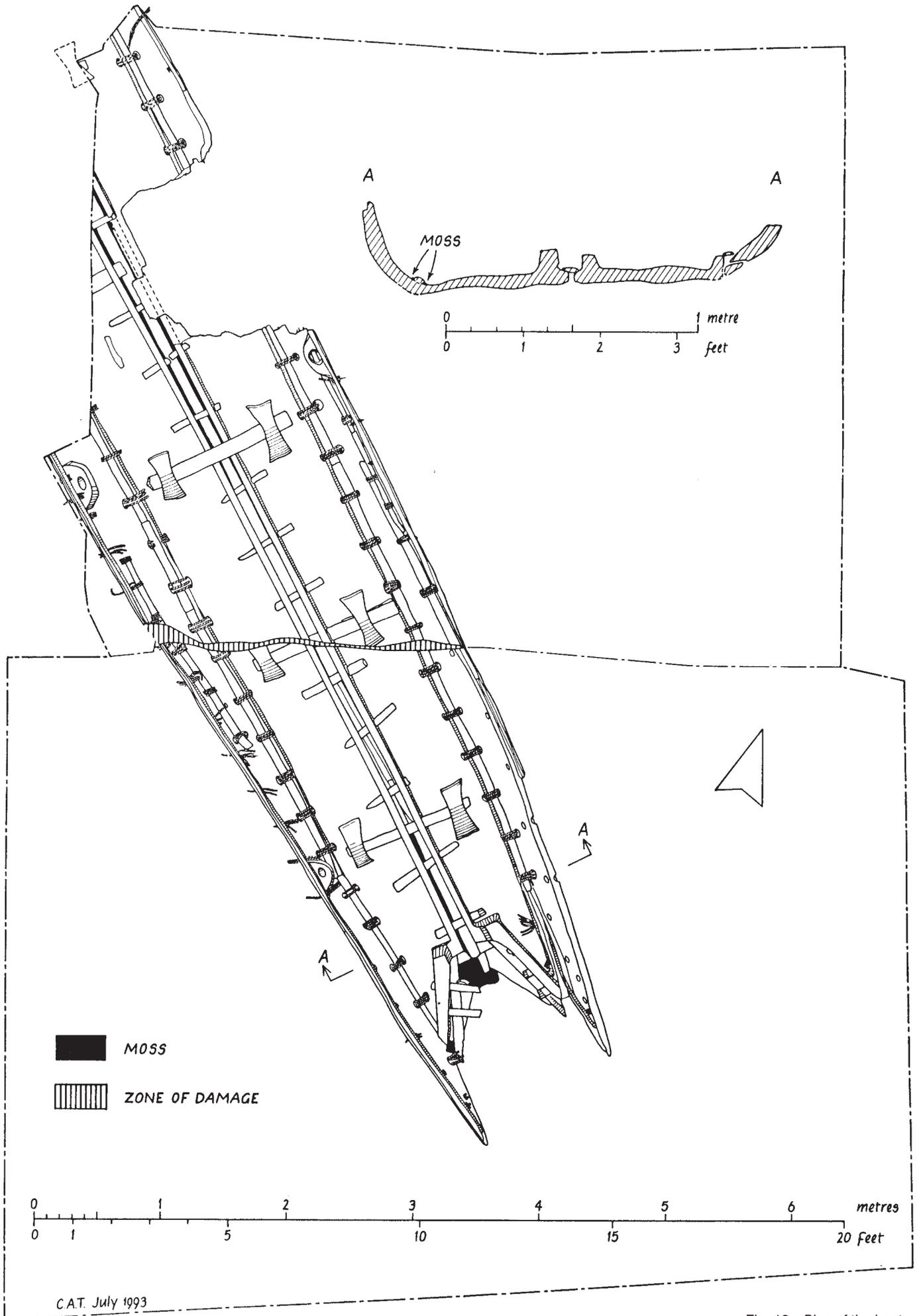


Fig. 12 Plan of the boat.

Pl. XIII *Stitch detail.*Pl. XIV *Low level view of boat.*

to complete their work, a period of six days to fully excavate, record and salvage the remains was arranged with the road engineers through the Department of Transport. Work on the boat continued for thirteen hours each day. It was decided that the safest way to lift the craft was to cut it into manageable sections, thereby safeguarding key structural features. Working in conjunction with English Heritage conservators, the boat was carefully cut into ten lettered portions, each being manoeuvred onto a pallet and then removed from the excavation using a crane and lorry kindly supplied by Dover Harbour Board. The timbers were then placed in a large water tank previously prepared by the Harbour Board in one of its store buildings on the quayside only a short distance away.

From the details of its construction, the craft must have been the product of a master boatbuilder working within a long established tradition. The two oak base planks were held together by transverse timbers passing through a pair of

central longitudinal rails carved from the main base timbers. The side planks were held in place by individual stitches of twisted yew wood with moss caulking between the joints.

It was clear that further substantial sections of the vessel must lie to the north and south of the mid-section first lifted. Although these sections were beyond the limits of the contractor's excavations, there were fears that the local watertable would be reduced by the pedestrian under-pass and its associated water pumping chamber which was being constructed. Therefore there seemed no certainty that if the remaining parts of the vessel were left in situ, for future generations to excavate and study with improved techniques, the sediments would remain sufficiently waterlogged to allow the continued preservation of the boat timbers. Consequently it was decided to attempt to recover more of the boat.

The close proximity of tall Victorian buildings to the north precluded excavation here but a second

coffer dam immediately to the south of the first was inserted and a further eight days allowed for the excavation of the southern section of the vessel.

Another 3.5 m. of the craft, including the remains of an original end (whether this represents the bow or stern is not yet clear) was exposed. The same procedure as for the first part of the boat was agreed for the lifting of the second section. A total of 9.50 m. have now been raised in all, which perhaps amounts to about one half to two-thirds of the overall length. There seems little doubt that the craft represents a sea-going vessel which presumably made regular trips across the Dover Straits. When conserved, it is hoped that the boat will be placed on permanent display at the new Dover Museum.

Initial C14 dates indicate that the boat is of Bronze Age date. Preliminary examination suggests that the boat was old and deliberately abandoned. It appears to have been left in, or adjacent to, a freshwater channel eroded into a compact peat

Pl. XV *Excavating the boat.*Pl. XVI *Lifting boat section.*

deposit. No evidence for brackish or saline water organisms have so far been found either in the mollusc or pollen assemblages, despite the proximity to the present coast. This suggests considerable palaeogeographic change since the boat was buried.

In addition to a significant amount of struck flints and pot-boilers a rich assortment of

palaeoenvironmental data has been recovered from the boat and immediately adjacent contexts. Significant quantities of animal bone were found both in and around the boat. From the material studied so far the animal bones appear to come largely from domestic cattle (*Bos taurus*).

The boat now rests in water-filled holding tanks, awaiting detailed recording and study next year.

Ultimately we hope to conserve the boat, probably by freeze-drying, and place it on display to the public. The process of conservation may take some years to complete, but we hope that one day the general public will be able to share the sight of this remarkable find.

## 14 Recent Work by the Geoarchaeological Service Facility (UCL) in Dover with Particular Reference to the Discovery of the Bronze Age Boat Martin R. Bates

The work undertaken by the Geoarchaeological Service Facility (GSF) has complemented the conventional archaeological work undertaken in the town of Dover by the Canterbury Archaeological Trust, funded by English Heritage. This work has focused on determining the nature of the stratigraphic sequences associated with the archaeological remains recovered by the Trust and sampling the sequences for the laboratory extraction of sedimentological and biological data to aid in palaeoenvironmental and environmental archaeological reconstructions. The work has examined a range of deposit types ranging from coarse beach gravels and sands to peats, tufas and silts. These deposits date to the last ten to twelve thousand years and record the change in climate from cold, periglacial sub-arctic conditions at the end of the last cold period (the Devensian) to the present temperate environment dominated by mixed oak woodland (Table 1 summarises this information).

In order to successfully record and sample such a wide diversity of sediment types and ages a flexible approach was adopted using a variety of techniques to recover information. These techniques included recording sequences in the sewer trench, temporary excavations associated with road constructions, test pits and, where access was restricted, purposive drilling using commercially available equipment to recover continuous sediment cores. The work has resulted in the accumulation of a large stratigraphic data set that links, through lithostratigraphic correlations (based on sediment types), a wide range of sites in the area. In addition the fieldwork has generated a large sample data set from which preliminary sieving, as part of the project evaluation, has recovered a wide range of data types (see Table 2).

The work undertaken by the GSF has been achieved by a team of specialists working on all

aspects of the data. Preliminary fieldwork and on-site investigation was mainly undertaken by the author with additional help from Mr A.J. Barham, Mr J. Czaska, Mr P Hunter, Ms C. Ward, and Dr K. Wilkinson. Preliminary laboratory processing was overseen by Mr J. Stewart with help from Mr. J Czaska and Mr P Hunter. Specialist assessments were undertaken by Mr V. Williamson (Sedimentology), Mr N. Branch (Pollen), Mr A. Fairburn and Dr J. Hather (Plant Macrofossils), Dr N. Cameron (Diatoms), Dr E. Robinson (Ostracods), Mr J. Stewart and Mr B. Irving (Vertebrates), Dr K. Wilkinson (Molluscs) and Dr E. Cross (Insects). This work has produced reports suitable for project assessment and full palaeoenvironmental and palaeoeconomic investigation to publication standard remains to be undertaken, as part of the analysis stage of the Management of Archaeological Projects (MAP 11) design under which the overall project is designed.

The town centre area has been the focus of much of this work and it is in this area that the stratigraphic sequences are most complex and where the time depth for the sequences are longest. The combination of the trench, test pit and drill data has allowed a detailed sequence to be drawn up along a transect line running along the length of Bench Street from Fishmongers Lane, across Townwall Street to the site of the old Dover Stage Hotel (Fig.13). This transect contains stratigraphic units typical of those encountered elsewhere in Dover and forms a preliminary composite lithostratigraphic diagram for the area of central Dover. This data is summarised in Table 3.

Key points to emerge during the project can be summarised:

1. There appears to be an extensive spread of tufa, peat and organic silt deposits that occur between 0.0 m. O.D. and -2.0 m. O.D. throughout

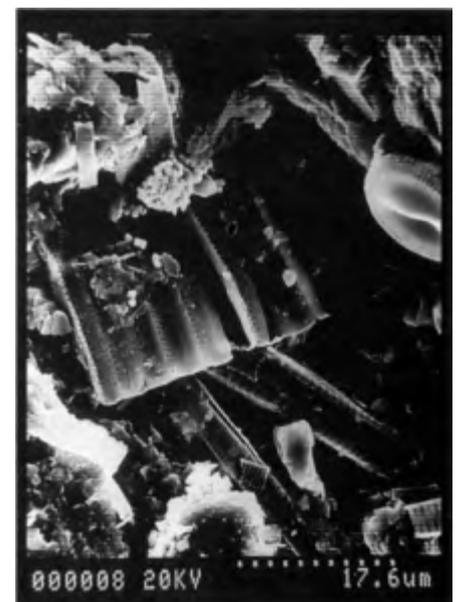
much of the town centre area. These deposits can also be traced inland as far as Crabble Paper Mill (Bates and Barham, in press). These sediments were initially located in the borehole cores drilled at intervals throughout the town centre and alerted GSF and CAT staff to the presence of sediment of presumed prehistoric age in the area. Observation, investigation and recording of these sequences in the deep pumping chamber adjacent to the Bench Street Underpass were responsible for the discovery of the Bronze Age boat timbers. In addition to the discovery of the boat the nature of the sediments are of great significance due to the presence of a wide range of palaeoenvironmental data types (e.g. pollen, insects, molluscs etc.) in the sediments. Detailed palaeoenvironmental reconstructions should be possible from these sediments.

2. A major unconformity or break in deposition occurs above these sediments and marks the influx of saline conditions into the area. Sediments and archaeological structures relating to the Roman harbour have been found and preliminary results suggest a complex record of infilling of the area is present within these sediments. The information recovered from the boreholes that relate to this episode of infilling have been assessed and the evidence from the pollen and diatom data suggests that fluctuations in the nature of the processes infilling the basin and periodic variations in the salinity within the area are recorded in the sequences. This information has important implications for our understanding of morphological change within the lower Dour Valley and hence patterns of human occupation. In addition the data set will contain important data regarding relative sea-level changes in the area.

3. Subsequent to infilling of the old Roman harbour there appears to be evidence for the establishment of a temporary terrestrial freshwater environment prior to migration of the

beach across the area and the final infilling of the area in the Norman period.

This study represents the first integrated investigation of the sequences within the lower Dour Valley and has produced a data set that will allow rigorous testing of previous hypotheses (e.g. see Rigold 1969) regarding the nature of the development of the area from the prehistoric to medieval periods. The nature of the data obtained from the project is diverse and includes pollen, diatoms (See Pl. XVII a & b), molluscs, insects, vertebrates and ostracods. Without exception the recovery and assessment of this type of material, from the Dour Valley, is novel and represents a significant new source of information regarding human occupation and resource exploitation in the area.



Pl. XVII a & b Diatoms recovered during the assessment of samples recovered from recent work in Dover.

### The Environmental Context of the Dover Boat – Preliminary Investigation.

As mentioned above the boat was located within a complex sequence of tufa, peats and organic silts. These deposits form part of a group of lithologically similar sediments present throughout much of the valley bottom for which age estimates of Early and Middle Holocene date are available. Within the excavated trench the boat rests, at the southern end, on a hard compact peat surface. The excavation revealed this surface to be scoured and pitted indicating the possibility of a considerable time gap between the formation

and compaction of the peat and the abandonment of the boat. In places, and especially towards the north, the boat rested on oncoidal tufa pellet gravel. Tufa, commonly used by the Romans as building stone in the area, is a carbonate deposit formed in chalk or limestone rich areas in wet ground or moving water environments (Pedley 1990). The tufa pellet gravels contain a wide range of biological materials including vertebrate, plant macrofossil, insect, mollusc, diatom and ostracod remains. The tufa pellet gravel is also present within the boat. The boat and associated sediments have been sealed and protected from

erosion and degradation by a thick silt unit that covers much of the site (Pl. XVIII).

Many questions have been posed by the discovery of the boat. Questions regarding the geological and biological data recovered during excavation can be listed:

1. What was the nature of the environment of deposition at the time of boat abandonment?
2. What was the palaeogeography of the area like? Despite the current proximity of the boat to

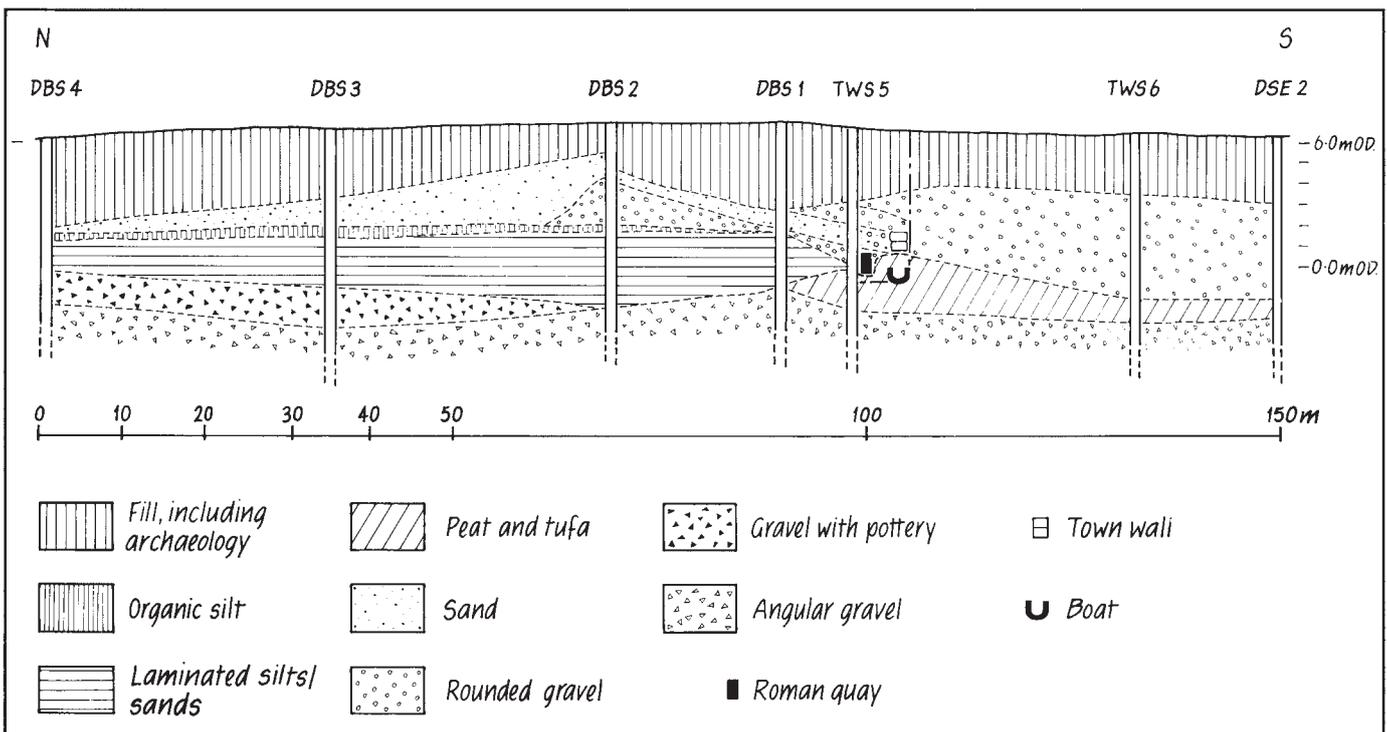


Fig. 13 Lithostratigraphic diagram for the area of central Dover.

AREA	SEDIMENT TYPES	ENVIRONMENTS OF DEPOSITS	DATA TYPES	AVERAGE DEPTH OF PROFILES	AGE OF SEQUENCES
<b>WESTERN HEIGHTS</b>	CHALK AND FLINT RICH GRAVELS & CARBONATE RICH SILTS	COLD CLIMATE CONDITIONS WITH FROZEN GROUND AND GRASSLAND COVER AND INTERMITTENT MELTING RESULTING IN SLUMPING AND MASS MOVEMENT OF GRAVELS	MOLLUSCS AND SEDIMENTS	2–5m	10–14 THOUSAND YEARS B. P. (before present)
<b>BULWARK STREET</b>	WELL ROUNDED FLINT GRAVELS AND SANDS COVERED BY CLAY WITH FLINTS	BEACH ENVIRONMENTS AT THE EDGE OF THE OLD PARADISE BASIN	SEDIMENTS AND OCCASIONAL REWORKED MOLLUSCS AND BONES	1–6m	0–6 THOUSAND YEARS B.P.
<b>SNARGATE STREET</b>	WELL ROUNDED FLINT GRAVELS	OPEN BEACH UNDER ACTIVE MARINE MODIFICATION	SEDIMENTS AND OCCASIONAL REWORKED MOLLUSCS AND BONES	1–6m	0–6 THOUSAND YEARS B.P.
<b>TOWN CENTRE</b>	WELL ROUNDED FLINT GRAVELS, ANGULAR FLINT GRAVELS, SANDS, SILTS, PEATS, ORGANIC SILTS AND TUFA	COLD CLIMATE RIVER GRAVELS BEING REPLACED BY TEMPERATE TUFA AND PEAT DEPOSITION IN FRESHWATER ENVIRONMENTS PRIOR TO FLOODING BY SEA AND THE ESTABLISHMENT OF SALINE CONDITIONS. INFILLING OF AREA BY MARINE SAND AND COLONISATION BY HUMANS	VERTEBRATES INCLUDING LARGE AND SMALL MAMMALS, AMPHIBIANS, AND FISH, POLLEN, PLANT MACROFOSSILS MOLLUSCS, DIATOMS, OSTRACODS, INSECTS, SEDIMENTS	5–10m	0–14 THOUSAND YEARS B. P.

Table 1. Main sediment types, environments of deposition, palaeoenvironmental data types, depths and age of sequences shown by zone within the study area.

PALAEOENVIRONMENTAL DATA TYPE	SIZE OF MATERIAL	QUANTITY OF MATERIAL RECOVERED DURING PROJECT	PALAEOECONOMIC POTENTIAL	PALAEOENVIRONMENTAL POTENTIAL
<b>POLLEN</b>	25–100µm	Present	Low	Good
<b>PLANT MACROFOSSILS</b>	<0.5cm–>2m	Present	Moderate–Low	Good
<b>DIATOMS</b>	5µm–2mm	Present	None	Good
<b>OSTRACODS</b>	0.15mm–15mm	Present	None	Good
<b>LARGE MAMMALS</b>	>1cm	Present	Moderate	Low
<b>SMALL MAMMALS</b>	<0.25cm–c.2cm	Rare	None	Low
<b>AMPHIBIANS</b>	<0.25cm–c.2cm	Rare	None	Low
<b>FISH</b>	c.0.5cm–>10cm	Present	Moderate	Low
<b>MOLLUSCS</b>	<0.5cm–10cm	Present	Low	Good–Moderate
<b>INSECTS</b>	<0.5cm–c.2cm	Present	Low	Good–Moderate

Table 2. Main palaeoenvironmental data types recovered during Dover project indicating quantities of material recovered and palaeoeconomic and palaeoenvironmental potential of the material. N.B. The potential of the material listed in this table refers only to the potential in relationship to the Dover project objectives and is not intended to indicate potential use and significance in other areas and research contexts.

LITHOSTRATIGRAPHY	ASSOCIATED ARCHAEOLOGY	LIKELY ENVIRONMENT OF DEPOSITION	AGE ESTIMATES (based on archaeological spot dates and preliminary 14C determinations)
<b>ORGANIC SILTS</b>	POTTERY	DAMP TO WET GROUND	NORMAN AND POST NORMAN
<b>SANDS AND ROUNDED GRAVELS</b>	OCCASIONAL ROLLED BRICK OR TILE FRAGMENTS	MARINE	MIDDLE/LATE SAXON
<b>SILTS</b>	CHEMICAL INDICATORS, e. g. PHOSPHATES	FRESHWATER CHANNEL EDGE	SAXON
<b>LAMINATED SANDS AND SILTS</b>	OCCASIONAL POT SHERDS	SUB-TIDAL BASIN	LATE ROMAN – SAXON
<b>TUFA AND PEATS</b>	BOAT, STRUCK FLAKES, BONES	FRESHWATER CHANNELS AND CHANNEL EDGE	LATER PREHISTORIC
<b>ANGULAR GRAVELS</b>	TRANCHET FLINT AXE	FLUVIAL CHANNELS	LATE GLACIAL – EARLY HOLOCENE

Table 3. Main lithostratigraphic units and associated archaeological material, inferred environment of deposition and age estimates for central Dover based on GSF stratigraphic investigation.

the contemporary coastline no evidence of saline or brackish water plants or animals have been found in the samples assessed. This suggests that considerable modifications to the topography and palaeogeography of the area have taken place since the abandonment of the boat.

3. Can the sediments examined at the site be correlated with superficially similar peat/tufa

stratigraphies located elsewhere in the town centre and up-valley towards Crabble? This clearly has implications for the extent of archaeologically important sequences in the area and the ability to reconstruct prehistoric landscapes in three dimensions.

4. Do the sediments preserved in the trenches excavated provide a detailed sedimentological and

biostratigraphic history of prehistoric landscape changes in Dover? If so what is the timescale of these sequences and what is the resolution of the sequences?

5. Can a study of the context of the boat across space (i.e. within the valley system) cast light on the reasons for the presence of the boat at this location in the valley?



Pl. XVIII *Boat cross-profile showing tufa and organic silt units infilling the boat.*

It is important to remember that the boat is but one element in the prehistoric and historic record of Dover. A correct interpretation of the artefact will hinge upon the adoption of an integrated approach to the study of all stratigraphic sequences revealed during the A20 project, during engineering works and sampled and monitored by the joint GSF/CAT team. Only through such an approach can many of the questions listed above be answered. In addition significant new information has been produced by the project relating to later periods in Dover's archaeological record and these aspects should not be eclipsed by the discovery of this artefact.

## 15 Watching Briefs at the Maison Dieu, Ladywell

Keith Parfitt

Dover Town Hall at Ladywell is a substantial stone-built structure consisting of thirteenth- to fourteenth-century medieval fabric and nineteenth-century Gothic work. The origins of the building now known as the Maison Dieu, date back to 1203 when Hubert de Burgh, Constable of Dover Castle, established a hospital for use by poor travellers and pilgrims outside the town and adjacent to the River Dour.

In 1544 the hospital was closed. Its extensive buildings, set within a walled enclosure, then passed into Royal hands, eventually becoming a supply depot for the Royal Navy until 1830. To this phase belongs the splendid brick house (Maison Dieu House) south of the main hospital complex. Dated 1665, it was originally built as the residence for the Chief Officer of the Dover Victualling Department and now houses the town Library,

In the 1830s a stone prison building was constructed across the northern part of the original hospital complex, adjoining the main medieval hall. The prison remained in use until 1877 and in 1881 its buildings were demolished to be replaced by a new concert hall and meeting place in the form of the Connaught Hall. This still serves as Dover's Town Hall. The Connaught Hall was designed by the eminent nineteenth-century architect William Burgess, well known for his works inspired by the architects of the later medieval period. The hall itself was built at first floor level, supported on a network of solid brick piers. After the last war, the space under the hall was converted into the town's Museum, only recently relocated to its original site in the Market Square.

### The Old Museum Site

In August 1992 contractors began the excavation of a large rectangular pit in the floor of the old Museum for the insertion of a lift. This provided a rare opportunity for archaeological investigation and it is most unfortunate that time was not allowed for more than the briefest record of the exposed remains to be made.

The excavation revealed the massive footings of the present Connaught Hall and a contemporary disused cellar with a vaulted roof. Much of the soil excavated consisted of nineteenth-century disturbed deposits and an extensive demolition layer containing large amounts of fragmentary medieval building stone and crushed mortar. This demolition layer was cut by the Connaught Hall foundations and appeared to be lying within a large

negative feature, probably an early nineteenth century robber pit, which was not clearly defined.

An area of intact stratification was revealed in the south face of the shaft and this included a section of a stone-built medieval wall running north-south, which had been largely cut away by the robber pit. The wall was made of mortared flint with occasional chalk lumps in the core.

On the northern side, in the base of the robber pit, another medieval wall was located. This was of different construction and aligned east-west. It was 0.58 m. wide, built of large, roughly squared greensand blocks set in mortar and was traced for a distance of 1.60 m.

The junction of the two walls was obscured by an area of undug soil but it seems likely that they



Pl. XIX *Library building.*

originally joined to form a right angle. From their construction it is clear that they are not of the same date. The east-west wall had the general appearance of being the earlier. No associated floors or layers were recorded adjacent to the walls. From their construction both walls appeared to be medieval but the north-south wall had been partially refaced in brick in postmedieval times, perhaps during the seventeenth century. Sealing the refaced north-south wall were two or three thin floor surfaces cut away by the Connaught Hall foundations. These floors may well relate to the exercise yard of the nineteenth-century prison.

The two medieval walls clearly formed parts of a larger structure. A map of the naval victualling office drawn in February, 1677 shows a series of buildings in this area. At least some if not all of these must be of medieval origin. Positioning the recorded walls on this map it seems possible that they formed part of what was then either the "Pump yard" or the "Coale House".

From the limited recording undertaken, it is clear that some significant medieval and postmedieval remains still survive below the floors of Dover's Town Hall. On no account should further excavation work be undertaken on this site without archaeological supervision.

### **Mason Dieu House (The Library)**

During October and November 1992 a cable trench was dug westwards from the front door of Maison Dieu House, to the north-eastern pavement of Biggin Street. Three ancient walls were exposed under the Biggin Street pavement. From the mortar used in two of these walls it seems fairly certain that they were of medieval date (one also contained fragments of slate and peg-tile).

It seems probable that these walls were contemporary with each other and that they joined at an approximate right angle to form the south-west corner of a structure. From the depth

of one (0.40 m.) it does not seem to have been a cellared structure and it seems most probable that the walls belonged to the outer boundary wall of the medieval hospital complex. In the 1960s Stuart Rigold recorded a substantial length of the southern boundary wall of the hospital complex further to the east (Rigold 1969, 94).

The third wall, clay bonded and containing a fragment of early post-medieval brick within its construction, was clearly later and could represent a strengthening of, or replacement to, one of the medieval walls. It may have been confined to the junction of the two earlier walls, perhaps forming an internal corner buttress.

Within Maison Dieu House itself, examination of a small test pit dug in the cellar ahead of a new lift being installed revealed natural river gravel below the laid brick flooring at + 4.51 m. O.D.

## **16 Evaluation trenching at the Royal Victoria Hospital**

Keith Parfitt

In connection with the redevelopment of the Royal Victoria Hospital site on the north-east side of London Road, two evaluation trenches were cut in the metalled yard to the rear of the existing hospital buildings in December, 1992. The work was implemented according to a specification approved by the County Archaeologist Dr John Williams, and was conducted in conjunction with the Geo-archaeological Service Facility of the Institute of Archaeology, University College, London.

The site lies well outside the historic town centre and is situated on land which slopes gently down to the River Dour at an elevation of between 9.00 m. and 6.50 m. above O.D. Originally built as a private mansion in the 1820s, the extant structure was converted into a hospital in 1851 and was expanded later in the nineteenth and twentieth centuries. It closed in the 1980s. Prior to the construction of the mansion the entire area appears, from documentary evidence, to have consisted of low-lying water meadows and gardens adjacent to the river.

The stratification recorded in each trench was different with the oldest deposits appearing to lie towards the valley edge and the youngest close to the modern channel of the Dour. Significant early Roman, medieval and post-medieval layers were revealed, together with a deposit of natural tufa of great geological interest.

The initial work on this site has demonstrated the presence of some significant geological and archaeological deposits at a depth of between 1.00 m. and 2.50 m. Least expected were the dumps of early Roman domestic rubbish, clearly implying settlement nearby. The date of this material, c. A.D. 50-80, is particularly interesting when set against the known background of the Roman occupation of Dover. The main Roman (military) settlement, a little further down the valley, appears to have started during the first half of the second century A.D. and there is only limited evidence for earlier 'native' occupation in this area (Philp 1989, 273). Nevertheless, the discovery of a considerable number of early Roman cremation burials on the outskirts of the modern town, including a few

containing Gallo-Belgic imports, strongly suggests that the main Dour valley and its side valleys were occupied in the years immediately before and after the Roman conquest (Philp 1981, 11). This conclusion is now reinforced by the early Roman material recovered from the Victoria Hospital site, which provides fairly clear evidence for occupation, well beyond the area of the main Roman settlement, and probably at an earlier date.

The proximity of the present site to the supposed line of the main Roman road (here represented by London Road) running from Dover to Canterbury and London may perhaps be significant, although it seems likely this was not constructed before the main military base was established in the early second century.

The occurrence of later medieval deposits, including part of some sort of riverside revetment is also of interest. The proximity of the important Maison Dieu hospital complex (founded 1203) some 65 m. to the south-east must be significant, as it no doubt owned large tracts of the adjacent land.

## **17 The East Gatehouse of the Classis Britannica II Fort**

Mark Houlston

During a two week period in mid October 1992 work was undertaken on the north tower of the

East Gatehouse of the Classis Britannica II Fort at Dover, the remains of which are currently on

display within the grounds of the White Cliffs Experience Centre TR319414). This work

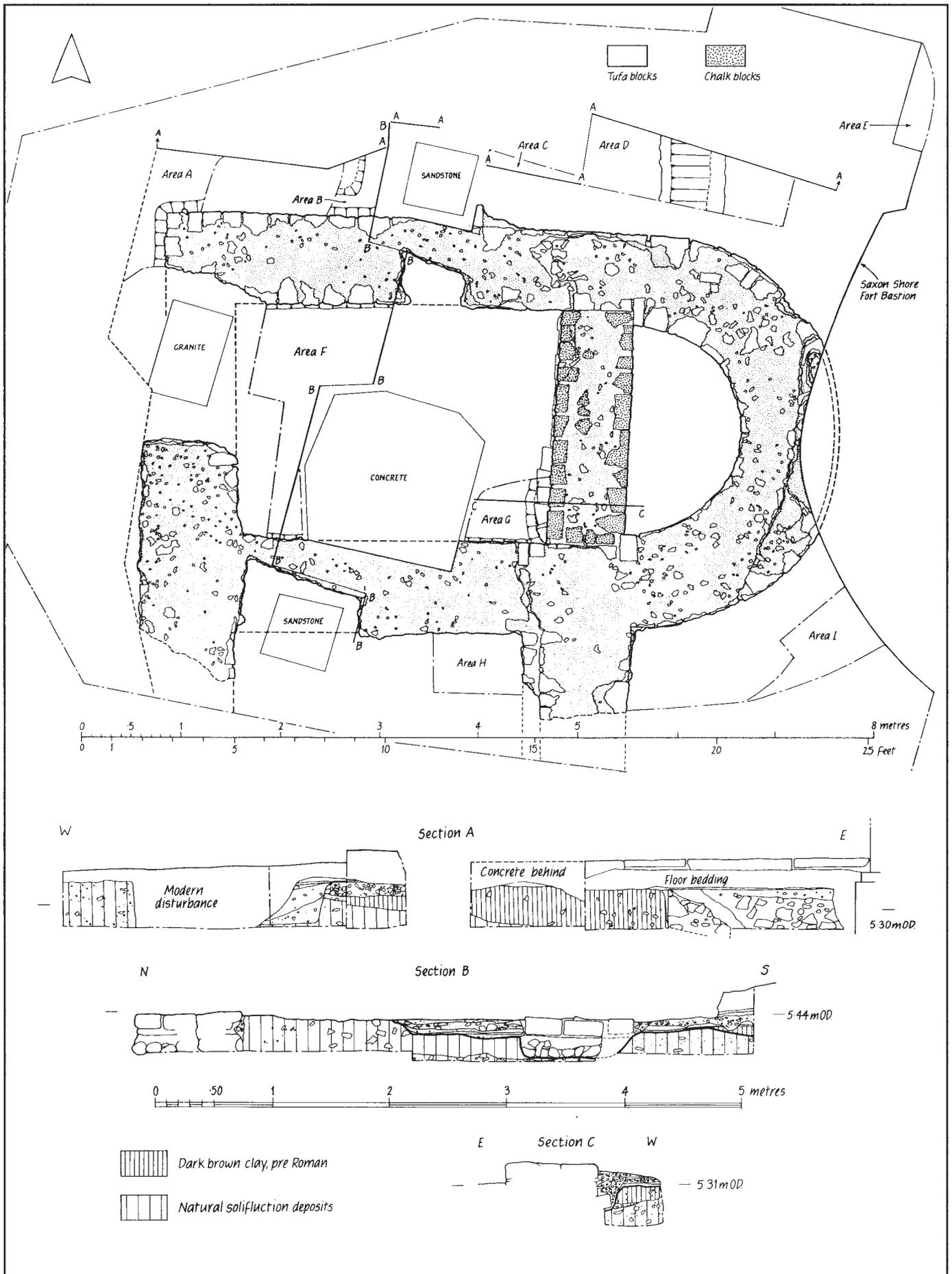


Fig. 14 Site plan and sections.



Pl. XX General view of the excavation.

included concrete removal and general ground clearance, as well as controlled stratigraphic excavation and a detailed survey of the surviving fabric. All these elements were conducted in good time prior to the planned consolidation, capping, and re-display of the remains by Heritage Projects Limited.

Work started with the removal of concrete and sandstone blocks, formerly part of the basement of the Warren and Reynold Warehouse. Following this, soils were removed from previously excavated areas around the monument to 5.10 m. O.D. (roughly 0.40 m. below the top of the surviving tower fabric). The site was then cleaned, with special attention being paid to the now upstanding blocks of unexcavated stratification and to the exposed surfaces of the tower. A detailed plan was made of the monument, and three sections drawn through it. The upstanding blocks located in and around the tower were then excavated. Six were examined, varying in size from c. 1 m. - 2 m. square, and each dismantled to a depth of 5.10 m. O.D. The results of these excavations are summarised below.

Of the earliest fort, CL. BR.1, constructed in about A.D. 117 (Philp 1981), no definitive evidence was uncovered. However a short length of a previously exposed east-west aligned chalk wall, revealed at the base of one of the excavated blocks, may have been built at this time. The wall was cut into the slope of the hill, its north side was trench built whereas it was faced with chalk blocks on its southern side. Previous sections of this wall have been observed under and within the 'D'-shaped end of the CL. BR.II tower, and also further to the

west under the south side of St Martin-le-Grand church (Philp 1981, 3). Interpreted as a retaining wall, whose function was to prevent soil slippage during the construction and use of the CL. BR.II fort, it lies at the southern limit of the 'plateau' on which the fort was constructed. From the point of view of the recent excavation however it is equally probable that the wall was built at the same time as the unfinished walls of the earlier CL. BR.1 fort.

A number of lenses of silt, rough crushed chalk, and crushed tufa overlay the dark brown deposit. These may also belong to the early, CL. BR.I, period of construction, though more probably they represent construction detritus from the later fort.

Cutting these lenses of construction debris were the main walls of the extant tower of the CL. BR.II period 1 fort. Generally these walls appear to have survived to offset level. Where their full dimensions were exposed, they were approximately 1.90 m. wide and 0.80 m. deep. They consisted of a single course of large tufa blocks set on trenchbuilt foundations. These were comprised of rough crushed chalk overlying a layer of large flints. The rectangular tower had a 'D'-shaped front of integral build, and was joined on its southern side by two walls, which presumably would have joined the north and south towers of the gatehouse below street level. Surprisingly there was no evidence of an adjoining wall on the northern side where the main defensive wall of the fort would have bonded with the gate. Furthermore, except for a short gap at the west end, an unbroken length of pre-Roman

strata was exposed on this side, and at no point were these lower than a level 0.40 m. above the bottom of the tower foundations. We can therefore say that the foundations of the wall, at least in the excavated c. 0.50 m. nearest to the north tower, were at least 0.40 m. higher than those of the gate. This fact is not too surprising since the tower would have been heavier and therefore have required deeper foundations. What is surprising is that the presumed bottom of the wall foundations should lie apparently so close to the level of the gate's offset.

The excavation did not uncover evidence of later Roman activity. A number of observations however can be made about the subsequent development of the gate based on material recently cleaned. First, the north-south aligned wall that separated the rectangular body of the tower from its 'D'-shaped end was clearly a later insertion, though it was not necessarily from a later phase. Secondly, the gravel metallings under the foundations of the later Saxon Shore fort overlaid a small part of the truncated remains of the 'D'-shaped front wall. Although in the former case the chalk block wall would probably have formed the eastern end of an internal guard chamber, it was clearly too substantial to have been merely a partition wall. It may have been added to strengthen the tower, or perhaps it was actually constructed as a new 'squared - off' front wall. In this case it should be seen as contemporary with the gravel metallings that ran over the now demolished 'D'-shaped wall. Replacing an apsidal wall of tufa block construction, with a straight, slightly narrower one of chalk (possibly chalk and tufa) does not seem to make good sense militarily, though there are a variety of reasons why such a change may have been made. What can be stated unambiguously from the second observation is that between the demolition of the 'D'-shaped wall and the construction of the Saxon Shore fort, gravel metallings were laid in the area east of the tower.

As can be seen the recent excavation and recording work has provided a valuable opportunity to re-examine this important local monument. The work was undertaken by Mark Houliston, Keith Parry, and Andrew Linklater (who drew the main site plan). The team would like to thank the staff and management of the White Cliffs Experience Centre and Dover Museum for their encouragement and assistance during the work programme.

# 18 H.M. Youth Custody Centre, Dover Western Heights

Mark Houlston

During March and April 1992 evaluation work was undertaken within H.M. Youth Custody Centre, Dover (TR308405), in an area once occupied by the Western Outworks and Citadel of the Western Heights Defences. The work followed a previous evaluation conducted by the Trust during August 1991 (Pratt 1991) when a series of eighteen evaluation trenches was machineexcavated in

the Grand Shaft Barracks Area on land owned by Eurotunnel Developments Ltd.

The Western Heights are located at the eastern end of the North Downs. Here superficial deposits of clay-with-flints overlie Upper Chalk. The clay-with-flints consists of sandy, silty, clay with varying amounts of flint-gravel and cobbles

dispersed within it. The thickness of the deposit varies considerably and its interface with the chalk is of an undulating nature.

There are no records of prehistoric archaeological remains having been found on the Western Heights. The only remains of Roman date known are those of a pharos, one of a pair located on

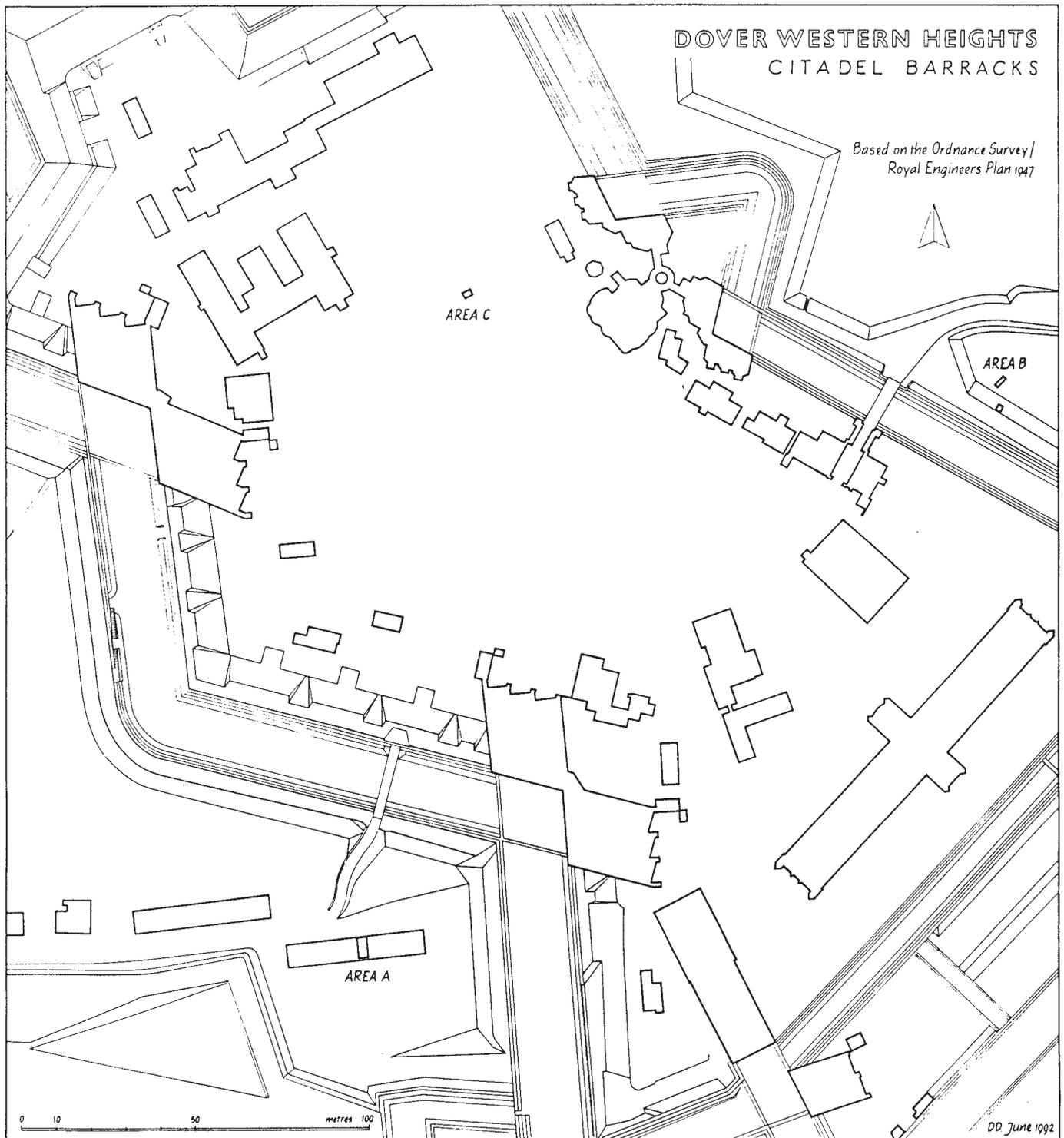


Fig. 15 Trench location plan.

high ground to the east and west of Dover To the west of the western limit of the Heights, however, at Great Farthingloe (Bennett et al. 1988) evidence of first- to third-century occupation was discovered, perhaps indicating the presence of a villa or farmstead nearby.

From the early twelfth century a settlement of the Knights Templars, later transferred to the Knights Hospitallers, was located on the Heights. Other lands came under the control of the Priory of St Martin of the Newark, Dover. Evidence from the medieval period however is sketchy. Dissolution of the Priory occurred in 1535, following which its lands were granted to the Archbishop of Canterbury. A more detailed account of the early history of the Heights, based upon archive material, was undertaken by the Trust as part of the assessment conducted preparatory to the 1991 evaluation (Cross 1990).

The first modern attempt to fortify the Western Heights was not initiated until 1778 (Coad and Lewis 1982) when the resumption of hostilities between Britain and France led to a review of coastal defences. Work may have begun as early as 1779 when a small sum of money was allocated to Lieutenant Thomas Hyde Page to construct fieldworks as part of a larger campaign of works and refurbishments in and around Dover. The intended design for these early fortifications is known from a plan of 1784. It is not clear however how much of this design was realised. The plan depicts the original Citadel, a large multi-bastioned, polygonal structure (on the site now occupied by the Youth Custody Centre), surrounded by numerous minor batteries, all of which lay to the west of a fort constructed at the eastern limit of the Heights overlooking Dover.

With the exception of minor refurbishments to existing defences no work was carried out between 1783 and 1804. However after a year of peace hostilities with France resumed in 1803, and a building programme ensued which, by the end of the war in 1815 had transformed the character and topography of the Heights. Most of the major defensive works were constructed during this period. In the area now occupied by the Youth Custody Centre a large Citadel was constructed. The main functions of this fortification were to protect the vulnerable western flank of the integrated defences, and to provide them with a

major garrisoned stronghold. For these purposes not only were large ditches constructed, but also subterranean tunnels and casemated barracks rooms.

Work on Western Heights stopped in 1816 and did not resume until the 1850s when renewed fears of a French invasion coupled with the revolution then taking place in artillery led to construction of further defensive works. It was during this period that the Western Outworks were added onto the western side of the Citadel, and a self-defensive officer's quarters built within the Citadel. These works seem to have been completed by 1868. Further small additions were made during the last years of the century. These included a Citadel Battery constructed west of the Western Outworks. The final form of the military works is shown on a plan of 1947.

In recent years buildings associated with the Young Offenders Institute have been added, mainly in the parade ground area of the Citadel.

Three areas were investigated. Area A was located in the Western Outworks area of the Young Offenders Institute. A series of concrete wall foundations was revealed., these cut a deposit of banded, silty, orange-brown clay, contained large chalk pieces, some large flints, and a few fragments of eighteenth- or nineteenth-century brick. Excavations were not conducted below a depth of 2.35 m., as the prospect of ground disturbance below this depth seemed unlikely.

The presence of brick fragments in the clay deposit clearly demonstrates it had been redeposited from elsewhere. The most likely explanation is the clay was upcast during the construction of the ditches, tunnels and subterranean rooms of the Western Outworks and Citadel, and was mainly derived from naturally occurring deposits. The concrete wall foundations, the positions of which matched the walls of the wash room, sergeant's bunk room, and central passageways of a barracks building (hut number six) identified on a plan of 1947 (O.S./R.E. 1947), were probably constructed in the final years of the last century.

Area B was located outside and south-east of the main entrance to the Young Offenders Institute. Below the topsoil the uppermost deposit was again comprised of bands of orange-brown clay,

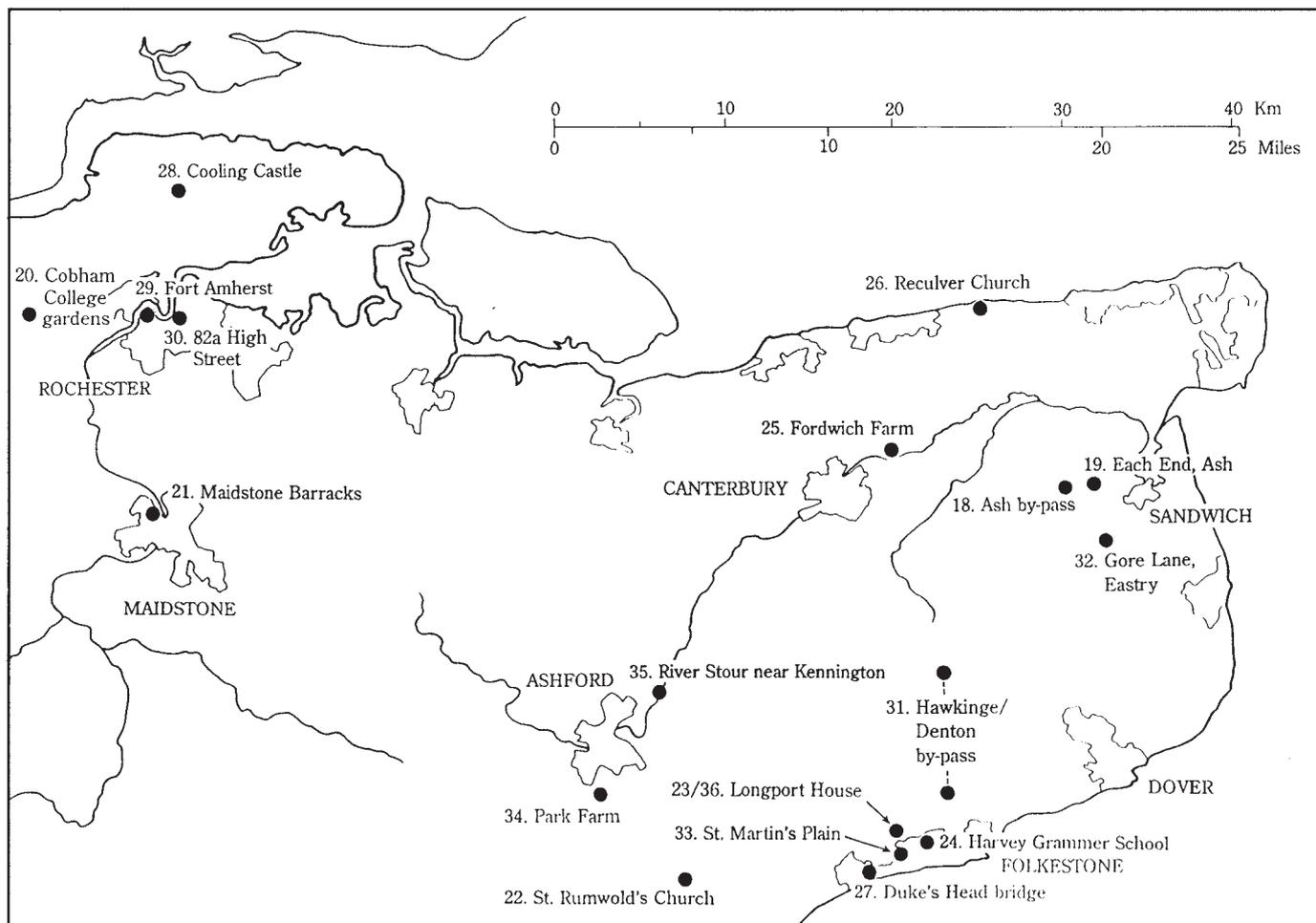
containing flints, some chalk pieces, and a few flecks of eighteenth- or nineteenth-century red brick. Here however the clay was bottomed and overlay a highly compact deposit of roughly broken chalk pieces, probably undisturbed natural Head Chalk. However, material upcast from the Citadel ditch is also likely to have been clean, and perhaps compact as well. If the deposit was Head Chalk then its north-east-south-west sloping surface indicates it was probably truncated during one of the periods of Citadel ditch construction. The presence of a few brick flecks in the clay that overlay it indicates this material was probably upcast during the construction of the ditch.

Area C lay within a building constructed in the 1950s and until recently the Education Centre of the Young Offenders Institute. Again a banded deposit of orange-brown silty clay was excavated. This contained a large number of flints, a few chalk pieces, and eighteenth- or nineteenth-century brick fragments. The deposit was probably upcast during the construction of the ditches and underground rooms in this area of the Citadel.

In Areas A and C the evaluation did not expose naturally occurring chalk or clay. Evidence of occupation pre-dating that of the earliest modern fortifications may therefore survive trapped below the upcast clay. A chance observation made several years ago by H.M.Y.C.C. works staff during the cutting of drainage trenches on the north side of Deal House, and reported by them to the excavation team, may be evidence of earlier occupation. Rounded flints bonded with a hard mortar were discovered. This fabric was located approximately 30 m. south-west of the evaluation trench. It lay below 1.30 m. - 1.50 m. of clay, apparently similar in texture and composition to that excavated in Area C. Although no face was observed it seems probable that these flints formed part of a wall, and that the wall lay sealed beneath material upcast during one of the phases of Citadel construction. This probable wall might be part of the earliest phase of Citadel fortifications, those erected by Page between 1779 and 1783, in which case the clay is likely to have been upcast during the 1803 to 1815 period of construction. However these defences, if constructed, were probably built of brick. It seems more reasonable to assume the fabric forms part of an earlier structure, possibly medieval.

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### III Sites elsewhere in Kent



Sites elsewhere in Kent: Excavation and building recording projects discussed in this years report.

## 19 The Ash by-pass (A257)

Jonathan Rady

For nearly three weeks at the end of March and the beginning of April 1992, an archaeological evaluation of the route of the new Ash by-pass was carried out. The work, implemented according to a specification supplied by the County Archaeologist Dr John Williams, was funded by Kent County Council Department of Highways and Transportation.

The method, of which Trust staff have now had much experience on numerous other projects, consisted of cutting a minimum 50 per cent linear sample of trenches along the centre line of the new road, and investigating any archaeological remains exposed. The trenches were excavated using a JCB

type machine, utilizing a toothless ditching bucket, which removed the topsoil down to either natural subsoils or the upper surface of archaeological deposits, if present. All unstratified artefacts were kept during this process, their approximate positions recorded and any archaeological features sample excavated and recorded. In addition, a borehole investigation of the palaeoenvironmental sequence of deposits at the eastern end of the route was undertaken by the Geoarchaeological Service Facility of the Institute of Archaeology, University College, London (GSF).

The route of the new by-pass, just over 5.5 km. long begins on the west at Green Man Farm, c. 1

km. west of Gilton (TR 270583), and follows the course of the present road for about 600 m. before diverging to the north to skirt the margins of Ash (fig. 1 6). The route passes immediately north of Molland Farm, just south of Chequer Court, then curves to the east, crossing Molland Lane and ascending to the higher ground north of Ash itself. Crossing Cop Street Road, it then curves to the south, rejoining the present Sandwich road south of Goss Hall. The new road then follows the present alignment but slightly to the north, except for a 500 m. length which by-passes Each End on the north side, descending to the low lying marshy ground to the east of Each End and finally terminating at the roundabout on the Sandwich by-pass.



Fig. 16 Map of road area with areas of interest.

Although the proposed route does not pass through any known archaeological sites, the area is fairly rich in ancient remains. Ring-ditches of unknown date have been located by aerial photography at TR 27405885, north-west of the route, as well as earthworks, also of uncertain date south of Molland Farm. Roman cremations were discovered at a site near Ash workhouse, later a brewery (TR 292584) in the eighteenth and nineteenth centuries (Jessup and Taylor 1932, 144).

Anglo-Saxon remains comprise the probably seventh-century burial ground at Guilton (Scheduled Ancient Monument 161 - TR 2811 5826), excavated at various times but mainly by Faussett in the early 1760's, who uncovered 106 inhumations (Faussett 1856, 1-34). Other finds from this site or nearby consist of two sixth-century squat jars, an iron sword and a very rare pagan Saxon sword pommel (now in Liverpool Museum).

Chequer Court itself, a moated farmhouse probably originally sixteenth-century in date (Scheduled Ancient Monument 12727), lies close to the route (TR 282591), and is associated with a string of lakes to the south, probably old fish ponds.

This area is also of considerable importance in relation to the Roman topography of north-east Kent. The Roman fort of Richborough is situated c. 4 km. to the north east of Ash and the area around

Each End has been postulated as the location of a Roman port (Walker 1932). Adjacent is the line of the Wantsum Channel, a broad low lying area, under the sea in Roman times. The precise extent of this sea passage and its subsequent history of infilling are poorly understood and it was hoped that the borehole survey would throw some light these aspects.

The location of Roman roads in this area is also open to speculation. Several routes for the main Roman road from Richborough to Canterbury have been postulated. The favoured route was thought to run along the present course of the A257, at least to the west, but an alternative postulated route lies to the north. The Roman road from Dover to Richborough can be traced as far as Woodnesborough (c. 3 km. south-east of Ash), before its course becomes uncertain.

In all 110 trenches were excavated, most 20 m. or more long, providing a total length of trench excavated of just over 2,300 metres or about 42 per cent of the route. In addition twenty-four boreholes were sunk by GSF, through deposits relating to the Wantsum Channel. Although the sedimentary sequence revealed by the borehole survey has not been studied in full at this stage and is at present undated, a number of conclusions can be made. The stratigraphic sequence contains information for a major marine transgression overlying terrestrial organic-rich sediments, in turn superimposed on

older marine or fluvial sediments. The sediments contain abundant organic material that suggests that analysis could provide a detailed picture of palaeoenvironmental change. It is likely that the bulk of the later sediments date to the Middle to Later Holocene. The earlier underlying marine sequence of sands, may just possibly be remnants of a Pleistocene 'warm stage', and as such could be of considerable importance to our knowledge of the Pleistocene history of East Kent.

Four main areas of ancient activity were located. Of these only one (Area 4 at Each End) represented an archaeological site on the line of the new road. This site was subsequently excavated prior to road construction (see below).

However, two or three other possible settlement sites are almost certainly indicated from this work. These are either just off the route of the road, probably on adjacent higher ground, or are perhaps sites that have been totally ploughed out, or otherwise destroyed.

Features located at Area 1 (fig. 16) were probably medieval or post-medieval field boundaries. Although no finds of these periods were evident in association, most of the recovered material, spanning the prehistoric and Roman periods, was abraded and worn, probably residual. No other observations made in this area suggested that the route transversed any in situ settlement. The finds

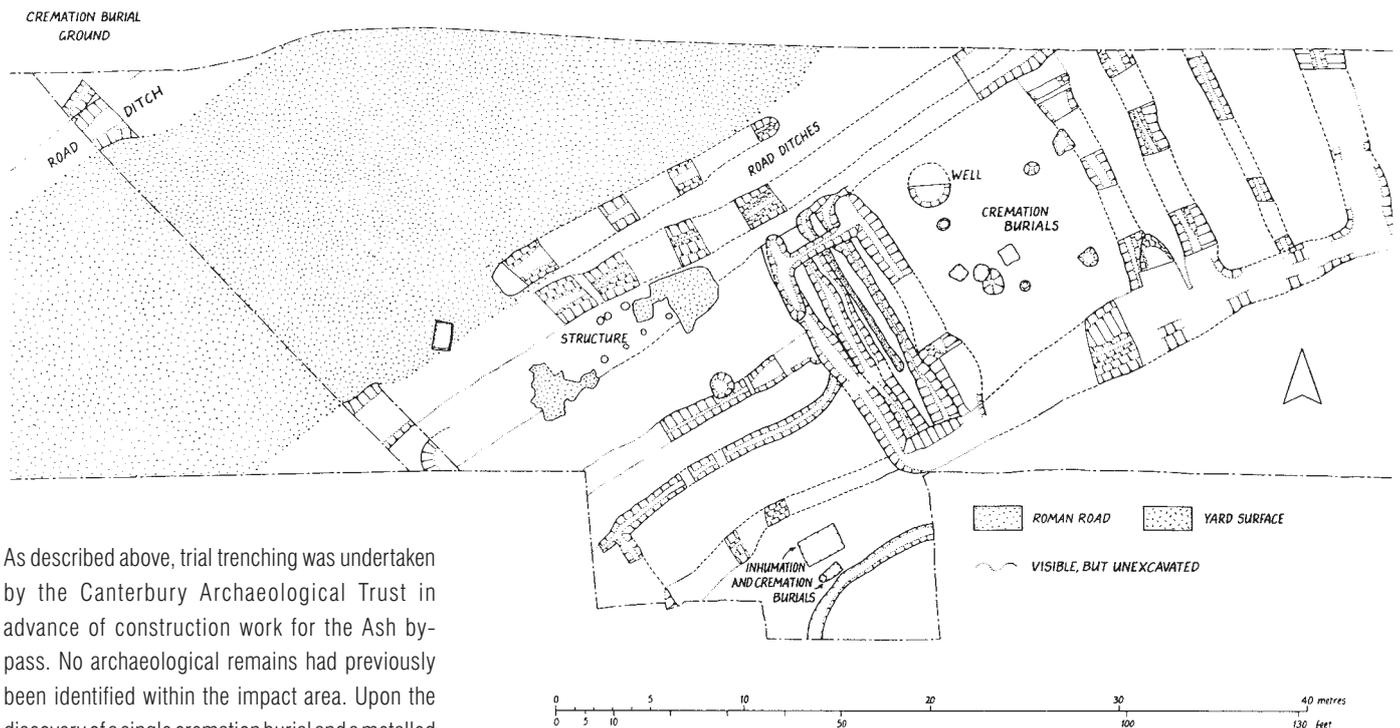
however, as well as those located at Area 2, which may be related, suggest a palimpsest settlement or settlements close by, perhaps on the slightly higher ground to the west of Area 2 (TR 273585) or south of the burial mounds mentioned above. Periods of occupation, perhaps starting at the Late Bronze or Early Iron Age transition, up to mid third-century Roman are indicated by the ceramics recovered.

Although the area traversed by the road between Molland Lane and Cop Street Road (TR 286591) is perhaps a likely place topographically for ancient habitation, very little evidence for occupation was uncovered apart from one or two stray finds. However, this elevated plateau is fairly broad and it is still possible that sites exist here, either north or south of the new road alignment.

One other area of likely ancient settlement is indicated by the scatter of finds from Area 3, west of Cooper's Lane (TR 294586). The precise location of any occupation sites here is however, very difficult to assess.

## 20 Each End, Ash

Alison Hicks



As described above, trial trenching was undertaken by the Canterbury Archaeological Trust in advance of construction work for the Ash bypass. No archaeological remains had previously been identified within the impact area. Upon the discovery of a single cremation burial and a metallised surface within one of the trenches, suggesting the location of a site of archaeological significance, a broad area of topsoil was stripped in order to determine its full extent. The site subsequently revealed contained much of interest including the line of a Roman road, two cremation groups and a complex sequence of linear features. Excavation was therefore undertaken between April and July 1992 to investigate that part of the site which lay within the path of the road scheme. The work was entirely funded by the GC Department of Highways and Transportation.

The occupation uncovered upon the site was principally of Roman date. However, towards the east of the area a sequence of gullies was excavated from which only daub and worked flints were found, suggesting a prehistoric date.

In addition, thirty-one sherds of prehistoric pottery were recovered, although most were residual within Roman features. Also residual within later

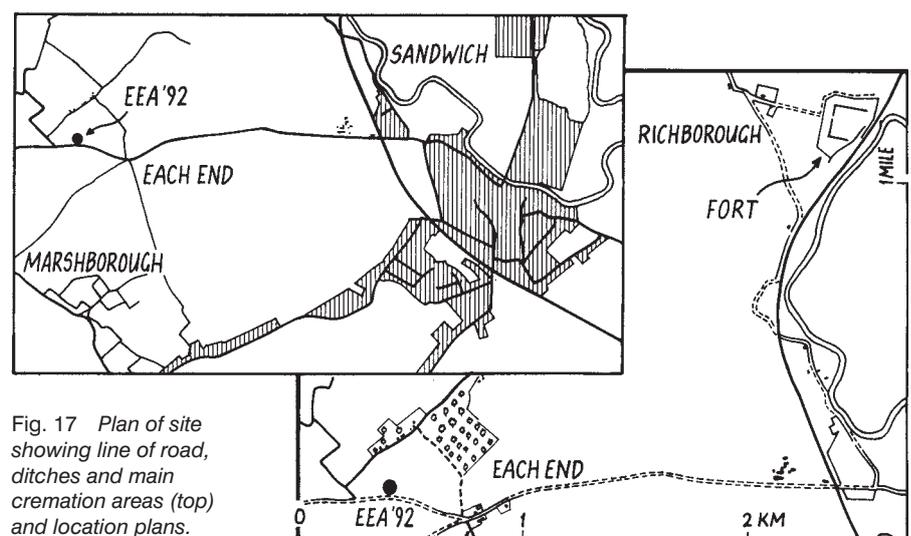


Fig. 17 Plan of site showing line of road, ditches and main cremation areas (top) and location plans.

features were a flint axe and a barbed and tanged arrowhead. Towards the west lay a broad, linear ditch-like feature, up to 1.70 m. in depth and of a length not bounded by the excavation area. It was cut by a number of gullies of certain Roman date and

yielded a single Iron Age pottery sherd. Curiously, the ditch was filled with a succession of apparently waterlain silts, perhaps indicating that it had been cut for drainage and gradually became backfilled as material slowly trickled into the sides.



PI. XXI General view showing road and slots through road ditches.



PI. XXII Cremation burials.

Roman occupation was extensive across the entire excavation area. The most prominent feature was a road and its associated drainage ditches. Constructed from a broad band of compacted metalling, it was aligned in a roughly northeast–south–west direction. Running parallel to north and south were a succession of ditches, cut to assist with drainage from the road surface. These had undergone numerous phases of silting up and recutting suggesting that for a time the road was well maintained. This was also confirmed by a number of metalling patches. Although of substantial width, the depth of metalling was insufficient for this to have been a major Roman road. It could not have supported any volume of traffic. Heading directly towards Richborough castle, located on the opposite side of the Wantsum channel, it may have provided a link with the Roman fort perhaps via a ferry crossing. However, this link would have taken the form of a local trackway, probably connecting small villages or farmsteads, rather than have supported vast marching legions. Towards the south-west the road may have met the junction of the Canterbury and Dover roads running off to the west and south respectively.

Lying on either side of the road were two groups of cremation burials. Those to the north, the smaller group, were heavily truncated but those to the south principally intact. In all, fifteen cremation burials were excavated, yielding a total of forty-nine pottery vessels, including one lamp. One cremation had no ceramic remains, but instead appeared to have been placed in a bag and then into a wooden casket. Though bag and wood had decayed, the corroded iron nails of the casket remained in place surrounding a central mass of cremated bone. With one exception, all the cinerary urns exhibited characteristics of a type known at Canterbury as 'Native Coarse Ware', generally dated midsecond to third century A.D. with an emphasis on the late second to mid-

third. Numerous Samian vessels were contained within the burials, mostly dating to the mid to late second century. Also present were Rhenish rough-cast colour-coated cornicerimmed beakers of similar date and cupped ring-necked sandyware flagons, probably made at Canterbury and generally dated mid second to early third century.

In addition to the pottery vessels, a single glass beaker and a number of metal objects were recovered as grave goods from the cremation burials. Some of the burials had the remains of hobnails lying at the base of the grave suggesting that the occupants were buried with their boots. Analysis of the cremated remains has determined that all the burials were of adults. Curiously, burnt pig and bird bones were recovered from amongst the remains, suggesting animals were placed on the funeral pyre, whilst the skeletal remains of a small rodent were also recovered from one of the cremation urns, the mammal probably using the vessel as a nest.

A single inhumation burial was also excavated, largely decayed and only consisting of fragments of the skull and longbones. The body had been laid within a wooden coffin, also decayed but with the staining still visible, set within a deep, narrow shaft in turn cut into a massive, outer rectangular cut, 2.90 m. by 1.50 m. in plan and 2 m. in depth. The body was that of a woman, aged between 35–45, possibly of high status to judge by the size and nature of the grave.

Associated with the road and burials was evidence of a small Roman settlement, probably a farmstead. In addition to a hearth, three wells and numerous rubbish pits, evidence of a small timber structure was revealed, surrounded by a cobbled yard surface. This small building had been positioned above the line of the primary road ditch which appears to have been deliberately re-

aligned slightly to the north to allow this structure to be inserted.

Initial assessment of the pottery retrieved suggests a predominantly later second- to third-century date for the settlement. Only a tiny proportion of the ceramic assemblage was of late first- to early second-century date, principally of a few sherds of Samian and fine grey Upchurch type ware. The later second- to third- and fourth-century material consisted in the main of reduced and oxidised coarse sandywares (mainly in the form of angular and roll-rim jars) and Native Coarse Ware, both predominantly of late second to third-century date. Other coarsewares included Black-burnished Ware 1 and 2, late Roman grog-tempered ware, shelly ware and German Mayen ware. Finewares included late Eastern Gaulish Samian (late second- to early third-century), Nene Valley and Oxford colourcoats of the mid third to fourth centuries, probable North French sandyware and Central Gaulish 'Rhenish' colour-coats of the mid second to early to mid third century. Of particular interest among the miscellaneous coarsewares was a group of moderately coarse silty sandywares, often containing abundant fine white mica and sparse to moderate ferruginous inclusions. Both pale oxidised and reduced versions occurred and may represent a local centre of pottery production.

Apart from the pottery, finds recovered during the excavation were few in number. The majority of the copper alloy, lead and iron objects were simple domestic pieces including buckles, brooches and the ubiquitous nails and fragments of strips and sheets. Of particular interest was a copper alloy cheek piece from a horse harness, inlaid with enamel. Bone pins were also recovered as well as a single fragment of jet. Of the stone fragments, a small number of quern pieces indicate local domestic activity whilst fragments of Carrara marble perhaps indicate trading and localised wealth.

Pl. XXIII *Cremation burial.*

Much of the occupation activity was concentrated towards the south-west corner of the site and could be seen to extend beyond the boundary of the excavation area, suggesting perhaps that only

the corner of the settlement was clipped and the remainder lies further up the hill slope, upon drier land, to the south-west. This suggestion is further supported by the mass of intercutting gullies and ditches which were uncovered, many with sloping bases to channel water away from the settlement. Complicated sequences of cutting and recutting were demonstrated, some apparently to clean out the gullies, others to change the direction of flow, in some cases the gullies being deliberately blocked by the deposition of rubbish, and in one case large flints. One of the ditches had the articulated skeletal remains of a dog lying within the base. It is possible that as the settlement expanded, more peripheral areas lower down the slope and closer to the Wantsum channel were subsequently occupied but required extensive drainage systems, constantly maintained, to remain habitable.

Evidence of late or post Roman occupation was slight. Small quantities only of distinctively

fourth-century pottery were recovered. That some sort of local activity persisted into the second half of the fourth century was suggested, however, by the presence of a few sherds of late Roman shellyware, mainly from a gully fill. An extensive deposit of dark loam overlying the line of the road metalling, indicating a build up of earth following the period when the road ceased to be maintained, yielded numerous coins dated to the fourth century A.D.. Thus it is probable that the line of the road, although not the actual road metalling itself, continued in use as a trackway throughout a part of the fourth century and possibly beyond but the settlement itself was probably abandoned well before the end of the Roman occupation of Britain in 410.

Post Roman occupation was represented solely by a few fragments of Anglo-Saxon pottery recovered from the topsoil.

## 21 Cobham College Gardens

Martin Hicks and Alison Hicks

Pl. XXIV *Garden into which trenches were cut, with Cobham College in the background.*

The village of Cobham lies along the B7009, an access road leading from the main A2 Dover to London road, on a northern escarpment of the North Downs. In March 1997 an area of land within the village (at TO 66856890) was considered for development within the vicinity of Cobham College, a structure originally founded in 1362 by Lord Cobham as a chantry or small college of five priests. The plot lay immediately to the east of the standing college buildings, dating to 1598, and north-east of the ruins to a kitchen range, dating to 1363 and a part of the original chantry foundation. It lay within a walled area possibly originally incorporated as part of the college.

Evidence of habitation since prehistoric times is present within the locality. Standing stones dating to the pre-Roman period were alleged to have stood in Battle Street and been removed by local farmers in 1773. The remains of an oppidum lie within the area of Cobham Park where a hoard of 836 Roman coins was discovered in 1883 whilst the line of Roman Watling Street flanks the northern side of the park. The church in Cobham has a section of four Roman tiles built into the chancel arch suggesting Roman occupation within the vicinity.

Due to the proximity of the church and college buildings and the known areas of archaeological

significance within the locality an assessment was undertaken in August 1992 by the Trust to determine whether any archaeological remains would be affected. Four trenches were excavated by machine within the proposed development area, varying from 5 m. to 30 m. in length and all 1 m. in width. Each trench was machined to a depth which exposed the natural drift geology, a dark orange brickearth, lying between 1 m. and 2.30 m. below the surface of the topsoil.

The only features discovered were the foundation remains of Victorian terraced housing and a number of associated post-medieval rubbish pits, cutting into a barren deposit of medieval loam. This had formed over the centuries and probably indicates that the area had long been used as gardens or orchards. Of interest, however, was the discovery that the foundations of the enclosing wall were continuous with those of the college buildings immediately adjacent. Access into the gardens from the college buildings was found to have been gained via a doorway, now blocked, within the east wall. It was therefore clearly demonstrated that the walled garden was an original part of the college grounds.

# 22 Maidstone Barracks

Mark Houlston

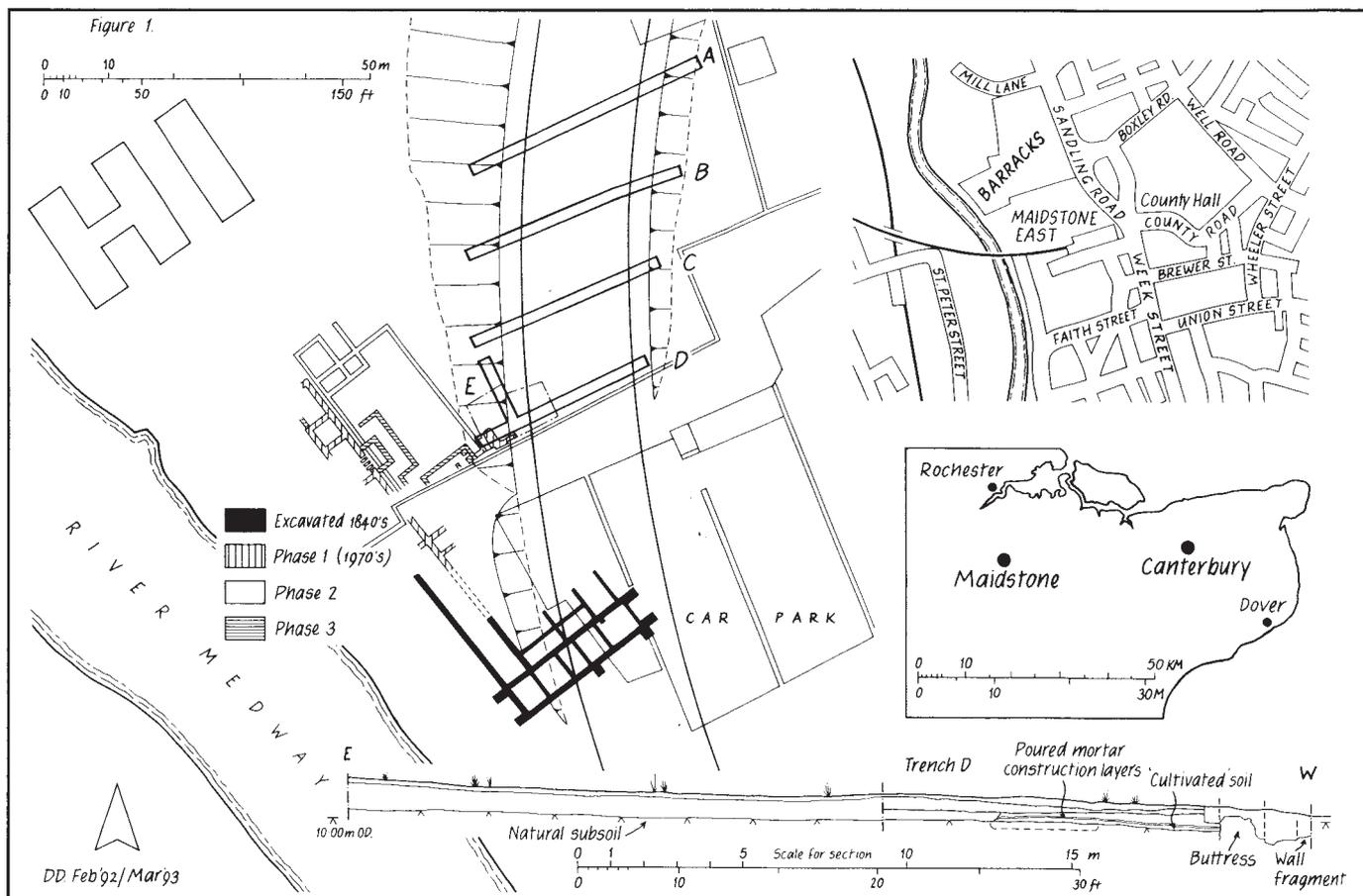


Fig. 18 Location plan and site plan.

During the first two weeks of December 1992 an excavation was conducted in the southern corner of Maidstone Barracks (T0756564) close to the site of a known Roman villa. This work followed an archaeological evaluation of the area undertaken by the Trust during January 1992 (C.A.T. 1992) as part of an assessment of potential sites along the proposed Maidstone Spine Road. The evaluation revealed intact Roman deposits in the south-western corner of the Barracks, close to areas containing known villa remains. The objectives of the excavation were to determine the full extent of these deposits and to excavate fully the areas in which they lay. Only masonry walls of a substantial nature were to remain in situ, if only when it could be demonstrated they would be unaffected by the road scheme.

The earliest excavations in the area took place in 1844 (Charles 1847, 86-9) when a range of rooms was uncovered, along with a corridor that ran northwards from the west end of that range. It was suggested that part of a four-sided villa had been discovered, and that the central courtyard, north and east ranges lay in unexcavated ground north of the original discoveries. Large masonry

projections bonded with the external walls of the exposed fabric have since been identified as buttresses. Further excavations were undertaken during the 1970s (Kelly, in preparation) when more of the western corridor was revealed, as well as a possible second courtyard to the north. Kelly identified three main structural phases, the earliest of which consisted of a range of rooms continuing the line of the western range of the earliest excavation. Some of these rooms appear to have been heated, possibly indicating the presence of a bath-house. During the second phase the northern courtyard was created with the addition of an eastern boundary wall and rooms to the north. In the third phase additional rooms seem to have been constructed within the courtyard. The main villa ranges are now covered with nineteenth-century railway spoil and a modern car-park.

The site, which was located in two parts on either side of evaluation trench E at its junction with evaluation trench D, lay on a gently sloping shelf of Atherfield Clay overlooking the River Medway (Fig. 18, Section). Numerous springs were located in the area, and because of this the ground was wet and boggy. The site was fully excavated, and

revealed an interesting sequence of both pre- and post-Roman deposits, as well as those associated with the villa itself.

The excavation did not produce evidence to suggest occupation prior to the first century A.D. By the second century however, and probably earlier, the area had been cleared and the cultivation of crops was taking place. Evidence of root action and worm activity was visible in the 'cultivated' loam.

This period of activity was brought to an end by the construction of the villa, two walls of which were uncovered during the excavation. These walls, probably the north and east buttresses of the north-east corner of the main villa range, were previously exposed by Kelly during trial trenching undertaken in the 1970s (Kelly, in preparation). They were assigned by him to the first of the three main structural phases then identified. Pottery recovered from the recent excavation suggests the villa was built in the mid to late second century. The buttresses were trench-built and consisted of ragstone blocks set in light brown sandy mortar. During their construction an irregularly laid sequence of poured mortar layers built up in

the surrounding area. Fragments of ragstone and Roman tile were found in the mortar, as well as the casts of two short linear objects with rectangular cross sections, perhaps timber battens used in the construction process.

After an indeterminate period of time a subsidiary series of walls was built north of the main villa range - most of these have been assigned by Kelly to the Phase 2 structure. Only a small fragment of the foundations of one of these walls (seemingly the southern corner of the main east wall) was uncovered during the excavation. During the occupational lifetime of the building surfaces of coarse gravel built up north of the mortar

construction deposits. Perhaps these surfaces formed the end of a trackway that ran along the outside of the second phase east wall.

Ceramic dating indicates occupation in the area continued well into the fourth century. Rain washed 'pea' grit built up over the last of the external surfaces, and over this was dumped a thick deposit of loam mixed with building demolition rubble. No later Roman, Anglo Saxon, or medieval deposits were identified during the excavation.

The deposit of loam and Roman demolition debris was truncated in the later half of the nineteenth century during the cultivation ('turning over') of

the overlying soils. At this time the area fell within the grounds of the cavalry barracks, and the 'cultivation' may have taken place in the garden of the Warrant Officer's house that is known to have stood nearby. A small number of features was also truncated by this activity. Later, perhaps during the infantry training exercises that were conducted at the barracks during the Second World War two series of east-west aligned trenches were cut through the 'cultivated' loam. These were quickly backfilled with soil gathered from the surrounding area. A few modern features cut through these backfilled trenches.

## 23 St Rumwold's Church

Martin Hicks



Pl. XXV *The church, trench and environs.*

Between November and December 1992, a watching brief was maintained during the construction of a modern drainage system at St Rumwold's church, located near the village of Bonnington, Kent. The church lies on the northern reaches of Romney Marsh (at TR 05743443) and

is accessible via a single trackway off the B2067 road from Hythe to Tenterden.

The church structure is predominantly Norman. The chancel is largely of this date although elements of the fabric appear to have been added when the nave was widened during the fourteenth century. The roof is supported by a fine series of crown posts and above the western door are the remains of a timber gallery and upper stairway. The dedication of the church to St Rumwold may indicate that the foundations of the church pre-date the standing building. Rumwold was the son of a Saxon King of Mercia. He was canonised because he allegedly cried "I am a Christian" when he was born. Unfortunately, the young child died three days later.

The watching brief consisted of recording the stratification within a trench 40 m. long and 0.70

m. deep, extending out from the eastern wall of the church and then making a return to the south. It was dug by a local contractor with help from detainees at HM Detention Centre, Bonnington, engaged on a day release programme.

A total of five layers were noted within the trench, none of which had any archaeological value. The exposed stratification showed that the church was constructed on a small knoll of natural brickearth, with an incline from the south to the north. Above this was a sequence of loam deposits abutting the southern edge of the natural incline. The nature of the inclusions within these loams suggested that they were laid during the construction of the Royal Military Canal, built between 1804 and 1806 and lying 40 m. from the church building.

## 24 Longport House, Folkestone

Barry Corke

As part of the continuing expansion of the Channel Tunnel terminal at Folkestone, the Trust was requested to undertake a four week programme of trial trenching ahead of the construction of a new Police Station within the grounds of Longport House, located beside the A20 between Cheriton and Newington. On the land associated with the farmhouse were some ramshackle outbuildings (modern cedarwood sheds) and a fairly large garden.

The site is situated on the lower slopes of Newington Hill at an elevation of about 65 m. O.D. and was bounded by the A20 Ashford Road to the south, a Eurotunnel access road (Access 9) to the west and a railway cutting to the north and east. These boundaries defined a triangular plot about 1.25 acres in extent. Just over half this area was available for excavation.

The required preservation of all trees and large bushes on the site slightly hampered the work

but over 380 m. of 1.50 m. wide trench were cut by machine. This investigation constituted Phase 11 of the Longport House project, with Phase 1, the initial recording of the historic building, being completed by Rupert Austin in July 1992.

In all, some 124 contexts and forty-nine soil-cut features were recorded. These ranged in date from the Medieval period (c. twelfth century) to the twentieth century and comprised principally a series of pits, ditches and post-holes. In the south

and east areas the earliest phase of occupation was represented by five ditches and one small pit, yielding sherds of medieval date (A.D. 1125–1325). A long period of ploughing then ensued which truncated the ditch tops. This activity seems to come to an end around the middle of the fifteenth century. Further pits and ditches were cut into this plough soil and these produced pottery dating from the mid fifteenth to the mid seventeenth centuries. A second period of ploughing followed, truncating the earlier features, and this probably continued until the mid eighteenth century. A number of later nineteenth- and twentieth-century features were also recorded.

To the west of the house some structural evidence of the development of the farm was recorded.

A masonry outbuilding, integral with the main house, was examined, along with several concrete bases with brickwork additions which probably relate to nineteenth-century cattle sheds. From the structural details recorded within Longport House it is clear that the development of the farmhouse was complex; the external buildings showed similar evidence for continued evolution.

The masonry outbuilding probably formed one element of a house improvement phase being structurally integral and linked for access. During a later phase the two structures became segregated and developed independently. At some stage the outbuilding appears to have fallen into disrepair but was later rebuilt 'in a similar style with the addition of a new brick floor. The building probably

stood until its partial demolition at the end of the nineteenth or early twentieth century.

Longport House itself, has revealed structural evidence dating from the sixteenth century. Finds from the excavated features suggest that the area was in use considerably earlier. A small amount of residual Roman and Iron Age pottery was recovered and it is not impossible that cultivation of this area first began long before the Norman conquest. The excavated medieval features include a series of probable field boundary ditches quite possibly associated with predecessors of the present Longport House. It seems fairly certain that the extant remains represent just one small part of the long agricultural history of the area.

## 25 Harvey Grammar School, Folkestone

Martin Hicks

A member of Canterbury Archaeological Trust conducted a watching brief in the grounds of Harvey Grammar School, Cheriton Road, Folkestone (TR 212367). The project was started in August 1992 when local workmen excavated a trench to hold a water pipe. The overall length of the trench was 11.50 m. with a maximum depth of 0.70 m.

Three layers were exposed during the watching brief. Each yielded finds indicating that the material and stratigraphic sequence belonged to nothing earlier than the nineteenth century. However previous discoveries in the region indicate that the school is located within an area rich in archaeological material. In 1934 a Roman burial group dating to the late first to second

century was discovered in the school playing field. A similar burial group dating to the second century was found in 1953, approximately 50 m. to the east of the school. The nature of the deposits uncovered at Harvey Grammar School suggest that any surviving archaeological layers are at a deeper level.

## 26 Fordwich Farm

Mark Houlston

During the third week of March 1993 an evaluation was undertaken at Fordwich Farm, Fordwich (TH180597) to assess the archaeological potential of an area of the farm prior to its proposed redevelopment. Eight evaluation trenches were dug, the first seven by a mechanical excavator, the eighth by hand. Each was positioned so that it lay as close as possible to the long axis of a proposed building.

Modern Fordwich lies close to the southern limit of the broad alluvial flats that define the flood plain of the Great Stour (Smart et al, 1966). To its south lies rising ground, part of a promontory of land that separates the Stour valley from the narrower valley of the River Lampen. The promontory is capped by river gravels (those of the third terrace) whereas on its north facing slope the sands and clays of the underlying Tertiary strata are exposed. It is the deposition by solifluction of

these strata, in particular the sands of the Thanet beds, which probably helped form the deposits of Head Brickearth mantling the lower parts of the slope. These deposits extend northwards to merge with the bands of river alluvium lining the valley bottom. Head Brickearth was revealed underlying the archaeological deposits in seven of the eight trenches excavated (in the eighth the natural subsoil was not exposed). In one, alluvial gravel was exposed beneath the brickearth, only 0.40 m. thick (trench 6).

The history of the Fordwich area is as long as it is distinguished. An assemblage of Palaeolithic flint implements recovered from the gravel terrace to the south of the modern settlement (TR 180589), comprising crude, stone-struck, hand axes, cores, and flakes, is regarded as one of the earliest ever found in Britain (Wymer 1982). Also on the high ground to the south, a Late Iron Age site has been

located (TR187592, Jenkins 1975). However, no evidence of prehistoric occupation was discovered during the evaluation. This reinforces the assumption that such sites are probably confined to the hills north and south of the valley bottom.

A pit containing pieces of Roman tile, and two cremation groups, were found at three sites close to the Iron Age discovery (Jenkins 1975). This suggests a small Roman settlement may have been located in the area. A Roman settlement (TR 185 604) located on low lying ground to the north of the modern town and river was clearly of a more substantial nature. The settlement lay to the south of the junction of two Roman roads, and was connected by a causeway of rammed gravel on its southern side to what appears to have been some form of quayside revetment. This may be evidence of the port associated with Roman Canterbury that has long been suspected to lie in

the SturryFordwich area near the upper limit of the Wantsum Channel.

The first activity in the area suggested by the results of the evaluation was probably Roman. It was represented by a horizon of possibly cultivated silty clay that overlay the weathered surface of natural Head Brickearth (trenches 1, 2, 5, and 8). Only one find was retrieved from this deposit, a fragment of tegula (trench 2), though a small pit containing a collection of approximately sixty sherds datable to the late first century A.D. cut the horizon (trench 8). The assemblage consisted almost entirely of locally produced coarsewares, cooking pots, storage vessels etc, although some sherds of Canterbury sandyware were also represented. Two other pits were also observed cutting the cultivated horizon (trench 5), but devoid of finds.

Assuming the contents of the trench 8 pit are not redeposited, a number of statements can be made about land use in the area during the early Roman period. Firstly 'domestic' occupation probably took place in the vicinity of trench 8. Secondly this occupation would probably have been contemporary with the agricultural use of the surrounding land. The suggestion that the area was under agricultural production, coupled with the absence of any evidence in the trenches for the deposition of alluvial silts is significant, since the site is presumed to lie close to the upper limit of the Wantsum Channel. The site is at a similar height O.D. to the settlement discovered by Frank Jenkins to the north, so it seems reasonable to suppose that if the tidal inlet did extend this far inland then it occupied a fairly narrow band, located half way between the two sites, centred on the existing river course. Although no Roman roads have been identified in the area the new evidence supports the suggestion first made by Frank Jenkins (Jenkins 1975) that a road may have run from near the occupation nucleus identified by him on the high ground to the south, down the line of Well Lane and Fordwich High Street to run round the end of the tidal inlet, crossing the Stour, and joining either with the large port or settlement to the east or with the main Canterbury road. This road would pass within 30 m. of the small pit found in evaluation trench 8.

The location of Anglo-Saxon Fordwich is more questionable than that of Roman Fordwich. Although numerous documents survive that attest to the longevity of the settlement (it is first mentioned in a document of A.D. 697), and to its considerable importance as a port (from the mid Anglo-Saxon period onwards), it has as yet to be confirmed by

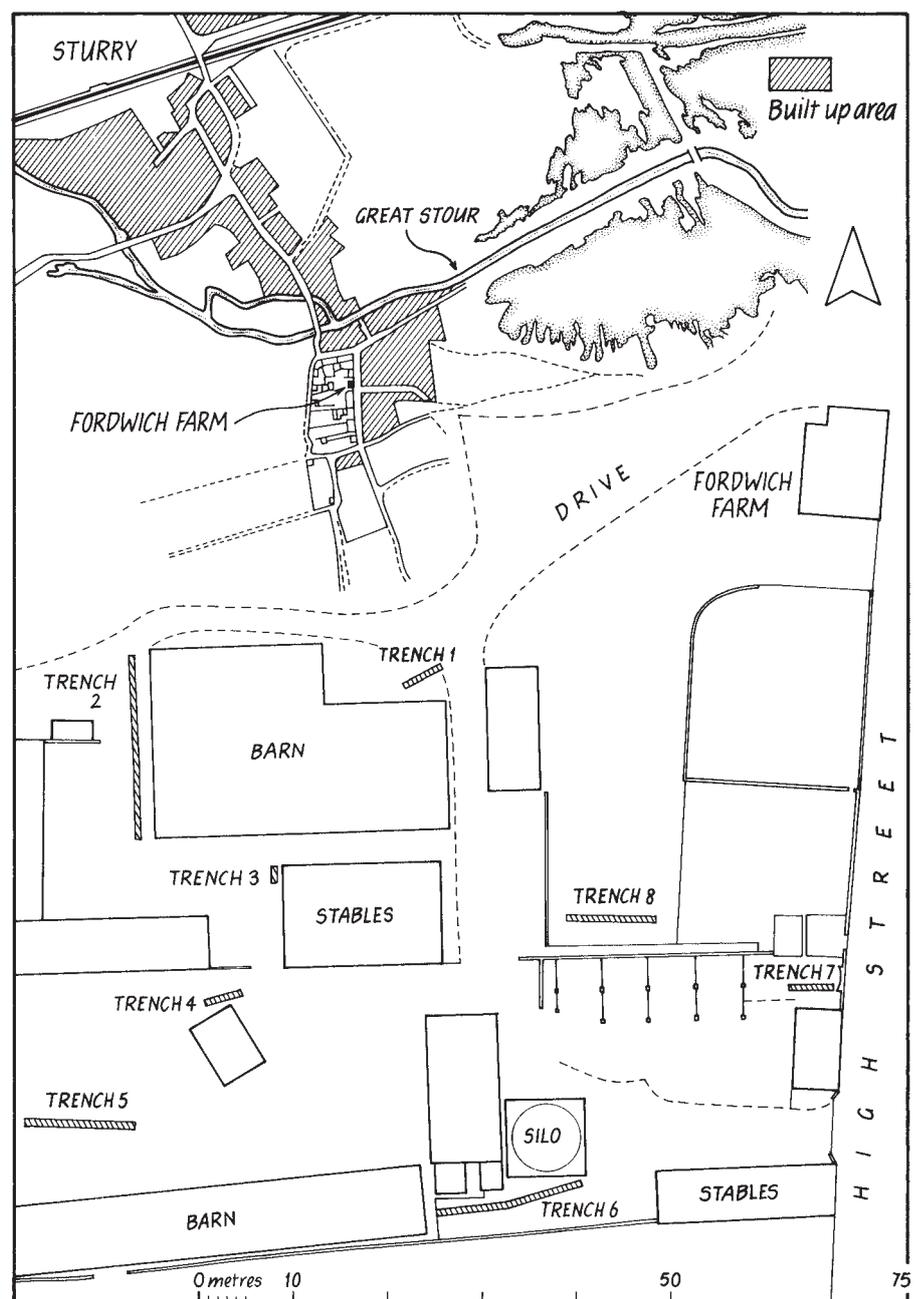


Fig. 19 Site location plan and trench location plan.

archaeological investigation. Two silver pennies of Offa (c. 792–6) found in 1985 about half a mile south of Fordwich church (Archibald 1987) represent the only finds of this period to be made. The site, however, lies close to the proposed end of a mid to late Saxon trackway, the other end of which was identified during excavations conducted near St Martin's Church (Rady 1987).

Nevertheless, no Anglo-Saxon artefacts or deposits were discovered during the evaluation. This important negative evidence possibly suggests the Anglo-Saxon settlement lay on the higher ground further to the west or south-west. Crop marks can be observed in places in these areas but their interpretation is equivocal. Recent work on changes in sea level (Waddelove and Waddelove

1990) indicates that considerable rises took place in the Roman and early Anglo-Saxon periods. This would have had the effect of pushing the areas suitable for settlement, as well as a fording of the Stour, and a haven, further to the west. If alluvial silts did build up over the early Roman cultivated soils they have unfortunately been removed by later truncation.

Fordwich church was probably built in the late eleventh century (Sparks 1975). At that time the Domesday survey (A.D. 1085) records there were 96 mansurae terra (land plots) in the town. The church clearly lies on made up ground which suggests most of the settlement, and indeed the earlier settlements, may have been located on higher ground nearby. Throughout the Middle Ages

Fordwich was held by St Augustine's Abbey. During this period the basic lay-out of the town would probably have been similar to that of the present day, although the topography of the town suggests an additional street may have existed parallel to the High Street linking Moat Lane to the river crossing (Tatton-Brown 1982). This suspected street, now a trackway, passes immediately to the west of the evaluation area.

The character of land use in the area in the medieval period is hard to determine from the results of the evaluation since only in the trench located closest to the High Street were medieval deposits revealed (trench 7). Here the Roman 1 agricultural deposit was not encountered. Instead Head Brickearth was overlain by two relatively clean deposits of dark brown loam. These were cut by a pit situated at the east end of the trench, just 0.80m from the street. It had been backfilled with domestic waste such

as oyster shells, daub, carbon, animal bones, etc, as well as two sherds of early thirteenth century pottery. The discovery of this pit may support the supposition that by the early medieval period the High Street had been established along its present line. On the western side of the excavation no clear evidence of medieval or later occupation was revealed, although this does not disprove the existence of the proposed street on that side. Loam deposits devoid of datable finds overlay the Roman in trenches 1, 2, and 5, and these are probably medieval, although they could also be Anglo-Saxon or post-medieval.

A number of the loam deposits exposed during the evaluation were observed to contain pieces and fragments of postmedieval red brick. These overlay the 'clean' soils tentatively identified as medieval in trenches 1, 2, 5, and B, and Head Brickearth in trenches 4 and 6. This suggests that

post-medieval ploughing truncated all the earlier deposits on the south side of the evaluation area, plus the medieval deposits elsewhere. Trench 7 cut through a wall and a floor of an oast house that was known to have occupied the site until recent times. The makeup layers and yard surfaces which cap the sequence of loams in most of the other trenches contain no material demonstrably earlier than the late nineteenth century. The excavated upper part of the soakaway identified in trench 3 probably filled up with fine silt and waste in the early twentieth century.

The tentative identification of Roman domestic and agricultural occupation in the evaluation area is of great importance. As a result of these discoveries alone all proposed developments around central Fordwich should be archaeologically evaluated, and, if development proceeds, excavated wherever Roman deposits are encountered.

## 27 Reculver Church

Martin Hicks

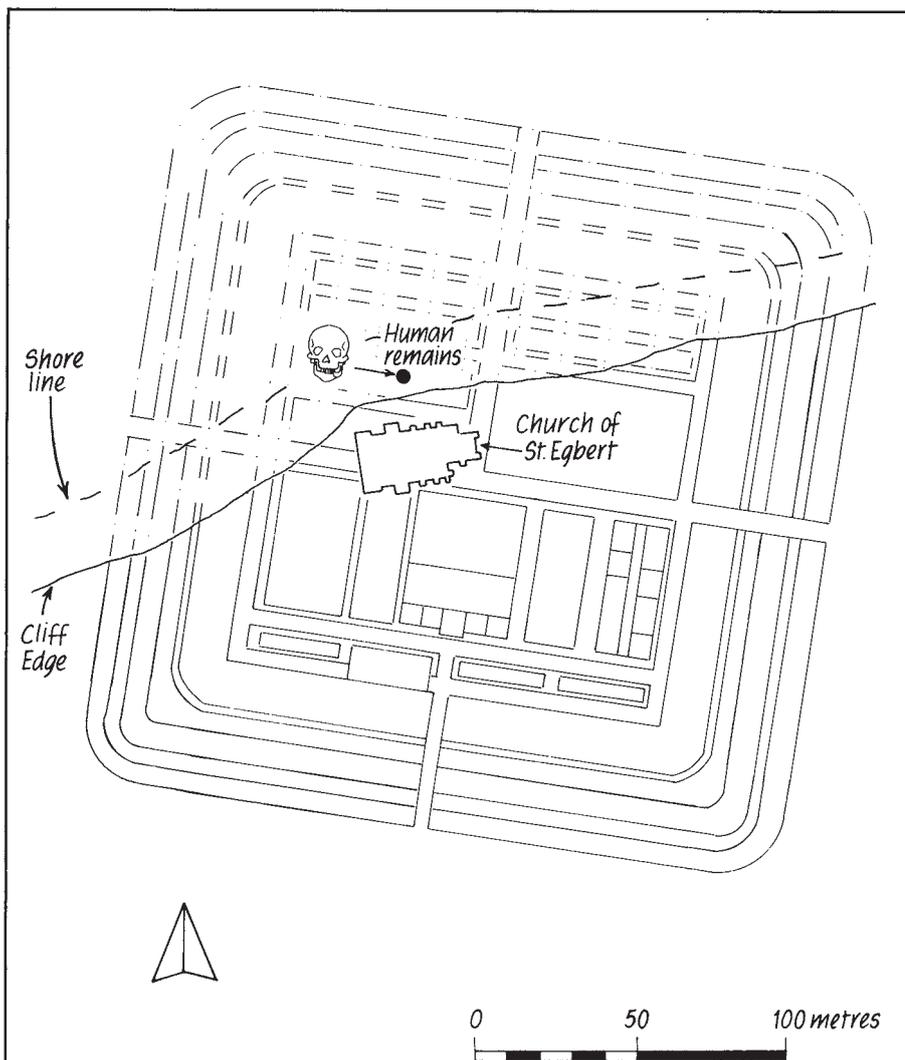


Fig. 20 Plan of church and position of skeletal finds.

A chance find of human remains was made by two members of the public whilst walking along the cliffs at Reculver. Bones were found protruding from a newly eroded section of cliff face near the north-west tower of the ruined church. The remains were deposited with the Coroner's Office at Canterbury Police Station. Following the satisfaction of the coroner that the bones were not recent, the Trust was contacted by the police and were given the remains in early October 1992.

Two members of the Trust visited the spot where the human remains were found, shortly after receiving them from the police. Debris consisting of soil, stone, post-medieval peg tile and animal bone were scattered down the newly exposed cliff face. This exposed area was cleaned, drawn and photographed but no archaeological features were evident. Following osteological analysis on the bones it was revealed that a total of three individuals had been found. These consisted of an adult, a juvenile and a child approximately 4 - 5 years old. There was no evidence of cause of death, but the adult had suffered chronic periodontal disease and the spine belonging to the juvenile suggested that it had been subject to severe strain during its short life.

Although no archaeological features were visible and no dating evidence recovered, it seems likely that the remains belonged to a cemetery associated with the church, a large portion of which has been claimed by the sea. The cohesive pattern of the

buried remains has been greatly disturbed by the eroding cliff, destroying the archaeological stratification and resulted in a number of bones belonging to separate individuals being displaced and strewn down the abraded cliff face. An earlier date is unlikely as the finds spot was within the

internal confines of the Roman barracks, and traditional burial practices dictated that the dead were deposited outside the occupied area.

This recent discovery of skeletal remains highlights the problem of the unstable ground around the

church. Currently the cliff edge is only 2-3 m. from the north-west tower. Eventually the erosion will gradually encroach upon and finally destroy all the standing remains unless action is taken to prevent it.

## 28 Duke's Head Bridge, Hythe

Martin Hicks

The Trust is currently engaged on a five-phase project at the Duke's Head Bridge, Hythe, Kent. The assignment started on the 13th April 1992 and to date four phases of the project have been completed.

Duke's Head Bridge (TR 15803465) is located on the north-west fringe of Hythe, opposite the Duke's Head public house. The bridge, completed in 1806, spans the Royal Military Canal of the same date, a defensive waterway 30 miles long built between Shorncliff in Kent and Cliff End in

Sussex. The canal was excavated primarily to form a physical barrier across Romney Marsh, but also as a means of conveying troops along the coastal reaches and as a supply route for the Martello Towers lining the southern coast from Dover to Hastings. Both the towers and the canal were constructed as a defense against threat of invasion from Napoleon.

In July of 1803, Napoleon started gathering troops at Boulogne with the intention of landing during the winter of 1803-4 and by August an estimated

167,000 men at arms were quartered at the French port. It is thought that Napoleon chose a winter timetable because he wanted to cross the channel hidden in a bank of fog, or after a gale, so that the British naval fleet would be unable to halt the French flotilla.

In 1804 Lt. Colonel Brown, Assistant Quartermaster General and member of the newly formed Royal Staff Corps of Field Engineers, was commissioned to survey the Kent coast by the Prime Minister, William Pitt. Shortly after Lt. Col. Brown submitted

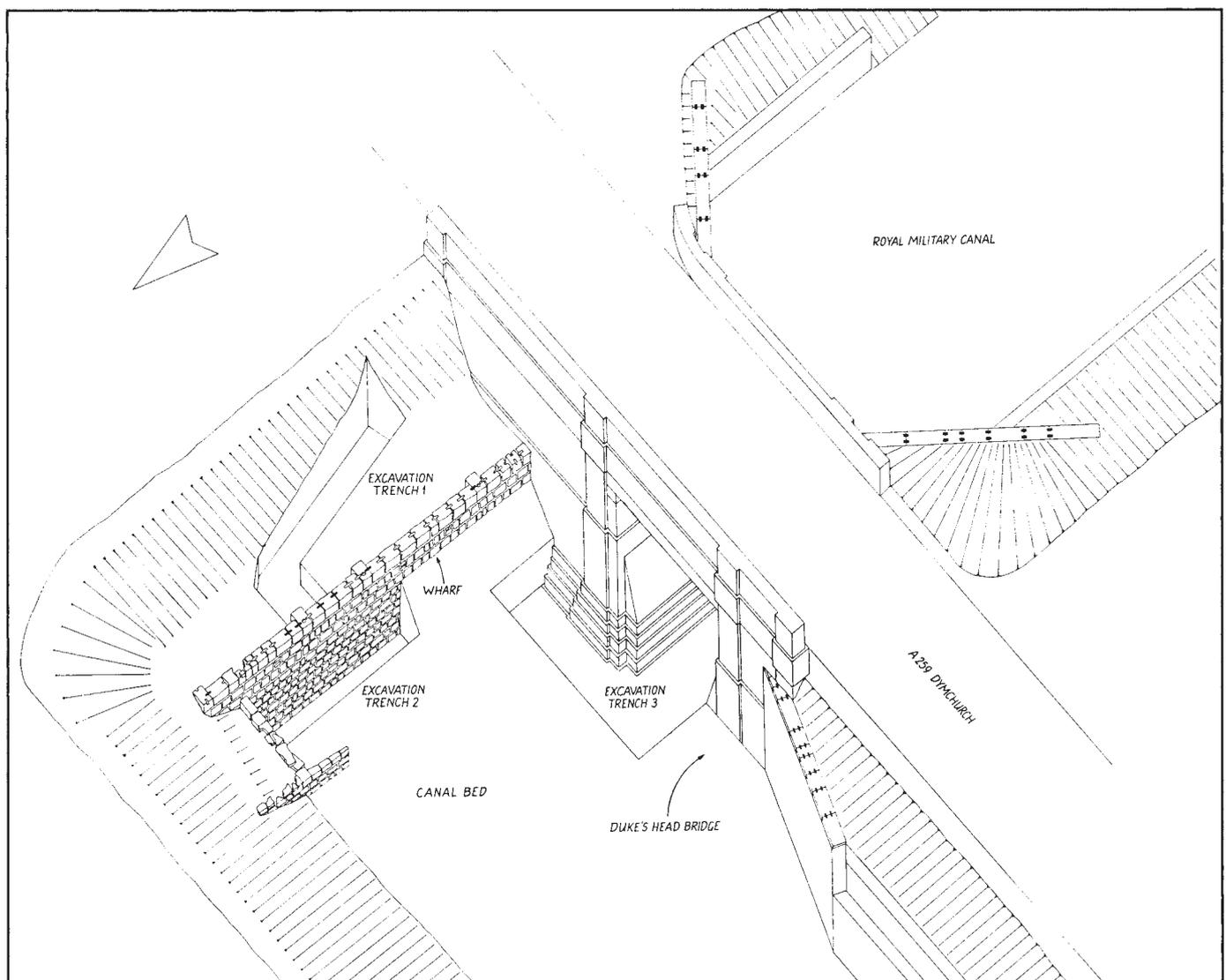


Fig. 21 Composite plan showing bridge, wharf and excavation.



Pl. XXVI *The bridge.*

his report an architect, Sir John Rennes (the designer of Waterloo Bridge), was commissioned to design a defensive waterway.

The result was the Royal Military Canal. The canal was first cut in November 1804 by a private company Messrs Holinsworth, Bough and Dyson, who had just finished building the London and West India Docks in London. However, in June 1805 they were jailed for embezzlement and general incompetence. The project was then passed to the military and, worked on by men from the South Lincoln, Lancashire and Cambridge regiments of militia as well as 500 civilians, the canal was finally opened by the Duke of York in August 1806. It was not fully complete but was serviceable as a means of defense. This vast engineering feat required each labourer to excavate 10 cubic yards of waterlogged gravel every day for five days a week, whilst the militia were employed in building the ramparts, excavating the ditch and building the military road.

The canal was originally 60 ft wide and 9 ft deep with a rampart, ditch and military road. At every third of a mile it was deliberately kinked to provide a small landing wharf for supplies. These positions were defended by 18-pounder cannons positioned on raised banks behind the wharf. The guns had been captured from the Danish fleet at the second battle of Copenhagen and were installed in 1807. The bends in the canal and the position of the guns provided a line of fire down the entire straight length of each quarter mile.

During the life of the canal, the water-way was predominately used for military traffic. However tolls were charged for civilian traffic along the military road and commercial barges were charged by the load. In 1807 twenty barges were licensed to use the canal loaded with freight between 21-38 tonnes, carrying a variety of materials including unburnt limestone, beach gravel (for road repairs), coal, timber and corn.

By the late nineteenth century, sections of the canal had been sold off to private individuals, the National Trust and, at Hythe, to the district council. The canal was again taken over by the military during both World Wars. During the latter conflict substantial gun emplacements were placed on the north bank by each canal crossing, virtually on the same sites as the original Georgian gun positions.

The current redevelopment of the area required the demolition of the original bridge followed by the construction of a larger and stronger canal crossing. Also affected by the redevelopment was a section of wharf which was to be dismantled and rebuilt after the new bridge construction had been completed.

The first part of the archaeological project was to record in detail the original bridge structure. The second was to record the wharf and number each block to be removed during construction, and finally dismantle the wharf itself. The third phase involved conducting an archaeological excavation behind the area of the wharf, along the line of a proposed new sewer pipe. The fourth and fifth phases required a watching brief whilst demolition of the bridge continued and finally an archaeological presence was required during the rebuilding of the wharf.

The detailed recording of the bridge was completed in early June and proved to be very informative. Since the construction of the canal it could be seen that a total of four bridges had been erected at the Duke's Head site. The first of these was a timber swing bridge built in 1805. The original specifications drawn up by Sir John Rennes stated that the abutments should be built out of brick but the Royal Ordnance had expended large amounts of money building the Martello towers which had included the purchase of bricks at enormous prices from Lincoln. Numerous bricks were also used in constructing culverts under the canal. As

a result of the mounting costs in materials, all the bridges across the canal were built solely of timber without brick abutments. The swing gear was on the north bank, designed so that if an invasion force threatened, passage across the canal could be swiftly removed.

This original structure was replaced in 1808-9 by an oak decking. By this date all twenty of the original bridges across the canal had to be rebuilt due to dilapidation and wear. The government paid for the work at a cost of £93,000. By 1810 guard houses were required to be built by each bridge across the canal to prevent smuggling and to protect against wilful damage. These were manned by one non-commissioned officer and eight men.

In 1813 a much larger and more substantial bridge was erected. This was constructed out of brick, with stone abutments. Contemporary records mention the presence of a crane located on the upper bank behind the wharf. The crane was originally installed to build the bridge but was retained for unloading barges that regularly plied the canal. Following the end of hostilities with Napoleon, a new bridge structure, incorporating surviving elements of the former, was built in 1827 from bricks and large Ragstone blocks. It is essentially this structure that has survived up to the present day.

The second phase of the archaeological project involved recording the wharf, a large section of which was to be removed during the laying of a new sewer and subsequently replaced following the completion of the sewer network. The wharf, dating to the construction of the canal, was positioned at right angles to the northern side of the bridge causing a 45 degree bend in the canal line. Only a small proportion of the wharf depth was visible after the canal was dammed due to the build-up of mud and silt at the base of the canal, thus necessitating an excavation trench through these deposits to reveal the entire blockwork. The



Pl. XXVII *Dismantling of wharf wall.*

wharf was then found to achieve a maximum depth of 2.80 m. (2 m. were below the canal silt), with a simple foundation consisting of oak planks set within the gravel bed of the canal. The wharf was constructed from Ragstone blocks, of irregular sizes but neatly cut and faced. A total of 133 blocks was numbered and removed. All the facing stones were toothed and bonded into a solid backing comprising of Ragstone waste and a solid body of mortar. Originally it was assumed that the blocks represented the entire wharf but during the course of the project a small landing bay was identified leading westwards from the northern extremity.

During July and August an archaeological excavation was undertaken on the grass bank behind the wharf on the northern side of the bridge.

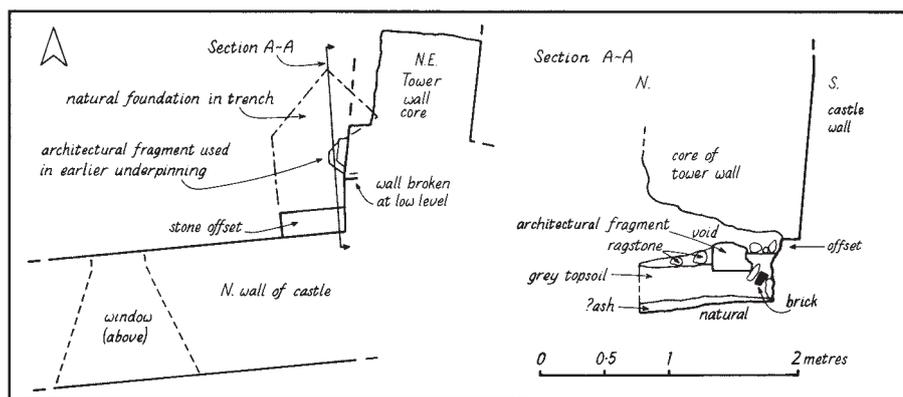
This constituted phase three of the project and its aim was to examine fully the route of a new sewer pipe and manhole shaft. It was found that a series of gravel, clay and loam layers formed the body of the sloping bank behind the wharf. These sealed a substantial deposit of fragmented and miss-shapen Ragstone blocks, presumably detritus from trimming the blocks during construction. Beneath the rubble was pure gravel 3 m. in depth. At the crest of the bank and within the southern segment of the excavation trench was the ruins of a Second World War installation consisting of concrete, steel sheeting and rubble. The structure was positioned at the north-east corner of the bridge and is thought to have been an anti-aircraft battery. No remains of the Georgian gun emplacement, or crane platform, were discovered.

A watching brief between the latter part of 1992 and the beginning of 1993 constituted phase four of the archaeological project. The aim of this phase was to record any surviving fragments of earlier bridge structures during the demolition of the standing bridge. Elements pertaining to the 1809 and 1813 bridges were found. Large portions of brickwork and stone had survived intact from these earlier structures, particularly from the 1813 crossing.

Currently, the final phase to the project awaits the completion of the new bridge. Following its construction, a cladding of stone reflecting the style of the 1827 bridge is to be supervised, together with the reconstruction of the wharf.

## 29 Cooling Castle, near Rochester

Alan Ward



A small trench was excavated below the remnant of the north-east tower, prior to underpinning. At a depth of about 0.25 m., natural chalk was reached, there being no sign of foundation for the wall. It could also be seen that the main northern wall of the castle had no foundation.

Fig. 22 Plan and section.

## 30 Fort Amherst, Chatham

Alan Ward

The complex eighteenth- and nineteenth-century fortifications of Fort Amherst are gradually being consolidated by the Fort Amherst and Lines Trust. The fort is open throughout the year. The highest part of the complex is the Amherst Redoubt, before which is a guardhouse of c. 1810-20 constructed

within an earlier ditch and over the bridge leading to the redoubt. It is hoped to refloor the guardhouse for display purposes.

Clearance of debris within the guardhouse was undertaken to ascertain whether or not there had

ever been an internal staircase. It was found that a wooden floor had always been present but there were no obvious outlines on the walls to suggest a stair

## 31 82a High Street, Rochester

Alan Ward

Contractor's trenching within the garden of 82a High Street and the adjacent area of the staff car park

of Rochester Cathedral uncovered post-medieval brick walls of outbuildings and a stone-lined cess

pit. A further stone wall aligned north-south may possibly have been part of the Old Deanery.

## 32 The Hawkinge/Denton by-pass (A260)

Jonathan Rady

During late September and October 1992, an archaeological evaluation of part of the route of the proposed Hawkinge/Denton by-pass was carried out. The work, implemented according to a specification supplied by the County Archaeologist Dr John Williams, was funded by Kent County Council Department of Highways and Transportation.

The method consisted of cutting a linear sample of trenches along the centre line of the new road and investigating any archaeological remains exposed. The percentage sample excavated varied depending upon the likelihood of the presence of archaeological remains. This was mainly based on a field survey of the route, carried out by the Trust in July, October and November 1991. The linear sample was either 25-30 per cent or 50 per cent. The trenches were excavated using a JCB type machine, utilizing a toothless ditching bucket, which removed the topsoil down to either natural subsoils or the upper surface of archaeological deposits, if present. All unstratified artefacts were kept during this process, their approximate positions recorded and any archaeological features sample-excavated and recorded.

The route of the proposed road lies wholly across elevated chalk downland from the southern escarpment of the North Downs at Hawkinge to north of Denton (fig. 23). The route, in all about 11 km. long, begins west of Coombe Farm, at White Hill, Hawkinge (TR 213406), and follows a north-western course across the former R.A.F. aerodrome, bypassing Hawkinge on the west and crossing the present A260 at Milgate Farm. The route then cuts through the southwestern corner of Reinden Wood, south-east of Densole and continues north to the east of Swingfield Minnis. Just north of Densole the proposed route spurs to a junction with the present A260 at Red House Farm. From Stockham Lane (TR 231441), the route curves north-westward around the east side of Wootton, passing Geddinge Farm on the east and Shelvin Farm on the south-west rejoining the present road immediately south of Broome Park.

Since this work was carried out well in advance of road construction, most of the land, almost exclusively agricultural in use, was still under

private ownership, and often under crop. Generally therefore, work was restricted to fields under arable and carried out between harvesting and new ploughing, although the latter was not always possible. The area of Hawkinge Aerodrome was also excluded, this being subject to a separate contract.

Although the proposed route does not pass through many known archaeological sites, the area is known to be fairly rich in ancient remains. A number of extant field monuments near the route can be tentatively identified as burial mounds of Bronze Age or later date. The most significant of these in relation to road construction are two earthen mounds in the south-western corner of Reinden Wood (TR 21334103). Two other mounds on either side of the A260, just north of Densole (Area 16—TR213424), are also extremely close to the line of the proposed road, in particular the spur connecting with the present A260.

A number of flint scatters, located during field walking also attest to prehistoric activity, broadly of the Mesolithic and Neolithic periods.

Roman activity is suggested at two areas where pottery and Roman tile was in evidence, although this material was worn and abraded and may have travelled some distance from its original point of deposition.

Other areas produced evidence for medieval occupation. At one of these, east of East Lees Wood, a small corpus of Early Medieval pottery and peg tile was located. To the south of this, in two fields immediately north of Stockham, an extensive scatter of peg tiles and tap slag may be indicative of a major industrial site (Areas 7 and 8 TR 23034452).

In all 107 trenches were excavated, most 15 or 20 m. long, providing a total length of trench of 1,925 m.. The areas investigated were: a) between the A260 north of Denton to south of Shelvin Farm (Areas 1 and 2); b) between Dumbrill Hill and West Lees Wood (Areas 3 and 4); c) from the north corner of Park Wood to Oak Hill, Smersole (Areas 7-9) and d) between Boyington Lane and Red House Farm and Pound Farm (Areas 14-16). These areas comprise c. 5,770 m. of the route.

Surprisingly, no archaeological features were located, and only a small quantity of artefacts, all unstratified, were recovered. The material ranged in date from possible Late Bronze/Early Iron Age to medieval and was concentrated in three places.

The spread of tap slag mentioned above (Areas 7 and 8; fig. 23), again produced large quantities of slag as well as medieval pottery. A small corpus of Belgic and Early Roman ceramics was also recovered, suggesting the possibility that the slag may be Roman in derivation.

Areas 14 and 15, immediately south of Boyington Lane (TR 217428), produced small but significant quantities of Belgic and Early Roman pottery as well as possibly earlier material. None of this pottery was evident from the field survey. Area 16, near the tumuli, yielded a small amount of Belgic and Early Roman ceramics.

It is hoped that more work on this project, examining the remaining areas, will take place in 1993.

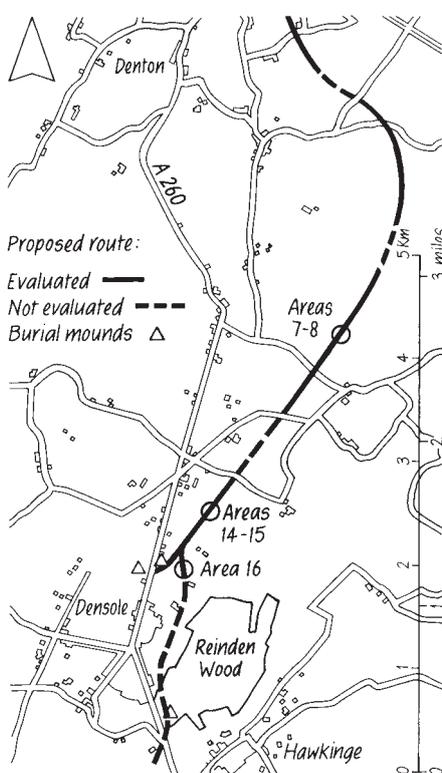


Fig. 23 Map showing evaluated areas.

## 33 Gore Lane, Eastry

Jonathan Rady

Between the 29th and 31st March 1993, an archaeological evaluation was carried out on a plot of land to the west of Eastry (TR305548), prior to possible development as sheltered housing, by Sanctuary Housing Association.

The work, funded by the developers and which conformed to a specification by Dr John Williams, the County Archaeologist, involved topsoil stripping, by mechanical means, at least 2 per cent of the proposed area due for development. This was carried out, in accordance with the Trust's usual practice, and involved the excavation of a number of lines of trenches, spread evenly over the site area, where soil was removed to the natural subsoil or any surviving archaeological horizons and the resulting exposed surface examined for traces of archaeological deposits.

The site, covering an area of approximately 14,250 square metres, consisted of allotments and fields under cultivation, situated immediately to the south of Gore Lane. The site was fairly level at a height of approximately 30 m. O.D.

Although no previous archaeological discoveries had been made in this precise location, an evaluation prior to development was considered to be important because of the richness of archaeological remains in the Eastry area, primarily a number of Anglo-Saxon cemeteries (Hawkes 1982) and a possible Anglo-Saxon Royal Palace (Hasted 1797, 102). The Roman road from Dover to Richborough also runs through the centre of Eastry, just over 500 m. to the east.

A total of thirty three trenches, exposing an area of subsoil in excess of 500 square metres, approximately 3.7 per cent of the site area, was cut by machine and examined. In the event, no significant archaeological remains were located. The only features observed to be cutting subsoil were of very recent derivation and obviously associated with gardening activity. These were mainly concentrated in the extreme north corner of the site.

Few finds were retrieved. These consisted of flint flakes and a few flint tools, and one or two sherds of pottery, all unstratified, having come from topsoil or pressed into the upper surface of subsoil, probably by recent ploughing.

## 34 St Martin's Plain, Cheriton

Jonathan Rady

Between the 11th and 16th November 1992 a parcel of land immediately to the east of the Eurotunnel Exhibition Centre at St Martin's Plain, Cheriton near Folkestone was evaluated for archaeological remains, prior to development by Eurotunnel Developments Ltd. The work, commissioned and funded by the developers, was designed to test the archaeological potential of the site and to determine whether any further work was necessary prior to construction work.

The site lies at the extreme north of St Martin's Plain (TR189369), on level ground at 65 m. O.D. and extended over an area of c. 18,500 square metres. It was bounded on the south by a railway cutting of the main Folkestone to London line, and to the east by a partially backfilled cutting for the

now disused Canterbury to Folkestone railway. The latter area was excluded from the evaluation.

Although nearby evaluation work for Eurotunnel, carried out by the Trust on the site of the Exhibition Centre in 1988 showed that no significant remains existed on that site, the area generally is fairly rich in both prehistoric and later occupation. A number of sites dating from the Late Neolithic to the later medieval periods were located by the Trust on the vast Folkestone Terminal of the Channel Tunnel, just to the north of the present development, in 1987 and 1988. During the same phase of operations, an extensive palimpsest settlement of the Iron Age, Roman and Anglo-Saxon periods was excavated east of Dollands Moor (TR 179372), about 1 km. to the west.

In 1948 an Early Roman cremation cemetery was located, and partially excavated during the construction of the housing estate to the east of the present site (Tester and Bing 1949). Other discoveries made about this time suggest the presence of a settlement of this date in the area.

Fifty-eight trenches, each 10 m. long, were cut evenly across the site area. Topsoil was removed by machine using a toothless ditching blade and the exposed subsoil examined for traces of archaeological features. This provided an examined sample equivalent to just over 5.5 percent of the site area. Apart from modern disturbances and debris no features or finds of any antiquity were located during the works.

## 35 Park Farm, Ashford

Martin Hicks

Canterbury Archaeological Trust conducted a two-phase archaeological project near Ashford in Kent. The assignment was undertaken in an area of open farmland due to be developed into a small new town. Within the 120 acres earmarked for construction are the surviving remains of a medieval moated

farm complex giving the area its name of Park Farm. Previous surveys in the surrounding region have indicated the presence of archaeological sites belonging to the Iron Age and Roman periods, evident in the form of burials, chance recovery of coins and known Roman roads.

The first phase of the archaeological project consisted of a fieldwalking programme over areas that were due for immediate development. The second involved small scale excavation in regions producing significant archaeological finds. The aim of the second phase was to



Pl. XXVIII Plot 13.



Pl. XXIX Flints. Left: Large flake with retouch. Right: Early Bronze Age slug knife. Scale in centimetres.

determine the extent of any archaeological remains and to assess whether further work would be necessary.

### Phase 1: Fieldwalking

The field walking program started on 21st August 1992 and during a seven week project a total of 46 acres had been covered, and numerous surface finds retrieved. Most proved to be related to a mixture of late medieval land drains and activities associated with common farming practices. Amongst the group however, were a variety of Mesolithic flints which including a worked core and several fine blades. Finds such as these were scattered generally across the landscape with no fixed area provenance.

However in September 1992 a field earmarked for residential development, covering a total of 100 m. x 260 m., contained areas of discoloured and disturbed soils. During a provisional search, this area yielded a large quantity of surface finds, including significant amounts of animal bone and a total of nine Mesolithic-Neolithic flint fragments, waste flakes and complete knife blades. As a result, a concentrated recovery programme was undertaken.

The plot of land was divided into five gridded areas, each 50 m. in width, with the aim of isolating and recording any concentrations of finds and thereby accurately locating any possible regions of occupation.

The study area produced 195 fragments of pottery covering a date range between the first century B.C. and second century A.D., and a large collection of Mesolithic-Neolithic flints. Of these,

three were flint cores, twenty flakes and nineteen blades. Two of the blades were manufactured from a flint not local to Kent.

At the close of the fieldwalking programme it was clear that only one parcel of land (subsequently labelled land plot 13) produced significant quantities of finds. The possibility that there was an isolated settlement, confined within this 10 acre plot, resulted in phase 2 of the project.

### Phase 2: Assessment

During October 1992, a small team excavated four trenches within Plot 13. The aim was to assess the archaeological potential of the site.

A total of six shallow ditches and two large pits were recorded cutting brickearth. The brickearth clay appeared to be eroded, possibly indicating a used land surface.

The finds from the brickearth proved significant. In total 145 flint artefacts were identified on the surface. One flint core had markings indicating uni-directional flaking, used for the sole production of blades, whilst another had been reduced by napping beyond the point of usefulness. This indicates that small-scale tool production was being carried out on site. A high proportion of the flint flakes were fresh and untainted, indicating that they originate from a settlement source, and therefore had not accumulated in the area by environmental means or farming practices. Other implements included a tranchet-ended chisel, a saw blade, a prepared graver point, end scrapers, a slug knife, blades and two flakes from a flint not local to the Kent region.

The high number of utilised flakes suggest that many have been used as one-off implements produced for a number of minor task requirements. This evidence of in situ manufacture and usage of tools suggests the presence of an important prehistoric settlement site. Some of the flint artefacts have been tentatively identified to be Upper Palaeolithic in date, but the majority of the assemblage appears to be Late Neolithic suggesting that the main settlement is circa 8,000-5,000 B.C. in date.

The ditches and pits all proved to be Roman in date. A known Roman road servicing the Roman fort at Lympne lies 60 m. to the south. Large amounts of pottery dating between the first and second century was retrieved from the features. The overall impression gathered from the ceramic material and the features indicated the presence of a settlement site and a managed field system. Some of the vessel fragments had traces of pitch sealant, indicating that the settlement was purchasing sealed products. In addition, several of the pottery sherds indicated that they were associated with the regional distribution of salt.

The results of the field walking programme and assessment clearly demonstrated settlement activity within Plot 13 possibly ranging from the Palaeolithic to the second century A.D.. The brickearth is due to be sampled by the Geoarchaeological Service Facility at the Institute of Archaeology in London to assess the nature of the prehistoric land surface. Hopefully the combined results of the assessment and the samples will enable a full archaeological examination of the land to be undertaken prior to development.

## 36 River Stour, near Kennington, Ashford

John Cotter, Nigel Macpherson-Grant, Andrew Savage

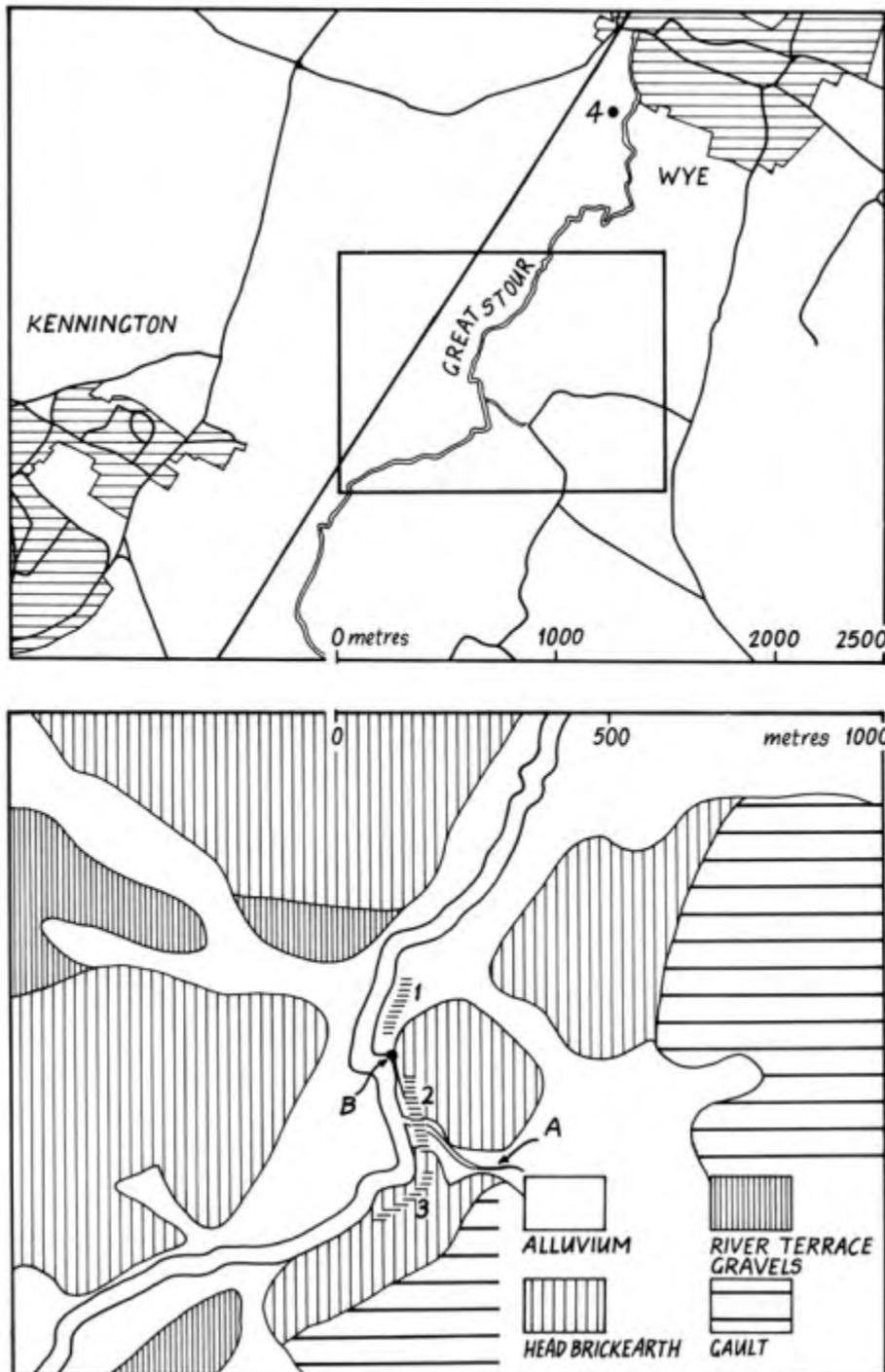


Fig. 24 Finds from the River Stour. Location and (inset) detail of main find-spots.

Examination of the weathered upcast from the fairly recent (November 1992) dredging of the Great Stour, between Kennington and Wye, has produced a considerable quantity of finds with an unexpectedly wide chronological range (Pl. XXX). The upcast had been dumped along the eastern bank of the river and initially sporadic, ultimately fairly intensive fieldwork, principally by Ashford wheelwright, Nicholas Gill, has isolated the main concentrations of material (Fig. 24, Locations

1–4). Other finds from the same locale have been made by Tim Marsh and Bill Sage and the site visited by Trust staff.

The dredging operation has cut through and dumped a variety of deposits.. peat, river sands and fine gravels, and alluvial clays, containing struck flints, pottery, bone, wood and a wide variety of fresh water mollusca including mussels. The upcast is fairly mixed so that the original

relationships between artefacts and deposit-type are not particularly clear, but the initial impression is that most finds are associated with the peat and river sands/gravels. The artefactual material falls into two broad categories. large sherds or semi-complete/ whole vessels representing mostly stray casual losses and smaller more fragmented material more indicative of specific occupation. The former type is generally confined to Locations 1 and 3 with, at Location 1 a complete early medieval cooking-pot, large sherds from a medieval jug and the complete small fourteenth century fifteenth-century bottle, and from Location 3 an intact 'Belgic' grog-tempered vessel, most of a Samian platter of late first-century date and a substantially complete late second- to third-century sandyware jar (Fig. 25 and Pl. XXX). These are all interesting finds in themselves, but technically, the most significant assemblage comes from Location 2, a relatively dense multi-period scatter of finds on either side (mostly the north side) of stream A. These include a Neolithic unpolished axe (point B), a considerable quantity of fresh and patinated flints (mostly knapping waste but including some tools), at least two definite sherds of Beaker pottery, probable Late Bronze Age coarsewares (Deverel-Rimbury-type), a number of bodysherds, bases, cooking-pot and bowl rims of broadly Late Bronze/Iron Age date, some Late Iron Age materials, and a fairly dense scatter of eleventh- to thirteenth-century sherds - some from Canterbury but most representing products from the Potters Corner kiln (?kilns) near Ashford (Grove & Warhurst 1952), as do the larger items from Location 1 .

Interestingly, this multi-period mix of small-medium size, worn and fresh pottery from Location 2 is more frequently associated with upcast river sand and gravels (notably from the stream A north to point B). Immediately east of this area there is a barely perceptible rise in the land, and the conjunction between this, the greater concentration of river sands/gravels and finds, all close to the marked bend in the river at point A, suggests the former presence of a low spur of land (or an islet) now virtually masked by later prehistoric or historic accumulations of alluvium. The chronological range of finds suggests local importance as a forcing point across the Stour and preliminary assessment indicates that during the Late Neolithic/Early Bronze Age transition (c. 2500-1700 B.C.), the Late Bronze/Early Iron Age

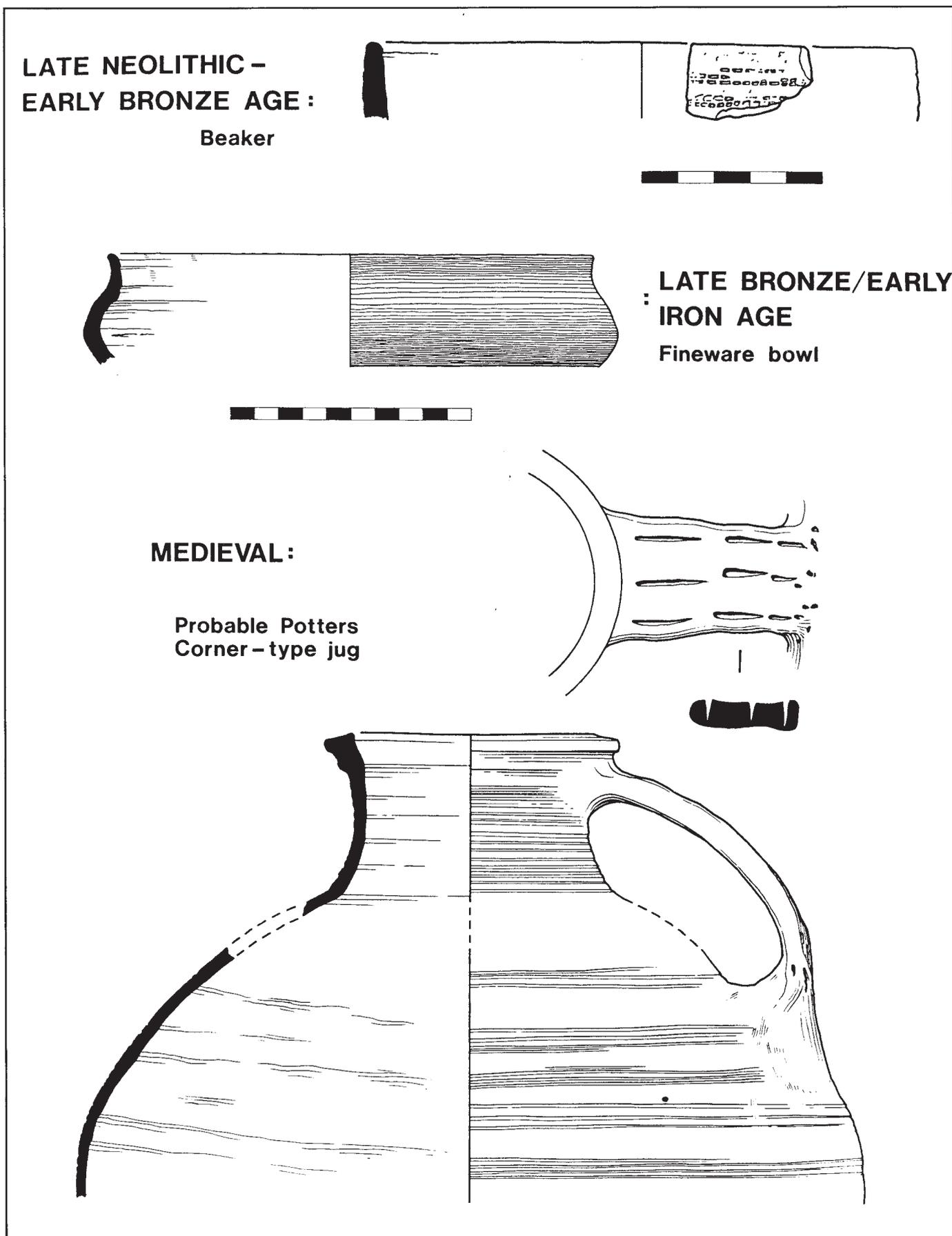


Fig. 25 Pottery from the River Stour, near Kennington, Ashford. (Scales in centimetres).

Opposite: Pl. XXX Pottery and domino from the River Stour, near Kennington, Ashford. Back, left: 'Belgic' beaker and jar sherd; right: Medieval jug top and Late Medieval bottle. Front, left: Beaker sherd, Medieval jug, handle, PostMedieval wooden domino. (Domino, length: 3.7 cm).

transition (c. 800–600 B.C.) and from c. A.D. 1175–1225 actual occupation at or close to this crossing was continuous/semi-continuous. Certainly during the earlier prehistoric period this low spur or islet would have been a more prominent entity close to the river and probably surrounded in part by reed beds and marsh (perhaps even meres) – an ideal wild-fowling ground, with (possibly) freshwater shellfish from the river to supplement a meat and cereal diet. Some of the later more distant finds are clearly casual losses, but intriguing: on a day late in the twelfth century was a woman angry when a small boy ran away with her complete cooking-pot and sank it, as it bobbed in the river, with a stone through its bottom? What lies behind the loss of a single wooden domino, in excellent condition, sometime in the nineteenth century?

The site is an important addition to the gazetteers for, in particular, the prehistoric periods – lowland riverine finds for the periods represented are scarce. Also, generally speaking, we have little detail regarding the later history of the middle reaches of the Great Stour, the formative processes underlying the modern landscape, and its occupation. This broad fairly flat valley basin lying at the mouth of the Stour's deep cut through the North Downs at Godmersham, is a landscape type that regionally is understudied and deserves thorough palaeo-environmental and archaeological assessment and study. Occupation near to a river is not particularly unexpected, and a possible fording-point not really a surprise either; what is significant here is the likely wealth of botanical/environmental data, the strong likelihood of preserved organic archaeological material, possibly stratified, and certainly accumulating as a result of very long-term, albeit periodic, human activity. At present the locale is not threatened by development but as indicators of research potential the site and finds to date are a valuable contribution that should not be ignored.

### The Belgic and Roman pottery

This summary is based on a 'scan' of the material. It has not to date been fully recorded or quantified,

Several hundred sherds of 'Belgic' and Roman pottery were recovered, the vast majority of it concentrated close to and just south of, location 4. In addition to this concentration of material, occasional stray sherds were recovered further upstream, and there was a minor find-cluster at Location 3. The material is overwhelmingly of first- and second-century date, with only a handful of later types. It should be noted that, although dredged from the river-bed, it is generally in good condition and only a handful of sherds are heavily worn in a manner suggestive of river-bed 'rolling'.

Location 4 lies in the immediate vicinity of a previously known Roman hypocaust building situated approximately 24 metres west of the river (Bradshaw 1971, 237–8.1 1972, 233)

The pottery appears to be almost exclusively of late first to second century date. It consists, very approximately, of 50 per cent 'Belgic' grogtempered ware, 15 per cent each of Canterbury sandywares, North Kent Black-burnished ware and fine Upchurch-types, and 5 per cent 'other' wares.

'Belgic' pottery, presumably of local manufacture, is represented by a very limited range of forms, principally large coarseware storage jars, some displaying combed or stabbed decoration. In addition, a few smaller jars and bowls were noted. Canterbury sandywares are represented, with the exception of a few pink-buff flagon sherds, perhaps exclusively by reed-flange bowls of late first- to mid second-century type. The Black-burnished component consists, again perhaps exclusively,

of roll-rim pie-dishes which are mostly decorated with a simple latticeburnished motif characteristic of the mid to late second century. Most of the positively identified fine Upchurch-type wares are late first- to early second-century types, and consist mainly of carinated and barbotine dot-decorated 'poppyhead' beakers.

Other pottery consists, in addition to a small number of coarseware sherds of uncertain origin, mostly of imported samian fineware. This is largely of central Gaulish origin and second-century date, but may include some late first-century sherds. Also found were five or six sherds of other imported finewares from the lower Rhineland, central Gaul and possibly northern Gaul, one sherd of a Dressel 20 olive oil amphora from southern Spain and a few mortaria sherds of south-east English manufacture.

Two sherds of late Roman Oxfordshire colourcoated ware of mid third- to fourth-century date were also recovered. This was the only material from Location 4 that need necessarily be later than second century.

Although all the pottery is unstratified and may well represent partial sampling of different groups deposited over a span of time, a clear chronological bias towards the late first to second centuries is apparent. Although a proportion of the 'Belgic' coarsewares may be earlier, the range of forms and the way in which they complement the forms noted in other wares suggest that they may be regarded as largely contemporary. If one considers the assemblage as a single group, it seems that local consumers may have been importing finewares and 'finer' coarsewares such as the Canterbury reed-flanged bowls and black-burnished dishes while relying on more local production of grog-tempered storage-jars.



# Building Recording

## A Longport House, Cheriton Rupert Austin



Pl. XXXI *Clapsed side-purlin and wind-brace roof over cross-wing.*

The dismantling of Longport House provided the Trust with one of its more unusual and interesting projects of the year. The future of this listed building had been uncertain for several years, ever since construction work on the Channel Tunnel started. Unfortunately the site occupied by this building, located close to the edge of the terminal complex, was due for redevelopment. A new police station was to be built and Longport House would have to go.

A preliminary assessment and survey of Longport House had been completed by the Canterbury Archaeological Trust during the early months of 1993. The historic fabric revealed within the building as a result of this survey was considered to be of sufficient value and interest to justify some form of preservation. At this stage however it was not clear how much, if any, of the building could be saved.

Externally Longport House, which was entirely clad in later brickwork, did not appear to be of much interest. Initial appearances are often deceptive, however, and so it proved with Longport House. Once inside the building, a considerably longer

and more complex history began to reveal itself. The first, and easiest phase of the building to be identified was a mid sixteenth-century timber-framed cross-wing. This element, with clapsed side-purlin and windbraced roof, was attached to the south-west end of the main range. Without further investigation it would have been natural to assume that the wing was a later addition to the main range. However, once later lathe and plaster had been removed it became apparent that the arrangement was not so simple. The cross-wing's former jetty was uncovered, buried at the junction with the main range. Clearly the main range, which now had to be a later phase, was built against the jettied exterior of the cross-wing.

Closer examination of the main range of Longport House however added further complications. With the building partially stripped of later coverings it was clear, from what had been exposed, that the timbers of the main range had an earlier and more 'medieval' feel to them than those in the cross-wing. This obviously conflicted with the order of events suggested quite clearly by the buried jetty. With only part of the framing uncovered at this stage it was suggested that the main range had

been constructed at some point in the seventeenth century using a mixture of re-used timbers from another earlier building together with some new material. The roof, a staggered butt-side purlin arrangement, was certainly built from re-used smoke blackened timbers. It was not until the dismantling was well underway and the framing fully exposed that the complete picture could be unravelled.

Having decided that the building could not be retained in situ, Eurotunnel applied for listed building consent to remove the structure from the site. This was granted on the condition that it should be dismantled and re-erected within a specified period of time at a new location. Tenders were invited for the dismantling contract. In an effort to find a new home for the building, Eurotunnel approached the Weald and Downland Museum. The museum specialises in the dismantling, repair and reconstruction of historic buildings, which they exhibit on an open-air site near Singleton, Sussex. Longport House could provide a much needed improvement for their visitor reception facilities at the museum. Both the Trust and the Weald and Downland Museum were interested in the dismantling contract, and as a result a partnership was proposed.

Two weeks of preparation were available at the end of September, while contract details were finalised, before the dismantling started in earnest. The contract gave the team only eight weeks to clear the site. Obviously with Eurotunnel schedules tied into this project there was no



Pl. XXXII *View to north at the start of dismantling.*



Pl. XXXIII *View to west during dismantling.*



Pl. XXXIV *Longport House beneath the scaffold roof.*

possibility of overrunning the timetable. The Trust has been involved in the dismantling of several buildings in the past, though only their timber frames were recorded and dismantled in detail, to be reassembled as habitable dwellings with much of the lesser fabric replaced, by necessity, in modern materials. Reconstructing a building with the sort of integrity expected of a museum exhibit requires an approach to recording and dismantling that is yet more detailed and systematic. Dismantling such a large building in such a short period of time, whilst maintaining these standards was a daunting task.

The museum provided three personnel, Richard Harris as overall site director and recorder, Roger Champion to supervise and assist with the dismantling and Bob Powell to accession finds and supervise numbering. The Trust provided a team of eight to ten experienced field archaeologists led by John Boulden and Alan Pope.

The dismantling of a building provided an interesting and welcome break from excavation work for the Trust's field staff. It soon became clear that the demands and disciplines of archaeology had provided the team with an ideal training for the

task in hand. Dismantling involves plenty of hard physical work as well as careful and systematic recording. As well as labelling and dismantling the timber frame, nearly nine thousand bricks and stones were methodically numbered and removed from site.

Once progress had been made and a routine established, a lively and spirited atmosphere developed. The expertise and efforts of the museum staff ensured that the site ran to a very high standard. The result was not only an enthusiastic and hard working team but a rapidly



Pl. XXXV *Cross-wing roof during dismantling.*



Pl. XXXVI *Trust staff numbering and removing brickwork.*

diminishing building. A complete scaffold cover, which had been erected over the site early in the project, provided valuable protection against Folkestone's unpredictable climate. This allowed the contract to continue uninterrupted and enabled the team to maintain standards of dismantling that would have been difficult outside in the frequent gales and torrential rain. Much to everyone's relief the site was cleared and every part of Longport House transported to Sussex within the specified time.

During the course of the dismantling a far clearer picture of the development of Longport House

was obtained. The sixteenth-century cross-wing was indeed the earliest standing element of the building. Its 'hall', of which no trace now survives, was almost certainly located to the south-west where there is now only an empty garden. It also transpired that the ground floor of this building was built in stone rather than timber. At some point in the seventeenth century a new range was constructed to the north-east of the cross-wing, hiding the former jetty inside the new structure. Although this new range was added later, its timbers were in fact those of an earlier medieval building that had been dismantled and re-erected. Rather surprisingly this had been done with very few alterations to

its original design, enabling a good picture of its previous form to be constructed.

This structure, which was perhaps built c. 1500, originally comprised a central 'open-hall' flanked on both sides by floored bays. An aisle was incorporated into the rear of the property whilst a continuous jetty ran the length of the frontage. A gallery, which crossed the front of the open hall at first floor level, linked the floored ends of the building. The integral aisle and gallery contained within the structure are certainly unusual features which add considerably to the interest and value of the building.

## **B** 14 Mercery Lane, Canterbury

Rupert Austin



Pl. XXXVII *Exposed framing at rear of property.*

14 Mercery Lane is a typical example of the many buildings recorded by the Canterbury Archaeological Trust. Its initial medieval form has been altered and changed so many times since the building was first constructed that only a small part of its original fabric still survives. Most of the visible fabric dates from the nineteenth and twentieth centuries, though a considerable amount of earlier timber framing still survives, buried within the walls of the present structure. A programme of renovation, undertaken during the spring and summer of 1992, enabled the Trust to survey the property. Although the repairs and alterations were limited, enough of the timber framing was exposed to provide a reasonable picture of the original medieval building which probably dates from the end of the fifteenth century.

The timber frame, which rises to a height of three storeys, runs away from the street frontage. Only the first two bays survive, though a small amount of isolated fabric confirms the existence of a third. There is nothing to suggest whether the structure continued further to the rear. A crown-post roof, which may originally have been jettied and gabled towards the street frontage, survives in part over the first two bays. Unfortunately, with the construction of a new facade and parapet, the roof now terminates in a hipped end. A garret floor was inserted into the roof space, probably a seventeenth-century modification, to provide additional storage or sleeping space.

Rather surprisingly the two surviving tie-beams in this roof space continue beyond the north-east limit of the building for a further 12–18

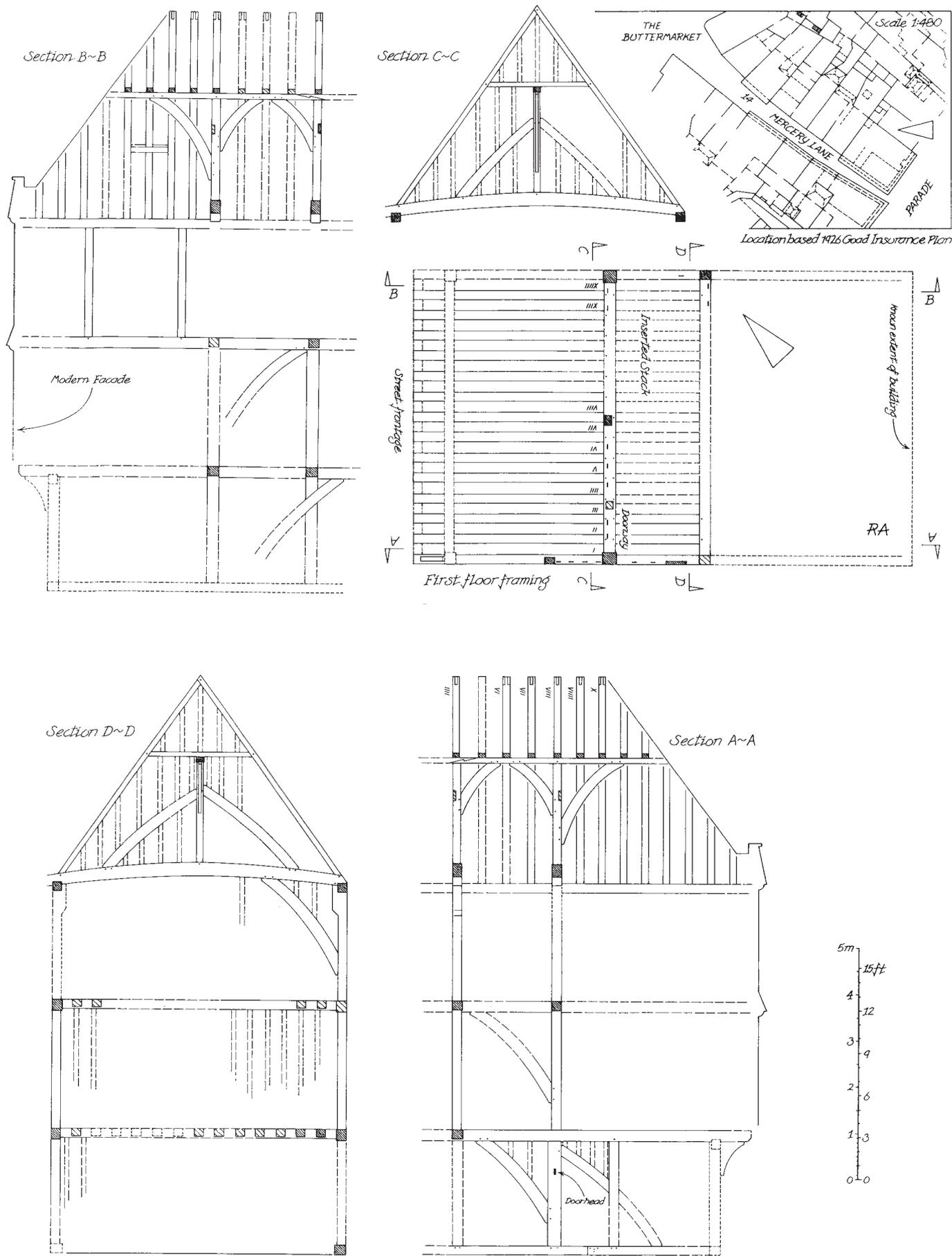


Fig. 26 Plan and sections from survey.

inches. This unusual detail suggests that the property was either contemporary with or built against an existing building to the north-east. In either case a double pile roof with valley gutter has been formed at their juncture. No survey work has yet been undertaken on 15 Mercery Lane and it is not known whether any historic fabric survives here.

Only the floor framing at first floor level was visible. All the floor joists in the first bay survive together with an intact sequence of carpenters marks, however no provision for stairs was observed. Later modifications, in particular the insertion of a

brick chimney stack, have resulted in the loss of all but two of the joists in the second bay.

The front bay at ground floor level, perhaps used for retail purposes, was separated from the second bay by a stud partition. Access to the rear of the property was afforded by doorway located at the south-west end of this partition.

As with most of Canterbury's historic buildings, 14 Mercery Lane has not escaped the ubiquitous face-lift. The street frontage, which was originally jettied on both first and second floor levels has been cut back and replaced with a modern facade

and parapet. Only the jetty at first floor level, now hidden behind later fabric, survives intact. One of the brackets below the first floor jetty appears to remain in situ. Apart from these details no further evidence survives to suggest what form the original medieval street frontage took.

Rather ironically shallow timber planks have been applied to the facade of the building in an attempt to lend it a timberframed appearance, a practice that has become increasingly common in the twentieth century. After nearly five hundred years architectural fashion has finally come full circle!

## C 8 High Street, Canterbury

Rupert Austin

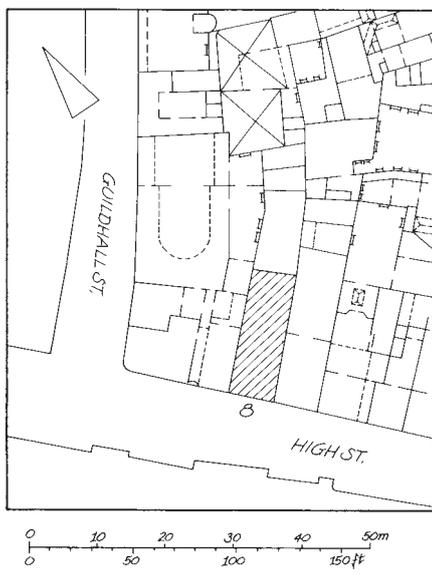


Fig. 27 Location based on 1926 Goad Insurance Plan.

The early fabric contained within the property was first discovered by the Canterbury Archaeological Trust in 1978 during repair works to the shop front. The oak joists and timbers revealed behind the plain nineteenth-century facade and low pitched slate roof of this building clearly belonged to a medieval building. Unfortunately, most of the historic material remained hidden, and it was only possible to record small elements of what was originally a very substantial structure. The opportunity for further recording work regrettably came only as the result of a disastrous fire in the summer of 1992. Much of the building was seriously damaged, though nearly all the surviving timber frame was uncovered as a result of the fire and subsequent repair work. Not surprisingly a considerable amount of this material was severely

burnt and damaged, making its analysis extremely difficult.

In its original form the building comprised a large double-jettied two storey structure set 'end-on' to the street. The second floor was divided into five bays and was almost certainly covered by a crown-post roof. Large sections of the building had already been lost prior to its recent disaster. Many of the buildings on this side of the High Street were destroyed by a great fire on August 18th, 1865. Fortunately this property escaped the worst of the damage, though its roof, which was badly burned, had to be replaced. Considerable alterations were undertaken in the eighteenth century resulting in the loss of the original facade and much of the internal framing. nineteenth-century brickwork now replaces virtually all the framing along the south-east elevation.

One of the most unusual features of this building is the use of double tie-beams at eaves level. The upper cambered tie-beam is framed into the roof structure in the usual manner. Rather surprisingly a second uncambered tie-beam is located immediately below. This additional beam supported a contemporary attic floor, of which only the joists in the rear bay now survive.

This building was clearly built at a transitional time in the development of vernacular timberframed houses. The crownpost roof is clearly a late example of its type, constructed when side-purlin structures were first being introduced. Despite the continuation of an established roof style, it seems that garret accommodation, a more progressive idea, was included in the original design. In

this respect the building is ahead of many of its contemporaries. These two features, which are not wholly compatible and rarely seen together, require the rather unusual double tie-beam assembly, just discussed, to support the floor frame.

It seems likely that the roof originally terminated in a jettied gable over both front and rear elevations. No framing survives along the street frontage, however the arrangement probably matched that of the rear elevation where some evidence still exists. Here it is suggested that the attic joists oversailed the rear eaves plates, in a similar fashion to the jettied floors below, to support a gable end. The relative level of the lower tie-beam and the eaves would facilitate this arrangement.

The north-west elevation, which is the most complete, contains several interesting features. Of these the use of brick infill is the most surprising. In most cases each panel, the space between the principal posts, is divided by three studs and crossed by a substantial tension brace. Small buff bricks, which can only be contemporary with the framing, infill the areas between the timber. The wide spacing between the studs is certainly not designed to support lathes and daub. Additional mortices for further lightweight studs, necessary for lathes, are not present. An offset to the recessed sides of the northernmost post provides for the thickness of the brickwork. These details confirm that the framing was constructed to support a brick infill. This brickwork represents some of the earliest discovered in vernacular use in Canterbury.

Although brickwork occupies practically all the panels, several areas are infilled with the more



Pl. XXXVIII Rear wall at first floor level showing fire damaged timbers.



Pl. XXXIX Back room at first floor level showing remains of Jacobean fireplace.

traditional lathe and daub. This is applied to large, closely spaced studs in the usual manner. There is no obvious explanation for this inconsistency, and it was not clear whether this replaced areas of failed brickwork.

Only the central bay of this elevation incorporated fenestration. A shutter groove, observed above windows elsewhere in the building, is not present here. Small square holes, probably left by forged metal gudgeon pins, suggest that internal hinged shutters were used to secure these windows.

Several scarfs, of the splayed and tabled variety with under-squinted butts, were observed in the building. These suggest an earlier date for the building than is perhaps indicated by some of the other features.

A rough stone dwarf wall, comprising a mixture of chalk, Caen and flint, still survives beneath this elevation. Several areas have been repaired in later red brick, presumably of nineteenth-century date. An early cellar, of possible thirteenth century date, still survives beneath the later building, now forming part of a larger basement. The best area of facing, which comprises a mixture of chalk, Caen and flint, survives along the north-west elevation. A small niche, with Caen jambs and small pointed arch, together with sizeable areas of ashlar are also visible along this wall. Clearly an earlier building occupied this site before the construction of what survives today.

Despite severe fire damage and previous losses, enough of the rear elevation survives to reconstruct its original form on paper. The arrangement of centrally located fenestration, subsequently enlarged to take inserted eighteenth century sash windows, can be observed at first floor level. Rebates on the jambs and centre post indicate

that windowheads, presumably decorated arches, once embellished the openings. The squinted housings for the sills, which were face pegged rather than tenoned to the uprights, are visible on the sides of these posts. A groove to take horizontally sliding shutters is still visible above the openings. Two very low curving braces, similar to those on several other buildings in Canterbury, survive below this fenestration, and arch-braces cross the outer panels from above.

Unfortunately only the lower plate and a fragment of eaves plate survives at second floor level. The details observed on these two timbers are consistent with those recorded below. It seems reasonable to assume that the arrangement was similar.

Only the jetty plate and corner posts survive at ground floor level, where the former jetty has been underbuilt in modern fabric. Access to the rear of the property was provided by a doorway located

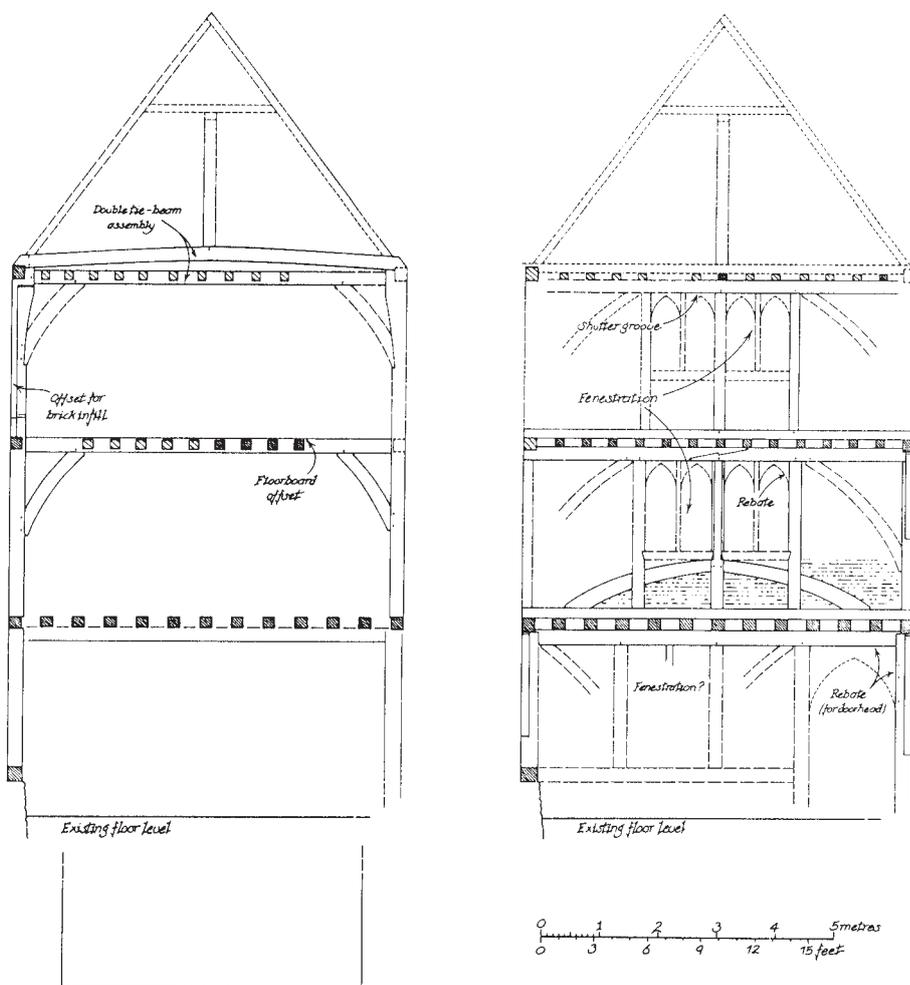


Fig. 28 Sections through building from survey.



in this elevation. A wide rebate, which runs up the easternmost corner post and across the soffit of the jetty plate (which must have continued down the missing door post), once housed a large carved wooden door-head positioned above this entrance. Two more door-frames were uncovered on this side of the building, incorporated into the ground floor partitions at each bay division. These openings were framed with small arch-braces (similar to jetty brackets), providing an opening similar in shape to that of the rear door. It is clear from the positions of these doorframes that a side passage ran from the street frontage through to the rear of the building.

In general the construction of this building, which has obviously been thrown together in a quick and functional manner, without recourse to unnecessary decoration or detail, is solid and substantial. In several respects however the structure, which incorporates some re-used timber, is a little haphazard and inconsistent, for example the arrangement of principal posts and tie-beams (which don't always coincide as they should) or the use of brick or daub infill. For this reason, together with a considerable quantity of missing or damaged timber, interpretation has proved difficult if not impossible in some areas.

The size and weight of the framing, in particular the substantial floor joists, together with the crown-post roof and splayed scarfing all suggest an early to mid fifteenth-century date, but the low tension bracing and particularly the brick infill suggest a sixteenth-century date. Considering these points, a construction date in the last quarter of the fifteenth century seems reasonable, with the brickwork representing some of the earliest found in Canterbury.

It will come as no surprise to learn that since its conception the primary structure has undergone many phases of alteration and addition. These periods of refurbishment have introduced numerous fixtures and fittings to the interior of the property. The first major upgrading of the property appears to have occurred in the seventeenth century.

A fine Jacobean fireplace, probably of mid seventeenth-century date, originally occupied the rear room at first floor level. Unfortunately very little of this survives. The overmantel and much of the lower surround was unfortunately destroyed by the recent fire. Its lavishly decorated pilasters, capped by classical capitals and decorated frieze were typical of the period. A Victorian cast iron grate has been inserted into the former hearth,



PI. XL *Front room at first floor level.*



PI. XLI *Remains of fenestration at second floor level along north-west elevation.*

Another interesting feature is the early balustrade detail around the staircase at first floor level. The turned balusters, which are short and stout, possibly date from the mid seventeenth century though these could be later. Numerous sections of plain seventeenth-century panelling survive throughout the building, in particular around the landing walls up to dado height. This type of panelling is very common, and has been observed in numerous properties throughout the locality. The vertical stiles and muntin pieces are typically scratch moulded whilst the horizontal rails are simply chamfered along their upper arris. Another large area survives in the central room at first floor level with a few smaller fragments surviving on the ground and second floors. It is always difficult to ascertain whether panelling of this type survives in situ or whether it has been re-used from another room or perhaps another building. There is a tendency for it to be looked patched together and cut to fit, even when it is clearly an original feature. This is perhaps because it was fabricated in bulk by an outside supplier to a standard size. Once purchased it would be trimmed and modified to fit the room being refurbished.

A small cupboard door, similar in pattern to the panelling just discussed, is located over the stairwell at second floor level. It is secured by 'H' type hinges with shaped ends, some of the most common internal door hinges used throughout the seventeenth and eighteenth centuries. The door has obviously been cut down and reused.

The next major period of refurbishment seems to have occurred in the late Georgian period. Virtually all the features in the front room at second floor level appear to date from the third quarter of the eighteenth century. A large fireplace, with panelled pilasters and frieze, forms the centre piece along

the south-east wall. The panelled overmantel still survives above the heavily moulded mantel shelf. A grate of mid to late nineteenth century now occupies the former hearth. A shelved niche with semi-circular opening and dropped keystone is located adjacent to the fireplace. Its pilasters, decorated with imitation block-work, rise from an integral cupboard below. A heavily moulded cornice with applied dentilations, surprisingly made from a sequence of smaller wooden elements rather than plaster, runs contiguously around the room. Below this was a picture-rail, chair-rail and finally a deeply moulded skirting.

It seems that the rear room at first floor level was also refurbished at around this time. Only the skirting, chair-rail and fragments of picture-rail have survived the fire. These mouldings, which are shallower and less complex than those in the front room, could suggest a slightly later date for this room. The earlier medieval fenestration was replaced at this time with larger sash windows which have unfortunately been destroyed.

Several more features can be attributed to this period. In particular the hall archway at second floor level. This semicircular arch with plain soffit and dropped key-block springs from a moulded architrave. The glazed doors, hung to the rear face of the arch, appear to be contemporary. A lightwell, also located in the second floor hall, is enclosed by turned balusters and a heavy moulded handrail.

A final phase of Georgian refurbishment occurs at the very end of the eighteenth if not the early nineteenth century. This can be seen in the front room at second floor level which, although split in two by a later Victorian partition, retains most of its fittings. The most interesting feature is

undoubtedly the fireplace. The cast-iron grate incorporates engaged columns complete with locking bands and corner roundels of floral design. The architectural elements can certainly be attributed to the Gothic revival of the late eighteenth and early nineteenth century. This is consistent with an early photograph of the facade which shows fenestration of Gothic influence. Door architrave, chair-rail and skirting mouldings (no cornice), considerably less elaborate than those previously discussed, survive intact. A wooden fire surround, with fluted corner blocks, has a similar but reversed moulding to the chair-rail, suggesting a contemporary date.

The alterations and additions undertaken by the Victorians have fortunately been limited to a few sash windows, door frames and cupboards. These are of little interest. We are fortunate that the effects of this century have been limited to the ground floor, until recently Dewhurst the Butchers.

No. 8 High Street, which survives as an interesting and sizeable example of a late medieval building, has revealed several important and unusual features. In particular the early brick infill and double tie-beam roof. The opportunity to survey this structure has provided a valuable addition to our growing knowledge of Canterbury's vernacular architecture. Evidence of an earlier preceding stone structure, not affected by the recent repair works, suggests an area for future investigation. This property, in common with most of Canterbury's historic buildings, has undergone many alterations and additions throughout the centuries. Numerous seventeenth-century fittings together with three wellpreserved Georgian rooms add considerably to the interest and historical value of the building.

## **D** Photographic Surveys Rupert Austin

Numerous smaller building recording projects have been undertaken, in particular an increasing number of photographic surveys. The Trust's large format camera has seen increasing use this year. This is used in situations where its high quality is desired and also for rectified photographic surveys. A powerful Lumendyne flash system was recently purchased by the Friends of the Trust for use with this camera. This equipment allows photographs to be taken in large and often gloomy interiors where our smaller hand-held flash would

not be sufficient. An additional 58 mm. wide angle lens, which has proved extremely useful for interior shots where space is restricted, was also purchased for use with the large format camera.

Several surveys were undertaken at the Cathedral and within its precincts during the past year. Amongst these a comprehensive survey of the exterior of the south quire and rectified photographs of the north quire clerestory were the most interesting. These will provide both a record

of fabric before repair and also to assist with the planning of future restoration in these areas. Photographs of the Norman Staircase, part of the Aula Nova complex, were also undertaken prior to cleaning.

A rectified photographic survey is presently in progress on several sections of Rochester City Wall including the large crenellated length adjacent to the Blue Boar Lane car park and adjoining drum tower. Annotated outline drawings will be prepared

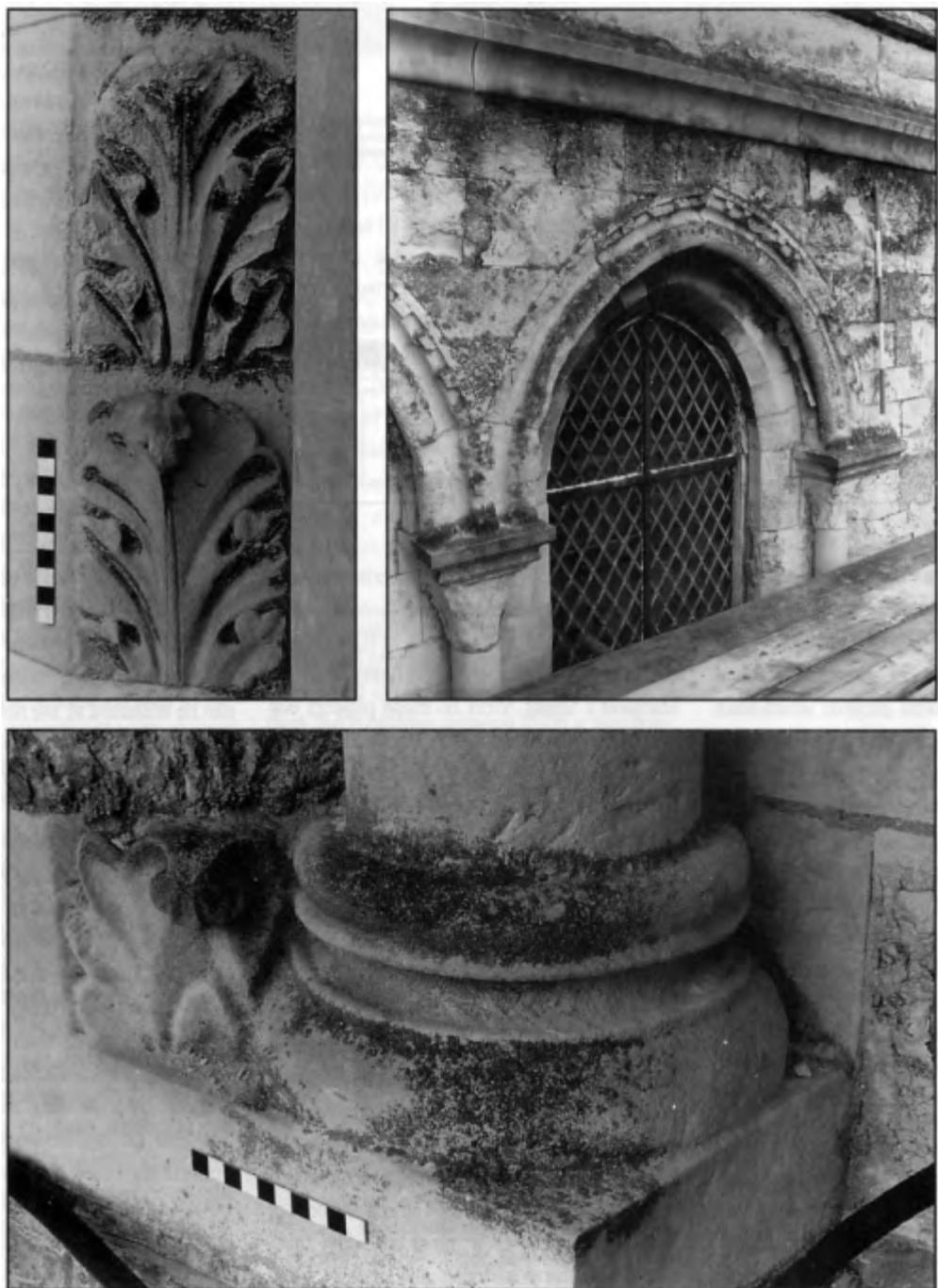
from these, indicating areas of original fabric and phasing. A large format photograph was also taken inside Rochester cathedral to record the ceiling of the crossing tower before restoration.

Rectified photographs were taken of the Dukes Head Bridge in Hythe to aid a drawn survey of the structure. The bridge, which has been virtually rebuilt and widened as a result of a road

improvement scheme, is one of the few remaining bridges crossing the military canal to retain Napoleonic fabric.

Further smaller photographic projects included work in the basement of 'K shoes', the site of Canterbury's Guildhall and an earlier twelfth century undercroft, as well as the remains of one of Canterbury's early bridges, behind the Eastbridge

Hospital. Unfortunately the only suitable camera positions for photographing this bridge were in the middle of the river Stour, making this a tricky undertaking. Finally a small section of the Dominican Priory was photographed in advance of a planned extension. Overlays were prepared from the photographs, indicating the phasing of this section of the building.



Pl. XLII Details from south quire of the cathedral.

# Post Excavation

## 1 Post Excavation and Research

Peter Clark

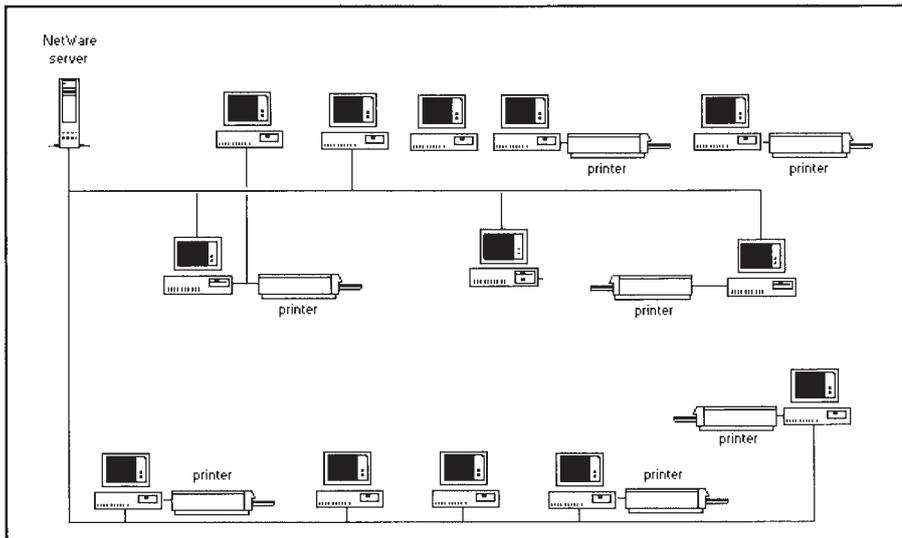


Fig. 30 A schematic view of the Trust's computer system.

The year 1992-1993 has been a period of great change for the Research Team of the Trust. Perhaps the greatest impact on the working practices of the unit has been the proliferation of the short-term 'evaluation' projects which have stemmed from the welcome inclusion of archaeological issues in the planning process throughout much of Kent. Although small in scale compared to 'traditional' excavation projects, these evaluations demand a high degree of skill and knowledge from the field teams, and a fast turn-around time in post-excavation and report writing, not only to satisfy the requirements of our commercial clients and planning departments, but also to ensure that the results are properly catalogued and studied to provide an academically sound resource for future research.

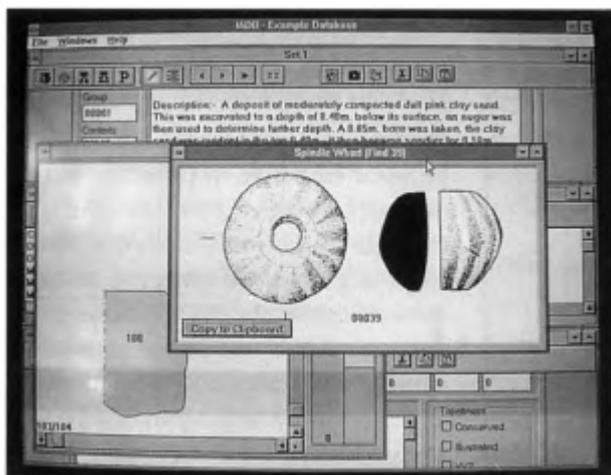
In addition to these short-term, fast-track projects, we are also involved in several large post-excavation projects, many of which will take several years to complete. Still continuing is the work on the Eurotunnel and Longmarket projects, and new projects include the Castle Hill Ring Ditches and St George's Clocktower, both reported on in last year's *Canterbury's Archaeology*. In addition, English Heritage have agreed to fund

work on four other major research projects, 'St Gregory's Priory, Northgate,' the group of three excavations in the Tannery area of Canterbury, the late Roman site at Ickham; and the excavations of the Roman baths at 20 St Margaret's Street. Work on these projects will extend into the next financial year and beyond, when they will be joined by work on Each End, Ash, the Dover Boat, the Dover A20 project, Diocesan House, and Canterbury Cathedral.

The Research Team thus has a very busy and demanding schedule for the foreseeable future, involving material and sites of all periods, ranging from small evaluation trenches to major urban excavations and landscape archaeology. To assist the team in their work, and to help maintain the highest academic standards possible, we continue to review our working practices and systems. An important change has been the increasing integration of excavation and postexcavation procedures. The appointment of a 'Records Officer' on some of our larger sites, responsible for monitoring and compiling the stratigraphic records has allowed the effective identification and resolution of problems in the field, greatly improving the efficiency and cost-effectiveness

of post-excavation stratigraphic analysis. Increasingly, the processing and cataloguing of artefactual material has been identified as part of the field work phase of a project, drastically reducing the amount of time required in post-excavation. The very large assemblage of finds and pottery from the St George's Clocktower excavations, for example, has already been fully catalogued and all finds information is available on computer for future research. The Finds Processing team and Pottery department have developed efficient systems which will allow post-excavation work to concentrate on research and explanation.

Computers are playing an increasingly important part in our research work. These useful tools have proved of inestimable worth to our studies, and have become an integral and indispensable part of our working practices. The Trust's computing services are based on a Dell 420SE File Server, with 8Mb RAM and a 645Mb hard disc. This is the 'heart' of the system, and contains all the information and data needed by the team, which can be accessed at any networked computer or 'workstation'. To date, there are eight workstations connected to the computer network, mostly Dell 486's with 4 or 8 Mb RAM. The system software is based on Novell Netware 3.11, using 'Windows for Workgroups' installed locally as a user front end. The use of Windows software has greatly facilitated staff training, and nearly all users have quickly picked up the system, allowing them to concentrate on archaeology rather than spending their time mastering complex computer instructions or programming. A wide range of software is available on the network, though the 'most commonly used are the word processor (Wordperfect for Windows) and spreadsheet (Excel). Project management software (Microsoft Project), a database (dBase /M and Desk Top Publishing (Ventura Gold) are also available. In addition to commercial packages, some customised software is also regularly used by the Research Team. Stratigraphic matrix programs

Pl. XLIII *The IADB computer programme.*Pl. XLIV *Desk Top Publishing at the Trust.*

include gNet (Ryan 1988; 1990), Consort, and we have recently received a beta copy of a new Windows-based matrix program, Matpro. Perhaps the most important custom software used by the team is the Windows version of the Integrated Archaeological Database (IADB), designed in collaboration with Mike Rains. A demonstration of this software was given at the British Academy at the end of the year, where it stimulated a great deal of interest.

The basic premise of the system is that all information from an archaeological site is interdependent, and that any researcher must have access to all of the data from a site to understand the particular piece of information being studied. Thus a particular find cannot be properly understood without considering the other artefacts found in association with it, the nature of the deposit it was found in, the spatial distribution and context of other artefacts of the same class, and so on. The purpose of the IADB computer system is to provide a simple mechanism by which all researchers have access to all of the information regarding a site. Thus a finds researcher may easily study information regarding the stratification, the matrix, the pottery, the site plans and photographs, etc., all from a single terminal. The use of the Windows interface means that no complex commands need to be learnt to examine the finds catalogue from a particular layer or phase, a stratigraphic analyst only needs to 'click' on a finds 'icon 1 to get a full listing. Pull-down menus give access to specialist reports, finds drawings or photographs (scanned onto computer and digitally stored), and even site plans stored on the main file server. Detailed questions can easily be asked (for example "What layers produced iron knives in association with

metalworking debris in phase 6?") by using a tool called 'Structured Query Language' (SQL), again with simple 'point and click' menus for those unfamiliar with computer commands. Notes, reports and interpretations are stored within the IADB, allowing all access to their colleague's thoughts, and these can be copied into word processing and Desk Top Publishing programs directly, allowing the production of a publication standard report at a single terminal. The results of data searches, etc. can also be downloaded into spreadsheet packages, allowing a wide range of data interrogation and statistical analyses to take place.

Naturally, such a powerful and flexible programme will change and adapt as new uses and avenues of research are explored. The use of Desk Top Publishing software (DTP) is beginning to revolutionise the way in which we prepare our reports for publication. This is the second annual report to be prepared totally using computer, and work will begin on the publication of the important Marlowe excavations next year. Authors may now write their reports directly into the computer system, where they are held on the file server and directly imported into DTP for design and editing. The Trust is most fortunate in having trained DTP operators on its staff to carry out this work to a professional standard, and we expect to produce many of our future reports in this way, greatly decreasing both the time and cost required to publish our findings.

Of course, such powerful tools and sophisticated methodologies are of little benefit without clear research goals and strategies. Much discussion has taken place within the Research Team about the broader aims and objectives of our work,

and in the future we hope to be able to articulate formal research strategies for archaeology in Canterbury and Kent, hopefully in collaboration with the County Archaeologist and the Kent Archaeological Society.

The deep local knowledge of the archaeology of Kent is perhaps one of the Trust's greatest strengths, but we should never allow ourselves to become introspective and isolated from the academic research and ideas being discussed in British and International archaeology. Several members of the team have attended conferences and seminars throughout the year, and the discussions and debates they have taken part in provide an important stimulus to the Trust's developing research programme. Papers have occasionally been presented by the Trust at these conferences, and a number of technical articles published during the year (e.g. Anderson 1993a; b; c; d; Anderson & Andrews 1993, Anderson & Carter 1993, Anderson et al 1992; Clark 1 992a; b; Clark & Hutcheson 1993; Cotter 1992a; b; Gibson & Macpherson-Grant 1992; Hutcheson 1992; Macpherson-Grant 1992a; b).

In summary, 1992/3 has been a busy and challenging year for the Research Team, we continue to study and report on the archaeology of Kent from all periods, whilst at the same time attempting to improve our techniques and working practices and conducting research into research strategies and theoretical archaeology. Two brief descriptions of some of our work are presented below, first a description of a rare ceramic tile found at Diocesan House, and secondly an account of the recent work of the Bone Department.

## 2 A German Stove-tile from Diocesan House

John Cotter

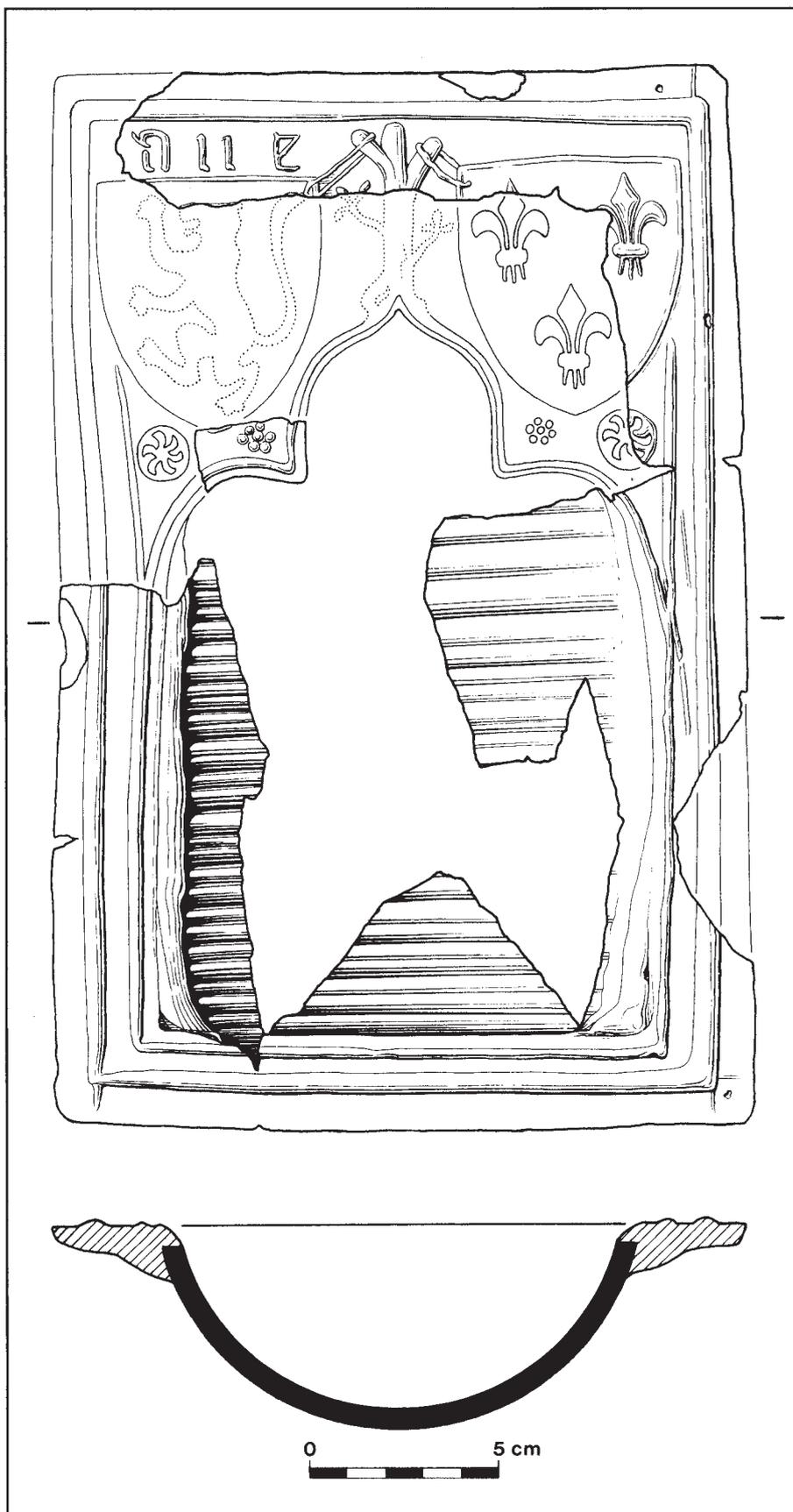


Fig. 31 Green glazed German stove-tile c. A.D. 1500, from 26 Broad Street, Canterbury.

One of the most unusual pottery items produced by recent excavations in Canterbury was an elaborate late medieval stove-tile believed to be of German origin. This was found in several pieces in a rubbish pit which also produced domestic pottery of c. 1525–50. Although incomplete enough of the tile survives to establish its overall dimensions and to permit a tentative reconstruction of its heraldic decoration (Fig. 31).

The tile is in a fine creamy-white fabric with its outer face covered in a rich green glaze. It is in the form of a niche, its body formed from a wheel-thrown cylinder cut vertically in half and then attached to a moulded frame with an elaborate gothic canopy. The whole effect is deliberately architectural and mimics in clay the form of a late medieval gothic window or wall-recess in stone or wood. In the spandrels of the arch are two shields suspended from a central post or tree-stump. That on the right with its fleur de lys emblems, is clearly the arms of France. That on the left is poorly preserved and its reconstruction here as a lion is largely conjectural. However, the left shield does have some faint traces of its original design, enough to show that it was different from the right shield, and as the lion and the French arms occur together on some stove-tiles on the continent, the reconstruction shown here may not be entirely fanciful. Both coats of arms were popular in European heraldic art and need not imply any particular connection with France or anywhere else. Above the left shield is part of an inscription in late gothic script, possible -alle., there is just room for one more letter in the corner of the frame but there is no trace of it and perhaps alle is all there is. It might be translated as the English all which would have been written more or less the same in medieval German as in Tudor English. Possibly it was part of a longer inscription continued on adjacent tiles.

Tiled stoves originated in medieval Germany and continued to be made and used on the continent as late as the eighteenth century. They were tall box-like structures rather like a cabinet attached or connected to the wall by a flue through which heat could circulate from a stoke-hole located in the wall of the next room. The faces of the box were composed of panels of glazed and decorated tiles which acted as insulators.

The fashion for tiled stoves eventually reached Britain in the fifteenth century but until well into the

following century, their use was confined to very wealthy establishments such as abbeys and royal palaces which could afford the expense of importing the tiles and perhaps the foreign expertise needed to assemble them. By the middle of the sixteenth century they were sometimes found in the houses of the gentry and wealthier merchant classes, and for a time stove-tiles with the royal arms were produced at kilns along the Surrey/Hampshire border. For all their value as status symbols, however, tiled stoves never caught-on in a big way in this country. Already by the mid sixteenth century wood was too scarce in south-east England to be burnt as fuel and as elaborate coal-burning fire-places grew in popularity among the wealthy, the wood-burning tiled-stove disappeared. Finds of stove-tiles in this country are consequently rather rare - particularly examples as well-preserved as that from Broad Street.

In the opinion of David Gaimster of the British Museum the Broad Street tile is one of the best examples of an imported stove-tile yet excavated in this country. He is convinced of its German origin, perhaps from Cologne or the lower/middle Rhine,

and believes it to date to c. 1500. Clay samples have been taken from the tile for Neutron Activation Analysis and this may eventually determine its place of manufacture with greater precision.

But how do we explain the presence of such a tile at Diocesan House? Conveniently, a major monastic establishment lies close at hand in the form of St Augustine's Abbey. For many centuries an out-building known as the Almonry stood on the left of the approach to the abbey gateway. Here the monks distributed charity to the poor and tended to the sick. It seems likely that the medieval pits on the Broad Street site represent rubbish dumping from the Almonry and nearby dwellings (see excavation account by Andrew Hutcheson in this volume). It may well be, therefore, that the German stove-tile originated from the Almonry or possibly some other building in the sprawling complex of St Augustine's Abbey. The Abbey was dissolved in 1538, and after 1541 large portions of it were torn down. However a large part was also converted 'into a royal palace which involved substantial renovation of the old fabric. The Almonry too was renovated in the 1550s.

It is curious that only a single though substantially complete stove-tile was recovered from the excavations. If it were part of a tiled stove one would have expected to find others but only the one was found. Perhaps then, the stove-tile was never part of a functioning stove (it is not sooted and shows little sign of wear). Undoubtedly the tile was made for a stove, but it may have been employed for other purposes, perhaps as a decorative niche for holding candies, tapers or keys etc., and then at the Dissolution in 1538 it was simply thrown out along with the domestic pottery of the monastery and all other 'junk' inappropriate to a royal palace. Alternatively it may have survived the Dissolution only to be broken during the palace renovations of the 1540s and '50s, and then got thrown out. Closer inspection of both the archaeology and documentary records may eventually throw some light on this point. For the moment, however, there is no doubt that the stove-tile is both a rare and intriguing object which will keep the experts thinking for quite some time.

### 3 Human Bone Studies

Trevor Anderson

Since last year's annual report most of our time has been spent on the St George's human bone material, computerising the records and writing the report. We anticipate that this work will be completed by the end of August 1993 and our findings will be available for inclusion in next year's report. For the present, we shall outline the work that has been carried out on several smaller human bone samples.

#### Each End, Ash

Excavation at Each End, Ash uncovered the remains of a Roman cremation cemetery which dates to the mid second or early third centuries A.D. Twelve deposits contained human bone, eleven in pottery vessels and one in a decomposed wooden chest.

After cleaning, the bone fragments were sorted by size, condition and colour and weighed. These variables will provide valuable information regarding methods of collection as well as degree and intensity of burning. The presence of sooty blue/black fragments suggests a slow, smouldering fire lacking oxygen. If higher temperatures were achieved the fragments would be calcined and

white in colour. Together with bone condition and colour, the size of the fragments, as well as the type of fracture, this will provide clues as to whether breakage occurred during cremation or in the process of collection and deposition.

An attempt was made to identify all the fragments, so as to ascertain minimum number of individuals as well as which elements of the skeleton are represented. This will give clues to the collection technique and position of the body in the pyre. If the body was placed on the ground with the pyre over it, the base of the skull and the vertebral arches should be well-preserved. If the hands are placed across the chest they will be protected by the heat shadow of the body and should be well-represented (Hoick 1987, 160).

Osteological examination of the identified fragments was then undertaken, to ascertain, where possible, the age and sex of the individual(s). Depending on the condition of the fragments, non-metric variants may be visible, supplying possible evidence of familial relationships. Careful examination of the dentition (often teeth roots survive) will provide evidence for the number of individuals represented

and, if sufficiently well-preserved, clues to the state of oral health. Evidence of bone pathology was also recorded.

The excavation of a cremation urn fill is a time-consuming, labour-intensive process, hampered by the fact that the inside of an urn is a confined and badly-lit environment. Excavation must proceed slowly and carefully since it is uncertain at what level the bone fragments will be encountered and when found, the extent and depth of the fragments. It would not be possible, however, to visualise the contents of a soil-filled pottery vessel by conventional radiography. Consequently, as an experiment to test the value of the technique, we submitted a vessel (No. 38) for Computerised Tomography (CT scan). This is an advanced form of radiography whereby sections or 'slices' can be obtained without damaging the object.

A series of twenty-seven examinations were taken at 5 mm. intervals. These revealed, within the soil matrix, several large opacities (Pl. XLV). Their lack of sharpness suggested the presence of stones rather than metal objects. Smaller opacities were detected and could represent either pebbles or



Pl. XLV Vessel 38: CT scan showing the absence of bone.

bone fragments. The presence of the occasional void probably represented the site of decomposed organic material. The soil was seen to be cracking away from the sides of the vessel.

The absence of bone in this vessel, however, meant that it was still uncertain as to whether CT scan was a valuable tool in identifying cremated bone fragments. A further four vessels (Nos 37, 2601 4711. 473) were sufficiently complete to be sent for CT examination. A single scan confirmed that the small globular jar (No. 473) did not contain bone material. This made unnecessary the difficult task of laboriously excavating a narrow-necked vessel which only contained soil. Cremated bone fragments were present in the other three vessels. The CT scans display clearly the shape and exact location of individual bones (Pls. XLVI–XLVIII). In addition any grave goods could be easily seen, and the presence of voids may indicate decomposed organic material such as leather or wood. The advantage over conventional radiography is that confusion over superimposed structures is eliminated and high quality definition of individual features is obtained.

The value of CT scan has been appreciated by Egyptologists for the examination of mummified material (Notman 1986. Pahl 1986. Strouhal 1986); including brain tissue (Millet et al. 1983) and the reconstruction of facial features (Lewin et al. 1990; Pickering et al. 1990). CT examination of skeletal material is much less frequent. The technique has occasionally been used as a tool in ageing (Hofman et al. 1992); sexing (Sanchez Sanchez S Gomez Bellard 1989), examination of lower limb morphology (Cross & Bruce 1989) and palaeopathological diagnosis (Anderson 1991. Hodler 1990). This is the first time that CT scan has been used to investigate the contents of



Pl. XLVI Vessel 37: CT scan showing the location of the cremated bone fragments.

archaeological cremation urns.

In five cases (vessels 30; 37; 43; 78 and 471) the remains were thought to be female. None of the remains could be definitely identified as male. Apart from separating into sub-adult or adult, it is extremely difficult to age cremated remains accurately. The presence of an unfused clavicle (collar bone) and a fused femoral head (thighbone) suggests that the female in vessel 30 was a young adult aged c. 18–23 years. The degree of suture closure in the unsexed remains from vessel 260 suggests an age of over 30 years. The other remains could not be accurately aged, except to say they were fully-grown.

There is very little evidence of pathological lesions on the cremated fragments. The adult female in vessel 43 had abnormal bony outgrowths (osteophytes) on her lower spine. The individual in vessel 471, an adult female, displays osteophytic outgrowth on her second cervical vertebra. The only other possible lesion was noted on an adult female in vessel 37. Her right heel-bone (calcaneus) exhibits a smooth-edged shallow cavity, an example of osteochondritis dissecans.

Fragmentary teeth were recovered from all the vessels except 142, which was only represented by a fragmentary base. A total of twenty teeth were available for examination, the majority represented by root fragments. In two vessels, 78 and 471, a complete tooth was preserved. The only evidence of dental pathology was found in an adult female (vessel 471). Her lower left first premolar displays evidence of infection and abscess or cyst formation.

In four vessels (30. 47. 78. 87), cremated animal bones were intermingled with the human remains. The only identified animal was pig. In vessel 47,

the presence of an unfused femur suggests that the pig was under 31/2 years; unfused metatarsals from the feet in vessel 30 argue for slaughter prior to 2 years (Cornwall 1974: 229).

The fact that all the bones are hard and solid, do not leave a mark when scratched and are not calcined, suggests that the firing temperature was between 400–750° (Hoick 1987: 131-2). Experimental work, however, suggests that calcination may occur at a lower temperature in an oxygen-rich environment (Parker 1985). In vessel 43, 11.6 per cent of the bones were only lightly burnt which argues for either a low firing temperature or a very short period of cremation. In two vessels (Nos 78 and 471) the recovery of intact teeth suggests that the maximum temperature was probably less than 500°C. The majority of the fragments (almost 90 per cent) were pale cream or off-white, which suggests that most of the bones were burnt in a well-oxygenated environment.

There is little variation in mean bone size. This suggests that a similar method of cremation and collection was practised throughout the sample. Bones that fractured during the cremation would have their broken ends exposed to the heat of the pyre and they would display a uniform white colour. The fact that many of the fragments are blue internally and white externally argues that the fractures occurred towards the end of the cremation process, perhaps as a consequence of the pyre collapsing, or else broken during collection.

The latter view is supported by the fact that even in present day cremations, bone shafts up to 25 cms in length are recovered, prior to crushing in the cremulator (McKinley 1989). Also, archaeological evidence has demonstrated that the bones of cremated bodies are relatively intact as long as the burnt remains are left in situ, and are not collected (Builstra & Goldstein 1973: fig. 16). From the four complete urns, the mean bone weight was 1.32



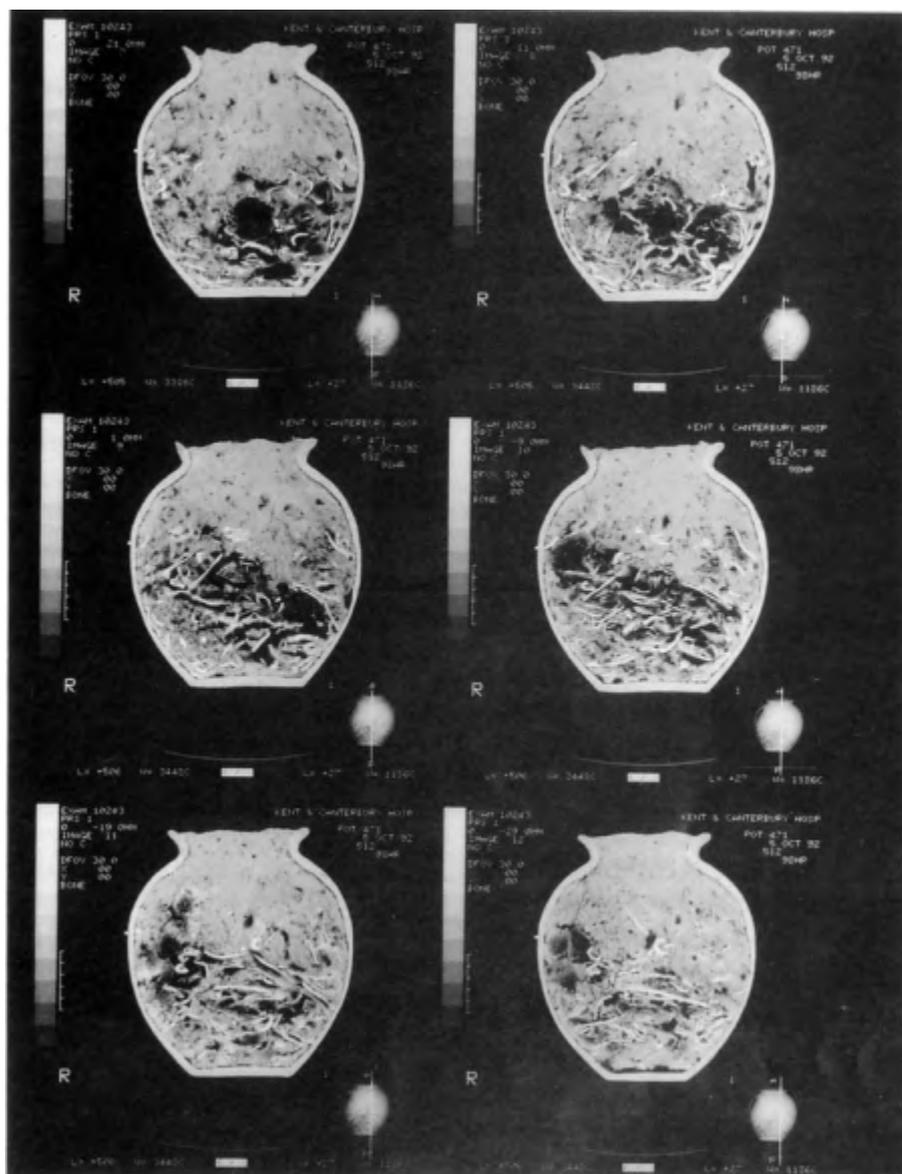
Pl. XLVII Vessel 260: CT scan showing the location of the cremated bone fragments.

kg., with a range from 0.86 to 1.96 kg. In modern crematoria somewhere between 1.6–3.6 kg. of bone is recovered from an adult body (McKinley 1989). This suggests that, in our sample, approximately half the bones were recovered and deposited in the cremation vessel. This raises the question of what happened to the rest of the cremated bones. There is a sufficient number of bones to rule out the possibility of a token deposit. Clearly, the smaller fragments may have been lost or overlooked during collection, but these would not account for half the body weight.

No distinct pattern of bone deposition was recognised in the three complete vessels which could be divided into layers. The various skeletal elements, such as skull, vertebrae and upper or lower limbs, were not confined to individual layers. In vessels 38 and 87 evidence of earthworm activity was noted. In the latter and in vessel 131 unburnt shrew and mole bones were recovered. Clearly their activity in trying to escape from the vessel will have disturbed the cremated fragments. In three vessels, cross-layer joins of the bone fragments was possible. In vessel 34 distorted skull fragments, which must have shattered during the cremation, from layers 3, 4 and 5 were re-united. In vessel 37 two fragments of left fifth metatarsal could be joined. In vessel 43 two fragments of patella from different layers were found to join. Our findings suggest that post-depositional infill of soil, coupled with earthworm activity and the presence of burrowing animals will have destroyed any information regarding the original location of the cremated human bone fragments.

Small samples of burnt animal bones were intermingled with cremated human remains in four vessels. No animal bones, burnt or unburnt, were placed with the associated vessels. This absence, coupled with the fact that the identified animal bones were feet and knee joints, suggests that they were not primarily regarded as items of nourishment for the body of the deceased. Only pig bones were identified from the cremation urns, presumably ruling out the possibility that domestic pets were being burnt with their dead master or mistress.

In the early Roman period, following the Celtic tradition, a formal meal was occasionally laid out beside the cremation vessel, in which plates, dishes and even cutlery were provided for the deceased (Biddle 1967; Phillipott 1991, 197, 198, 237). As time progressed this practice became less frequent and, as at Ash, burnt animal bone



Pl. XLVIII Vessel 471: CT scan showing the location of the cremated bone fragments.

fragments are found in the cremation vessel. It appears that in Celtic tradition the deceased was still thought to require bodily nourishment after death. Items of food and footwear would be placed with the body so that it would safely reach the next world and would not return to haunt the living.

The Roman practice of placing coins with the corpse, payment for Charon to ferry the deceased across the Styx, is a similar ritual. The burning of animal bones on the pyre with the corpse suggests that the Romans were feeding the spirit or soul of the deceased. The ascending smoke symbolised the release of the bodies from their mortal existence and completion of their safe passage into the next world. When present, the small sample of burnt animal bones suggests that only a few bones were placed on the pyre. The age of the slaughtered pigs would be compatible with prime eating quality. It is reasonable to assume, therefore, that the majority of the carcass was used as a meal for the living,

whilst inedible portions were burnt with the corpse as a token gesture.

In addition to the eleven cremations deposited in pottery vessels, a single cremation was discovered in a box or casket. The wood had rotted away but the outline of the container could be identified by the presence of iron nails.

Examination of the fragments suggests that the box contained only one individual. The remains are those of a fullygrown adult. There is insufficient evidence, however, for a more precise age. The gracile nature of the long bone diaphyses suggests that the remains are female.

Pig teeth and lower jaw and bird bones were intermingled with the burnt human remains. The presence of two parallel cut-marks on the latter suggest that the flesh may have been removed prior to cremation. As with the other cremations,

it appears that the small sample of non-human cremated bone represents a symbolic gesture of feeding the spirit of the deceased, whilst the majority of the animal was eaten by the mourners.

The fragments deposited in the box are broadly similar in appearance to those found in the pottery vessels. All the bones were burnt in an oxygen-rich environment, most noticeable in those from the box. The maximum temperature, however, judging by the condition of the bones and the incomplete destruction of the teeth was probably less than 500°C. It is possible that the bones were burnt in a fairly fierce fire of short duration.

The container exhibits characteristics typical of both box and casket burials. The size, (length 70 cm. width 34 cms., depth 27 cms), as well as the absence of ornate metal decoration, suggest that it represents a box rather than a casket (Philpott 1991, 12-21). The bone fragments, however, appear to have been deposited directly in the box and not, as is the usual practice with box burials, inside a pottery or glass container (*ibid.*, 16). It is possible, of course, that they were originally placed in a leather bag or pouch, which would leave no visible trace.

Unlike most box and casket burials the example from Ash did not contain any grave goods apart from cremated bird and pig bones. Over fifty box burials and about forty casket burials are known from Roman Britain (*ibid.*, 12-21), the majority from Hertfordshire and Cambridgeshire. Most casket burials are first or second century., box burials are most frequent in the mid-late second century (*ibid.*).

This approach of scientifically examining, excavating and recording the cremations has shown that valuable information which would normally be lost is available to permit a better understanding of cremation practices. Despite the obvious limitations of studying such fragmentary remains, a careful examination of the in situ bones can provide many clues as to the method of cremation and subsequent collection of the fragments. We are able to look beyond the dry remains themselves and use them to help interpret the beliefs and outlooks of the people which they represent.

### Canterbury Cathedral

During the early months of 1992, small scale excavation was undertaken within Canterbury Cathedral. In eighteen (12.7 per cent) of the layers,

disarticulated human bones were discovered, the majority (61 per cent) in association with animal bones. A total of 189 human bones were identified. Most of the layers contained a few fragmented bones, only three layers containing more than a dozen.

For the most part the remains were too incomplete to age or sex with any accuracy. However three children were identified, one 3-4 years old, one about 5 years old and a third only about 0-6 months. Two adult males were found elsewhere, though only their lower legs and feet survived. Based on the length of their tibiae (shinbones), it was possible to calculate their stature; 1.68 m. (5 ft 6 1/2 ins) and 1.67 m. (5 ft 6 1/4 ins).

Only three cases of bone pathology were discovered in the fragmented remains. There were two cases of spinal degeneration and one example of trauma, a broken hand bone that had healed.

During the 1993 excavation of the nave the intact vaults were not disturbed and only disarticulated human bone fragments were recovered from five layers. The uncleaned bones were examined on site and were then carefully reburied within the Cathedral. A total of twenty-seven people were represented. Three bones of a c. 8-10 year old child were recovered. From the twenty-six adults, eleven were identified as male, seven as female and the remainder could not be sexed.

The rapid examination of the uncleaned bones revealed little evidence of obvious disease. Arthritic degeneration of the spine and dental caries were noted in two individuals. A benign

bone overgrowth was noted below the knee in an adult male. The only evidence of trauma occurred in a probable male, aged 20-25 years. Two of his upper left teeth had been knocked out during life. The marked loss of alveolar bone in such a young person argues for traumatic loss rather than extraction. No obvious evidence of infection was discovered in the sample. One adult male displayed dental wear diagnostic of clay pipe smoking, thus dating this individual to the post-medieval period.

One individual was practically complete. It appears that his grave must have been disturbed presumably by the digging of a new grave, and all his bones were gathered up and reburied (Pl. II). The remains were those of a middleaged or elderly male. The bones suggest a robust, well-muscled, but rather stocky (5 ft 7 ins) individual, the only evidence of disease being spinal degeneration and dental caries.

An articulated skeleton was discovered in the south-west transept. The remains were cleaned but were not exhumed. The burial was lying prone with arms and legs extended, both forearms in pronation with the hands palm down, the left arm slightly pulled in. The remains were well-preserved, although the skull was badly crushed and the front of the lower vertebrae were eroded.

A rapid in situ examination suggested that the individual was male. Fusion of the epiphyses confirms that he was fullygrown. It is difficult to assign a more precise age, since cranial suture closure as well as the right side of the jaw could not be seen and the pubic bones were absent.



Pl. II. Layer 434: The carefully reburied human bones from a disturbed grave.

All molars on the left side had been lost during life and the jawbone had begun to heal. The front teeth, however, were only lightly worn.

Measurement of the skeleton *in situ* suggests a stature of *c.* 1.70 m. (5 ft 7 ins). A similar figure, 1.7 m. (5 ft 7 1/2 ins), was calculated from the maximum length of the long bones. There was no evidence of pathology on the available bones and it was not possible to ascertain cause of death.

### Diocesan House

During the evaluation of this site two Roman inhumations and a layer containing cremated bone were discovered. The first burial to be unearthed was incomplete, only the upper legs and the right arm, pelvis and hand being recovered (Pl. V). The fact that the epiphyses (ends of the bones) were unfused means that the individual was not fully grown. The only osteological clue to the sex of the skeleton comes from the fragmentary pelvis, the rather wide greater sciatic notch suggestive of a female. The state of epiphyseal fusion equates, in a female, with an age of 15-17 years. There was no evidence of disease on the dry bones and cause of death could not be ascertained.

The second inhumation consisted of a badly fragmented skull. The remains are female and fully grown, probably a young adult in her early twenties. The small size of the skull vault is interesting; it appears to be much smaller than normal. The possibility of an endocrinal disturbance was considered but the absence of the cranial base and all the post-cranial skeleton mean that a definite diagnosis is not possible. The available teeth are quite normal; it is possible that the fragile skull has been distorted post-mortem.

The rather fragile teeth were examined by Jon Andrews, a practising dental surgeon. The standard of oral health, especially in such a young person, was rather poor. Thirteen cavities were recorded, with both lower first molars exhibiting widespread destruction. An abscess in the lower jaw was probably evidence of chronic gum disease rather than caries or trauma. There was no evidence of calculus, though the teeth were so badly eroded that calculus deposits may have been lost post-mortem.

One deposit contained almost 200 very small fragments of cremated human bone, mixed with charcoal. Only adult skull and long bone fragments were recognised and they represented less than 2 per cent of a complete skeleton. The small size

of the sample and the absence of a container suggest that the fragments were not buried here deliberately. They probably represent a disturbed cremation, or possibly uncollected fragments.

During the excavation of the site a further six articulated skeletons, all adult, were unearthed. Three were identified as male, two female and one, represented by badly eroded and fragmentary feet, could not be sexed. Two individuals could be aged, in both cases the teeth suggesting a younger age than the cranial suture evidence. This is interesting, although a larger sample would be necessary before any firm conclusions could be made regarding diet. There was no evidence of osseous disease and cause of death could not be ascertained for any of the burials.

### St Gregory's Priory

There is at present no funding to carry out any research on this material. However, students from the University of Kent at Canterbury engaged on a course on Medieval Monasticism spent four days studying the human remains from the Priory cemetery. By pure good fortune the next skeleton to be examined (SK 1134), displayed clear evidence of cleft lip and palate. A case of cleft palate is known from an Anglo-Saxon cemetery at Burwell. Our example, however, is the first evidence for both cleft lip and palate in British archaeological material. Despite the inability to breast-feed, as well as possible social stigma, the individual had survived into adulthood.

The skeleton is relatively well-preserved, although the facial area is badly fragmented; the hands are incomplete and the lower legs were outside of the excavation area and could not be recovered. Based on pelvic and cranial morphology the skeleton is clearly male and stature is assessed as 1.74 m. (5 ft 8 3/4 ins). The heavily worn teeth, ossification of the thyroid, as well as the obliteration of the

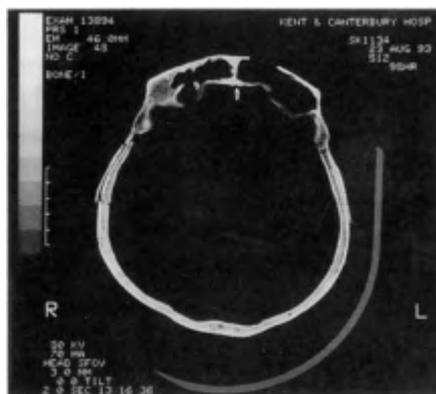
sutures, argue for an age at death between 40-50 years. In addition to the cleft lip and palate, SK 1134 displayed evidence of spinal degeneration, osteophytic outgrowths of the lumbar and lower thoracic spine. The teeth were free of caries, but displayed moderate deposits of calculus and hypoplastic enamel defects.

The skull, due to the abnormal breadth (160 mm.) is markedly broad-headed (Pl. L). The fact that the sutures are closed and the calculated cranial capacity is 1,690 cc, does not argue for hydrocephalus (Hooke 1926). The cleft has caused asymmetry of the face.. the affected left side being shorter. After reconstruction of the fragmentary facial area, a definite smooth-edged defect of the left palate and upper jawbone was present (Pls. LI-LII). The sinuous cleft extends from the back to the front margin of the jawbone, so that the oral and nasal cavities are in direct communication. Such a smooth-edged defect, without any bone reaction, is clear evidence for a congenital condition.

Although various infections, including syphilis and leprosy, may cause destruction of the hard palate (Hackett 1976, Møller-Christensen 1978) the appearance in SK 1134, without alveolar resorption or post-mortem atrophy of the nasal spine does not suggest an infective lesion. Also the location of the defect, between lateral incisor and canine, is typical of an unilateral cleft palate. The absence of any reparative new bone, coupled with the smooth-edged defect, negates a traumatic incident.

Above the left second molar a swelling in the floor of the sinus, contains an amorphous mass of dental tissue, or odontome (Soames & Southam 1985, 212). The extracted object is irregular in outline and appears to be composed largely of dentine and cementum and bears little resemblance to a normal tooth.

Very few examples of cleft lip and palate have been diagnosed in archaeological material. Three possible cases, all of unknown date, are located within the Smithsonian Institution (Ortner & Putschar 1985, 351: figs. 551-6). Brooks and Hohenthal (1963) report cleft abnormalities in three Californian skulls, in two cases, however, a clear bone reaction suggests an infective or traumatic process. A definite example, from the South Pacific, is stored in the Wellcome Institute (Ortner & Putschar 1985, 350-1: figs. 549, 550). No British examples of cleft lip and palate are known.



Pl. L SK 1134: CT scan demonstrating the abnormal breadth of the skull.



Pl. LI SK 1134: Detail of the cleft-palate.

A few cases of archaeological cleft palate, without lip involvement, have also been reported (Alexandersen 1967). Only one case of cleft palate has been reported from Britain (Burwell, Cambridge) and is dated to the Anglo-Saxon period (Brothwell 1981, 171: plate 6.14B). As such, SK 1134 from Canterbury is the first British archaeological evidence for combined cleft lip and palate.

The presence of an abnormal tooth, or odontome, is also a very rare finding. Only 351 cases were seen at the Medical College of Virginia in a period of eighteen years (Kaugers et al. 1989). They appear less frequently in archaeologically retrieved remains (Brothwell 1959, Schultz 1978, Santini 1987; Anderson & Andrews 1993). This shortage is probably due to the lack of routine radiographic examination of outwardly normal archaeological skeletal material. Their cause is still not fully understood, though, in rats deficiency in vitamin A can lead to odontome development and supernumerary tooth formation (Hitchin 1971).

The presence of cleft lip and palate, with direct communication between the mouth and nose, would mean that the child could not be adequately breast fed. Only in 1612 did the French surgeon, Jacques Guillemau, construct an artificial palate that could be successfully inserted whilst feeding (Fildes 1986, 267). Prior to this, milk would be regurgitated through the nasal cavity. The fact that SK 1134 survived into adulthood suggests that he must literally have been spoon-fed. Despite the difficulties of feeding, as well as his abnormal and unfavourable appearance, this medieval child was successfully reared and cared for during his



Pl. LII SK 1134: Anterior view of the skull, demonstrating the unilateral cleft-lip.

formative years. The stature of SK 1134, 5ft 8 3/4 ins, supports the view that early growth was not severely compromised.

Despite his physical handicap and possible social stigma, the individual had survived into old age. No other congenital anomalies were discovered. The only visible pathology is spinal joint degeneration. The presence of two rare anomalies in one individual is very interesting. As far as I am aware, no relationship is known to exist between odontoma and facial clefting. However, the fact that the manifestation of both cleft palate (Tolarova 1990) and odontoma (Hitchin 1971) have been related to vitamin deficiency suggests that their combined presence may not be entirely fortuitous. Is it possible that osteo-archaeological evidence may provide a clue to modern day research on facial clefting?

### Whitstable Harbour

An incomplete human skull was brought to the surface in the nets of a fishing boat off Whitstable harbour. After initial examination by the coroner, the skull was forwarded to the Trust. The bone was solid although the outer surface was slightly eroded and the frontal bone was porotic. Thin fronds of cream-coloured seaweed were firmly attached to the right side of the skull. Remnants of the occasional barnacle were visible. pale grey reticulate deposits on the internal surface of the skull were also of marine origin.

Based on the shape of the frontal bone the remains appear to be female. Most of the vault sutures were clearly visible, suggesting that the

remains are under the age of 30/35 years. Seven measurements could be taken on the skull; they fall within the normal range although the frontal bone is rather wide.

The frontal bone displays persistence of the metopic suture. The two halves of the frontal bone begin to unite during the second year and between the third and the eighth year at the latest, the suture is obliterated (Williams & Warwick 1980, 334). Occasionally the halves may remain separate throughout life. When this occurs, the condition is known as metopism. In large samples of English medieval (Parsons 1908) and post-medieval remains (Hooke 1926) metopism has an incidence of c. 9-11 per cent.

The appearance of the skull suggests that it has been immersed for a considerable period of time, although it is not necessarily of great antiquity. There is no evidence of pathology on the remains and cause of death cannot be diagnosed from the available bone.

### Other Work

In my spare time, at weekends and evenings, I have been writing up the bone report for the Anglo-Saxon site excavated at Deal by Keith Parfitt. Unfortunately, bone preservation is very poor. The teeth are in slightly better condition and Dr Jon Andrews, a dental surgeon, has been able to compare the Anglo-Saxon dentition to that of his modern day patients. An exciting discovery is an apparently man-made drill hole in a lower premolar. Unfortunately, the edge of the hole has been undermined by secondary caries and a definite diagnosis is now difficult.

Jon has experimented on a similar, freshly extracted tooth and he reports that a hole could be drilled by hand in approximately ten minutes. This appears to be the first physical evidence for dentistry in the Anglo-Saxon period. The location of the hole, in the upper crown of the tooth, means that any drilling would not be painful. holding one's mouth open for a long period of time would be somewhat difficult. A Danish Neolithic skeleton (c. 3000 B.C.) displays a circular hole in the roots of an upper right second molar, which has been confirmed by high power microscopy to be a drill hole (Bennike 1985, 176-81: figs. 92, 96-99). Consequently, a similar operation in the Anglo-Saxon period need not be so surprising.

# Education

The past year has seen both the forming and bonding of links with colleagues in the Education field and, through our activities, the further promotion of our work leading to an increased awareness of the role of Archaeology.

## Funding

In the long term the KAS/CAT Education Committee would like funding for education work to be borne equally by three parties: Kent County Council, the Kent Archaeological Society and Canterbury Archaeological Trust. It is important to remember that funds accrued for the Education service not only have to cover the costs of the Education Officer, but also the input of complementary staff, for example on Work Experience placements and the production of written resources.

Our contribution to schools education in particular has this year again earned support from both the Kent Archaeological Society and Kent County Council. Many thanks are due to them for their continued interest in this venture. In addition to grants for the overall Education programme for 1992–93, support has been offered to help pay printing costs of the resource book, Roman Canterbury currently in preparation.

## 1 Activities in Primary and Secondary School Education

Marion Green

### Roman Canterbury

This is perhaps currently our most exciting project. This book, designed essentially for a young readership (broadly 9 to 13 year olds), is an entirely new concept and is the result of a liaison between its author, Andy Harmsworth, Head of History at the Simon Langton Girls Grammar School, and the Trust. It was vital to strike a balance between academic accuracy and a need to present the content in a digestible form. We feel we have managed to achieve this with an end product which will appeal not only to younger readers but also to the increasing number of people interested in their local heritage.

We hope to be able to sell the book at Canterbury's new Roman Museum in Butchery lane, due to open late 1993 or early 1994. The educational facilities planned for the museum together with the Trust's own input into the school curriculum will make a valuable contribution towards meeting National Curriculum needs and those of the History programmes in particular.

### 'Canterbury and the National Curriculum': *In-Service Training*

Much of our publicity is generated through word-of-mouth and In-Service Training (INSET) days provide an excellent opportunity to foster awareness of our educational activities and

establish new contacts. The Trust was involved in two INSET days during the 1992–93 period; one in May 1992 (based at Christ Church College, Canterbury) and the second in March 1993 (based at the Canterbury Urban Studies Centre). Both were designed primarily for teachers of Key Stage 2 and 3 children (7 to 14 year olds).

The aim of these INSET days is to give teachers a 'taster' of the resources available to them from a body of six Canterbury educational centres, the Canterbury Cathedral Education Centre, the Canterbury Urban Studies Centre, the Canterbury Heritage Museum, St. Augustine's Abbey (an English Heritage site), The Canterbury Tales and Canterbury Archaeological Trust.

The Trust's contribution to the two most recent days involved a short introductory talk to all participants about our education work followed by two sessions at the Trust's offices for teachers choosing 'Archaeology' as one of their options. The aim of these sessions was two-fold. First, to demonstrate to teachers a summary classroom visit, showing them what the children would experience in a 'How do we know about the Romans?' session, for example. Secondly, teachers were able to see first-hand some of the major post-excavation processes thus increasing their confidence when talking to children about the nature of archaeological evidence and its interpretation. This worked particularly well and they were introduced to pottery and human

bone identification and the basic principles of small find conservation. Assessing the responses of the teachers attending INSET, there is no doubt that these days are most productive in helping teachers to meet National Curriculum needs.

### 'How do we know about the past?'

We are always especially pleased when a teacher considers the potential of archaeological evidence, whatever the period of history that he or she is planning to teach, any course of historical enquiry should investigate archaeology as one of the many sources of primary evidence. During the past year we have presented the role of archaeology in the following Kent schools:

- Wingham C P School, near Canterbury (Saxons project)
- Pilgrim's Way C P School, Canterbury (an environmental project)
- St. Edmund's Junior School, Canterbury ('How do we Know?' session introducing evidence for the past)
- Sturry C P School, near Canterbury (Romans project)
- Luddenham C P School, near Faversham (Romans project)
- Garlinge County Junior School, Margate (How do we Know?)
- Holy Trinity C E Primary School, Margate ('Underground' project)

- St Laurence C E School, Ramsgate (Romans project)
- Marden C P School, south of Maidstone (Romans project)
- Ashford School (Romans project)
- Fort Pitt Girls Grammar School, Chatham (Archaeology and transferable skills. part of a Humanities day for 13 to 14 year olds).

## Work Experience

Taking part in post-excavation activities gives secondary school pupils an insight into the

painstaking work of processing masses of material. Usual tasks are washing the 'bulk' finds, helping to lay out and catalogue human skeletons, reconstructing pottery and drawing small finds. These placements are especially valuable to sixth form pupils considering Archaeology as a career

During the past year we have had placements from:

- The Archbishop's C E School, Canterbury
- The Judd School, Tonbridge
- St John's R C Comprehensive, Gravesend

- Sir William Nottidge School, Whitstable
- The King Ethelbert School, Birchington
- The King's School, Canterbury

Other involvement with secondary school education entailed showing a small group of sixth form GCSE Archaeology students from Highstead School, Sittingbourne, around our offices at Broad Street. They were particularly interested in archaeological processes and welcomed the opportunity to see the theory put into practice.

## 2 Involvement with Higher Education

Marion Green

There have been two main areas of involvement in recent months.

### GCSE Archaeology at Canterbury College

The college has approached the Trust with a view to establishing an evening course for GCSE Archaeology. The oneyear course, based at the college is to begin in September 1993. Canterbury College is the only local institution to run GCSE Archaeology and should prove to be very popular. We sincerely wish tutors and students much pleasure and success in this venture.

### University of Kent: Medieval Monasticism Internships

Last summer, a group of first year Humanities students took a Medieval Monasticism module as part of their academic studies. Under the Enterprise Kent scheme, Professor Alf Smyth and his colleagues planned to build in a practical component to complement the academic content. The aim was to get students out into 'real' situations where the daily work of recovering, recording and conserving historical material was taking place. To this end, Professor Smyth approached three centres to assist with the practical input: the Canterbury Archaeological Trust, the Canterbury Cathedral stonemasons workshop and the Canterbury Cathedral stained glass studio. I was

nominated 'link' person to co-ordinate between the three centres and the University for the duration of the 'internship' project.

The twelve students were divided equally into three groups and a programme was devised for those spending their placement with us. By their nature the Cathedral stonemasons and stained glass workshops were concerned with Medieval history and so we planned a Medieval programme for our students.

The week began with students hearing how and why the Trust was established, about our policies, staffing, funding and administration and how we relate to other outside bodies, as one of the requirements was to find out how the host organisation operates. They were then taken through the processes behind the planning of an excavation project and subsequent post-excavation work, the whole culminating in the publication.

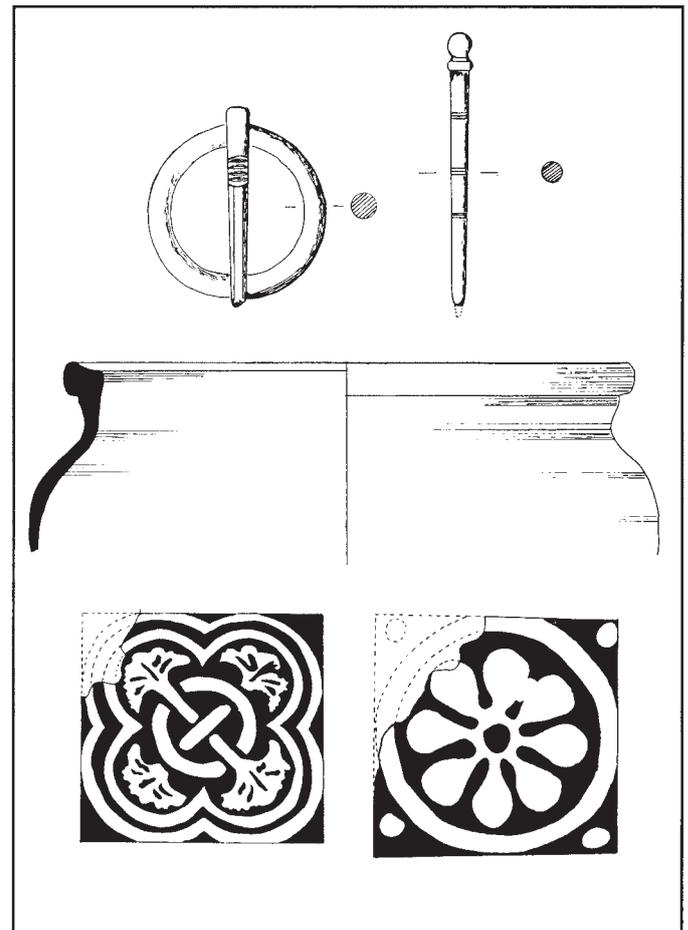
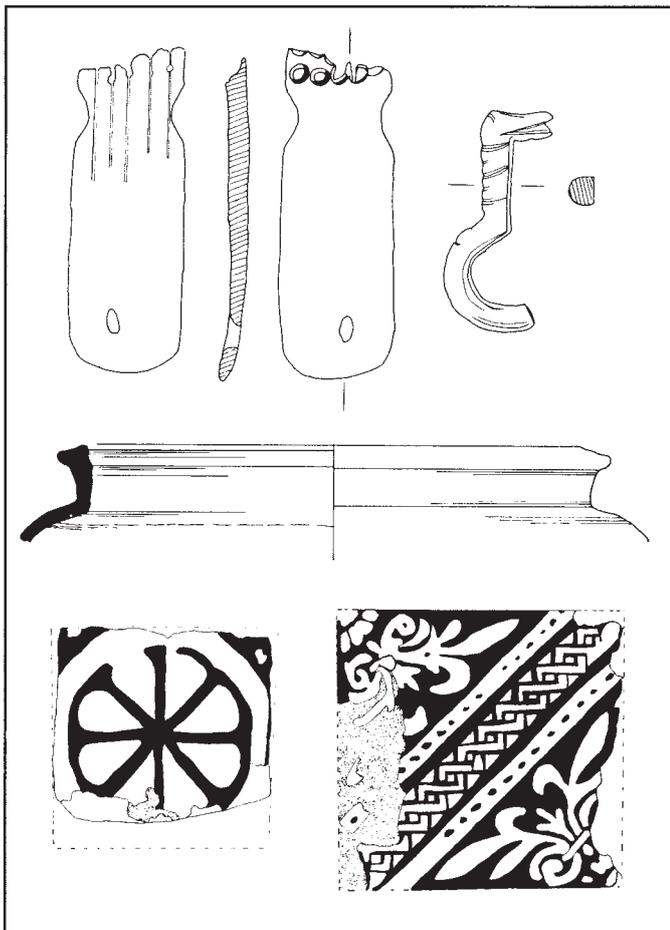
The remainder of the placement involved looking at material from the St Gregory's Priory site, excavated by the Trust between 1988 and 1989. Students were introduced to the site through plans, sections and photographic slides and they rapidly grasped the complexities of urban excavation!

The 'hands-on' work really began when students became involved with the finds. They did some

initial finds washing and then followed up with learning about the nature of small finds and ceramic evidence, how to draw artefacts and how to assemble and record the human skeletal remains from St Gregory's cemetery. All of the Trust staff involved in this project found the students to be very well motivated, applying themselves enthusiastically to the task in hand. The students themselves seemed to greatly appreciate the opportunity to experience archaeology first-hand and produced remarkably comprehensive reports at the end of their placement.

Feedback from Professor Smyth showed that university staff were happy with all aspects of their students performance, particularly by their enhanced confidence through working with people and material outside of the university environment and by their subsequent lively contribution to seminar discussion. From all points of view this liaison with the University has been a productive one. We hope that the exercise will be repeated in the summer of 1993 with the University again contributing towards our educational costs.

Still within the sphere of Higher Education, we also accommodated a group of GCSE and A Level Archaeology students from South Kent College, Ashford, by giving them a tour of our post-excavation departments.



Kent University students on placement at the Trust: *Trying their hand at finds illustration (top left) and human bone identification (top right).*  
 Above: *Two examples of their finished illustrations.*

### 3 A Resource Database

Marion Green

Finally, we have been investigating the possibilities of setting up a Resource Database holding information about archaeological materials and services in other parts of the county which are available to Kent schools.

The idea has evolved as a number of teachers working outside East Kent contact the Trust for assistance, for example with site visits or Work Experience placements. We accommodate requests where we can but it is not always possible. There are occasions when it may be more productive to refer the enquiry to another party.

To this end we began by sending a questionnaire to all KAS affiliated groups asking about their activities. To date thirty per cent have responded and these are currently being assessed.

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# The Friends

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## The Friends of the Canterbury Archaeological Trust

Lawrence Lyle

Excavation in the Nave of the Cathedral and the discovery of the Bronze Age Boat at Dover have dominated the Friends' programme this year. Before he and his family moved to Salisbury, Tim Tatton-Brown gave us an illustrated talk on the rebuilding of the Nave in the fourteenth century, a valuable introduction to that part of the Cathedral which was to be investigated when the floor was to be replaced and the central heating renewed in the first half of 1993. Individual Friends followed the course of the excavations through the large window on the pulpitum steps whilst the codirector, Kevin Blockley, described the fascinating findings to a large audience soon after the end of the dig.

In March, Keith Parfitt's talk about the discovery and recovery of part of the Bronze Age Boat at Dover roused great interest. We shall follow the preservation of the timbers and their eventual display in Dover Museum with interest. Both these major events in the history of the Trust attracted national media interest and were the subjects of articles in 'Current Archaeology'.

Paul Bennett's Frank Jenkins Memorial Lecture in January reviewing the work of the Trust in 1992 was packed with interest and lasted for over an hour and a half. We had a fascinating evening in February when Andrew Savage described the

Roman wine trade using slides and objects as illustrations; Italian wine was also served.

In September members of the Sandwich History Society showed a small group of Friends round

some of the lesserknown aspects of that intriguing town. Our customary Christmas party was held in the Dominican Guesthouse by kind permission of Don Beerling. Elizabeth Rothwell Eyre organised the food and Laurence Fisher presided at the bar.

Our main grants to the Trust during the year were £3,000 towards the cost of extending the computer network at 92A Broad Street which is speeding the production of reports and enhancing the quality of research, and £2,300 for camera equipment to facilitate recording of excavations and buildings.. it included a wide-angle lens and portable flash system which were first used in the Nave excavations. From the Donald Baron Bursaries Fund grants were made to enable members of staff to attend and to contribute to conferences on their specialisms. John Cotter attended a Medieval Pottery Conference at Southampton University. three members went to the annual conference of the Institute of Field Archaeologists at which Peter Clark gave a paper on an aspect of recording being developed by the

Trust and Paul Bennett described the discovery and context of the Dover

Bronze Age Boat. The Trust was also represented at a conference in Edinburgh on interpreting stratigraphy at which Peter Clark and Andrew Hutcheson gave a joint paper which has been published. Smaller sums have been spent on books and maps for the Library.

Barbara Rogers organised the Festival Walks in October, a feature of the Festival which is always sold out and yields about £700 for the Trust. She has now handed over this responsibility to Bob Dunnett. Her post as Membership Secretary has been taken by Robert Shine, our efficient Minutes Secretary. We are all most grateful for Barbara's work for the Trust, in the shop, organising excursions, keeping track of our membership and organising Festival Walks. she is remaining on the Committee where her advice and enthusiasm will be most valuable.

Our regular Newsletters have been typed by Jane Elder, designed by Mark Duncan and distributed by a team of members led by Laurence Fisher. Other members have assisted with pot-washing at 92A. To these, and all the other Friends who have helped during the year, my grateful thanks. The following financial statements represent a summary of the audited accounts of the Canterbury Archaeological Trust Limited for the year ended 31st March 1992. A full set are available at the Registered Office.

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**FRIENDS**  


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*of the*  
**CANTERBURY**  
**ARCHAEOLOGICAL**  


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**TRUST**

# Accounts

The following financial statements represent a summary of the audited accounts of the Canterbury Archaeological Trust Limited for the year ended 31st March 1993. 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 1993.

### 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 1993 are as follows:-

	1993	1992
	£	£
Main Account	(19,924)	4,676
Publications Account	155	1,098
Shop Account	6,965	16,590
Friends Account	8,233	6,703
Donald Baron Bursary Fund	544	1,466

### Directors

The Directors during the year were:-

F.H. Panton  
M.H.S. Bridgeford  
N.G.H. Taylor

### 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

23rd August 1993

## Report of the Auditors

To the Members of Canterbury Archaeological Trust Limited

We have examined the financial statements set out on pages 3 to 12 which have been prepared on the historical cost basis of accounting.

In our opinion, these financial statements give a true and fair view of the state of affairs of the Trust at 31st March 1993 and of the deficit for the year ended on that date, and have been properly prepared in accordance with the Companies Act 1985.

CHANTREY VELLACOTT  
Chartered Accountants  
Registered Auditor

7 Dane John  
Canterbury  
Kent CT1 2QS.  
23rd August 1993

## Main Account

*Balance Sheet* *31st March 1993*

### Assets Employed

	1993	1992
	£	£
<b>Fixed Assets</b>		
Freehold property	140,000.00	140,000.00
<b>Current Assets</b>		
Bank Accounts, Float and Debtors	<u>180,753.62</u>	<u>191,713.25</u>
	320,753.62	331,713.25
<b>Current Liabilities</b>		
Overdraft, Loan, Creditors and Shop Reserve	<u>154,045.00</u>	<u>145,080.30</u>
	<u>166,708.62</u>	<u>186,632.95</u>
<b>Financed by</b>		
Trust Capital Account	5,824.63	5,824.63
Income and Expenditure Account	<u>160,883.99</u>	<u>180,808.12</u>
	<u>166,708.62</u>	<u>186,632.95</u>

*Income and Expenditure Account for the year ended 31st March 1993*

	1993	1992
	£	£
<b>Income</b>		
I English Heritage projects	309,274.53	122,840.00
II Other Income, Fees, Grants, Donations and Projects	<u>381,327.35</u>	<u>497,137.85</u>
	<u>690,601.88</u>	<u>619,977.93</u>
<b>Expenditure</b>		
I English Heritage projects	227,000.38	157,682.06
II Other projects	474,885.27	453,617.53
III Other Expenditure; Loan Interest, Repairs, Publications	<u>8,640.56</u>	<u>4,002.26</u>
	<u>710,526.21</u>	<u>615,301.85</u>
(Deficit)/Excess for the year	<u>(19,924.33)</u>	<u>4,676.00</u>

## Publications Account

*Income and Expenditure Account for the year ended 31st March 1993*

	1993	1992
	£	£
Income	184.17	1,098.47
Expenditure	<u>29.37</u>	-
	154.80	1,098.47
Balance brought forward	<u>3,251.45</u>	<u>2,422.98</u>
	<u>3,676.25</u>	<u>3,521.45</u>

*Balance sheet* *31st March 1993*

Represented by:		
Bank Accounts and Debtors	<u>3,676.25</u>	<u>3,521.45</u>

**The Friends Account****Balance Sheet** **31st March 1993**

	1993 £	1992 £
<b>Current Assets</b>		
Bank Accounts	16,120.83	12,988.61
Sundry Debtors	<u>1,135.89</u>	<u>1,243.00</u>
	17,256.72	14,231.61

*Less: Current Liabilities*

Sundry Creditors	<u>262.53</u>	-
	<u>16,994.19</u>	<u>14,231.61</u>

**Financed by:**

Income and Expenditure Account	<u>16,994.19</u>	<u>14,231.61</u>
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**Income and Expenditure Account for the year ended 31st March 1993**

	1993 £	1992 £
<b>Income</b>		
Subscriptions	5,932.44	6,424.22
Other income:		
Donations, Events, Interest	<u>1,609.58</u>	<u>1,609.58</u>
	10,518.43	8,033.80

**Expenditure**

Stationery, Postage, Printing, Advertising, Bank Charges, etc., Sundries	<u>2,285.52</u>	<u>1,331.13</u>
<b>Excess for the year</b>	<u>8,232.91</u>	<u>6,702.67</u>

**Donald Baron Bursary Fund****Income and Expenditure Account for the year ended 31st March 1993**

	1993 £	1992 £
Deed of Covenant, Donations received, plus Interest	1,076.39	1,685.59
Courses paid	<u>532.00</u>	<u>219.50</u>
	544.39	1,466.09
Balance brought forward	<u>5,193.88</u>	<u>3,727.79</u>
	<u>5,738.27</u>	<u>5,193.88</u>

**Balance sheet** **31st March 1993****Represented by:**

The Charities Deposit Fund Account and Debtors.	<u>5,738.27</u>	<u>5,193.88</u>
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**Shop Account****Balance Sheet** **31st March 1993**

	1993 £	1992 £
<b>Fixed Assets</b>		
Freehold Property:	45,125.41	45,125.41
<b>Current Assets</b>		
Bank Accounts, Float and Debtors	<u>45,094.78</u>	<u>38,228.35</u>
	90,220.19	83,353.76

*Less: Current Liabilities*

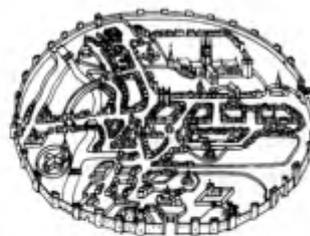
Sundry Creditors	<u>35.00</u>	<u>133.34</u>
	<u>90,185.19</u>	<u>83,220.42</u>

**Financed by:**

Income and Expenditure account	<u>90,185.19</u>	<u>83,220.42</u>
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**Income and Expenditure Account for the year ended 31st March 1993**

<b>Sales</b>	-	15,415.85
<b>Other Income:</b>		
Rents, Fees, Interest	<u>10,176.77</u>	<u>7,452.70</u>
	10,176.77	22,868.55
<b>Expenditure:</b>		
Wages, Services, Repairs, etc	<u>3,212.00</u>	<u>6,278.23</u>
Excess for the Year	<u>6,964.77</u>	<u>16,590.32</u>



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\* indicates no longer in Trust employ

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# Acknowledgements

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The Employment Service (St John's Lane)

The Diocese of Canterbury (Diocesan House)

McCarthy and Stone (Developments) Ltd. (Dean's Mill)

Abbey National Building Society (48 High Street)

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## GENERAL ACKNOWLEDGEMENTS

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The Very Revd John Simpson, Dean of Canterbury

The Works staff of the Dean and Chapter

Professor Martin Biddle and Dr Richard Gem

Tim Tatton-Brown, Margaret Sparks and Tempest Hay

The staff and management of Canterbury Job Centre

David Kemp and the staff of Diocesan House

Pat Cockle and Sylvia McKean of the Kent Mills Group

David Coupe and the staff of Christ Church College

Mott Macdonald and Norwest Holt

The Department of Transport

Dr Martin Bates, Dr Tony Barham and the staff of G.S.F.

Christine Waterman and the staff of Dover Museum

Bill Fawcus and the staff of Dover Harbour Board

The members of Dover Archaeological Group

Valerie Fenwick and Dr Ted Wright

Dr John Williams, Liz Dyson and Sally Howard of K.C.C. Archaeological Section

Chris Zoynier, Richard Harris and the field staff of the Weald and Downland Museum

Martin Steerman, John Kavanagh and Peter Williams of Eurotunnel

Geoff Blatchford and Derek Holmes of K.C.C. Highways

May Gurney plc

Mike Rains

The many volunteer helpers who assisted with fieldwork, finds processing and human bones research.

Special thanks are extended to the members of the Trust's Management Committee and particularly to Dr Frank Panton, Lawrence Lyle and Nigel Taylor.





# ARCHAEOLOGY

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