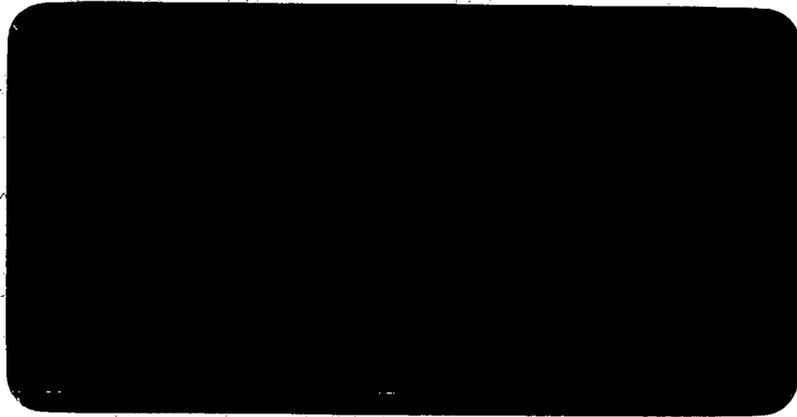




Chartered Surveyors • Property Consultants

45217
3829, 9944-45,
45218-20

TL40





Source ex 63119
event ex 53877

**RYE HILL TO FAIRFIELD
TRUNK MAIN**

An Archaeological Watching Brief

Maureen Bennell MA MIFA

**Cluttons Daniel Smith
3 Beer Cart Lane
Canterbury
Kent CT1 2NJ**

January 2000

CLUTTONS

SUMMARY

A Romano-British settlement was uncovered during the construction of a water pipeline near Epping, Essex. Pottery ranged from the 2nd to the 4th centuries AD with the major part of the assemblage dating from the 3rd to 4th centuries. Curvilinear ditches were interpreted as remnants of round or semi-circular stake-built structures and ceramic building material which was recovered is thought to relate to a more substantial structure beyond the limit of excavation. There was some evidence that iron working had taken place in the vicinity of the settlement. The site lies beside the presumed line of a Roman road and a land division on the settlement ran at right angles to this. Elsewhere another part of the Roman road was investigated and a partly ploughed-out gravel layer above a raised agger with side ditches was revealed. Medieval features and pottery were also recovered on the pipeline route.

CONTENTS

Summary

- 1 Introduction
- 2 Policy framework and aims
- 3 Archaeological and historical background
- 4 Methodology
- 5 Results
- 6 The finds and environmental assessments
- 7 Discussion
- 8 Conclusions
- 9 Bibliography

Appendices:

- Appendix 1 – Sites and monuments table
- Appendix 2 – Finds Reports
- Appendix 3 – Environmental Assessment Reports
- Appendix 4 – Context Summary

Figures:

- Figure 1 – Location of pipeline
- Figures 2a, 2b – Areas of archaeological interest
- Figure 3 – Site 15 plans and sections
- Figure 4 – Site 6 plans and sections
- Figure 5 – Site 8 plan of settlement features
- Figure 6 – Site 8 sections through boundary features, pits and postholes
- Figure 7 – Site 8 sections through structural features
- Figure 8 – Site 8 pottery illustrations

1 INTRODUCTION

- 1.1 Cluttons Daniel Smith was commissioned by General Utilities Partnership (GUP), on behalf of Three Valleys Water, to carry out an archaeological watching brief during the construction of a water main at Epping, Essex. The fieldwork took place in May and June 1999. It followed consultation with Essex County Council's Archaeological Advisory Group and an initial study of the route (*An Archaeological Appraisal of Rye Hill to Fairfield Reservoir Trunk Main, Maureen Bennell October 1998*).
- 1.2 The route of the pipeline runs from Rye Hill water tower, just south of Harlow, south-eastwards across Thornwood Common and then across the B1393 road to arrive at the Fairfield Hospital reservoir, Epping, a distance of approximately 4 kms (see Figure 1). The underlying geology, according to the National Geological Survey 1:50,000 map, is London Clay with some areas of Boulder Clay.
- 1.3 The watching brief was carried out by Maureen Bennell, assisted during excavation by Daryl Stump (supervisor), Ceri Ashley, Jason Conduct, Charles Morse, Katie-Sue Wilson and Andrea Yardley-Honess. The archaeological team would like to thank the Resident Engineer (Kevin Goodson, GUP) and Agent (John Roberts, JBS) and all site staff for their assistance and co-operation throughout the work.
- 1.4 Post-excavation identification and assessment of finds was carried out by specialists from Essex County Council Field Archaeology Unit and their sub-consultants. Environmental samples were assessed by Val Fryer, Loddon, Norfolk and charcoal samples by Rowena Gale, Andover, Hants. Mark Hassall, Institute of Archaeology, University College London, kindly commented on the Roman graffiti.
- 1.5 The landowner has generously agreed to donate the finds to Epping Museum where they will be deposited with the archive.
- 1.6 All archaeological field and post-excavation work has been funded by Three Valleys Water through GUP who designed the pipeline and supervised its construction.

2 POLICY FRAMEWORK AND AIMS

National Policies

- 2.1 Statutory protection for archaeology is provided by the *Ancient Monuments and Archaeological Areas Act* (1979) amended by the *National Heritage Act* (1984). Sites of national importance are listed in a Schedule of Monuments maintained by the Secretary of State for the Media, Culture and Sport. Scheduled Monument (SM) consent is required for any work which would affect the fabric of an SM. There are three SMs within the study area but none of these is directly affected by the development.
- 2.2 Listed buildings are protected under the provisions of Section 54(i) of the *Town and Country Planning Act* (1971) amended by the *Planning (Listed Buildings and Conservation Areas) Act* (1990). A list of built structures of historic or architectural interest is maintained by the Secretary of State for the Environment. There are three Listed Buildings within the study area but the pipeline does not affect either the houses or their curtilages.

English Heritage

- 2.3 English Heritage (the working title of the Historic Buildings and Monuments Commission for England) is consulted by the Secretary of State for National Heritage on SM consent applications and is sometimes asked to advise on other archaeological matters. As well as providing general archaeological advice it also monitors the situation of archaeology in the planning process.

Department of the Environment Policy Guidance

- 2.4 The *Planning Policy Guidance on Archaeology and Planning* (PPG 16) published in November 1990 provides advice to planning authorities concerning the safeguarding of archaeology within the planning process. The guidance points out the irreplaceability of the archaeological resource saying:

archaeological remains should be seen as a finite and non-renewable resource, in many cases highly fragile and vulnerable to destructioncare must be taken to ensure that archaeological remains are not needlessly or thoughtlessly destroyed. They can contain irreplaceable information about our past.

PPG 16 emphasises the role of information kept in county Sites and Monuments Records (SMRs) and encourages early consultation with county archaeological officers. It notes that applicants must provide sufficient information on the impact of their proposed development to enable reasonable planning decisions to be made. PPG 16 also details circumstances where further archaeological evaluation might be necessary to provide this information and explains the use of appropriate agreements and conditions.

- 2.5 *Planning and the Historic Environment* (PPG 15) was published in 1994 and considers Conservation Areas, Listed Buildings, Historic Parks and Gardens, Historic Battlefields and Historic Landscapes. It is also concerned with the implementation of the *Town and Country Planning (Development Plan) Regulations* of 1991.

County Council and District Policies

- 2.6 In order to provide protection for archaeological sites and monuments, County Council Structure Plans and District Local Plans have policies concerning these issues. *Essex County Replacement Structure Plan (Draft Deposit Plan February 1998)* addresses this in **Sections 7.9 – 7.22, Heritage Conservation**. Referring to the built heritage it states that the many listed buildings in Essex must be highly valued and protected. **Section 7.17 (Listed Buildings)** explains the importance of considering historic buildings not only as individual features but also

the inter-relationship between individual buildings and the value of the surrounding historic townscape and landscape as a whole.

Sections 7.22 – 7.29, Archaeology, point out that Essex has an exceptionally rich archaeological heritage with a remarkable variety of sites. These have left their own distinctive monuments, settlements, earthworks and burial sites as well as individual artefacts. This irreplaceable asset helps towards an understanding of the evolution of the Essex landscape and is protected by **Policy HC5:**

Development which would damage or destroy an Ancient Monument or other nationally important archaeological site, its character or its setting will not be permitted. Other archaeological areas and sites, together with their settings, will be protected and conserved wherever possible.

- 2.7 Interrogation of the county SMR is encouraged although it is acknowledged that this record cannot always be complete and that other methods of evaluation may be required. Preservation of remains and deposits *in situ* is stated to be the preferred course of action but **Policy HC6.2** adds that:



In circumstances where preservation is not possible or merited, then development will not be permitted until the developer has ensured that satisfactory provision has been made for a programme of archaeological investigations and recording prior to the commencement of the development, commensurate with the archaeological significance of the site.

2.8 *Epping Forest District Local Plan* (adopted January 1998) affirms that it supports government and county recommendations in safeguarding the cultural heritage. Policy HC1 states:

On sites of known or potential archaeological interest planning permission will only be granted for development which would not adversely affect nationally important remains, whether scheduled or not, or their settings. The Council will also require:

- (i) the results of an archaeological evaluation to be submitted as part of any application;**
- (ii) the preservation *in situ* and provision for appropriate management of those remains and their settings considered to be of particular importance;**
- (iii) provision for recording and/or excavation by a competent archaeological organisation prior to the commencement of development where *in situ* preservation is not justified.**

Pipelines

2.9 The laying of pipelines is not regulated by planning controls and is therefore not directly affected by national or local policies or by PPG 16 or PPG 15. However, the water industry acknowledges its responsibility with respect to the environment and *The Water Industry Act* (1991) states that there is:

a requirement to have regard to the desirability of protecting and conserving buildings, sites and objects of archaeological, architectural and historic interest.

The industry is also bound by Codes of Practice giving guidance, amongst which is a recommendation to appoint consultants to advise on the protection of archaeology.



Aims

- 2.10 In appointing an archaeological consultant the developer aimed to demonstrate that, although pipeline works are not bound by planning policies, construction would be carried out in line with these recommendations and in the spirit of PPG 16. The preliminary appraisal at the design stage ensured that, where the route appeared to impinge on known archaeological sites, these could be avoided. The archaeological watching brief carried out during construction aimed to observe and adequately record any features, deposits or artefacts which might be exposed by earth-moving operations.

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 3.1 Much of the background information for the study area has been gathered from the county SMR and is shown on Figures 2a and 2b. It is accepted that the SMR cannot be complete and that its effectiveness may depend on the amount of fieldwork which has been carried out in the vicinity. However, the information it provides can help to form a general background knowledge and suggest what may lie in the unexamined areas.
- 3.2 There is little evidence for prehistoric activity in the area. It is likely that early settlement on the heavy clays was not extensive although there are bronze age sites (2000 – 700 BC) in Harlow (Brown and Bartlett 1992) and Nettlewell Camp is dated to the late bronze age. Trackways would have followed either river banks or high ground such as the ridge on which Rye Hill is situated. This ridge marks the final extent of the ice cap during the Anglian glaciation. Only one record, SMR 13732, north-east of Rye Hill water tower and on the high ground, is from the pre-Roman period. It records the recovery by a metal detectorist of a gold bracelet from the bronze age period. The value of an item of this kind makes it unlikely that it was an accidental loss and it is possible that it comes from the remains of a high status burial, now ploughed out. A settlement related to this burial need not necessarily have been in close proximity to it and it is probable that the Boulder Clays were not permanently settled until the iron age (700 BC – AD 43). No iron age material is recorded in the study area though it is probably during this time that parts of the forest were cleared to provide land for agriculture.
- 3.3 No full scale excavation of Roman material has taken place in the study area, Harlow Romano-British temple being the nearest major site. However, signs of Roman-period activity (AD 43-410) are widespread throughout the study area though rather ephemeral in nature (see Figures 2a and 2b). Lengths of three minor Roman roads run north-south: SMR 3829, which has been identified from aerial photographs (APs), SMR 3830 where part of the agger or raised central embankment has been surveyed and SMR 3755 which is known from documentary evidence. Road 3755 is probably a continuation of 3830 and began at Hobbs Cross, where a larger road, beyond the study area, passes from Abridge in the south to Great Dunmow in the north to meet the important Stane Street.
- 3.4 Associated with the roads are a number of other recorded finds. In Epping itself a Roman kiln (SMR 3736) lies close to the extrapolated line of the road and another possible kiln is farther to the west (SMR 3761). At SMR 3756, towards the north of the area and beside road 3829, a soil mark shows a possible dump and ditch where Roman pottery, tile and brick have been found. At Latton Priory, between

CLUTTONS

roads 3829 and 3755, reused Roman brick is in the medieval walls and a late Roman gold coin was found (SMRs 0023 and 0110). More recently, during excavations for a gas main, (Ellis 1992) more Roman building material was discovered west of Latton Priory and beside the line of the Roman road (SMR 9950). Close to the continuation of road 3755 and north of the study area, SMR 3753 marks the site of finds of Roman pottery from excavations at Bush Fair Common (beyond the limits of Figure 2a). It appears that these small country roads linked a well-populated Romano-British landscape and that undiscovered structures, perhaps small farmsteads, must exist nearby.

- 3.5 As well as the evidence for Roman-period activity associated with the roads, more widespread Roman material was found during the gas main works at SMR 9946, west of Rye Hill water tower and at SMR 4299, east of the M11 where ditches and kiln wasters were excavated. Ditches and pottery were also found at SMR 3816 during the construction of the M11 (not included in Figure 2a). These finds reinforce the suggestion that there was extensive Romano-British occupation of this part of Essex although no major sites have yet been located.
- 3.6 By the medieval period (AD 1066-1500) the landscape in the study area was probably similar to what exists today with fields under cultivation and farms scattered among them. The major medieval structure in the area is Latton Priory (SMR 0023), the remains of a small 12th century Augustinian religious foundation. This disbanded before the dissolution of the monasteries carried out during the reign of Henry VIII. Parts of the building still stand intact and this and its surroundings, including a moat, are scheduled (SM 017) as well as being a Listed Building Grade II*. The 12th century medieval centre of Epping was deliberately settled by the canons of Waltham Abbey. A route known as Epping Long Green, which runs south-westwards along the ridge from Rye Hill water tower, was a medieval trackway which connected Waltham Abbey and Harlow. Several medieval moated sites are within the study area including SMRs 3725, 3772, and 3730. Moated sites 3725, east of the water tower, and 3731, at Thornwood, have recently been scheduled and are SM33246 and SM 33245 respectively. Many of the moats have been badly damaged or ploughed out but there are documentary references to them in the 14th century (3727, 3772) and the 15th century (3725). Most of these sites would have been small farms, probably on earlier foundations. In the 14th century it became fashionable to improve properties with a moat, not only to drain the farmyard but also as a statement of status and success.
- 3.7 The gas main investigations which ran from east to west across the north of the study area (Ellis *ibid.*) recovered medieval material at a number of locations including wall foundations, ditches, occupation debris and pottery (SMRs 9947, 9944 and 9951). One of these sites is beside Epping Long Green and another not

CLUTTONS

far from Rivetts Farmhouse, a listed 16th century house. The third is near Latton Priory. It seems that in some places there was a continuity of occupation from the medieval to the post-medieval period (AD 1500-1800). Marles Farmhouse, a 16th century listed building Grade II, is at the site of the earlier moat SMR 3772. Shingle Hall, also 16th century and listed, is at the site of moat 3727 and the moated site SMR 3730 continues in use with a later farmhouse at Hayleys Manor Farm. In the 17th century a new road was built between Epping and London which assisted in the distribution of local products such as pottery from the small industries at Potter Street, Latton Street and Harlow Street. Some post-medieval pottery has been retrieved in the area and, in the grounds of Fairfield Hospital is the sites of an 18th century windmill with another further to the south.

- 3.8 More recent records are two milestones and two early industrial sites. The earliest part of Fairfield Hospital (St Margaret's) was the Union Workhouse built in 1838. Bringing the area into the 20th century are all SMR sites beginning with the numbers 16 which are associated with North Weald Bassett WWII airfields and ancillary buildings.
- 3.9 Three SMR entries are shown as undated. Two of these are AP traces and show what are probably field boundaries of recent date. The other (SMR 3767) records a puddingstone marker at Cross Keys. Other similar markers have been found outside the study area and it is thought that they mark the route of an ancient track, perhaps from the medieval period.

4 METHODOLOGY

- 4.1 A study area covering one kilometre on each side of the pipeline route was researched at the Essex County Council Planning Department Sites and Monuments Record (SMR). This area was later enlarged during post-excavation research.
- 4.2 The watching brief was carried out in accordance with a specification of works agreed with the Essex County Council Archaeological Advisory Group. Progress and finds of note were regularly reported to the officer responsible who visited the site to advise and inspect the work.
- 4.3 Monitoring Areas, which were fields or parts of fields, were numbered consecutively. Where features or concentrations of finds were discovered, these are referred to as sites and given the same number as the Monitoring Area within which they were found.
- 4.4 The easement area was examined during or immediately after topsoil stripping and surface artefacts were collected. Man-made features which were identified were cleaned and further defined by hand tools before recording. The pipetrench cut was examined in section for below-ground features.
- 4.5 Features were excavated stratigraphically and recorded by text, scale drawings and photographs. A representative sample of features of all types was excavated. Some small features were fully excavated in order to maximise the retrieval of diagnostic finds, otherwise 50% of discrete features such as pits and postholes were removed. Linear features were investigated by the removal of several units of 0.50m width along their lengths. Plans were drawn on polyester film at a scale of 1:20 and sections at 1:10.
- 4.6 Levels were tied in to the site grid and reduced to Ordnance Datum level. Sites were located on the National Grid by use of the engineering plans.
- 4.7 Features were photographed in black and white and colour transparency. General photographs illustrating the nature of the work were taken as colour prints.
- 4.8 Finds were washed and marked as appropriate with the site and context number before submission to finds experts for analysis. Environmental samples were also collected for examination.
- 4.9 A short report describing the work will be submitted to the journal *Essex Archaeology and History*. The finds and archive will be deposited in Epping Museum.
- 4.10 Work was carried out in accordance with the Code of Conduct of the *Institute of Field Archaeologists* and with regard to all relevant health and safety regulations.

5 RESULTS (for context locations see Appendix 4)

- 5.1 In most Monitoring Areas (MAs) few surface finds were seen, confirming the results of the earlier walkover survey when little was noted in the ploughsoil. Six sherds were collected in MA 16 (see Figure 2b) including parts of a black-glazed jug and Metropolitan slipware dish. These are thought to date to the 17th century. At the boundary of MA 16 with MA 17 a row of postholes close to the present fence was examined. They proved to contain modern material and are interpreted as a previous boundary line.
- 5.2 Post-medieval sherds from MA 9 also included black-glazed and Metropolitan slipware and sherds from large pancheon-type bowls. These were mainly from the 17th century although two sandy orange ware sherds are possibly medieval in date. Romano-British pottery and building material was found in this MA where it joined MA 8 (Site 8) and one feature, a small pit containing Roman pottery, was recorded during the cutting of the pipetrench (context 9/2). It is likely that two possible features at the edge of the easement in this part of the MA were also Romano-British in date but it was not possible to excavate these.
- 5.3 Post-medieval sherds similar to those from MAs 9 and 16 were retrieved from surface collection in MA 6. SMRs 9944 and 9945 which record the previous discovery of medieval and post-medieval material (Ellis 1992) are situated in this MA and a number of sherds of interest were identified during the initial walkover. Where the water pipeline route passed within approximately 50m of the earlier excavations, an irregular-shaped ditch crossed the easement diagonally (see Figure 4). It varied in width from 1m to 1.80m and had been damaged by machine at its northern end. It is presumed that it continued onwards below the spoil heap. After surface cleaning two sections were removed from the ditch and it was found to be 600mm to 640mm in depth. Pottery which was retrieved from the silty clay fills dated from the 11th to the 14th centuries and included Mill Green ware and Harlow ware.
- 5.4 A small well-defined oval-shaped pit, 1.80m along the long axis and 340mm deep (see Figure 4) was at the west of the ditch. The silty clay fill contained one abraded Mill Green sherd but no association between the ditch and the pit could be ascertained. The medieval ditch and pit are referred to as Site 6 and are centred on TL 4600 0594.
- 5.5 An area of approximately 34m of the easement in MA 13 (referred to as Site 13 and centred on TL 4654 0468) contained a scatter of up to 120 abraded medieval pottery sherds although no sherds were found in other parts of this MA. The sherds dated mainly from the mid-13th to the 14th centuries with a few earlier in date and three post-medieval sherds. The condition of the sherds, which included fine wares and coarse wares, made identification difficult but jugs, cooking pots, and bowls

CLUTTONS

were represented from kilns at Harlow and Mill Green. Three iron nails and a horseshoe toe of an early 13th century to late 14th century type were recovered. Three fragments of ferruginous slag were identified and two small shallow areas of burning were investigated. One, very shallow and containing fragments of coal, was not considered to be of archaeological interest. The other, Feature 13-2 (illustrated in archive) was 800mm x 300mm and 50mm deep. It contained no diagnostic material.

- 5.6 The projected line of a possible Roman road (SMR 3829) is in the vicinity of Site 13 (see Figure 2b). Five Roman sherds were collected with the medieval pottery and Roman coins have previously been discovered in this field (personal communication Mr Ian Padfield).
- 5.7 Within MA 15 the route of the pipeline crossed the well-defined AP trace of the possible Roman road SMR 3829. Experimental investigations were carried out before topsoil stripping to establish whether the AP trace could be identified on the ground and, if so, its precise location and character. Trench A was cut at the point most likely to intercept the AP trace where a former field boundary showed on the photographs. Evidence for remains of a Roman road was found but, as the trench cut the road diagonally and some evidence had been removed by the modern field ditch, a second trench, Trench B, was cut a short distance beyond the first (see Figure 3). The easement provided access for site vehicles and could therefore not be completely closed so, to locate possible side ditches, Trenches C and D were staggered to east and west, leaving a central gap.
- 5.8 Section drawings of Trenches A, B and D show that, although the central embankment or agger of the Roman road has been considerably reduced by plough action, evidence for a deliberate deposit of gravel and flint pebbles (Context 4) still exists and is, in some places, 300mm to 400mm deep. In Trenches A and B it appears that the underlying chalk-flecked clay natural (5) has been pulled up from the sides and redeposited in the centre to raise the road. In Trench A, a deposit of bright orange clay from elsewhere has also been dumped (6). [Section drawings of A and B have been reversed to align with features in Trench D].
- 5.9 In Trenches A and D the truncated remains of an inner side ditch (7 and 14) can be seen at the eastern end of the trench with pebbles from the road surface washed into the fill. In both cases a mottled, possibly water-laid, silty clay fill is above the ditch (9 and 16). In Trench B this side ditch cannot be seen but, in retrospect, it seems possible that the clay deposit (2) was insufficiently machined away at this point (see Figure 3). A layer of pebbles from the surfacing (Context 4) in Trench B runs towards the possible location of an unexposed side ditch. Strangely, no inner ditches were found at the western side of the trenches although deposit 12 in Trench B, damaged by a modern drain, may mark the remains of a ploughed out ditch. In Trench A, which was cut diagonally to the alignment of the road, a western side ditch would be beyond the limit of the easement.

CLUTTONS

- 5.10 Trench C was opened briefly and was terminated at the eastern end when 1.5m of gravel surfacing had been exposed. The small ditch (13) at the western end is too far from the centre of the road to be an inner side ditch. It may possibly be an outer or 'setting out' ditch marking the working limits of the Roman road, similar in function to the fencing of the easement before pipeline construction. Bagshawe (1979) suggests outer ditches defining a road zone at 27m apart with the inner ditches 10m apart. However, roads were not standardised and inner ditches have been recorded at anything from 5m to 15m apart. Here the inner ditches are calculated at 5m apart with the setting out ditches 15m apart.
- 5.11 MA 8 ran south-eastwards from Rye Hill Road to cross the postulated line of the Roman road (see Figure 2a). Cut features, large quantities of Roman ceramic building material and pottery sherds could be seen on the surface of the easement after topsoil stripping. North-west of the field boundary and the line of the possible Roman road there was no sign of features for 30m and only occasional sherds and fragments of tile were seen. An area of 14m (the width of the easement not covered by spoil) by 65m was selected for excavation (see Figure 5). It is likely that a few features exist in the 92m between this area and Rye Hill Road although building material and pottery was not seen. However, at that time, the area was used for spoil and gravel storage and was unsuitable for excavation.
- 5.12 The centre of the site was partially covered by a dark layer of silty clay (78) containing concentrations of flint and stone. This was later interpreted as trample. The deposit, where it spread from the centre to the north-western side of the site, was dark grey brown but as it stretched towards the south-west became lighter in colour and was given the context number 112. As time was limited, some of the stone-free areas were machined off. The concentration of stone and flint on the southern side was investigated to establish whether it was tumble surrounding wall foundations. Extensive trial excavation revealed no foundation trenches and the spread was interpreted as a rough surface for a yard or thoroughfare, with stone, ceramic building material and pottery thrown down to improve conditions underfoot. The largest collection of pottery from the site was produced from this layer, 228 sherds from the dark area and 65 sherds from the lighter area which was less extensively investigated. Pottery was dated to the late 3rd - 4th centuries. Tile and brick fragments totalled 93 and there were four fragments of copper alloy, one of which was the shaft of a hairpin, and a badly corroded coin. Some slag was collected and a piece of vitrified baked clay, possibly part of a domestic hearth.
- 5.13 Features which were identified fell into three categories: a linear land division or barrier stretching along the site; pits and postholes; and intercutting curvilinear features (see Figure 5). All features had been severely truncated and rarely contained more than one fill. Pottery from the site was very abraded though some of the building material was in good condition.
- 5.14 The land division or boundary ran diagonally across the site but was at right angles to the possible Roman road. The eastern end (contexts 30, 2-16, 18, 22, 166, 172,

CLUTTONS

150, 174, and 142) appeared in plan to be a hedgeline with ancillary trees or posts. When excavated, the base of the features did not, however, show any of the usual characteristics of hedgelines such as an irregular base or root channels.

Nevertheless, if this were a posted boundary, it is difficult to imagine why a trench of this shape had been dug to position them. The group farthest to the east (2-16) contained fragments of charcoal, slag, iron and ironworking waste including nails, hobnails, a carpenter's dog and items which are probably chisels and a punch. This composite feature produced half of all the slag collected on site with the rest scattered throughout other features. Small posts or trees adjacent to the southern side were blackened and may have been burned *in situ*. Early, middle and late Roman pottery was retrieved from the excavated features.

- 5.15 During investigation of the stones within layer 78 a possible continuation of the boundary hedge or fence, context 144, was discovered below them. Although barely more than a shallow depression it exhibited one convincing cut edge and followed the same alignment as the boundary. Context 148, west of 144, was a shallow but well-defined feature and may also have been part of the boundary or land division. Feature 148 was the only feature to show clear evidence of root disturbance.
- 5.16 The boundary was formed from this point onwards by a ditch, Context 126. Three sections were excavated and showed that the remaining fills of the V-shaped ditch were 180mm to 300mm in depth. The ditch, which was cut by two large pits (see below), came to an abrupt termination before reaching deposit 78 and contained undiagnostic Roman pottery.
- 5.17 Pits were generally shallow (see Figure 6) and provided little information about their original function though it is likely that some were used for rubbish disposal. The fill of pit 42 was fire-blackened and contained small fragments of burnt bone, suggesting that a small cremation had been deposited. Features 75 and 110 were the only substantial pits on the site with 110 cutting 75. Pit 75 was 630mm deep and 1.66m in diameter yet contained comparatively little artefactual material (eight sherds and eight fragments of building material). One large piece of puddingstone was retrieved from the bottom of the pit. The purpose of this pit is obscure but it may possibly have been dug to provide drainage. Pit 110 (260mm deep by 940mm in diameter) contained 49 sherds and 48 fragments of building material, the largest assemblage on the site from a cut feature. It also contained a small disc, recut from a sherd, probably used for counting or a game. Pottery from both of these pits was dated to the late 3rd to 4th centuries.
- 5.18 A large shallow pond-like feature (134) was investigated at the western end of the site. Although it contained occasional finds it was interpreted as a natural formation created by pooling of rain water on the impermeable ground surface. Environmental tests on soil samples from this feature provided little additional information.

CLUTTONS

- 5.19 Four postholes, 44, 46, 48 and 73, were grouped together in the centre of the site, the function of which is unknown.
- 5.20 The curvilinear features were all found north of the land division and mainly in the west (see Figure 5). These have been interpreted as posted ditches of single-walled penannular or semi-circular structures. This form of construction was most clearly demonstrated in Structures 1 and 2 and the pattern of posted ditch accompanied by a large terminal post can be recognised in other fragmentary structures across the site. Terminal 52 (Structure 1), with a depth of 430mm, was the only substantial post pit (see Figure 7). In Structure 5 and Structure 4, only the fragmentary bases of the postholes remained. It is possible that these two arcs of posts represent a single double-walled posted building, slightly larger in diameter than the others structures, rather than two successive phases.
- 5.21 Fills of Structures 1 and 2 contained fragments of charcoal and areas darkened by charcoal flecks. Feature 54, which may be a post-pad for a central support in Structure 1, was darkened by charcoal fragments on the surface. Outside Structure 11, at the eastern end of the site, a spread of ironworking waste and slag fragments (154) was found. This is the structure closest to features 2-16 where much of the slag on site was discovered.
- 5.22 Several phases of occupation can be interpreted, both from features which visibly intercut and by calculating probable circumferences. Some postulated projections can also be phased because, although not intercutting, they would have blocked obvious access points. None of the structures could be positively dated from the pottery.
- 5.23 Cutting of the pipe trench was monitored through MA 8. As the trench approached the eastern end of the excavated site it was, for approximately 12.50m, on the same alignment as the hedged or posted boundary features, Contexts 2-20. At 2.70m east of the excavation a similar feature, 5.80m in length, was recorded and, after a break of 1m, another feature 3m in length was seen.
- 5.24 No evidence for the Roman road (SMR 3829) was seen as the pipe trench crossed its probable line; the subsoil at this point was disturbed and calcareous. It is likely that this had been caused by over-bank flooding from the seasonally-running ditch which separates the two fields and by the passage of farm vehicles. As it was unclear whether the line would have followed the modern road (see Figure 2a) or was beside it, the contractors agreed to continue the trench across the width of MA 9 at this point. A small pit containing pottery was recorded but no road-like gravel deposits were seen in MA 9.

6 THE FINDS AND ENVIRONMENTAL ASSESSMENTS

- 6.1** Specialist finds and environmental assessment reports can be found in Appendices 1 and 2. Detailed pottery and artefact catalogues have been prepared but these are not reproduced in this report. They will be deposited with the archive where they may be consulted. The following paragraphs are a non-specialist's guide to the contents of the appendices to assist with their interpretation.
- 6.2** The pottery reports examine the form (shape) and decoration of sherds in order to date them and suggest their place of manufacture. Some forms and decorations are very closely dateable, for example specialised imported wares. Others vessels remained unchanged over a long period and are therefore unhelpful for dating. The dates of pottery sherds will suggest periods when activity was taking place on a site and do not necessarily date the features in which are found. It does however establish a date after which a feature was created – for example, a foundation trench with 3rd century pottery incorporated into its fill must have been dug either at that time or at some time after that. Most of the pottery from the pipeline was very worn suggesting it had been discarded for some time before it was buried.
- 6.3** Very few early Roman sherds were collected on Site 8. Some pottery is identified as from the mid-2nd to 4th centuries and some can be more narrowly defined as from the mid-2nd to the mid-3rd centuries. The larger groups of sherds, which obviously provide the best information, are from the late 3rd century onwards. The latest positively confirmed pottery is from the 4th century.
- 6.4** Most of the pottery is locally made with a high proportion coming from the kilns at Hadham. In the group of pottery from the 4th century, Oxfordshire wares are also well represented. Sherds from mortaria, a type of pounding or mixing bowl, were mainly 2nd century in date and from a variety of kilns though surprisingly, unlike other comparable sites in Essex, there are none from Oxfordshire.
- 6.5** Samian pottery, a red-coated ware imported from Gaul, is discussed separately as it is closely dateable. The small assemblage of worn sherds spans the period from AD 70-260 and is considered to be typical of samian found on Romano-British rural sites. One piece, part of a mortarium, is of interest as it shows evidence of an early repair.
- 6.6** A handle-like sherd (see Figure 8,1) has incised letters (grafitti) applied before firing took place. These are thought to be part of a name or perhaps two names (personal comment Mark Hassall). The sherd is of a red fabric similar to brick and may possibly be part of a roof decoration.
- 6.7** Medieval and post-medieval sherds from the pipeline were also abraded except for a few excavated from features in Site 6. Small numbers of sherds from surface collection in Monitoring Areas 6, 9, 13 and 16 spanned a date range from the 12th to

CLUTTONS

the 17th centuries. A large spread of abraded sherds (Site 13) was mainly from the mid-13th to 14th centuries and were from bowls, jugs and cooking pots.

- 6.8 Two coins were retrieved from Site 8. One was too worn to decipher but the other was sent for conservation and details are included in Appendix 2. It is dated to AD 341-346.
- 6.9 The report on miscellaneous finds identifies artefacts of copper alloy and iron and comments on slag and ironworking waste which was found at Site 8. Part of a horseshoe which was found at Site 13 was of a similar date to the associated pottery sherds. This part of the appendix also discusses stone objects and ceramic building material, mainly Romano-British tile and brick.
- 6.10 Appendix 3 contains the reports on environmental assessments. Charcoal from Site 8 was examined and small roundwood from hawthorn, prunus, and cherry or blackthorn identified. Outer parts of oak were in evidence as was a more substantial fragment of maple. Narrow hazel appeared to have been coppiced suggesting managed hazel woodland in the vicinity.
- 6.11 Examination of soil samples for plant macrofossils produced sparse evidence with only three cereal fragments and rare seeds or fruits. The presence of blackthorn, noted in the charcoal report, was confirmed.
- 6.12 The animal bone report quantifies and, where possible, identifies the remains. Horse, cattle and deer were present and some bones showed butchery marks. The suggestion is made that one pit (8/42) may have been a small cremation which was also noted in the soil sample analysis.



7 DISCUSSION

- 7.1 **Medieval sites.** Occasional surface finds in several MAs of medieval and post-medieval pottery sherds are the result of agricultural processes where rubbish thrown out on the midden is later spread on the fields during manuring. Sites 6 and 13 however, where features or a concentration of material were found, suggest habitation in the close vicinity. At Site 6 (see Figure 4) the medieval ditch, situated at the top of a ridge, may once have been more substantial although, when excavated, it had the irregular meandering appearance of a field boundary. Ellis (1992) found two ditches approximately 50m to the west, which he suggests may be part of a moat, and other ditches, pits and wall foundations dating from the medieval period to the 17th century. Rivett's Farm, a 16th century house 200m to the north, may have formed part of the same settlement. Both Ellis's site and Site 6 produced medieval pottery of similar types and dates and it seems likely that they are connected. A number of medieval moated sites are recorded in the Study Area and this is perhaps a lost site, previously undetected by survey or documentary evidence.
- 7.2 The spread of abraded surface finds in MA 13 is more difficult to explain. The collection is too concentrated to be the result of manuring and the presence of contemporary metalwork, nails, and slag indicates settlement activity nearby. The fact that a variety of pottery forms were identified, including vessels used in the kitchen and the serving area, suggests that this is rubbish from a reasonably high-status house and, once again, it appears that unrecorded structures may have existed here.
- 7.3 **The Romano-British settlement.** The settlement (Site 8) was in some ways enigmatic and contradictory. Although liberally scattered with ceramic roofing tiles, no structure was found which could support them and, although numbers of round or semi-circular structures built in the tradition of the iron age were identified, no pre-Roman material was recovered.
- 7.4 By projection of their possible circumferences the structures can be tentatively phased. Four structures (or three if 4 and 5 are considered to be a single structure) pre-date the ditch (126) and, of these, Structure 8 (which is cut by 7) must be the earliest followed, when this went out of use, by 4/5 and 7. There is no reason why Structure 2 could not have been contemporary with these but it is perhaps more likely that it came next, with Structures 6 and 9. Next came Structure 1, which cuts 6, and Structure 3 which cuts 2. Structures 10 and 11 cannot be phased and would not conflict with any stage of this model. There is no way of telling whether these phases were accomplished quickly or whether they were spread over a considerable period of time. Pottery from the fills was abraded and difficult to date but where a date is assigned the suggested phasing is not contradicted. For example, if feature 146 is considered to be a terminal post (which is uncertain), then latest pottery from Structure 5, and probably Structure 4 also, is from the mid 3rd century. Latest pottery from Structures 2 and 6 is mid 4th century and latest pottery from Structure

CLUTTONS

1 is late 4th century. These dates should be treated with care, however, as the pottery report points out that sherds may have been redeposited several times. It seems clear from the small segment of Structure 3 which was uncovered that other structures continue to the north and north-west beyond the limit of excavation.

- 7.5 Four of the structures face south (1, 6, 9 and 11) and three (or four) probably face east (2, 3, and 4/5). The others face west (10), north-west (7) and north-east (8) though some of these directions are conjectural. It might be possible to establish from a larger sample of structures whether contemporary buildings were constructed on the same alignment but this is not possible at present.
- 7.6 It is unusual for round houses, typically iron age in style, to be constructed well into the Roman period although examples have been found at several sites, notably Baldock (Stead and Rigby 1986), Ashton (Hadman and Upex 1975) and Great Dunmow (Lavender 1997). One reason for utilising this form at Rye Hill may be that these were not permanent dwellings but ancilliary buildings or workshops. Apart from a few fragments of lava, probably part of a quernstone, from Structure 2 and a fragment of decorative worked bone from Structure 1, no domestic artefacts were associated with the structures. The only evidence to suggest their use is the quantities of charcoal, slag and ironworking waste which were found although a lack of hearths weakens this theory.
- 7.7 Variable preservation may account for the fact that no hearths or complete circles were detected but it is also possible that some of the structures were semi-circular. Pit 69 may be the mid-opening support for semi-circular Structure 9 with pit/post-pad 54 a support within Structure 1. The nature of the posted walls and large terminals suggests that they were more than windbreaks and carried a roof, probably of thatch or turf. This type of construction would have been suitable for carrying out hot, smoky work, providing maximum light and air and it would have been less hazardous than working in an enclosed inflammable building. Structure 4/5, which appears to be larger and more substantial, may have been circular and used for some other purpose. Features 114 and 59 within it are likely to be domestic (for example, screening) rather than structural. Structure 8, another of the early buildings, may also be round if Feature 61 is associated with it.
- 7.8 The small collection of cremated bones in pit 54 are not conclusively human but the inclusion of infant burials within structures can be paralleled elsewhere. At Baldock (ibid.) roundhouse No.VII was closely associated with eight infant burials, four outside, two immediately inside, and two directly on the line of the trench. Building V was also associated with an infant burial.
- 7.9 The presence of abraded, redeposited pottery cannot date specific features with any degree of certainty. It can however suggest the length of time during which activity took place either on Site 8, beside it to north and south (see Figure 2a) or in the field directly to the south where SMR 3756 marks the site of Roman pottery, tile and brick.

- 7.10 There are a few late iron age type sherds present in the assemblage, typical of the period of the Roman invasion, which may indicate a continuity of occupation in this part of Essex. The bulk of the sherds can confidently be dated to the 2nd, 3rd and 4th centuries, with the larger groups being late 3rd to 4th century, and make a speculative scenario possible. After the earliest phase of occupation, which includes the larger round house Structure 4/5 and Structures 7 and 8, the area was divided with a hedge/fence and a ditch. This barrier was obviously for legislative or cosmetic reasons as the gaps along its length would have prevented it from being exclusive or inclusive. The hedge/fence section of the barrier may have acted as a screen for the industrial activity and suggests this might be the time that a high-status building, able to take the weight of very substantial roof tiles, was constructed beside the Roman road. Later it seems that passage between the two areas was desired and part of the barrier was obliterated and covered with demolition material to create a convenient hardstanding. This may represent a different use for the putative house or its partial or total demolition. Building material in pit 110 was presumably deposited before the barrier was breached or it could have been thrown down with the rest. The trampled deposit which was created by traffic across the site is darker towards the work huts and lighter, less charcoal-rich, behind the barrier. The building material and pottery, including finds from other areas of the site which are remnants of the trampled layer (see Figure 5) were dated to the late 3rd to 4th centuries and suggest the date for the building of the main house or houses.
- 7.11 A small roadside Romano-British settlement can now be envisaged with Roman-type structures to the south of Site 8 and possibly also in the adjoining field (SMR 3756) and industrial activities taking place in traditional round or semi-circular structures to the north. It is tempting to speculate even farther and wonder whether the strange 'dog-leg' at this point in Rye Hill Road marks the route of a track through the settlement which then swung off towards the high ridge on its way to Roman Harlow.
- 7.12 **The Roman road.** Investigations of the Roman road have demonstrated successfully that this was part of the pattern of small north-south rural roads linking the larger east-west thoroughfares (see Section 3 above). As more information is retrieved it becomes apparent that these roads may have been busier than previously suspected. It has been suggested that road 3830, east of road 3829 (see Figure 2b), may have continued to Latton Priory, where Roman material has been found, and link up with road 3755. Now that the settlement has been discovered at Site 8 it seems more probable that road 3829 is the connecting road with 3830 perhaps veering to the east where Roman material, possibly a kiln, has been found beyond the M11. Road 3829 would then pass beside a site in Epping, Site 13, Roman pottery and building material in SMR 3756, Site 8, the gas main site (SMR 9950) and Latton Priory and continue, north of the study area, to significant finds at Bush Fair Common.



8 CONCLUSIONS

- 8.1 Known archaeological remains were avoided during the course of the pipeline construction. Where deposits were unexpectedly disturbed, these were excavated, recorded and artefacts collected and conserved. The archaeological discoveries made during the construction of the pipeline have provided significant new information for the county record. In an area where occasional finds of Roman material suggested undiscovered sites, a small Romano-British settlement has been located. The excavation suggests that other structures and settlement may exist in the vicinity.
- 8.2 Investigation of the linear feature or track identified from aerial photographs has confirmed that it is the remains of a Roman road, linking the excavated settlement to other sites.
- 8.3 Medieval features and pottery which were located have added to information previously gathered in the area by earlier projects.
- 8.3 GUP and Three Valleys Water have fulfilled their environmental responsibilities following the Codes of Practice of the water industry and in the spirit of PPG 16, national and local legislation. The valuable new information which has been gathered will be made available to students and interested members of the public.



9 **BIBLIOGRAPHY**

Bagshawe R W 1979. *Roman Roads*. Shire Archaeology

Bennell, M, 1998. *An Archaeological Appraisal of Rye Hill to Fairfield Reservoir Trunk Main*. Cluttons client report.

Brown N and Bartlett R, 1992. A tanged chisel/leatherworking knife from Sheering and prehistoric finds from the valley of the Pincey Brook, Essex. *Essex Archaeology and History* 23 p.115-6

Ellis T 1992. *The Archaeology of a Gas Pipeline in Essex*. Archive report at ECC Planning Department

Hadman J and Upex S 1975. The Roman Settlements at Ashton near Oundle. *Durobrivae* 5

Lavender N 1997. Iron Age and Roman Occupation in Great Dunmow. *Essex Archaeology and History* 28

Stead I M and Rigby V 1986 Baldock. The excavation of a Roman and pre-Roman settlement 1968-72. *Britannia Monograph Series No. 7*



APPENDIX 1

SITES AND MONUMENTS RECORDS IN THE STUDY AREA



Sites and Monuments Records in the Study Area

KEY: BA = bronze age RO = Roman MED = medieval PM = post-medieval
 MOD = modern UD = undated

SMR no.	NGR	Period	Description
0023	TL 4655 0655	MED	Latton Priory, C12. SM 017
0110	TL 4655 0655	RO	Coins, re-used brick
3725	TL 4535 0665	MED	Moat, ? associated with William Forster 1466. SM 33246
3727	TL 4490 0530	MED	Moat, manor house mentioned 1304
3730	TL 4570 0490	?MED	Possible moated site
3731	TL 4750 0435	MED	Moat. SM 33245
3736	TL 4745 0310	RO	Tile kiln
3739	TL 4675 0215	PM	Mill mound
3755	TL 4640 0675	RO	Road, documentary evidence
3756	TL 4625 0555	RO	Brick, tile, pottery, ?ditch and dump seen in soil mark
3757	TL 4625 0555	PM	Pottery, ?ditch and dump seen in crop mark
3761	TL 4665 0235	RO	Possible kiln, documentary evidence
3767	TL 4675 0575	UD	Puddingstone, possible marker of ancient track
3772	TL 4530 0570	MED	Possible moat, recorded 1345
3806	TL 4665 0285	PM	Site of mill 1777
3829	TL 4625 0615-TL 4645 0485	RO	Road, projected line, AP crop marks
3830	TL 4725 0435- TL 4735 0370	RO	Road, agger visible
9943	TL 4650 0640	PM	Wall foundations
9944	TL 4595 0595	MED	Pits, walls, ditches, ?moat
9945	TL 4595 0595	PM	C16/17 pottery, dumps, ditches
9946	TL 4675 0635	RO	Pottery, gully, bone, daub
9947	TL 4675 0635	PM	Pottery in topsoil
9948	TL 4675 0635	MED	Pottery, spread of charcoal, chalk, flint pebbles, 3 ditches
9950	TL 4650 0640	RO	Brick and tile
9951	TL 4650 0640	MED	Foundations
13732	TL 4535 0685	BA	Gold bracelet found with metal detector
15116	TL 4705 0405	PM	Milestone
15118	TL 4640 0206	PM	Milestone
15125	TL 4605 0305	MOD	Industrial site
15377	TL 4690 0280	MOD	Union Workhouse 1838

CLUTTONS

15393	TL 4760 0260	MOD	Industrial site
16598	TL 4755 0420	MOD	WW2 military site
16599	TL 4690 0490	MOD	WW2 military site
16602	TL 4690 0450	MOD	WW2 military site
16603	TL 4710 0430	MOD	WW2 military site
16604	TL 4735 0445	MOD	WW2 military site
16605	TL 4760 0450	MOD	WW2 military site
16607	TL 4720 0415	MOD	WW2 military site
17801	TL 4570 0650	UD	AP linear features
17804	TL 4615 0225	MED	C12 town centre
18031	TL 4580 0420	UD	AP field boundaries



APPENDIX 2

FINDS REPORTS

- A The Roman Pottery**
- B The Medieval and Post-Medieval Pottery**
- C The Roman Coin**
- D The Miscellaneous Finds**

2A THE ROMAN POTTERY by T S Martin with specialist reports by P R Sealey (amphoras) and Steven Willis (samian)

Introduction

The 1999 excavations produced a total of 819 sherds (7kg) of Roman pottery from 56 contexts. This material was classified using the Chelmsford typology (Going 1987). Analysis was primarily concerned with identifying the variety of fabrics and forms, and providing dating evidence for features. A total of twenty-one fabrics or fabric groups were recorded. Quantification was by sherd count and weight by fabric.

Fabric	Code (after Going 1987)	Sherds	Wt.	%Wt.
Amphora fabrics (AMPH)	-	3	130	1.83
Black-surfaced wares (BSW)	-	35	215	3.03
Colchester buff ware mortaria (COLBM)	27	3	64	0.90
Colchester colour-coats (COLC)	1	1	12	0.16
Fine grey wares (GRF)	39	148	709	10.01
Grog-tempered wares (GROG)	53	7	121	1.70
Hadham black-surfaced ware (HAB)	35	32	334	4.71
Hadham grey wares (HAR)	36	184	1244	17.56
Hadham oxidised red ware (HAX)	4	60	464	6.55
Hadham oxidised red ware mortaria (HAXM)	4	1	16	0.22
Hadham white-slipped ware mortaria (HAWM)	14	1	116	1.63
Late shell-tempered wares (LSH)	51	1	4	0.05
Misc. oxidised red wares (RED)	21	14	213	3.00
Misc. white-slipped wares (WCS)	15	9	65	0.91
Nene Valley colour-coats (NVC)	2	3	22	0.31
Nene Valley white ware mortaria (NVM)	24	1	55	0.77
North Kent grey wares (NKG)	32	4	21	0.29
Oxfordshire red colour-coat (OXRC)	3	4	96	1.35
Samian (TSG)	60	12	125	1.76
Sandy grey wares	47	273	2334	32.96
Storage jar fabrics (STOR)	44	21	709	10.01
Unspecified colour-coats (UCC)	-	2	7	0.09
Totals		819	7081	-

Site Chronology

Given that there are few stratigraphic relationships on site, most features are only datable by their contents. All but one of the features excavated contained single fills. However, even where pottery was present, few features proved to be closely datable. By and large the assemblage was very abraded and consisted of undiagnostic body

CLUTTONS

sherds which suggests that it had probably been re-deposited several times over. This also implies considerable levels of residuality. Moreover, there were only three contexts containing in excess of 30 sherds and two of these were layers. Consequently, it is only possible to provide a very rough impression of site chronology from the available data.

The earliest pottery on the site appears to be Late Iron Age in date, although none of this material comes from contexts of this period. Grog-tempered pottery accounts for less than 2% of the total assemblage. Early Roman material was largely absent. Most of the pottery recovered from the site is mid-2nd to 4th century in date, judging by the range of forms and fabrics. There were several contexts where a tentative mid-2nd to mid-3rd century date bracket can be suggested. These include pit fill 147 and possible boundary fence fills 3-17. Pit fill 147 contained just 18 sherds (11g) a Fine grey ware B3.2 plain-rimmed dish and a G5.4 lid-seated jar, while possible boundary fence fills 3-17 are dated to this period by virtue of having no distinctively later fabrics. All the groups with more than 30 sherds belong to the period from the late 3rd century onwards, however, only one of these is a feature-fill. Pit fill 111 produced 49 sherds (486g) of pottery, although the only datable form was a Hadham black-surfaced ware B6.2 bead and flange dish. To this period also belongs the large pit fill 77. Although this feature contained only 8 sherds, two late Roman forms were present, a B6.2 bead and flange dish and an E6.1 type bowl jar. The latest pottery from the site, 4 sherds belonging to an Oxfordshire red colour-coat bowl, comes from context 157. Only the base was present and no exact vessel form could be recognised. This is more likely to be 4th century in date, than earlier.

Pottery supply

Understanding pottery supply to the site is a major problem given the condition of the pottery and the absence of large, well-stratified groups. None of the larger groups were of sufficient quality to warrant detailed description and discussion. Several very generalised observations are possible, however. Locally produced pottery dominates, with very little in the way of traded wares being present. By far the bulk of the pottery comprises Sandy grey wares from unspecified sources, although Hadham is the most likely origin for much of this material. Of the pottery reaching the site in the 2nd century, Colchester products represent a mere 1% of the total assemblage, while North Kent grey wares are barely present. Hadham wares account for over 30% of all pottery and includes all of the fabrics that were produced from the 2nd century onwards (i.e. Hadham black-surfaced ware, Hadham grey ware, Hadham oxidised red ware and Hadham white-slipped ware). High levels of these products are to be expected on this site given its fairly close proximity to the kilns. In the late 3rd to 4th century pit fill 111, Hadham products account for nearly 50% of all pottery in the group. However, this group was in very poor condition. Oxfordshire red colour-coats attained a comparable share of the market in the 4th century, while Late shell-tempered ware is represented by a single sherd. Given that this fabric is typical of late 4th century horizons over much of the region, its virtual absence from this site is almost certainly chronologically significant.

CLUTTONS

Perhaps the most interesting aspect of the assemblage is the mortaria, the bulk of which is 2nd century in date. Mortaria fabrics account for just over 3% of all pottery. Four fabrics were recorded, Nene Valley white ware mortaria, Hadham oxidised red ware mortaria, Hadham white-slipped mortaria and Colchester buff mortaria. Two vessel forms were represented, D13 (c. AD 150/60-200) and D3.1 (c. AD 100-160) in Colchester buff ware and Hadham white-slipped ware respectively. The D3.1 Hadham white slipped ware mortarium from context 8-13 has part of a 'herring-bone' stamp and a section of the spout (see Figure 8, 2). However, the amount of abrasion present means that the die pattern does not lend itself to secure identification. The only late Roman piece is the Nene Valley white ware vessel that could have arrived on the site anytime within a mid-3rd to mid-4th century date bracket. It would seem that, even given the meagre nature of the dating evidence, the mortaria reflect the overall chronology of the site. It is notable, however, that Oxfordshire products are not present. These form the principle source of late Roman mortaria found on Essex sites.

Conclusions

The pottery from the site is of little value for understanding site development. Only the widest of date margins are possible for many feature-fills which prevents a detailed picture of site chronology from being constructed. The evidence suggests that the bulk of the pottery was probably being deposited from the 2nd until the mid-4th century at the latest. A terminal date sometime within Chelmsford ceramic phase 7 is indicated.

The Samian Pottery by Steven Willis

Introduction

The fieldwork undertaken in MAs 8 and 9 produced a small group of samian (*terra sigillata*) pottery, amounting to 13 sherds weighing 138g, with some 9 vessels represented. Of this total one sherd was recovered from MA 9 during surface collection, while the remainder came from the excavation in MA 8 (Site 8). The date range of the latter material falls within the period c. AD 70-260. It provides complementary information to that revealed by the Roman coarse pottery, and its character and composition are consistent with the conclusions reached in the report on the coarse ware. The samian sherds are of low average weight and are considerably abraded, suggesting that they may have been subject to various processes between their original breakage and their incorporation into the deposits from which they were recovered. A catalogue is presented below, followed by a discussion.

Catalogue

The Catalogue lists all samian sherds submitted for identification. Sherds are listed in context number order. As regards the source of the item/s South Gaulish is abbreviated to SG, Central Gaulish to CG and East Gaulish to EG. An estimate of the date of the sherd in terms of calendar years is given (this being the date range of deposits with which like pieces are normally associated).

Site 8

- Context 8 - 3

1 body sherd, CG Lezoux, form not identifiable, 1g, c. AD 120-200

- Context 8 - 15

1 body sherd, SG La Graufesenque, Drag. 37, 1g, c. AD 70-100. The sherd is a flake upon which part of an ovolo border is represented. The ovolo is finely executed with a double border, narrow core and a tongue which, although abraded, evidently has a four-pronged terminal. Below the ovolo is a bead cordon, separating the ovolo from the zone of decoration (in this case perhaps a scroll). The character and quality of the ovolo is paralleled amongst bowls from the Pompeii hoard of AD 79 (Atkinson 1914); a closely similar ovolo occurs on a South Gaulish Drag. 37 bowl from the area of the vicus at Melandra, Derbyshire (Wild 1971, Fig. 8 No. 8). Whilst this vessel from context 15 is best assigned a date range of c. AD 70-100, a bracket of c. AD 75-90 is quite probable.

- Context 8 - 37

2 sherds (1 body sherd and a probable worn down rim sherd, not conjoining), EG Argonne, small plain bowl, 18g, c. AD 130-260

- Context 8 - 79

1 body sherd, CG Lezoux, probably from a Drag. 36 or Drag. 42 dish, 4g, c. AD 120-170

1 body sherd, CG Lezoux, form not identifiable, 3g, c. AD 120-200

1 body sherd, CG Lezoux, Drag. 38, 18g, c. AD 130-200

4 body sherds (all conjoining), CG Lezoux, Drag. 45, 61g, c. AD 170-200; two drilled holes are present indicating that the vessel had been (or was going to be) repaired via lead riveting

- Context 8 - 111

1 body sherd, CG Lezoux, Drag. 38, 19g, c. AD 130-200

Site 9

- Context 9 - 1

1 body sherd, including part of a footring and some vessel floor, CG Lezoux, from a bowl or dish, 13g, c. AD 120-140

Discussion

The recovered samian assemblage is of very modest size but has a potential date range extending from the Flavian period to the mid third century (c. AD 70-260), and, at minimum, must cover the Flavian period to the late second century. As with other rural Romano-British sites in Essex the impression gained is that there is likely to have been a broadly continuous access to, and use of, samian vessels more or less throughout the period of samian importation.

However, samian amounts to a very small proportion of the overall quantity of Roman pottery arising from the excavations at Site 8 (cf. Martin, Table, above). It is typical for rural sites to yield only low proportions of samian amongst their pottery assemblages (Willis 1998), while in this case a further skewing factor is the strong presence of later Roman pottery, dating to the period after the importation of samian had ceased. It would appear that a proportion of the sherds are likely to occur within contexts as residual material; much of the samian recovered from excavated features at Romano-British rural sites generally is residual, and boundary features are especially associated with finds of this status.

The composition of the samian assemblage by date shows a second century bias which is typical of rural sites in Britain. There is only 1 first century vessel represented (also the only decorated item). Including the item from MA 9 there are seven vessels of the Hadrianic-Antonine period, with the likelihood that the majority of the vessels from Site 8 are Antonine. No Colchester samian present. Whilst it might be posited that this is a function of assemblage size, it is clear that there is very little other Colchester pottery amongst the assemblage. In terms of form, dishes and bowls predominate but the group is too small to draw firm conclusions. The presence of the Drag. 45 mortarium is of interest though; moreover it had been repaired. While the Drag. 45 is a distinctive and familiar samian form it is, in percentage terms, a surprisingly rare component of samian groups (Willis 1997). Samian was more often repaired than were other contemporary pottery types, but only around 1 in 75 samian sherds show signs of repair.

Samian assemblages from rural sites are often composed of highly fragmented and abraded pieces (cf. Willis 1998). The condition of the present material is consistent with this norm. The average sherd weight for the sherds from Site 8 is 10.4g. This mirrors the average sherd weight of the samian recovered from the excavations at the rural site at Brook House Road, Great Tey, Essex (Willis In Press) which was 10.8g (32 sherds, from 17 vessels). This pattern seems likely to reflect the probability that much of the material recovered from deposits on rural sites comprises rubbish which was 'old' before it became incorporated within the contexts from which it was recovered by excavation.

The Amphoras by P R Sealey

Context 8-21 produced two joining sherds of a Gauloise IV foot-ring base weighing 114g. Gauloise IV was exported to Britain from Gaul bottled with a range of wines from after the Boudican revolt until the 3rd century AD. A further sherd from context 8-13 weighing 15g is in exceptionally poor condition and thus does not lend itself to identification.

Bibliography

Atkinson, D. 1914. A hoard of samian ware from Pompeii, *Journal of Roman Studies*, 4, 26-64.

Going, C.J., 1987 *The Mansio and other sites in the south-eastern sector of Caesaromagus: the Roman pottery*, CBA Res. Rep. 62.

Wild, F.C. 1971. The samian pottery, in P.V. Webster, Melandra Castle Roman fort: excavations in the civil settlement 1966-1969, *Derbyshire Archaeological Journal.*, 91, 58-118, (80-9).

Willis, S.H. 1997. *The English Heritage Samian Project. Report on the Results of Phase 1*, University of Durham Press, Durham.

Willis, S.H. 1998. Samian pottery in Britain: exploring its distribution and archaeological potential, *The Archaeological Journal*, 155, 82-133.

Willis, S.H. In Press. The samian pottery, in S. Gibson, Excavations at Brook House Road, Great Tey, Essex, on the course of the Great Horkesley - Braintree Anglian Water pipeline, *Essex Archaeology and History*.



2B THE MEDIEVAL AND POST-MEDIEVAL POTTERY by H Walker

Method

The pottery has been recorded using Cunningham's typology for post-Roman pottery in Essex (Cunningham 1985a, 1-16) and some of her rim-form codes are quoted, see also Drury (1993, 81-4) for the chronology of cooking pot rims used in recording this pottery.

Spot-dating of pottery

Context & type	The Pottery	Wt (g)	Date range
5-1 surface collection	1 unabraded modern stoneware beer bottle rim	12	19th to early 20th C
6-1 surface collection	2 sherds sandy orange ware including sherd with traces of slip-coating; 1 sherd unglazed medieval Harlow ware; 1 upright post-medieval red earthenware rim, perhaps from a cistern, ?16th C; 1 black-glazed ware rim - form unidentified but not from a drinking vessel; all sherds abraded apart from black-glazed sherd	38	13th to 14th C and ?17th C
6-3 clearance of ditch	abraded sherds; 2 joining sherds early medieval ware base; 13 sherds medieval Harlow ware including fragment of jug rim and upper handle attachment, and sherds with internal splash glaze; 6 sherds sandy orange ware; 1 sherd medieval coarse ware; 2 joining sherds from Metropolitan slipware dish rim	128	mid-13th to 14th C and ?17th C
6-4 ditch fill, box section A	3 slightly abraded sherds early medieval ware including beaded cooking pot rim, 12th C-type	33	12th C
6-5 upper fill ditch, box section B	unabraded sherds, 1 early medieval ware thickened everted cooking pot rim, 11th-12th C; Mill Green coarse ware sagging base, fire-blackened and spalled on underside with pale green splash glaze on internal surface; 1 sherd sandy orange ware, slip-painted under clear glaze; 6 sherds medieval Harlow ware including internally glazed base and splash-glazed body sherds	80	mid-13th to 14th C + earlier
6-8	slightly abraded sandy orange ware jug rim showing beginnings of pulled spout and two horizontal bands of cream slip-painting below rim, partial plain lead glaze	19	13th to 14th C
6-10 fill of pit 6-9	1 sherd abraded Mill Green fine ware showing traces of cream slip-coating under a green glaze	3	mid-13th to mid-14th C
9-1 surface collection	all sherds are abraded; sandy orange ware beaded rim and base sherd showing remains of internal glaze, could be medieval Harlow ware; 1 sherd black-glazed ware; 1 Metropolitan slipware horizontal-flanged jar rim with slip-trailed decoration on top of flange; 5 sherds post-medieval red earthenware including handle from drinking vessel with all over brown glaze, could be as early as 16th C, internally glazed flanged rim from large pancheon-type bowl and two internally glazed sherds	130	mainly 17th C

CLUTTONS

Context & type	The Pottery	Wt (g)	Date range
13-1 surface collection	<p>all medieval sherds are abraded making identification difficult; 6 sherds early medieval ware including beaded cooking pot rim; 4 sherds Mill Green fine ware including fragment from a thumbled jug base and green glazed sherd showing curving lines of combed decoration through cream slip-coating; 10 sherds sandy orange ware including the following: slip-painted and glazed sherds, a slip-coated and green glazed sherd, remains of thumbled jug base and a recessed base which is either warped or not circular;</p> <p>11 sherds medieval Harlow ware including thumbled jug base; two curved over flanged cooking pot rims (sub-form D2) and two everted flanged rims from larger vessels, one similar to an example from Stansted (Walker forthcoming, no.125); 39 sherds Mill Green coarse ware including an H2 cooking pot rim, a flanged bowl rim and several internally glazed base sherds;</p> <p>53 sherds assorted medieval coarse ware, some grey firing but mostly oxidised, forms - several cooking pot rims comprising two beaded rims (sub-form C3), 12th C-type; one B4 rim-c.1200; one H2 rim-early to mid-13th C and one H1 rim-current throughout the 13th C, also a flanged ?bowl rim;</p> <p>2 sherds post-medieval red earthenware comprising an abraded sherd with powdery green internal glaze and an unabraded sherd with all over apparent green glaze</p>	1108	latest is post-medieval, but most dates to the mid-13th to 14th centuries
16-1 surface collection	3 sherds black-glazed ware including part of a jug rim and handle; 1 Metropolitan slipware dish rim; 2 sherds post-medieval red earthenware comprising glazed, beaded rim from small jar and internally glazed sherd from a flat ware	120	?17th C

Dating of fabrics and published references

- Early medieval ware, 10th to 13th C (Drury 1993, 80),
- Medieval coarse ware, 12th to 14th C (Drury 1993, 81-6).
- Mill Green fine ware and Mill Green coarse ware, mid-13th to mid 14th centuries, Pearce (*et al.* 1982) and Meddens and Redknap (1992, 11-43). See also Walker 1995 (114) and Walker 1996 (130) for discussions of its dating in Essex.
- Sandy orange ware 13th to 14th C, (Cunningham 1982, 359),
- Medieval Harlow ware, a type of sandy orange ware in which both cooking pots and jugs were made, mid-13th to 14th centuries (Walker 1991, 107-12)
- Post-medieval red earthenware, 16th to 19th centuries (Cunningham 1985a 1-2).
- Black-glazed ware and Metropolitan slipware, principally 17th C, but current locally from the end of the 16th to early 18th centuries (Cunningham 1985b, 64, 71 and Newton and *et al.* 1960)

Summary of pottery present

A small amount of pottery weighing 1671g was excavated. Much of the pottery is abraded and poorly stratified, coming from surface collections. However, the earliest find comes from a ditch fill (6-4) comprising an early medieval ware beaded cooking pot rim, a type datable to the 12th century. Early medieval ware occurred in other contexts from site 6, but with later material (contexts 6-3, 6-5).

Most of the pottery found dates to the 13th to 14th century and comprises Mill Green fine and coarse wares, medieval Harlow ware, and sandy orange ware. Unfortunately Mill Green coarse ware and medieval Harlow ware can be quite similar, as cooking pots with an internal splash glaze, in a sandy, oxidised red-brown or orange fabric were produced by both industries. Mill Green coarse ware however tends to be smoother, often with quite large rounded quartz inclusions, whereas medieval Harlow ware has a harsher feel and typically has some red or amber sand inclusions and sometime sparse chalk flecks. In context 13-1, where sherds are very abraded, it was difficult to distinguish between the two, and identifications are quite tentative. Uncertain sherds from context 13-1 are classified as either sandy orange ware or medieval coarse ware.

Medieval vessel forms comprise, cooking pots (in medieval coarse ware, Mill Green coarse ware, and medieval Harlow ware); fragments from flanged bowl rims in (Mill Green coarse ware and medieval coarse ware), and fragments from jugs (in medieval Harlow ware, sandy orange ware and Mill Green fine ware). Many sherds from jugs show slip-painted/slip-coated and glazed decoration, and one sherd of Mill Green fine ware shows combed decoration (context 13-1) typically found on this ware. The presence of coarse and fine wares suggests the pottery comes from both living and service areas.

The presence of medieval Harlow ware is not unexpected as Harlow Common, the reputed site of the medieval kilns lies only 3½km north of site 6 and 4½km north of site 13. The sites are also near to the production site at Mill Green, which lies about 18km to the east of sites 6 and 13. Mill Green coarse ware and medieval Harlow ware also occur together at a nearby site at Chipping Ongar (Walker in prep.).

Although most of the pottery from sites 6 and 13 is medieval, the latest pottery (in contexts 6-1, 6-3, and 13-1) is 17th century, comprising post-medieval red earthenware, black-glazed ware and Metropolitan slipware. Similar post-medieval pottery was also found in contexts 9-1 and 16-1. All these wares could have been made locally, with known production sites at Harlow, Loughton and Stock. Site 5 produced one sherd of modern pottery.

CLUTTONS

Bibliography

- | | | |
|--|--------------|---|
| Cunningham, C. M., | 1982 | 'The medieval and post-medieval pottery', in Drury, P.J., 'Aspects of the origin and development of Colchester Castle', <i>Antiq. J.</i> , 139, 358-80 |
| Cunningham, C. M., | 1985a | 'A typology for post-Roman pottery in Essex', in Cunningham, C. M. and Drury, P. J., <i>Post-medieval sites and their pottery: Moulsham Street, Chelmsford</i> , Chelmsford Archaeol. Trust Rep. 5, Counc. Brit. Archaeol. Res. Rep. 54, 1-16 |
| Cunningham, C. M., | 1985b | 'The pottery', in Cunningham, C. M. and Drury, P. J., <i>Post-medieval sites and their pottery: Moulsham Street, Chelmsford</i> , Chelmsford Archaeol. Trust Rep. 5, Counc. Brit. Archaeol. Res. Rep. 54, 63-78 |
| Drury, P. J., | 1993 | 'The later Saxon, medieval and post-medieval pottery', in Rodwell, W. J. and Rodwell, K. A., <i>Rivenhall: Investigations of a villa, church and village, 1950 - 1977</i> , Chelmsford Archaeol. Trust Rep. 4.2. Counc Brit. Archaeol. Rep. 80, 78 - 95 |
| Meddens, F. M. and Redknap, M. | 1992 | 'A group of kiln waste from Harding's Farm, Mill Green, Essex' <i>Medieval Ceramics</i> , 16, 11 - 43 |
| Newton, E. F., Bibbings, E. and Fisher, J. L., | 1960 | 'Seventeenth century pottery sites at Harlow, Essex', <i>Essex Archaeol. Hist.</i> , 25, 358 - 377 |
| Pearce, J. E., Vince, A. G. and White R., | 1982 | 'A dated type-series of London medieval pottery part one: Mill Green ware', <i>Trans London Middlesex Archaeol. Soc.</i> , 33, 266 - 298 |
| Walker, H., | 1991 | 'The medieval and later pottery', in Andrews, D., 'An archaeological sequence at the edge of Old Harlow marketplace', <i>Essex Archaeol. Hist.</i> 22, 107 - 112 |
| Walker, H., | 1995 | 'The medieval and post-medieval pottery', in Wymer, J. J. and Brown, N. R., <i>North Shoebury: Settlement and Economy in South-east Essex 1500BC - AD1500</i> E. Anglian Archaeol. Rep. 75, 102-24 |
| Walker, H., | 1996 | 'Medieval and post-medieval pottery', in Medlycott, M., 'The medieval farm and its landscape: excavations at Stebbingford Farm, Felsted', <i>Essex Archaeol. Hist.</i> 27, 127-50 |
| Walker, H., | forth-coming | 'The medieval and post-medieval pottery', in Brooks, H. and Havis R., <i>Excavations at Stansted Airport</i> , E. Anglian Archaeol. Rep. 00 |



2D THE ROMAN COIN REPORT by P McMichael

SF. No.	Context	Material	Description
1	8/1	Cua.	Coin: Roman 341-346 <u>Obv.</u> Helmeted head facing left with sceptre behind left shoulder. <u>Legend:</u> [CONSTANTINOPOLIS] missing <u>Rev.</u> Victory on the prow [standing left with shield and sceptre] No mint mark 13m diameter 1 gram

Works Cited

- Casey, P.J. 1980 *Roman Coinage in Britain* Princes Risborough
- Sternberg, F 1974 *Römische Münzen Byzantinische Münzen* Zurich

2E THE MISCELLANEOUS FINDS by H Major

Conservation of selected objects was undertaken by A-M. Bojko, Colchester and Essex Museum.

Site 6

The only miscellaneous finds from this site were two small and undatable fragments of baked clay, and an iron key, probably post-medieval.

Site 8

Coins (identification by P. McMichael)

There were two copper alloy coins from the site. One (from 8-79) was very badly damaged, and unidentifiable. The second (SF1, 8-1) was dated 341-346.

CLUTTONS

Metalwork

There were only five pieces of copper alloy recovered from Roman contexts. The only recognisable object was a hairpin shaft.

(Not ill.) Copper alloy hairpin, bent and damaged, with the head and point missing. It has traces of a spiral line below the head. Spirals are found on a number of different groups of pins of varying dates (Cool 1990), but are generally incised; here the spiral was probably in relief. It is not possible to date this pin within the Roman period, although a later Roman date is most likely. 8-79 SF5

Iron

Iron objects and working waste were recovered from thirteen contexts. Although the preservation was generally good, many of the pieces were incomplete, making positive identification difficult. Besides a few nails and hobnails, the only definite object was a small carpenter's dog from context 12.

Eight contexts contained small amounts of working waste, which reinforce the impression gained from the slag that there was ironworking taking place in the vicinity, and two of the incomplete objects from context 12 may be small smith's chisels. A third object, from context 14 is possibly part of a punch or drift.

Slag

A small amount of slag was recovered, a total of 80 fragments weighing 1653g. It was predominantly ferruginous, although a few pieces of low density slag and vitrified baked clay could be domestic in origin. Over half of the material came from slot contexts 3 to 17, with the remainder spread over the rest of the site. A possible fragment of hearth bottom came from context 79. While there is not sufficient material present to indicate that iron working was taking place on the site, it can be suggested that smithing was taking place somewhere in the vicinity.

Building material

303 fragments of tile were recovered, weighing 20,652g. As this was only a small assemblage, the fabrics were not recorded in detail. On the whole, the tile was not very abraded, which is in contrast to the pottery from the site.

The distribution was across the whole site, with few contexts yielding more than a few fragments. The major exceptions were spread 79 (31% of the total by number) and pit fill 111(24%). The assemblage was dominated by roof tile,

CLUTTONS

although bricks and box flue tiles were also present. The three sherds of box flue tile were all combed, and derived from separate tiles.

There are no indications of the tile having definitely been used on the site, although one fragment of brick from context 57 has surface wear consistent with use in a surface such as a hard standing or a path. On the whole, the assemblage is typical of tile groups from rural field systems in Essex.

There were only nine small fragments of baked clay recovered, some of which may be accidentally fired structural daub.

Querns

Four small lumps of lava were found in context 39, probably originally from a single quern.

Shell

There were only two oyster shells from the site, one each from contexts 79 and 135.

Other finds(not illustrated)

Small fragment of burnt bone from a thin-walled ?cylinder, with two closely set incised circumferential lines. This is possibly part of a hinge cylinder, with an internal diameter of c 18mm. 8-53 SF7

Disc, made from a sherd of Hadham greyware, with the edge ground. Diam. 25mm. 8-111 SF10

Site 13

The miscellaneous finds, all from context 13-1, comprised three fragments of ferruginous slag, three iron nails, a fragment of iron which may be part of a socket, and a horseshoe toe. The smooth profile and the form of the nail-holes indicate that the horseshoe is a London type 3 (Clark 1995, 87), in use in London from the early 13th century to the late 14th century.

References:

- | | | |
|-----------------|------|---|
| Clark, J. (ed.) | 1995 | The Medieval horse and its equipment Medieval finds from excavations in London: 5 |
| Cool, H.E.M. | 1990 | 'Roman metal hair pins from Southern Britain' Archaeol. J. 147, 148-182 |



APPENDIX 3

ENVIRONMENTAL ASSESSMENT REPORTS

- 3A The Charcoal Report**
- 3B The Plant Macrofossils**
- 3C The Animal Bone**

3A THE CHARCOAL REPORT by Rowena Gale

Introduction

This report discusses the analysis of charcoal from Romano-British contexts, including a composite feature, which also contained slag, and contexts associated with iron age type huts.

Material and methods

Charcoal was examined from seven samples. The samples consisted mostly of large, firm lumps with some measuring >10mm in radial cross-section, and numbering from 1-12 fragments per sample.

Samples were prepared for examination using standard methods. Fragments from each sample were fractured to expose fresh transverse surfaces and sorted into groups based on the anatomical features observed using a x20 hand lens. Representative fragments from each sample were selected for detailed study at high magnification. These were fractured to expose the tangential and radial planes, supported in washed sand, and examined using a Nikon Labophot microscope at magnifications of up to x400. The anatomical structure was matched to prepared reference slides.

When possible the maturity (i.e. heartwood/ sapwood) of the wood was assessed and number of growth rings recorded. It should be noted that measurements of stem diameters are from charred material; when living these stems may have been up to 40% wider.

Results

The results of the charcoal analysis are summarized in Table 1, and discussed in detail below. The anatomical structure of the charcoal was consistent with the following taxa or groups of taxa. It should be noted that the anatomical structure of some related taxa can not be distinguished with any certainty as, for example, members of the Pomoideae (*Crataegus*, *Malus*, *Pyrus* and *Sorbus*). Classification follows that of *Flora Europaea* (Tutin, Heywood *et al* 1964-80).

Aceraceae. *Acer* sp., maple

Corylaceae. *Corylus* sp., hazel

Fagaceae. *Quercus* sp., oak

Rosaceae. Subfamilies:

Pomoideae which includes *Crataegus* sp., hawthorn; *Malus* sp., apple;
Pyrus sp., pear; *Sorbus* spp., rowan, wild service and whitebeam.

Prunoideae which includes *Prunus avium*, cherry; *P. padus*, bird cherry,
and *P. spinosa*, blackthorn.

CLUTTONS

Most samples contained several fragments of charcoal but in some the similarity of physical dimensions and growth patterns (including vessel size, and curvature and width of annual increments) suggested an origin from a single piece, which had subsequently fragmented.

Composite feature containing slag

8-5: Fragments identified as hawthorn type (*Pomoideae*) roundwood may have derived from a single stem. Although the charcoal was too fragmented to record the stem diameter, it was probably at least 20mm. One fragment retained bark.

8-11: The sample consisted of three pieces of oak (*Quercus*) roundwood, possibly from the same stem, but only representing the outermost areas. Estimated minimum diameter: 20mm.

8-13: The sample consisted of 7 fragments of oak (*Quercus*) roundwood, probably of similar dimensions to those in context 8-11.

8-15: Three fragments of *Prunus* were included but were too small to assess whether from stem, roundwood etc.

The composite feature, interpreted as a possible fence line or boundary, also included significant amounts of slag. By implication the charcoal may represent iron-working fuel residues, although other sources (e.g. domestic hearths) should also be considered. The quantity of charcoal was comparatively small and, as noted above, in some instances multiple fragments within a sample may have originated from a single fragmented stem. Nonetheless it is evident that this material derived from the use of relatively narrow roundwood, and although relevant diameters can only be estimated, it is probable that these were at least 30mm when living. There was no evidence to indicate the use of coppiced wood either from the hawthorn group or *Prunus*. Fragments of oak mostly consisted of the outer parts of the stem, thereby preventing any assessment of early growth rates. Neither was there evidence of oak heartwood, often the preferred wood for metal-working.

8-35, fill of curvilinear ditch (structure)

The sample consisted of three pieces of maple (*Acer*), with the outer surfaces abraded. These were probably from roundwood, although the innermost and outermost areas were missing and it was impossible to record their diameters accurately. The incomplete radius of the largest piece measured 25mm, and included at least 12 growth rings, which suggests a minimum diameter of 90mm when living.

CLUTTONS

8-55, fill of square pit, possibly the central post of a structure

Twelve fragments of charcoal from narrow roundwood were included. Although the outer surface of the largest piece was abraded, its radial measurement of 15mm suggests a minimum stem diameter of 45mm when living, with at least 17 growth rings. The wide early growth rings suggested a possible origin from a coppiced stem. The charcoal consisted of two distinct types (based on differences in the size and distribution of the vessels), implicating charcoal as probably from at least two sources of hazel. It seems unlikely, therefore, that the charcoal represents the burnt remains from the single (central) structural post.

8-123, deposit, ?occupation layer

The sample consisted of a single fragment of oak (*Quercus*), probably roundwood but it was impossible to estimate diameter or age.

Charcoal deposits from contexts associated with iron age type huts seems more likely to have originated from domestic hearths than from structural components (although the relatively wide diameter of the maple (probably *c.* 90mm+ when taken from the tree) could infer otherwise). There is some evidence (context 8-55) to suggest the use of hazel from managed woodland.

Environmental evidence

The samples examined were relatively lightweight as regards environmental evidence. If from fuel deposits, the wood was probably gathered from sources closest to the settlement. Although a fairly narrow range of taxa was identified, it does indicate a landscape which included oak (*Quercus*), maple (*Acer*), hazel (*Corylus*), a member of the hawthorn/ *Sorbus* group (Pomoideae) and cherry/blackthorn (*Prunus*). Evidence from context 8-55 suggests the existence of managed hazel woodland.

References: Tutin, T.G., Heywood, V.H. *et al.* 1964-80 *Flora Europaea*, 1-5, Cambridge

Charcoal from Romano-British contexts

Key: r = roundwood (no.of fragments)

Context	Acer	Corylus	Pomoideae	Prunus	Quercus
8-5	-	-	6r	-	-
8-11	-	-	-	-	3r
8-13	-	-	-	-	7r
8-15	-	-	-	3	-
8-35	3	-	-	-	-
8-55	-	12r	-	-	-
8-123	-	-	-	-	1r

3B THE PLANT MACROFOSSIL ASSESSMENT by V Fryer**Introduction**

Excavations undertaken in advance of pipe-line work at Rye Hill, Essex revealed features of probable Romano-British date including pits, ditches, structural features and occupation spreads. Samples were taken from across the excavated area and seven were submitted for assessment.

Methods

The samples (or sub-samples thereof) were processed by manual water flotation/washover, collecting the flots in a 500 micron mesh sieve. The dried flots were scanned under a binocular microscope at low power and the plant macrofossils and other remains noted are listed on Table 1. Modern contaminants were present in all samples and included fibrous and woody root fragments, seeds/fruits, arthropods and fungal sclerotia. In only one instance (sample 8(43)) was a non-floating residue retained as it appeared to contain small fragments of burnt bone, possibly from a cremation.

Plant macrofossils

Cereals and/or seeds/fruits were extremely rare and were noted in only four samples, mostly as single specimens. A badly puffed wheat (*Triticum* sp.) grain was recovered from sample 8(55) and abraded spelt (*T. spelta*) glume bases were found in samples 8(79) and 8(153). Seeds/fruits of an indeterminate small grass, dock (*Rumex* sp.) and vetch/vetchling (*Vicia/Lathyrus* sp.) were also noted. A single sedge (*Carex* sp.) fruit was present in sample 8(43).

Small charcoal fragments were common or abundant in all but sample 8(135) and other plant macrofossils included fragments of indeterminate root, rhizome or stem and thorns, possibly of sloe (*Prunus* sp.) type.

Other material

The fragments of black porous 'cokey' material are probably derived from the burning of organic materials at very high temperatures. Other materials included burnt or fired clay fragments, burnt and mineralised concretions and bone fragments. A single small piece of coal is probably a modern contaminant.

Discussion

With the exception of sample 8(43) which appears to be a cremation, nothing can be said about the use or function of any of the features recorded on the site. While cereals appear to have been locally present, cereal processing was certainly not being undertaken on or near the site and there is no evidence of domestic or industrial activity.



3C THE ANIMAL BONE by P McMichael

148 pieces of animal bone were examined from 20 contexts weighing a total of 980 grams. The bone was in a poor condition and most of it was fragmentary.

Three species were positively identified: Equus, Bos and Cervus. 41 unidentifiable bone fragments were found.

Some of the bones showed cut or chop marks indicative of butchery.

Small Find 7 from context 8 - 53 is a small fragment of decorated cremated bone. Three other pieces showed signs of being worked in contexts 8 - 79 & 113. Context 8 - 43 had 15 fragments of cremated bone that might suggest a cremation burial.

Animal Bone Catalogue

Context	Species	Description	Weight [g]
6 - 11	Medium mammal	A charred fragment with chop mark	6
8 - 13	Medium mammal	Unidentifiable fragment	1
8 - 15	Medium mammal	4 unidentifiable fragments, tooth fragment	5
8 - 17	Large mammal	Rib fragment with cut mark	4
8 - 19	Bos	10 fragments of one tooth	3
8 - 39	Bos	1 molar	6
8 - 43	Bos	11 fragments of molars	19
	Unidentified	15 unidentifiable fragments of cremated bone	
8 - 45	Bos	Proximal articular surface of Humerus 2 scapula fragments	43
	Large mammal	2 unidentifiable fragments	
8 - 51	Bos	5 tooth fragments	4
8 - 53	Unidentified	3 unidentifiable fragments	0.5
	Small / medium mammal	[SF 7] = piece of cremated worked bone with two incised parallel lines	
8 - 57	Medium mammal	Sesamoid in 5 pieces	5
8 - 77	Bos	3 pieces of right calcaneus Unfused distal end and part of shaft of right tibia Half of unfused distal epiphysis of right tibia	138
8 - 79	Bos	Right calcaneus 4 teeth Right scapula articular surface[Cranial end]	426

CLUTTONS

	Cervus	Right scapula articular surface[Cranial end] 2 scapula fragments	
	Large mammal	Rib fragment 10 pieces with chop marks 7 fragments 2 fragments with cut marks: ? worked	
8 - 89	Bos	5 teeth	132
	Medium mammal	1 fragment	
	Unidentified	26 unidentified fragments	
8 - 111	Equus	1 tooth 5 fragments of 2 teeth	130
	Bos	8 fragments of 2 teeth	
	Cervus	Piece of antler	
8 - 113	Unidentified	Fragment with cut marks, [worked?]	3
8 - 115	Unidentified	Fragment with chop marks	2
8 - 125	Unidentified	Unidentified fragment	0.5
8 - 135	Large mammal	Unidentified fragment with chop marks	3
8 - 147	Large mammal	Rib fragment Unidentified fragment with 6 cut marks	49

NB: Glossary Equus = Horse; Bos = Cattle/Cow; Cervus = Deer.



APPENDIX 4
CONTEXT SUMMARY



RYE HILL TO FAIRFIELD TRUNK MAIN ARCHAEOLOGY

APPENDIX 4

CONTEXT SUMMARY

SITE CODE: EPU RH97

SITE 6: medieval

NGR: TL 4600 0594

Context no.	Location	Category	Description
6-1	MA 6	Collection	Surface and topsoil finds from easement
6-2	"	Cut	Irregular linear cut
6-3	"	Layer	Surface cleaning of 6-2
6-4	"	Fill	Fill of box section A on 6-2
6-5	"	Fill	Upper fill of box section B on 6-2
6-6	"	Fill	Middle fill of box section B on 6-2
6-7	"	Fill	Basal fill of box section B
6-8	"	Fill	Above mole drain - ?disturbed
6-9	"	Cut	Oval pit
6-10	"	Fill	Fill of oval pit 6-9



SITE: 8 – Romano-British settlement
NGR: TL 4624 0574

For purposes of identification, the short axis of the trench is deemed to represent Eastings and the long axis of the trench to represent Northings

Context no.	Category	Location in trench	Description
8-1	MA 8	Topsoil	Surface and topsoil finds
8-2	Cut		indistinguishable cuts and fills of 'posted ditch' or hedge
8-3	Fill		
8-4	Cut		
8-5	Fill	centred	
8-6	Cut		
8-7	Fill	on	
8-8	Cut		
8-9	Fill	9E	
8-10	Cut		
8-11	Fill	5N	
8-12	Cut		
8-13	Fill		
8-14	Cut		
8-15	Fill		
8-16	Cut		
8-17	Fill		
8-18	Cut	8E 8.5N	
8-19	Fill		Fill of 18
8-20	Cut	6E 8N	Small posthole or pit
8-21	Fill		Fill of 20
8-22	Cut	6.5E 7.5N	Small pit
8-23	Fill		Fill of 22
8-24	Cut	5E 2N	Small pit
8-25	Fill		Fill of 24
8-26	Cut	6E 4.5N	Small pit
8-27	Fill		Fill of 26
8-28	Cut	5.5E 2.5N	Small pit
8-29	Fill		Fill of 28
8-30	Cut	7.5E 1N	Small pit
8-31	Fill		Fill of 30
8-32	Cut	11.5E 4.6N	Oval pit
8-33	Fill		Upper fill of 32
8-34	Cut	11.5E 43N	Curvilinear feature
8-35	Fill		Fill of box section a of 34
8-36	Fill		Fill of box section b of 34
8-37	Fill		Lower fill of 32
8-38	Cut	13E 39.5N	Terminal of curvilinear feature 34
8-39	Fill		Fill of terminal 38



SITE 8 continued

Context no.	Category	Location in trench	Description
8-40	Cut	11E 53N	Curvilinear feature
8-41	Fill		Fill of 40
8-42	Cut	3E 56.5N	Small pit poss. cremation pit
8-43	Fill		Blackened fill of 42
8-44	Cut	9.5E 39N	Post hole
8-45	Fill		Fill of 44
8-46	Cut	10.5E 39N	Stake hole
8-47	Fill		Fill of 46
8-48	Cut	10.5E 39N	Stake hole
8-49	Fill		Fill of 48
8-50	Cut	7E 51N	Curvilinear feature
8-51	Fill		Fill of box section near terminal
8-52	Cut	9.5E 51N	large post terminal of 40
8-53	Fill		Fill of 52
8-54	Cut	13E 50.5N	Rectangular pit within circumference of 40
8-55	Fill		Fill of 54, evidence of burning
8-56	Fill		Fill of box section a on 40
8-57	Fill		Fill of terminal of 40 (not post)
8-58	Fill		Fill of box section b on 40
8-59	Cut	2.5E 44N	Pit
8-60	Fill		Fill of 59
8-61	Cut	6E 52N	Pit
8-62	Fill		Fill of 61
8-63	Cut	3E 52.5N	Curvilinear feature
8-64	Fill		Fill of 63
8-65	Cut	5.5E 55N	Remnants of curvilinear feature?
8-66	Fill		Fill of 65
8-67	Cut	5E 55.5N	Linear feature cutting 65
8-68	Fill		Fill of 67
8-69	Cut	5E 60N	Small pit
8-70	Fill		Fill of 69
8-71	Cut	7.5E 53N	Pit
8-72	Fill		Fill of 71
8-73	Cut	10E 38.5N	Pit or post hole
8-74	Fill		Fill of 73
8-75	Cut	3E 41N	Large amorphous pit
8-76	Fill		Upper fill of 75
8-77	Fill		Lower fill of 75
8-78	Deposit	6E 33N	Dark spread, ?occupation layer
8-79	Inclusions		Finds from spread 78
8-80	Cut	2.5E 57N	Pit
8-81	Fill		Fill of 80
8-82	Cut	6.5E 44N	Post hole or small pit
8-83	Fill		Fill of 82
8-84	Cut	6.5E 46.5N	Small pit or post hole
8-85	Fill		Fill of 84
8-86	Cut	6.5E 46N	Curvilinear feature
8-87	Fill		Fill of 86



SITE 8 continued

Context no.	Category	Location in trench	Description
8-88	Cut	7.5E 43.5N	Small post hole
8-89	Fill		Fill of 88
8-90	Cut	5.5E 48N	Small pit or post hole
8-91	Fill		Fill of 90
8-92	Cut	5E 51N	Small pit?
8-93	Fill		Fill of 92
8-94	Cut	4E 56N	Indistinct linear feature
8-95	Fill		Fill of 94
8-96	Cut	7E 57N	Pit
8-97	Fill		Fill of 96
8-98	Fill		Lower fill of box section b on 40
8-99	Fill		Lower fill of box section a on 40
8-100	Cut	6E 58N	Small pit
8-101	Fill		Fill of 100
8-102	Cut	7E 47N	Small pit or post hole
8-103	Fill		Fill of 102
8-104	Cut	7E 46.5N	Small pit
8-105	Fill		Fill of 104
8-106	Cut	7.5E 45.5N	Small pit
8-107	Fill		Fill of 106
8-108	Cut	7.75E 46N	Small pit
8-109	Fill		Fill of 108
8-110	Cut	3E 41N	Circular pit cutting 75
8-111	Fill		Fill of pit 110
8-112	Deposit	1.5E 33N	Spread west of 78, similar but lighter in colour
8-113	Inclusions		Finds from 112
8-114	Cut	2.5E 43N	Linear feature
8-115	Fill		Fill of 114
8-116	Cut	7.75E 43.5N	Small pit, part of group
8-117	Fill		Fill of 116
8-118	Cut	6.5E 48N	Small pit beside 102
8-119	Fill		Fill of 118
8-120	Cut	6E 42N	Linear feature, poss. 'posted ditch'
8-121	Fill		Fill of 120
8-122	Deposit	10E 28N	Amorphous spread, remains of 78
8-123	Inclusions		Finds from 122
8-124	Deposit	11.5E 30N	Amorphous spread, remains of 78
8-125	Inclusions		Finds from 124
8-126	Cut	1.5E 48N	Linear feature, ditch
8-127	Fill		Fill of box section a on 126
8-128	Cut	12E 9.5N	Terminal post hole
8-129	Fill		Fill of 128
8-130	Cut	12.5E 10N	Curvilinear feature
8-131	Fill		Fill of 130 at junction with 128
8-132	Fill		Fill of box section b on 126
8-133	Fill		Fill of box section c on 126
8-134	Cut	10E 62N	?natural depression



SITE 8 continued

Context no.	Category	Location in trench	Description
8-135	Fill		Fill of 134
8-136	Cut	4.5E 17N	?pit
8-137	Fill		Fill of 136
8-138	Cut	4.5E 17N	Small pit
8-139	Fill		Fill of 138
8-140	Cut	2E 11.5N	Sub-circular pit
8-141	Fill		Fill of 140
8-142	Cut	5.5E 24N	Part of 'posted ditch'
8-143	Fill		Fill of 142
8-144	Cut	3.5E 33.5N	One side of cut feature below 78
8-145	Deposit	12.5E 24N	Spread, remains of 78
8-146	Cut	6E 41N	Large pit or terminal post
8-147	Fill		Fill of 146
8-148	Cut	4E 37N	Linear feature below 78
8-149	Fill		Fill of 148
8-150	Cut	7E 14N	Continuation of 'posted ditch'
8-151	Fill		Fill of 150
8-152	Cut	13.5E 44.5N	Curvilinear cut
8-153	Fill		Fill of 152
8-154	Deposit	11.5E 8N	Spread containing iron waste beside 128
8-155	Deposit	0E 55N	Upper layers of 126 surviving at trench edge
8-156	Cut	Outside LoE	Continuation of 'posted ditch' seen during machining
8-157	Fill		Finds from 156
8-158	Cut	2.5E 63N	Curvilinear feature ?terminal
8-159	Fill		Fill of 158
8-160	Cut	1.5E 62N	Post hole beside 158
8-161	Fill		Fill of 160
8-162	Cut	3E 56N	Small pit cut by 42
8-163	Fill		Fill of 162
8-164	Cut	10E 22N	?terminal of ditch near 145
8-165	Fill		Fill of 164
8-166	Cut	7.5E 11N	Length of 'posted ditch' or hedge
8-167	Fill		Fill of 166
8-168	Cut	11.5E 7.5N	Small pit
8-169	Fill		Fill of 168
8-170	Cut	8E 12N	Small pit or post hole
8-171	Fill		Fill of 170
8-172	Cut	8E 12.5N	Small pit or post hole
8-173	Fill		Fill of 172
8-174	Cut	8E 5.5N	Small pit
8-175	Fill		Fill of 174
8-176	Cut	4.5E 59N	Small post hole
8-177	Fill		Fill of 176
8-178	Cut	2.5E 38N	Oval feature
8-179	Fill		Fill of 178



SITE 9: continuation of Romano-British site
NGR: TL 4640 0570

Context no.	Location	Category	Description
9-1	MA 9	Collection	Surface and spoil heap collection of finds
9-2	"	Cut	Small pit seen during machining
9-3	"	Fill	Fill of pit 9-2

SITE 13: medieval
NGR: TL 4654 0468

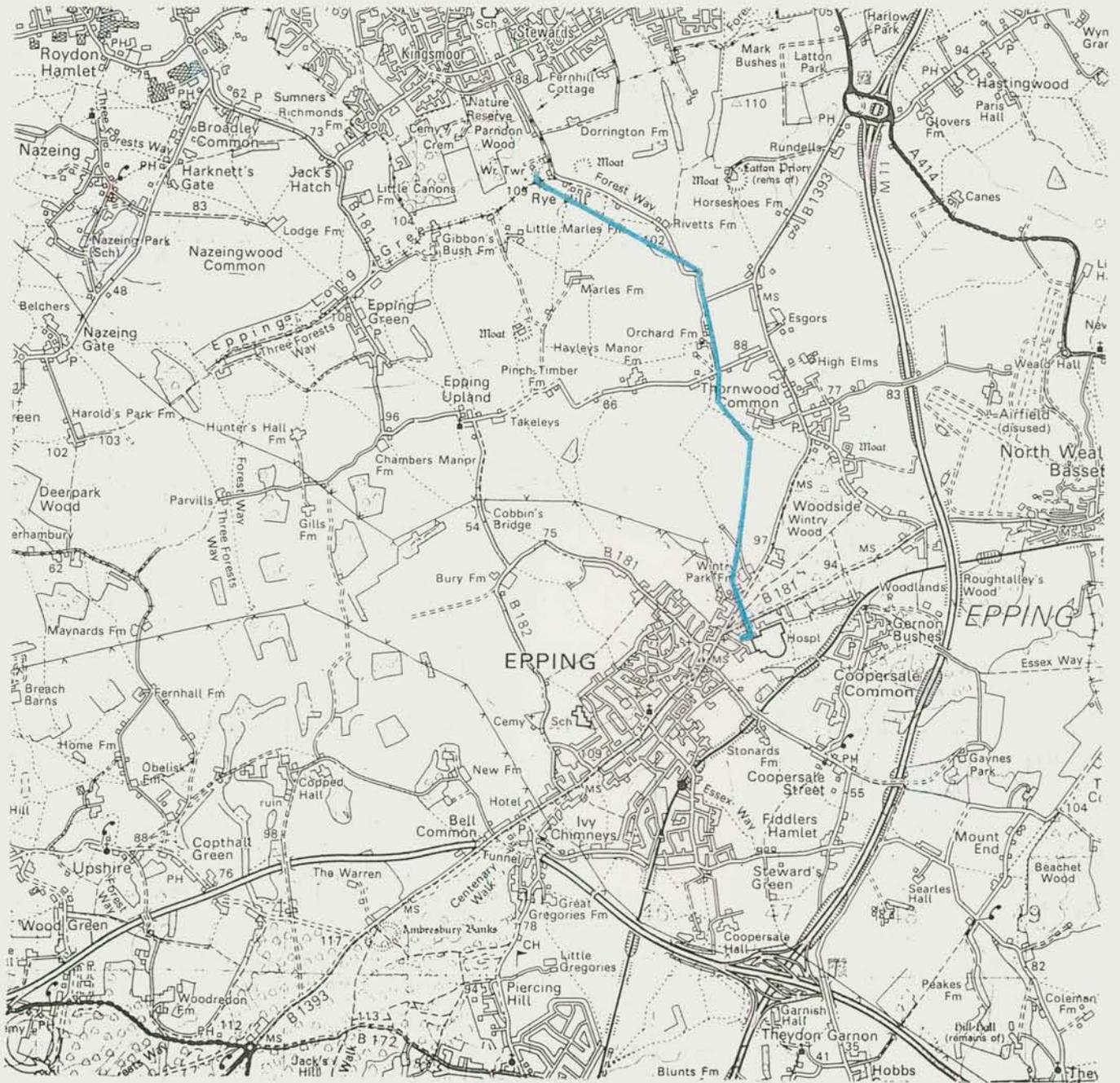
Context no.	Location	Category	Description
13-1	MA 13	Collection	Surface and spoil heap collection of finds
13-2	"	Cut	Small rectangular pit or hollow
13-3	"	Fill	Fill of 13-2, signs of burning
13-4	"	Cut	Small rectangular pit ?modern
13-5	"	Fill	Fill of 13-4

SITE 15: Roman road crossing
NGR: TL 4665 0397

Context no.	Location	Category	Description
15-1	MA 15	Layer	Topsoil
15-2	All trenches	Layer	Clay subsoil
15-3	Trench A	Deposit	Red-brown clay
15-4	All trenches	Deposit	Flint pebbles in sandy matrix
15-5	All trenches	Deposit	Calcareous clay natural and redeposited natural
15-6	Trench A	Deposit	Clay with chalk inclusions - ?redeposited
15-7	Trench A	Cut	Shallow cut of small side ditch
15-8	Trench A	Fill	Silty clay fill
15-9	Trench A	Deposit	Silty clay with mottling
15-10	Trench A	Cut	Modern ditch
15-11	Trench A	Fill	Fill of 15-10
15-12	Trench B	Deposit	Silty clay with pebble inclusions
15-13	Trench C	Cut	?setting out ditch
15-14	Trench D	Cut	Round based truncated side ditch
15-15	Trench D	Fill	Basal fill of 15-14
15-16	Trench D	Fill	Upper fill of 15-14
15-17	Trench C	Fill	Fill of 15-13

CLUTTONS

FIGURES AND PLANS



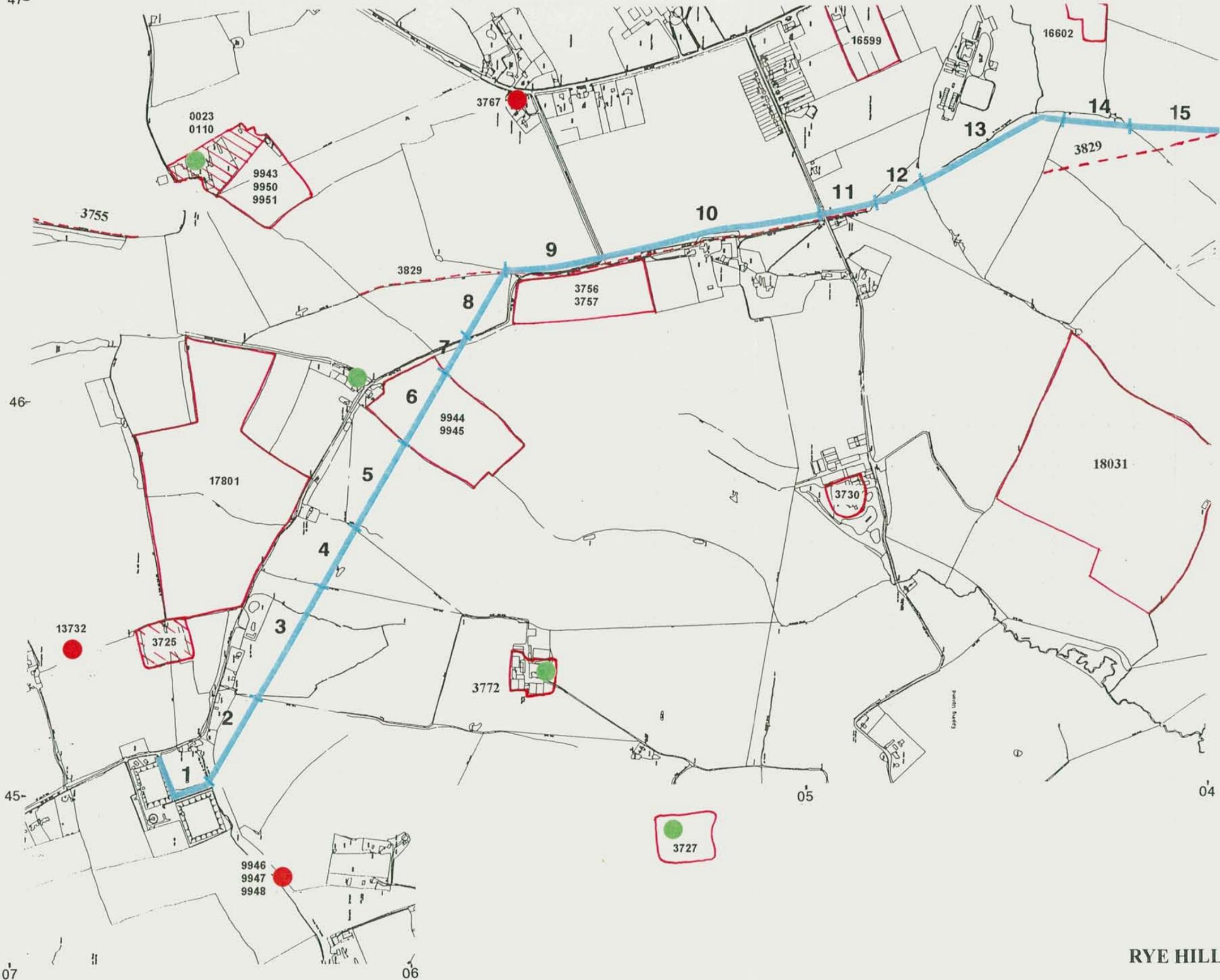
RYEHILL TO FAIRFIELD TRUNK MAIN

Figure 1 – Location of Pipeline

Scale 1:50,000

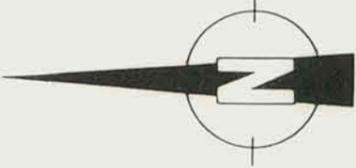


47-



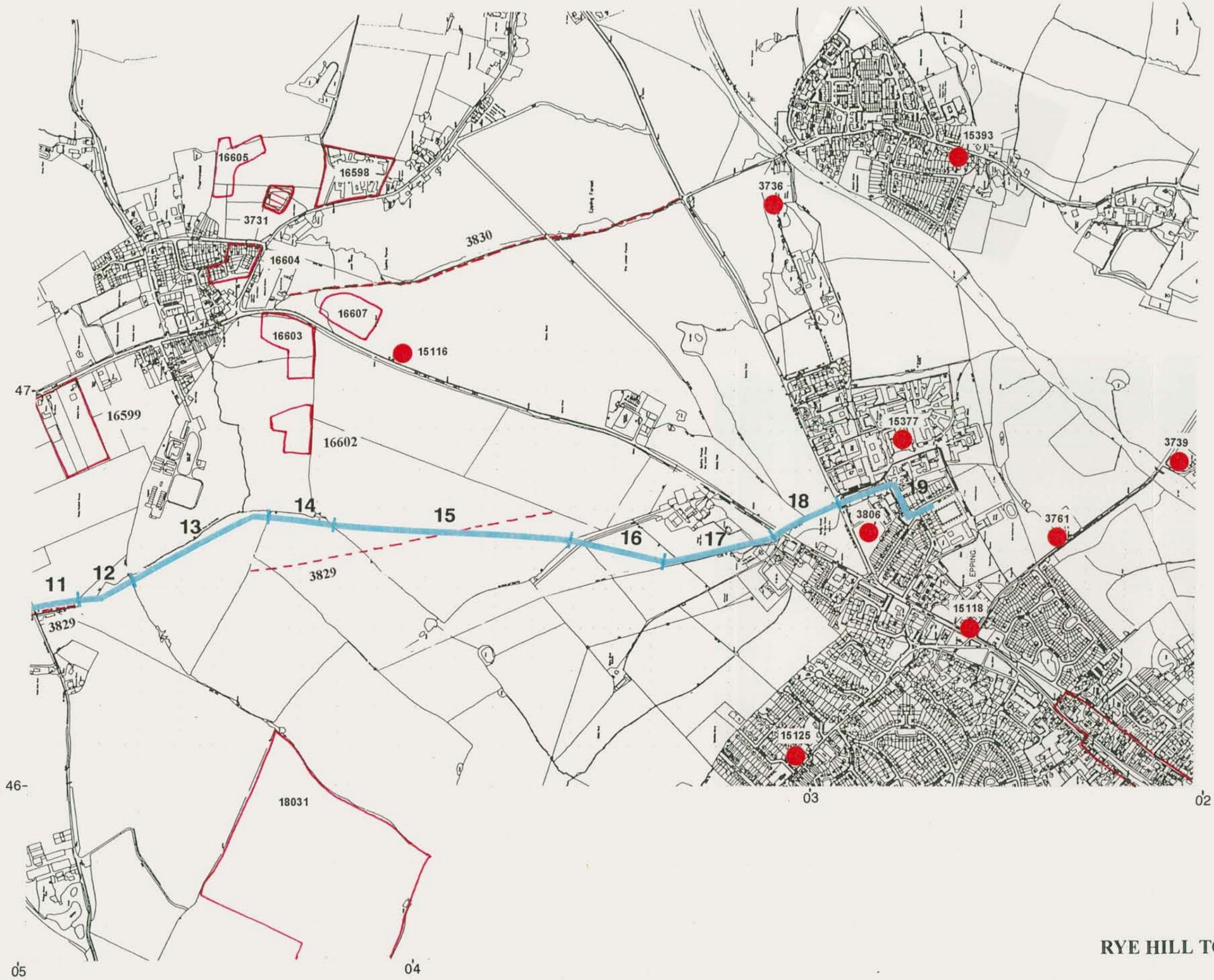
	Scheduled Monuments
	Sites and Monuments Records
	Listed Buildings
	Monitoring Areas

0 500 m



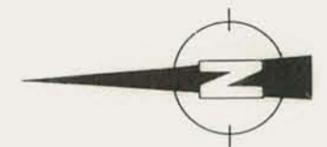
RYE HILL TO FAIRFIELD TRUNK MAIN

Figure 2a – Areas of Archaeological Interest



-  Scheduled Monuments
-  Sites and Monuments Records
-  Listed Buildings
-  Monitoring Areas

0 500 m



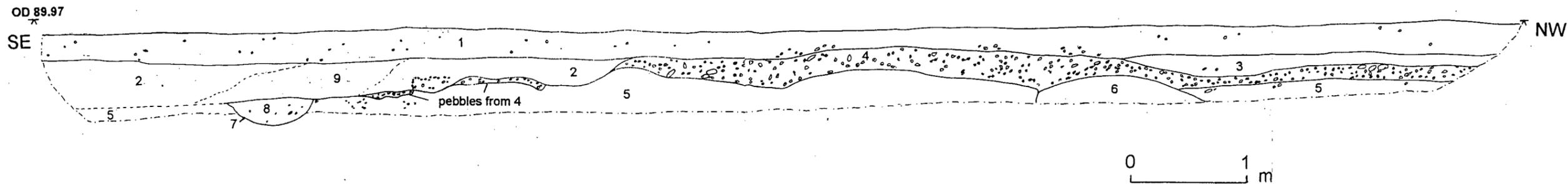
RYE HILL TO FAIRFIELD TRUNK MAIN

Figure 2b – Areas of Archaeological Interest

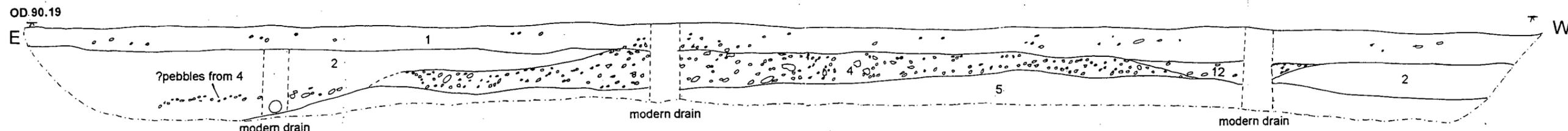
RYE HILL TO FAIRFIELD TRUNK MAIN 1999 – Site 15

Sections of trenches through Roman road

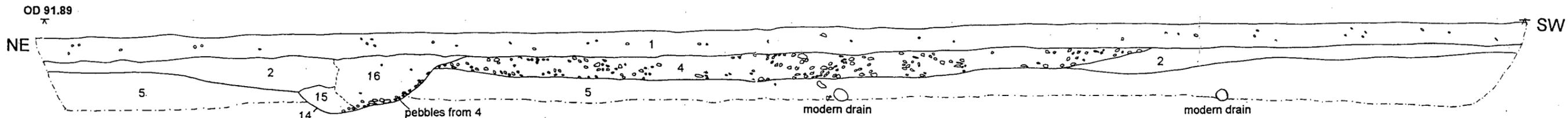
Trench A



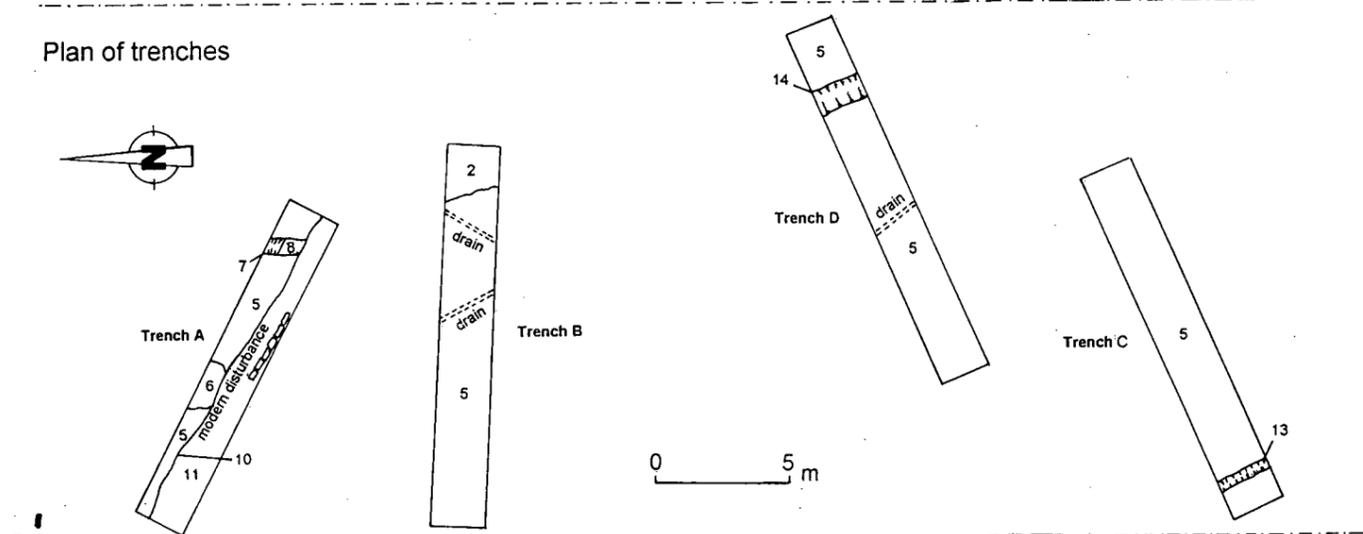
Trench B



Trench D



Plan of trenches



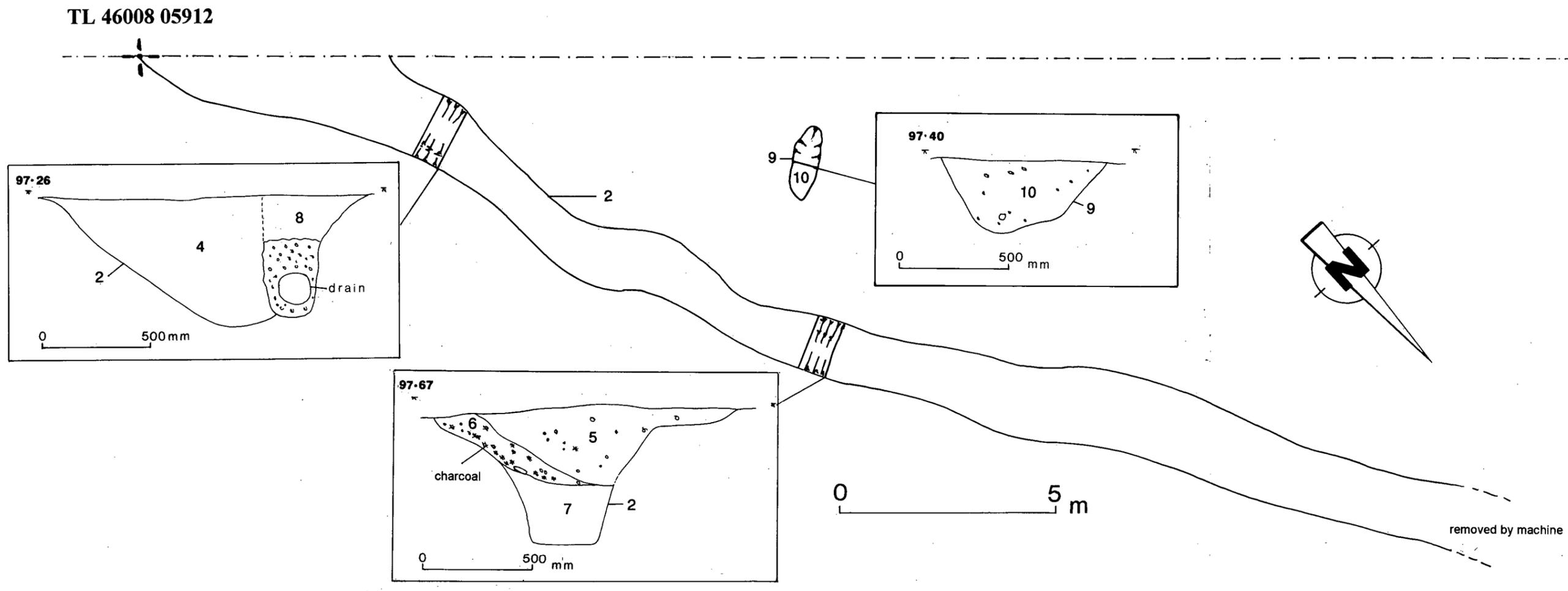
TL 4664 0394

RYE HILL TO FAIRFIELD TRUNK MAIN

Figure 3 – Site 15 Plans and Sections

RYE HILL TO FAIRFIELD TRUNK MAIN 1999

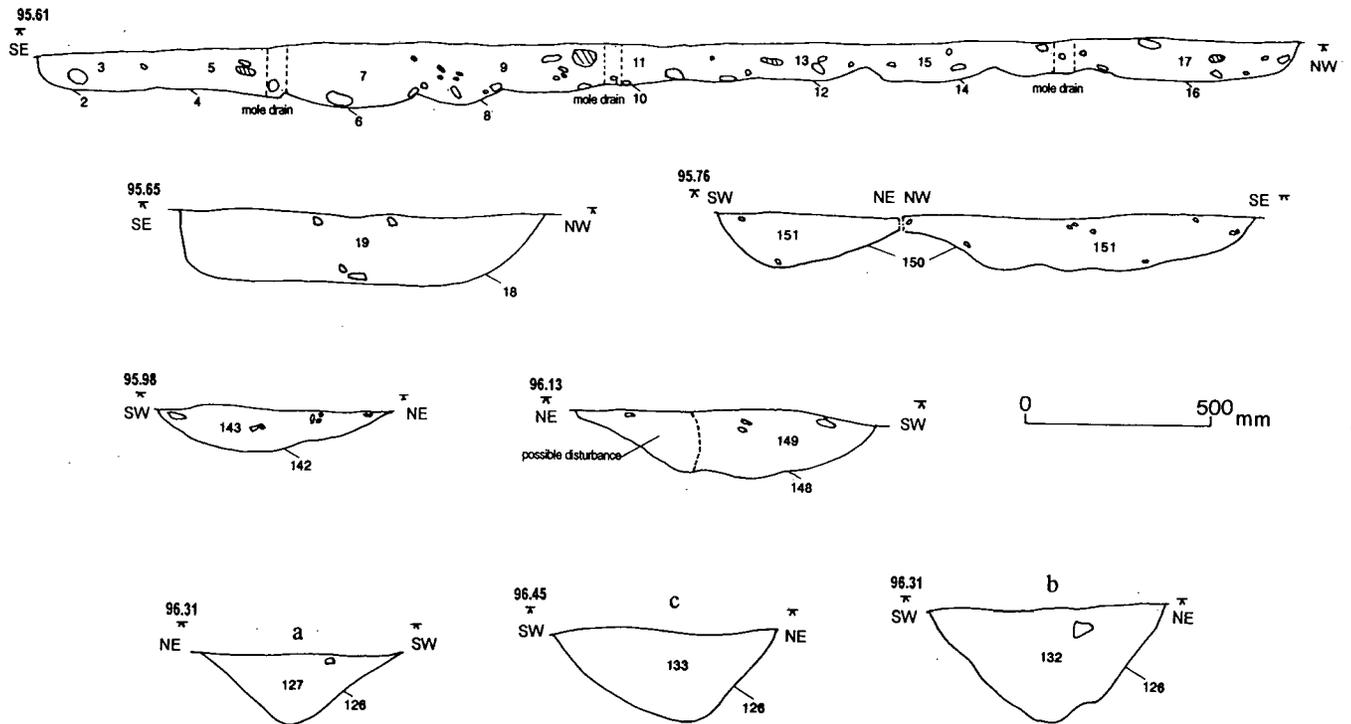
Site 6 Plans and Sections



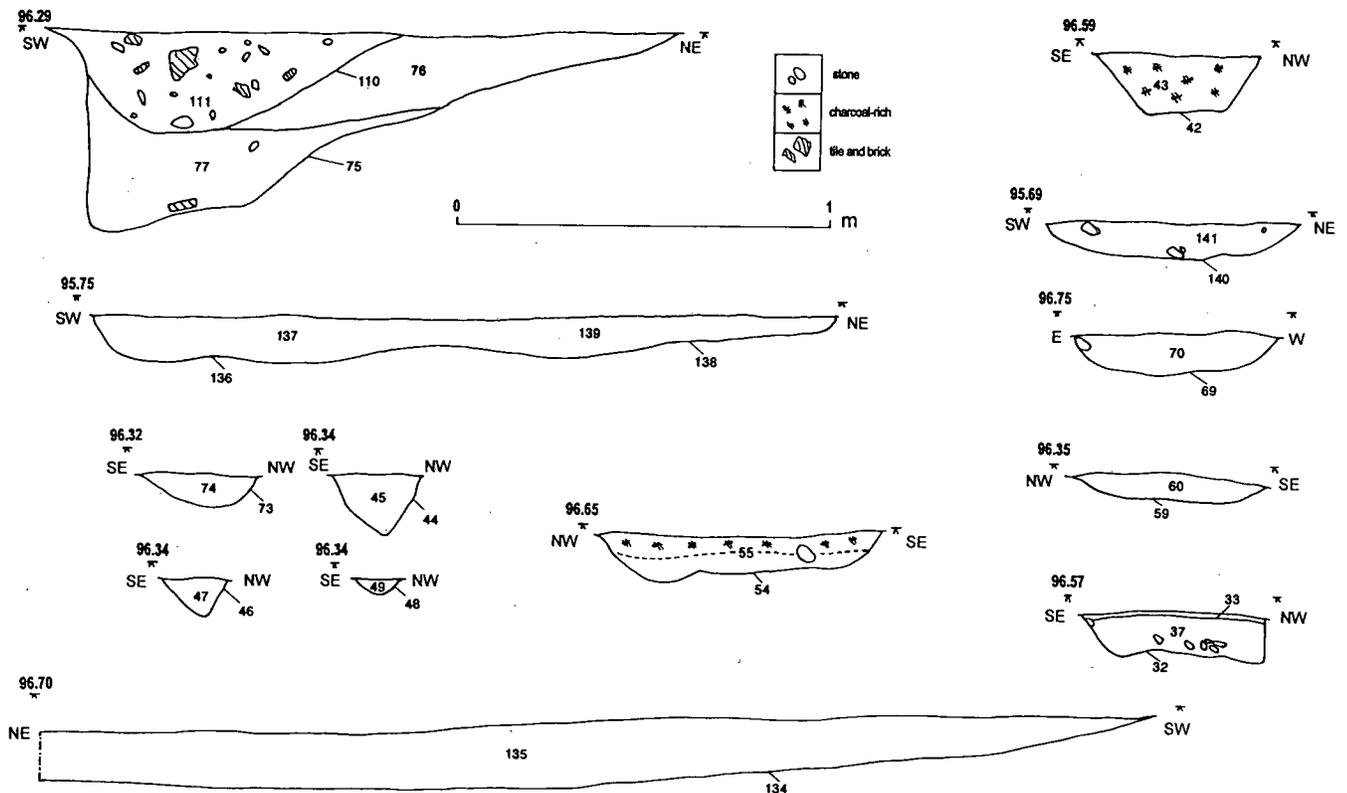
RYE HILL TO FAIRFIELD TRUNK MAIN
Figure 4 – Site 6 Plans and Sections

RYE HILL TO FAIRFIELD TRUNK MAIN 1999

Boundary features

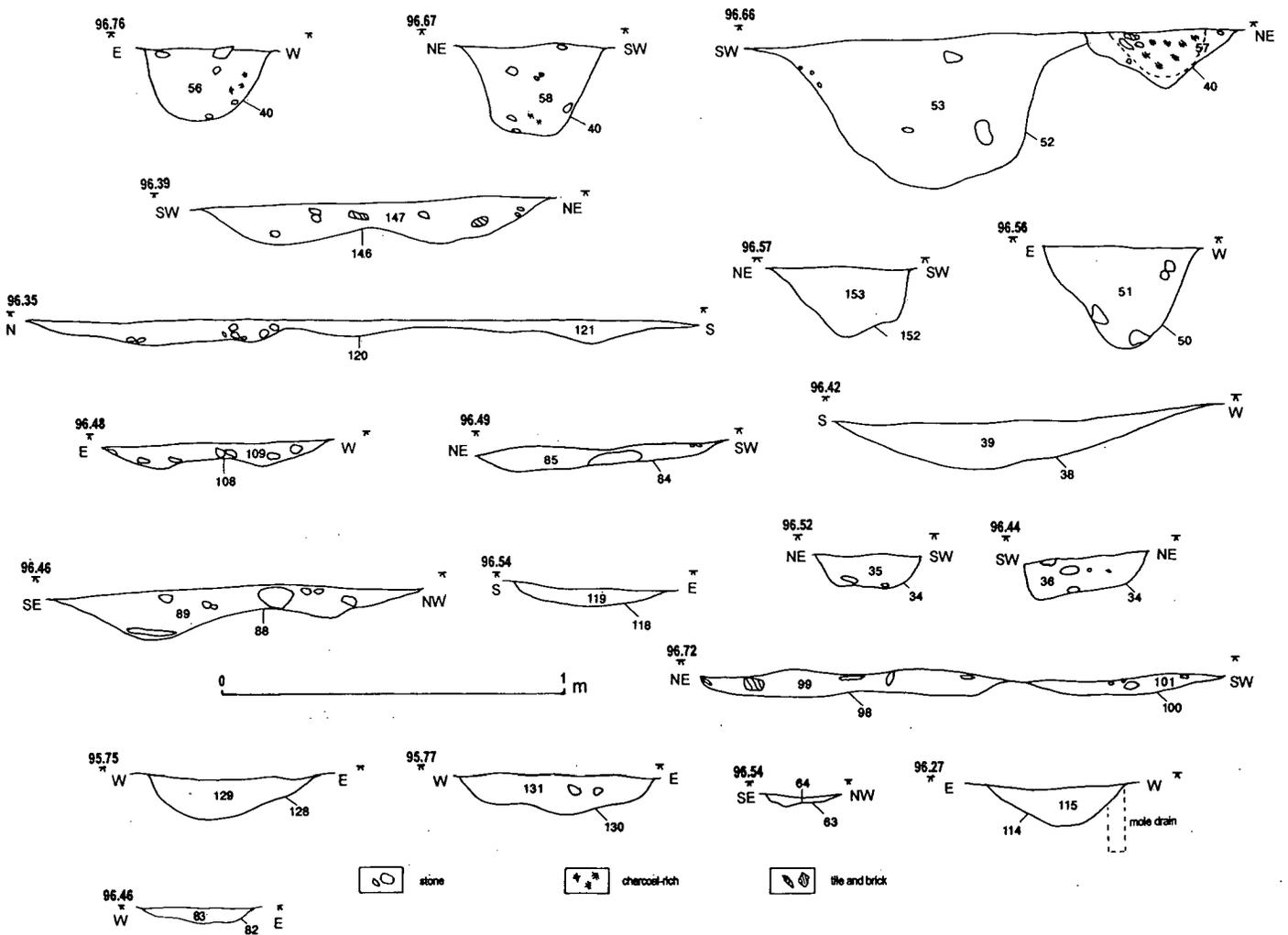


Pits and postholes



RYE HILL TO FAIRFIELD TRUNK MAIN 1999

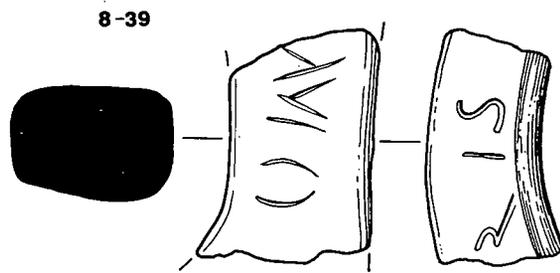
Structural features



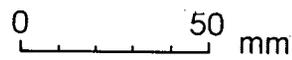
RYE HILL TO FAIRFIELD TRUNK MAIN

Figure 7 – Site 8 Sections

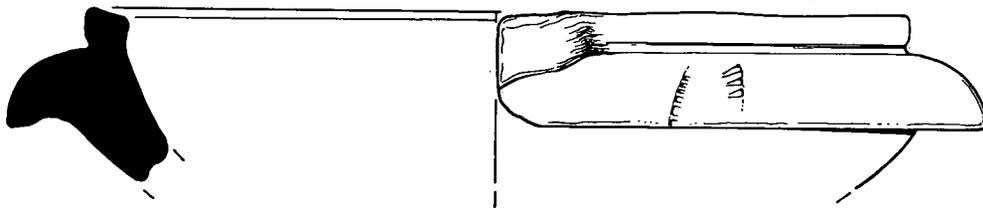
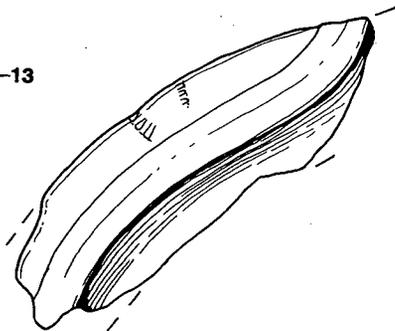
RYE HILL TO FAIRFIELD TRUNK MAIN 1999



1



8-13



2

RYE HILL TO FAIRFIELD TRUNK MAIN

Figure 8 - Site 8 Pottery Illustrations