

**CHANNEL TUNNEL RAIL LINK  
UNION RAILWAYS LIMITED**

**Archaeological Evaluation at High House, Purfleet  
(ARC HHP97), Essex  
Environmental Statement Route Window 10/11**

**FINAL FIELDWORK REPORT**

**31st March 1999**

**Contract no. 194/870  
WA Report no. 43507e**

**Wessex Archaeology**

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**Volume 1 of 1**

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**31st March 1999**

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# CHANNEL TUNNEL RAIL LINK UNION RAILWAYS LIMITED

## Archaeological Evaluation at High House, Purfleet (ARC HHP97), Essex Environmental Statement Route Window 10/11

### Executive Summary

Wessex Archaeology was commissioned by Union Railways Limited to carry out an archaeological evaluation on a site at Purfleet, Essex (centred on URL grid point 36750 58125; NGR grid point TQ 56750 78125), known as High House. The potential for archaeological remains within the site had been identified by an earlier Environmental Statement (URL 1994) which included fieldwalking (URL 1995) and geophysical prospection (URL 1996). This potential was defined as the possibility of discovering subsoil features and deposits of archaeological interest which may be associated with, or in close proximity to, surface artefact concentrations recorded during fieldwalking or anomalies recorded during geophysical survey, and also the possibility of finding a continuation of the possible late prehistoric enclosure noted in the evaluation of the adjacent Palaeolithic site.

The evaluation revealed three groups of potentially archaeological features, all of which were investigated, located in various parts of the evaluation area. A gully produced Late Bronze Age pottery, but this feature does not appear to have formed part of the possible late prehistoric enclosure noted in the earlier evaluation of the Palaeolithic site approximately 300 m to the north-west. A single sherd of Late Bronze Age pottery came from a shallow pit or possible tree hole. A substantial, broad, but relatively shallow Romano-British ditch running north-east to south-west produced few finds and is thought most likely to represent a field boundary. Post-medieval features comprised two shallow ditches or gullies, a shallow pit, and a small pit containing a calf burial, all of which were probably associated with the medieval - post-medieval manor of High House. The late 17<sup>th</sup>/early 18<sup>th</sup> century complex of buildings at High House comprising the manor house, a barn and a dovecote survive and are Listed Buildings (Grade II). A small quantity of finds was recovered from topsoil contexts and include undiagnostic worked flint and two sherds of medieval pottery, broadly reflecting the nature and date of the material recovered from earlier fieldwalking. Anomalies recorded during the earlier geophysical survey appear, where investigated by evaluation trenching, to be the result of recent ploughing.

## FACTUAL STATEMENT

### 1 INTRODUCTION

#### 1.1 Project Background

1.1.1 Wessex Archaeology was commissioned by Union Railways Limited (URL) to carry out an archaeological evaluation on a site at Purfleet, Essex (centred on URL grid point 36750 58125; NGR grid point TQ 56750 781250; **Figure 1**), known as High House, Purfleet (site code ARC HHP97; Environmental Statement Route Window 10/11).

1.1.2 The evaluation forms part of a programme of archaeological investigation along the proposed route of the Channel Tunnel Rail Link (CTRL), and was preceded by an Environmental Assessment (URL 1994), fieldwalking survey (URL 1995) and geophysical prospection (URL 1996).

1.1.3 The fieldwork was conducted in accordance with a written *Agreement for the provision of Archaeological Investigations* (URL 1997), which defined the scope, aims and methods for the project. In addition to general aims, the following site specific aims were identified:

- *to determine the presence/absence etc of any subsoil features and deposits of archaeological interest which may be associated with, or in close proximity to, surface artefact concentrations recorded during the CTRL Environmental Assessment or anomalies recorded during geophysical survey;*
- *to determine whether there is any continuation with the possible late prehistoric enclosure noted in the evaluation of the adjacent Palaeolithic site*

1.1.4 The fieldwork was carried out between 24th August 1998 and 28th August 1998, with preliminary survey work carried out on 28th June 1998.

#### 1.2 Site Description, Topography, Geology and Hydrography

1.2.1 The site comprised an elongated strip of land which extended along the south side of the Purfleet by-pass to the east and west of High House, a late 17<sup>th</sup>/early 18<sup>th</sup> century complex of Listed Buildings (Grade II) comprising manor house, barn and dovecote (**Figure 2**). The boundaries of the site to the south-east and south-west were defined by the limit of the proposed development, and did not correlate with existing land divisions. The site covered a total area of approximately 3.83 hectares. The evaluation comprised 15 machine trenches (trench 1356TT – trench 1368TT inclusive and trench 3011TT – 3012TT inclusive), each measuring 30 m in length by 1.80 m, within a single plot of lucerne crop.

- 1.2.2 The western two-thirds of the site occupies a very gentle south-east-facing slope, descending within the site limits from a height of *c.* 20.50 m above Ordnance Datum (aOD) in the north-west (trench 1356TT) to *c.* 18 m aOD in the south-east (trench 1363TT). Further to the south-east the slope increases towards the River Thames floodplain, with the lowest part of the site at *c.* 11.50 m aOD (trench 1368TT). In a broader context, the site is situated towards the highest part of a ridge or promotory, the Purfleet anticline, between the River Thames to the south and the Mar Dyke channel to the north and north-west.
- 1.2.3 No underlying drift geology for the immediate area is mapped, although Pleistocene Head Brickearth is recorded less than 1 km to the east of the site. The evaluation trenching, however, encountered superficial spreads of 'flinty wash', a sandy silt containing flints and variable quantities of small chalk inclusions, overlying chalk in all of the trenches. It is likely that this 'flinty wash' is largely a chalk-derived deposit. Solid geology is recorded as comprising Upper Chalk (Ordnance Survey 1977, *Geological Survey of Great Britain (England and Wales): Sheet 271 – Dartford*). The edge of the Mar Dyke channel, an early course (or courses) of the Mar Dyke or an early loop of the Thames, lies less than 500 m to the north and north-west of the site, and is filled with an important sequence of Pleistocene deposits and Palaeolithic material of national and possibly international importance.
- 1.2.4 The hydrography of the area is dominated by the River Thames which lies approximately 1 km to the south-west of the site. The Mar Dyke lies a similar distance to the north and follows a gently curving course to join the Thames approximately 2 km upstream.

### 1.3 Methods

- 1.3.1 As noted above (paragraph 1.1.3), the fieldwork was conducted in accordance with the *Agreement for the provision of Archaeological Investigations* (URL 1997), which contains a detailed methodology for all aspects of the evaluation fieldwork. This methodology will not be repeated in full here, although a brief summary is reiterated below:

- *allowing for agreed variations noted below, all trenches were located to a horizontal accuracy of  $\pm 0.50$  m and elevation accuracy of  $\pm 0.02$  m (per kilometre traverse) in relation to trench location plans provided and Ordnance Datum (Newlyn);*
- *all trenches were excavated in discrete 0.10-0.20 m spits using a tracked excavator with a 1.80 m wide toothless ditching bucket under close archaeological supervision, to either 1.20 m depth, the surface of in situ geology, or the surface at which archaeological remains could be identified, whichever was encountered first;*
- *all trenches were cleaned manually, with a sufficient sample of all exposed features investigated, and sampled where appropriate, in order to fulfill the aims of the evaluation; and,*

- *all recording conformed to the standards of current best practice, and included a full graphic and photographic record of all stages of the evaluation.*

## 2 RESULTS

### 2.1 General

2.1.1 In summary, 15 evaluation trenches were excavated within the defined site (**Figure 2**), revealing three groups of potentially archaeological features, all of which were investigated. These features were located in various parts of the evaluation area. The features towards the western end included a substantial, broad, but relatively shallow ditch (in trench 1359TT) and a shallow pit or tree hole (in trench 1358TT). The features towards the centre included a shallow ditch and a gully (in trench 1362TT). The features towards the eastern end included a shallow ditch, a shallow pit, and a small pit containing a calf burial (in trench 1364TT).

2.1.2 Artefacts recovered from these features comprise a small quantity of pottery of Late Bronze Age date from the gully in trench 1362TT, and a single sherd of similar date from the shallow pit or tree hole in trench 1358TT; both features also contained several pieces of worked flint. Two sherds of Romano-British pottery, some residual Late Bronze Age pottery, and small assemblages of worked flint, animal bone and fired clay came from the relatively substantial ditch in trench 1359TT. A single sherd of medieval pottery was found in the pit containing the calf burial in trench 1364TT. Ceramic building material of probable post-medieval date was recovered from the shallow ditches in trenches 1362TT and 1364TT, the ditch in trench 1364TT also producing one sherd of Romano-British pottery. A small quantity of post-medieval/modern material came from the shallow pit in trench 1364TT.

2.1.3 Finds recovered from topsoil contexts comprise one piece of prehistoric worked flint from trench 1360TT, one sherd of medieval pottery from trench 1364TT, and a single sherd of late medieval/early post-medieval pottery from trench 3011TT.

2.1.4 A context inventory (by trench) is provided in **Appendix 1**, whilst deposits and features of note are described below.

### 2.2 Stratigraphy

2.2.1 The stratigraphic sequence identified within the evaluation area can be broadly summarised as:

- Upper Chalk;
- ‘Flinty wash’;



- Subsoil;
- Modern topsoil.

### ***Upper Chalk***

2.2.2 This natural deposit was recorded outcropping in places within five of the 15 trenches (trench 1358TT, trenches 1360TT – 1362TT, and trench 3012TT), on the higher ground in the north-western part of the site above *c.* 18.50 m OD. It was interspersed and sealed by ‘flinty wash’ or, where this was absent, by subsoil. It can be characterised as being heavily fractured and weathered, off-white in colour, and containing frequent flint nodules and subrounded to angular flint fragments up to 0.1 m in size.

### ***‘Flinty wash’***

2.2.3 This natural deposit was recorded within all 15 of the trenches, overlying and in some places interspersed with outcrops of natural chalk. It is likely that this deposit derives from weathering of the chalk, often filling shallow solution features within the surface of the chalk, but may have been subject to erosion and redeposition in some areas. It comprises a yellowish brown sandy silt containing frequent flint nodules and subrounded to angular fragments up to 0.1 m in size, with varying quantities of chalk lumps and chalk flecks generally less than 0.05 m in size.

### ***Subsoil***

2.2.4 This occurred in six of the trenches (1358TT – 1352TT and 1354TT) and can be characterised as a yellowish brown sandy silt with occasional small, subangular or subrounded flint gravel. It had an average thickness of approximately 0.15 m, with a minimum of 0.05 m (in trench 1362TT) and a maximum of 0.25 m (in trench 1360TT).

2.2.5 The subsoil directly overlay natural deposits and sealed archaeological features of Late Bronze Age, Romano-British and post-medieval date in trenches 1358TT – 1359TT, trench 1362TT and trench 1364TT. The lower part of this horizon appeared to be cut by a modern feature in trench 1364TT and was sealed by topsoil.

### ***Topsoil***

2.2.6 In general, topsoil encountered throughout the evaluation area comprised 0.25 - 0.40 m thickness of greyish brown sandy silt loam with sparse, small, subangular to subrounded flint gravel. The topsoil was covered by a lucerne crop in all trenches at the time of the evaluation.

2.2.7 Although the topsoil represents a disturbed modern context, a small number of residual finds were recovered from this horizon. These comprise one sherd of medieval pottery from trench 1357TT, one sherd of late medieval/early post-medieval pottery from trench 3011TT, and one piece of worked flint from trench 1360TT.

## 2.3 Structural Report (Figures 3 and 4)

### *Trench 1358TT (Figure 3)*

- 2.3.1 A shallow, sub-square or sub-rectangular feature (**135805**) lay partly within the trench. It measured 1.7 m by at least 1.2 m across, and was 0.15 m deep with steeply sloping sides and a flat base. It was filled with a brown sandy loam that produced one sherd of Late Bronze Age pottery, three flint flakes and a cattle tooth. This feature is provisionally interpreted as a Late Bronze Age pit, although it is possible that it was a tree throw hole.

### *Trench 1359TT (Figure 4)*

- 2.3.2 A substantial, broad, but relatively shallow ditch (**135905**) lay towards the south-east end of the trench. It was aligned approximately north-east to south-west, was 4.50 m wide and 0.60 m deep, and had a somewhat irregular, open U-shaped profile with a shallow 'step' along the top on the east side. The bottom fill (135904) was a mid greyish brown sandy silt which produced five tiny sherds of probably residual Late Bronze Age pottery along with small quantities of worked flint, burnt flint, fired clay and animal bone. A bulk soil sample taken from this fill contained large quantities of charred grain fragments and a few charred chaff pieces. The upper fill (135903) of mid yellowish brown sandy silt produced a small amount of fired clay and two relatively large sherds of Romano-British pottery. The fill (135907) of the shallow 'step' along the top of the ditch on the east side was also a yellowish brown sandy silt, but it was characterised by containing approximately 25% small chalk fragments. It was sealed by upper ditch fill 135903 which, in this part of the ditch, could not be clearly differentiated from the overlying subsoil (135902).

### *Trench 1362TT (Figure 3)*

- 2.3.3 A narrow, shallow gully (**136206**) aligned north-south lay at the west end of the trench. This gully was 0.60 m wide, up to 0.20 m deep and had an open V-shaped profile. The fill of dark greyish brown sandy silt loam (136207) produced six sherds of Late Bronze Age pottery, one piece of fired clay and three worked flints.
- 2.3.4 Also towards the west end of this trench was a shallow ditch (**136204**) aligned north-south, approximately 1.20 m wide and 0.40 m deep. The fill of greyish brown sandy silt loam (136205) produced several fragments of post-medieval ceramic building material. Along either side of this ditch was a thin layer of yellowish brown chalky soil (136203), no more than 0.50 m wide, which appears to represent the remains of upcast from the digging of the ditch, sealed beneath the subsoil (136202).

### *Trench 1362TT (Figure 3)*

- 2.3.5 A small, shallow, oval-shaped pit (**136410**) towards the west end of the trench contained the articulated remains of a calf burial, minus the skull and mandibles. Although the pit had been truncated to some extent, it is unlikely that this would have completely removed these elements, and not any others, and it seems probable, therefore, that the head had been removed prior to

burial. The date of this burial is uncertain, but a single small sherd of possible 13<sup>th</sup> century date indicates it to be medieval or later.

- 2.3.6 Towards the east end of the trench was a shallow, open U-shaped ditch (**136407**), aligned north-south. It was 1.10 m wide, 0.35 m deep and contained a single fill of yellowish brown sandy silt (136406). This produced two fragments of undiagnostic ceramic building material which could be of Romano-British or post-medieval date, one small sherd of Romano-British pottery, small assemblages of worked flint and animal bone, and three small fragments of iron (?)sheet. It is uncertain whether this ditch should be assigned a Romano-British or post-medieval date; adopting caution, it has been assigned to the post-medieval period, but an earlier date cannot be ruled out.
- 2.3.7 Pit **136405** was a shallow, sub-square or sub-rectangular feature, 2.40 m by at least 1.20 m across, and surviving to a depth of 0.20 m. The fill of dark greyish brown sandy silt (136404) included a fragment of post-medieval roof tile and several small pieces of coal. Fill 136404 was visible extending up into the overlying subsoil (136402) and together, the stratigraphic relationships and finds indicate a relatively modern date for this feature.

## 2.4 Artefactual Report by Lorraine Mephram

- 2.4.1 A small quantity of artefactual material, in a limited range of material types, was recovered from seven trenches. Finds totals, by material type and by context, and including finds extracted from soil samples, are given in **Appendix 2**. The potential date range of material recovered is prehistoric to post-medieval.

### *Pottery*

- 2.4.2 The small pottery assemblage (18 sherds) includes material of prehistoric, Romano-British, medieval and post-medieval date. The earliest material is represented by 12 body sherds in coarse, flint-tempered or shelly fabrics (trenches 1358TT, pit/tree hole **135805**; 1359TT, ditch **135905**; 1362TT, gully **136206**). Such fabrics are characteristic of the post-Deverel-Rimbury ceramic style of the later Bronze Age in southern England. One sherd has traces of finger-impressed decoration (trench 1358TT). Romano-British sherds were recovered from two trenches (1359TT, ditch **135905**; 1364TT, gully **136407**); these comprise three coarsewares sherds, two in sandy fabrics and one shell-tempered, none of which may be dated any more closely within the Romano-British period. Two medieval sherds were identified, both small, undiagnostic body sherds, one in a coarse sandy fabric with some shell, perhaps of 13th century date (trench 1364TT, pit **136410**), and the second (trench 1357TT, topsoil **135701**) in a finer, oxidised sandy fabric, probably of 14th or 15th century date. The remaining sherd, in a fine oxidised fabric and partially glazed (trench 3011TT, topsoil **301101**), is probably of late medieval or early post-medieval date (15th/16th century).

***Worked Flint***

- 2.4.3 The 29 pieces of worked flint do not include any chronologically distinctive forms; all are waste flakes or core fragments. Condition varies from unpatinated to lightly patinated, and most pieces show signs of edge damage. The raw material is likely to derive from a local gravel source. In the absence of diagnostic pieces, a broad date range of Neolithic to Bronze Age is suggested for this small collection.

***Burnt Flint***

- 2.4.4 Burnt, unworked flint was also recovered in small quantities. This material type is intrinsically undatable, but is often taken as an indicator of prehistoric activity.

***Fired Clay***

- 2.4.5 The fired clay, recovered from three contexts (trenches 1359TT, 1362TT) comprises small, featureless fragments of uncertain date or origin, although associated pottery suggests either a Late Bronze Age or Romano-British date.

***Ceramic Building Material***

- 2.4.6 Of the twelve fragments of ceramic building material recovered, nine are of post-medieval date (trenches 1362TT, 1364TT); the remaining two fragments are undiagnostic, but could be either of Romano-British or post-medieval date (trench 1364TT).

***Metalwork***

- 2.4.7 Three very small scraps of iron were recovered (trench 1364TT), of unknown date or function, although associated pottery and ceramic building material suggests a Romano-British or post-medieval date.

**2.5 Environmental Report** by Michael J Allen

- 2.5.1 A single bulk sample of 15 litres was taken from a Romano-British ditch (trench 1359TT, ditch **135905**, fill 135904) to recover and assess the preservation and potential significance of the charred plant and charcoal remains.
- 2.5.2 The sample was presoaked in water, with the additions of small quantities of hydrogen peroxide. After soaking the sample was transferred to a flotation tank, within a wire basket holding a nylon mesh of 0.5 mm aperture. Water was pumped through the sample and the flot retained on a 0.5 mm nylon mesh. The residue was fractionated into 5.6 mm, 2 mm and 1 mm fractions and dried. The coarse fraction (>5.6 mm) was sorted, weighed and discarded. The flot was scanned under a x10 - x30 stereo-binocular microscope and presence of charred remains quantified (**Appendix 3**), in order to present data to assess the preservation and nature of the charred plant and charcoal remains.

***Charred plant remains***

2.5.3 The sample produced a large flot (average flot size for a 15 litre sample is 90 millilitres) with 75% rooty material and very high numbers of uncharred weed seeds, which may be indicative of stratigraphic movement.

2.5.4 Large quantities of charred grain fragments and a few charred chaff pieces were observed. Small mammal bones and molluscs were also present.

***Charcoal***

2.5.5 No charcoal fragments greater than 5.6 mm were recorded.

***Animal bone*** by Pippa Smith

2.5.6 Thirteen fragments of animal bone were recovered from a variety of contexts in addition to a near-complete calf skeleton buried in a small, shallow pit (**Appendix 4**).

2.5.7 A cattle tooth was recovered from Late Bronze Age pit/treehole **135805**, eight fragments of cattle, sheep and horse bones from Romano-British ditch **135905**, and four fragments of cattle, sheep/goat and unidentified bone from post-medieval ditch **136407**. A calf burial which is in generally good condition and mostly complete except for the skull and mandibles was recovered from medieval/post-medieval pit **136410**.

## STATEMENT OF IMPORTANCE

### 3 CONCLUSIONS

#### 3.1 Extent of Archaeological Remains

- 3.1.1 Three groups of archaeological features were recorded, located in various parts of the evaluation area. The features towards the western end comprised a substantial ditch and a shallow pit or tree hole. Artefacts recovered from these features include one sherd of Late Bronze Age pottery from the possible pit in trench 1358TT, and a small quantity of Late Bronze Age pottery and two undiagnostic Romano-British sherds from the ditch in trench 1359TT. The features towards the centre of the evaluation area comprised a gully and a shallow ditch (both in trench 1362TT). The gully produced six sherds of Late Bronze Age pottery and the shallow ditch contained several fragments of post-medieval ceramic building material. The features towards the eastern end of the evaluation area comprised a shallow ditch, a shallow pit, and a small pit containing a calf burial (all in trench 1364TT). These three features may all have been of post-medieval date, although the shallow ditch contained one sherd of Romano-British pottery as well as some undiagnostic ceramic building material, and the pit containing the calf burial produced a single sherd of possibly residual medieval pottery.
- 3.1.2 Finds recovered from topsoil contexts include one piece of prehistoric worked flint from trench 1360TT, one sherd of medieval pottery from trench 3011TT, and one sherd of late medieval/early post-medieval pottery from trench 1357TT.
- 3.1.3 The preliminary fieldwalking survey of the evaluation area highlighted a general scatter of 19 worked flints, including one scraper of possible Neolithic date, and recorded five burnt flints. No concentrations were apparent and it was considered that the material might represent a background scatter (URL 1995, 22, maps 1a and 1b). Only two sherds of medieval pottery were collected during preliminary fieldwalking, and 12 of the 13 post-medieval sherds came from the south-eastern half of the site in the vicinity of High House (URL 1995, 22, maps 1c and 1d).
- 3.1.4 The magnetometer survey (URL 1996, plans 1.2 and 1.3) indicated a series of parallel north-south linear anomalies which extended throughout much of the survey area. It was considered likely that these anomalies were caused by past cultivation, and the results from the evaluation trenching do not alter this broad interpretation. However, two of the anomalies may have been caused by a Late Bronze Age gully and a shallow post-medieval ditch respectively, both in trench 1362TT. No pits were identified corresponding with any of the small magnetic anomalies recorded, and the most distinct linear anomaly (marked c on plan 1.3) lay between trenches 1360TT and 1361TT.

### **3.2 Nature of the Archaeological Remains**

- 3.2.1 All of the Late Bronze Age, Romano-British and post-medieval features survived as shallow cuts (i.e. generally not greater than 0.40 m deep; ditch 135905 was the exception at 0.60 m deep) excavated into the surface of the *in situ* geological natural, and were sealed by subsoil or topsoil. Inter-relationships between features were not observed.
- 3.2.2 No structural remains were certainly identified, although there is a slight possibility that Late Bronze Age gully 136206 may have been a structural element.
- 3.2.3 Three small, shallow pits were identified, one containing a calf burial (in trench 1364TT), and another possibly a tree throw hole (in trench 1358TT).
- 3.2.4 The remaining three features were all linear in nature, comprising ditches of Romano-British and post-medieval date in trenches 1359TT, 1362TT and 1364TT. These are likely to represent boundary features.
- 3.2.5 A small quantity of artefacts recovered were provenanced from topsoil contexts. These include one piece of undiagnostic prehistoric worked flint, one sherd of medieval pottery and one sherd of late medieval/early post-medieval pottery. These artefacts are in addition to those recovered from preliminary fieldwalking, comprising 19 worked flints (including one scraper of possible Neolithic date), two sherds of medieval pottery and 13 sherds of post-medieval pottery.

### **3.3 Character of Site**

- 3.3.1 The body of evidence (incorporating fieldwalking and geophysical results, subsoil finds from machine trenches, and subsurface archaeological features) would appear to indicate an area of Late Bronze Age activity in the central and possibly the western part of the site, with evidence for Romano-British activity in the western part of the site. Post-medieval activity appears to have been restricted to the central and eastern parts of the site.
- 3.3.2 The nature of the Late Bronze Age features and the small but perhaps significant quantity of pottery recovered (summarised above) might indicate settlement on the site.
- 3.3.3 The Romano-British ditch produced few associated finds and may have served as a field boundary rather than, for example, an enclosure boundary, thereby suggesting the likelihood of agricultural rather than domestic activity in the vicinity. This suggestion is supported by the large quantity of charred grain fragments and a few pieces of charred chaff recovered from the bulk soil sample taken from the ditch.
- 3.3.4 The two shallow ditches, the shallow pit, and the small pit containing a calf burial, all assigned to the post-medieval period, are indicative of agricultural

activity. This is almost certainly related to High House, the post-medieval (and possibly earlier) manor house and associated farm.

- 3.3.5 It is likely that the material recovered from topsoil contexts during the evaluation and earlier fieldwalking, including undiagnostic prehistoric worked flint and sherds of medieval and post-medieval pottery, represents casual losses or rubbish disposal in an agricultural environment.

### **3.4 Site Chronology**

- 3.4.1 As summarised above, datable archaeological features have indicated Late Bronze Age, Romano-British (not closely datable) and limited post-medieval activity within the evaluation area. Stratigraphic relationships were not identified to enable a stratigraphic sequence to be defined, and comparatively small amounts of datable finds were recovered from these features. Artefacts recovered from the subsoil include one piece of undiagnostic prehistoric worked flint, and single sherds of medieval and late medieval/early post-medieval pottery.

## **4 IMPORTANCE OF REMAINS**

### **4.1 Scheduled Monument Criteria**

- 4.1.1 The Secretary of State's criteria for scheduling monuments has been addressed. The remains recorded during this evaluation do not satisfy any of the criteria as defined.

### **4.2 Condition**

- 4.2.1 Archaeological features recorded during the evaluation are preserved as shallow cuts in the surface of *in situ* geological deposits sealed by subsoil and/or topsoil. The subsoil probably serves to protect some of these features from present-day ploughing, although it is very likely that all have suffered varying degrees of truncation in the past.

- 4.2.2 Cultural remains have survived, including pottery, fired clay, ceramic building material, worked flint and iron objects. These finds are not prolific, although the majority can be confidently identified as Late Bronze Age or Romano-British, or assigned a broad prehistoric date.

- 4.2.3 Environmental analysis has demonstrated that palaeo-environmental material has survived in the sample examined, although charcoal is absent. Animal bone is present in small quantities in Romano-British and post-medieval contexts.

### **4.3 Period**

- 4.3.1 Prehistoric activity, though not necessarily settlement, is well-documented in the area. However, although many of the important Palaeolithic finds have come from excavations, virtually all of the remaining material has come from



salvage work or as unstratified finds made during gravel extraction to the north and west of the evaluation area. This material includes Mesolithic worked flint, some Neolithic worked flint and pottery, and small quantities of Bronze Age and Iron Age finds. Some Romano-British material has also been recovered. Secure chronological indicators from the evaluation are restricted to a small assemblage of Late Bronze Age pottery and a few sherds of Romano-British pottery recovered from archaeological features, a small quantity of undiagnostic prehistoric worked flint mainly found as residual material in later features, and a few sherds of medieval pottery, most of which were recovered from subsoil contexts.

4.3.2 The Late Bronze Age and Romano-British features and associated pottery are of local importance, and further work within the evaluation area could contribute to an understanding of the nature of the Late Bronze Age and Romano-British activity in the Purfleet area which, at present, is not well understood.

4.3.3 The post-medieval ditches and pits are of limited local interest, and it is doubtful whether further work would contribute any additional information.

#### **4.4 Rarity**

4.4.1 The small number of Late Bronze Age and Romano-British remains recorded during the evaluation are of note. Some unstratified finds of late prehistoric and Romano-British date have been made during gravel quarrying to the west and north of the evaluation area, but no large-scale excavations have been carried out, and the quality of evidence is poor.

4.4.2 The small quantity of undiagnostic prehistoric worked flint and few sherds of medieval pottery may represent stray losses and/or manuring on fields.

#### **4.5 Vulnerability**

4.5.1 There is evidence that the archaeological remains have been subjected to truncation, particularly in areas where topsoil and subsoil areas shallowest. Should deeper ploughing or any other invasive groundwork occur, then this will clearly cause further truncation of these remains. All archaeological remains will be under threat from construction of the CTRL.

#### **4.6 Diversity**

4.6.1 Although feature types include both discrete and linear remains, there was no significant diversity of features or finds.

#### **4.7 Documentation**

4.7.1 The post-medieval building complex at High House comprising manor house, barn and dovecote (Grade II Listed Buildings) is documented, but nothing else is recorded of the evaluation area.

4.7.2 In the surrounding area, the important complexes of Palaeolithic remains from the Pleistocene gravels of the Purfleet anticline (the Mar Dyke channel) are well documented, and the associated stratification and faunal indicators in the deposits make this an area of national, and even international significance for Quaternary geology (it is a geological SSSI) and Palaeolithic archaeology. Important assemblages of Palaeolithic material have been recorded from the 'Esso Pit', the Botany Pit and Beacon Hill, all less than 1 km to the west of the evaluation area, and the Greenlands and Bluelands quarries, both less than 1 km to the north-east. In addition to the Palaeolithic material, various finds of later date have been recovered as a result of quarrying and are recorded in the Essex Sites and Monuments Record. These include Iron Age/Roman-British material as well as traces of pits and ditches from the Botany Pit; Neolithic, Bronze Age, Iron Age and Roman-British material from Beacon Hill; and Mesolithic, Neolithic, Iron Age and medieval material from the Greenlands Quarry immediately to the north-east of the evaluation area.

#### **4.8 Group Value**

4.8.1 There is some group value that can be attributed to the results of this evaluation in view of the small quantities of late prehistoric and Roman-British material recovered during quarrying to the north and west, although no Bronze Age and Roman-British material is recorded from the Greenlands Quarry immediately to the north-east of the evaluation area. The group value is enhanced by the fact that much of the surrounding area has been destroyed by quarrying.

#### **4.9 Potential**

##### *Structural*

4.9.1 The archaeological features recorded offer some potential for contributing to the understanding of Late Bronze Age and Romano-British settlement and agricultural activity in the area.

##### *Artefactual*

4.9.2 The small prehistoric pottery and flint assemblage is useful as an indicator of activity in the Late Bronze Age, Roman-British and medieval periods, but is otherwise of limited significance, and there is little potential for further analysis.

##### *Environmental*

4.9.3 The presence of high quantities of charred grain and some chaff in the Romano-British ditch is potentially useful as there is relatively little published plant evidence from south Essex. This material can provide some indication of the crops cultivated and the stage of processing; ie from the field (unprocessed), from storage (part-processed) or ready for consumption (fully processed). The small animal bone assemblage has little potential for further analysis

## 4.10 Discussion

- 4.10.1 The potential for archaeological remains within the evaluation area had been identified by an earlier Environmental Statement (URL 1994) which included fieldwalking (URL 1995) and geophysical prospection (URL 1996). This potential was defined as the possibility of discovering subsoil features and deposits of archaeological interest which may be associated with, or in close proximity to, surface artefact concentrations recorded during fieldwalking or anomalies recorded during geophysical survey, and also the possibility of finding a continuation of the possible late prehistoric enclosure noted in the evaluation of the adjacent Palaeolithic site.
- 4.10.2 The evaluation revealed a small number of archaeological features grouped in various parts of the site. A gully and a shallow pit or tree hole were of certain or probable Late Bronze Age date, one ditch was of Romano-British date, and two gullies, a shallow pit, and a small pit containing a calf burial have all been assigned to the post-medieval period.
- 4.10.3 This group of features lay on the Purfleet chalk outcrop overlooking the River Thames to the south and the Mar Dyke (a possible former course of the Thames) to the north and west, an area which might be expected to have a high archaeological potential.
- 4.10.4 The evaluation has established that the Pleistocene gravels filling the Purfleet anticline do not extend this far to the south-east and, therefore, no Palaeolithic deposits occur within the evaluation area.
- 4.10.5 The Late Bronze Age gully provides evidence for possible settlement in the vicinity. The only other Bronze Age find from the area is a cinerary urn recovered from the top of Beacon Hill, some 0.5 km to the west, during a salvage excavation. There was no evidence for the continuation into the evaluation area of the possible late prehistoric enclosure indicated by an earlier excavation 300 m to the west. However, it is conceivable that this putative enclosure may have been associated with the Late Bronze Age feature(s) recorded in the evaluation area.
- 4.10.6 The Romano-British ditch cannot be closely dated, but has been interpreted as a field boundary rather than a 'settlement feature'. It may be significant that no Romano-British finds are recorded from the Greenlands Quarry immediately to the north-east of the evaluation area, and the nearest features and finds, which might indicate settlement, come from the Botany Pit approximately 0.5 km to the west.
- 4.10.7 The features assigned to the post-medieval period are almost certainly related to the nearby manor house and farm of High House. The extant Grade II Listed Buildings are of 17<sup>th</sup>/early 18<sup>th</sup> century date, perhaps replacing earlier, medieval buildings.
- 4.10.8 A small quantity of artefacts recovered was provenanced from subsoil contexts, including one piece of undiagnostic prehistoric worked flint, one

sherd of medieval pottery and one sherd of late medieval/early post-medieval pottery. These artefacts, in conjunction with those recovered from preliminary fieldwalking comprising 19 worked flints (including one scraper of possible Neolithic date), two sherds of medieval pottery and 13 sherds of post-medieval pottery may indicate that settlement contemporaneous with these finds occurred in the vicinity. This is demonstrated in the post-medieval period and possibly also in the Late Bronze Age.

- 4.10.9 Only two of the geophysical anomalies recorded during the CTRL Environmental Assessment (URL 1996) have been shown in the evaluation to possibly correspond with features of archaeological interest, in this case a Late Bronze Age gully and a shallow post-medieval ditch respectively. The remaining linear anomalies have been attributed to the effects of past cultivation (ie ploughing).
- 4.10.10 In conclusion, the specific aims of the evaluation (section 1.1.3) have been substantially realised in identifying single areas of Late Bronze Age (?settlement) activity and Romano-British (?agricultural) activity within the evaluation area, though neither of these areas of activity was represented by surface collected material of the same date. There was no evidence for the continuation into the evaluation area of the possible late prehistoric enclosure indicated by an earlier excavation 300 m to the west. The post-medieval, and perhaps also the medieval pottery, is likely to have derived from the manuring of fields in the vicinity of High House manor house and farm. A Late Bronze Age gully and a shallow post-medieval ditch are the only features that were found to possibly correspond with geophysical anomalies, the remainder apparently resulting from ploughing.

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