

**CHANNEL TUNNEL RAIL LINK  
UNION RAILWAYS LIMITED**

**Archaeological Evaluation at Springhead  
(ARC SPH95), Gravesend, Kent  
Environmental Statement Route Window 13**

**Final Fieldwork Report**

**2nd October 1997**

**Contract no. 194/870  
WA Report no. 43501d**

**Wessex Archaeology**

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**Volume 1 of 1**

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**2nd October 1997**

## Contents

<b>Executive Summary .....</b>	<b>1</b>
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### FACTUAL STATEMENT

<b>1</b>	<b>INTRODUCTION</b>	
1.1	Project Background .....	3
1.2	Site Description, Topography, Geology and Hydrography .....	4
1.3	Methodology .....	5
1.4	Variations.....	6
<b>2</b>	<b>RESULTS</b>	
2.1	General.....	7
2.2	Stratigraphy.....	8
2.3	Structural Report.....	10
2.4	Artefactual Report .....	22
2.5	Environmental Report.....	27

### STATEMENT OF IMPORTANCE

<b>3</b>	<b>CONCLUSIONS</b>	
3.1	Extent of Archaeological Remains .....	29
3.2	Nature of Archaeological Remains.....	29
3.3	Character of Site .....	34
3.4	Site Chronology .....	36
3.5	Truncation by ploughing and other activities .....	37
<b>4</b>	<b>IMPORTANCE OF REMAINS</b>	
4.1	Scheduled Monument Criteria .....	37
4.2	Condition .....	38
4.3	Period.....	39
4.4	Rarity .....	40
4.5	Vulnerability .....	41
4.6	Diversity .....	41
4.7	Documentation.....	42
4.8	Group Value.....	42
4.9	Potential .....	42
4.10	Concluding Remarks .....	43
<b>5</b>	<b>BIBLIOGRAPHY .....</b>	<b>45</b>

## APPENDICES

<b>Appendix 1:</b>	Context Inventory
<b>Appendix 2:</b>	Artefact Quantification
<b>Appendix 3:</b>	Animal Bone Assemblage Composition
<b>Appendix 4:</b>	Ecofact Quantification

## FIGURES (after Appendices)

<b>Figure 1:</b>	Site location
<b>Figure 2a:</b>	Area B (southern half) trench layout summarising presence of archaeological remains
<b>Figure 2b:</b>	Area B (northern half) trench layout summarising presence of archaeological remains
<b>Figure 3:</b>	Area A trench layout summarising presence of archaeological remains
<b>Figure 4:</b>	Areas A and B showing trenches, contours and extent of archaeological features and deposits
<b>Figure 5:</b>	Trench 1161TT, plan and sections
<b>Figure 6:</b>	Trenches 1180TT, 1183TT and 1195TT, plans and sections
<b>Figure 7:</b>	Trenches 1197TT, 1200TT, 1313TT and 1314TT, plans and sections
<b>Figure 8:</b>	Trench 1118TT, plan and sections
<b>Figure 9:</b>	Trenches 1119TT and 1322TT, plan and sections
<b>Figure 10:</b>	Trenches 1123TT and 3053TT, plans and sections
<b>Figure 11:</b>	Trenches 1126TT, and 1329TT, plans and sections
<b>Figure 12:</b>	Trenches 1135TT, 1341TT and 1346TT, plans and sections
<b>Figure 13:</b>	Trench 1147TT, plan and sections
<b>Figure 14:</b>	Trench 1148TT, plan and sections
<b>Figure 15:</b>	Test pits, sections

## TABLES

<b>Table 1:</b> Quantification of Romano-British pottery .....	23
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## **CHANNEL TUNNEL RAIL LINK UNION RAILWAYS LIMITED**

### **Archaeological Evaluation at Springhead (ARC STP97), Gravesend, Kent Environmental Statement Route Window 13**

#### **Executive Summary**

Wessex Archaeology was commissioned by Union Railways Limited to carry out an archaeological evaluation on a site to the south-west of Gravesend (centred on URL grid point 41750 52750; NGR grid point TQ 61700 72800), known as Springhead. The potential for archaeological remains within the evaluation area had been identified by an earlier Environmental Statement (URL 1994). This potential was defined as prehistoric finds scatters and the possible remains of a small Roman town with a unique complex of temples part of which, including an area adjacent to the construction site south of the A2, is a scheduled monument.

The excavation has revealed a considerable number of dated archaeological features, and a small number that remain undated. These features were predominantly concentrated towards the lower ground to the south and south-east within the Ebbsfleet valley, but a few lay on the higher ground to the east. Overall, archaeological features probably extend over an area of between 4 and 5 hectares within the area evaluated.

A small quantity of worked flint was recovered, but all occurred in topsoil/subsoil or was residual in later features. One trench, on the east side of the Ebbsfleet valley, exposed an undated deposit of burnt flint sealed beneath approximately 2 m of colluvium. This deposit is considered likely to have been of Neolithic or Bronze Age date, and perhaps represented part of a burnt mound adjacent to the River Ebbsfleet.

The earliest dated features were one, or possibly two shallow ditches of Early Iron Age date which lay on the higher ground in the east part of the site.

The vast majority of archaeological features were of early Romano-British date (1st - 2nd century AD) and were concentrated on the lower ground in or towards the valley floor. These comprised a variety of features including a probable road leading out of the settlement to the north-west, enclosure and boundary ditches, wall footings, post-holes, inhumation burials (probably part of a small cemetery), pits, and various spreads and deposits probably representing floor or yard surfaces, occupation deposits and middens. The only features of later Romano-British date (3rd - 4th century AD) were two substantial ?enclosure/boundary ditches and a shallow gully, all of which lay on the higher ground in the east part of the site. In places, on the steeply sloping valley sides and on the higher ground, the Romano-British features and deposits lay

very close to the surface, but in the floor of the valley, particularly on the south side of the River Ebbsfleet, they were sealed by up to 2 m of colluvium.

The evaluation appears to have defined the north-western extent of the small Roman town of *Vagniacae*, and shows it to have been confined to the lower ground within the Ebbsfleet valley. The excavated evidence, which includes a substantial pottery assemblage, suggests domestic occupation (in addition to the burials) spanning a relatively short period in the 1st and 2nd centuries AD. A notable quantity of debris from crop processing was present; no evidence for industrial or craft activities was recovered. The rediscovery of four unstratified pieces of monumental masonry comprising part of a column and three column bases/capitals may indicate the former existence of a substantial structure(s) nearby. Later Romano-British activity appears to have been confined to the higher ground to the east. These features contained relatively few finds, produced little environmental evidence and are best interpreted, on the available evidence, as serving an agricultural function(s), probably defining enclosures or fields.

No evidence for Saxon or medieval activity was found, and the only other archaeological features were of post-medieval date and lay within one trench on the east side of the River Ebbsfleet close to its present source. These comprised a series of unmortared, 'dwarf walls' which were probably the remains of early watercress beds known to have been established here from the early 19th century when watercress was first cultivated. The construction of these watercress beds has probably removed most if not all of the earlier (Romano-British) deposits in this area within and immediately adjacent to the river.

## 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 to the south-west of Gravesend (centred on URL grid point 41750 52750; NGR grid point TQ 61700 72800; **Figure 1**), known as (site code ARC SPH95; Environmental Statement Route Window 13).

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)

1.1.3 The fieldwork was conducted in accordance with a written *Specification for Archaeological Investigations* (URL 1997), which defined the scope, aims and methods for the project. In addition to general aims applicable to all works within the project, this identified the following site-specific aims:

- determine whether significant Palaeolithic, Mesolithic or Neolithic deposits exist associated with, or in close proximity to, alluvial/colluvial deposits to the east of the River Ebbsfleet;
- determine whether Bronze Age and Roman artefact concentrations located during the CTRL Environmental Assessment are associated with, or in close proximity to, subsoil archaeological features and deposits;
- determine whether any structures, features or deposits associated with, or in close proximity to, the Roman settlement of *Vagniacae* (SAM 158), including potential wharfage, are present to the north of the current A2;
- determine whether any remains of the original Roman Watling Street and Roman occupation or burial survive to the north of the present A2 in the area of Springhead Nurseries;

1.1.4 The fieldwork was carried out between 12th May 1997 and 13th June 1997, with preliminary survey work carried out on 8 - 9th May 1997.

## 1.2 Site Description, Topography, Geology and Hydrography

- 1.2.1 The site was located to the north of the A2 Trunk road, and was bounded by Southfleet Road to the west, and by Northfleet East electricity sub-station and parts of an embankment and cutting of a disused railway to the east. The north boundary was formed either by existing field boundaries or lay within fields. The site was divided into two unequal halves by the River Ebbsfleet (designated Areas A and B by Wessex Archaeology, to the west and east respectively), with Springhead Nurseries comprising an extensive series of greenhouses, sheds and two houses lying between the two areas towards the south end of the site. In total, the site covered an area of *c.* 40 hectares (**Figures 2 and 3**). The evaluation comprised 85 machine trenches (trenches 1161TT - 1200TT inclusive, 1312TT - 1323TT inclusive, 1326TT - 1355TT inclusive, and 3053TT) and 10 test pits (test pits 2007TP - 2015TP inclusive, and 2065TP). Of the 85 machine trenches, 83 measured 30 m by 1.50 m and two (which were not undertaken, see below) measured 10 m by 1.50 m. The test pits each measured 1 m<sup>2</sup>.
- 1.2.2 At the time of the evaluation eight distinct plots were identified within the site limits (**Figures 2 and 3**), comprising two cereal fields (Plot 1 and Plot 7), one potato field (Plot 2), three linseed fields (Plot 4, Plot 5 and Plot 6), one arable field not under cultivation (Plot 3), and one area of commercial horticulture associated with Springhead Nurseries (Plot 8); the latter comprised individual areas used for car parking, plant propagation and lawn, and an area of tarmacadam.
- 1.2.3 The site occupied an extensive area of variable topography on either side of the River Ebbsfleet (**Figure 4**) which rises and flows approximately north to south in this area and ultimately feeds into the River Thames between Swanscombe Marsh and Northfleet. On the west side (Area A), the slope of the valley side is moderate, ranging from convex to concave in profile, but flattening out to the east towards the valley floor, and continuing to rise to the west beyond the edge of the site; a shallow, dry valley extends from the north-east into the south-west corner of the site. The ground surface within the site on the west side (Area A) descends from a maximum of *c.* 22.60 m aOD (in trench 1331TT) to a minimum of *c.* 8.00 m aOD (in trench 1348TT) towards the base of the valley. On the east side (Area B), the opposing side of this valley comprises a steep 'cliff' with a slightly concave profile towards the bottom of the valley where the slope begins to level out. The slope also levels out to the east, and the eastern half of this area occupies part of what, in effect, is a plateau. The ground surface within the site on the east side (Area B) descends from a maximum of *c.* 26.90 m aOD (in trench 1194TT) to a minimum of *c.* 6.10 m aOD (in trench 3053TT) towards the base of the valley. The area within Springhead Nurseries, along the southern edge of the site, sloped from north-west to south-east, from *c.* 13.00m aOD (test pit 2007TP) to *c.* 5.50 m aOD (test pit 2015TP); the slope was quite regular towards the north-west, but became more irregular to the south-east as a result of terracing/levelling for car parking.



- 1.2.4 Underlying drift geology for the area is recorded as Pleistocene Head deposits. Solid geology is recorded as comprising Cretaceous Upper Chalk, with overlying caps of Palaeocene Thanet Beds forming the higher ground (Ordnance Survey 1977).

### 1.3 Methodology

- 1.3.1 As noted above (paragraph 1.1.3), the fieldwork was conducted in accordance with a written *Specification for 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);
- two species exclusion zones, each approximately 60 m in diameter, were maintained towards the south-east corner of the site (in Area B)
- all trenches were excavated in discrete 0.10-0.20 m spits using a tracked excavator with a 1.50 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 includes a full graphic and photographic record of all stages of the evaluation.

- 1.3.2 For ease of reference, the evaluation area was divided into two areas, Area A and Area B, to the west and east of the River Ebbsfleet respectively (**Figure 4**). Each context has been given a unique number comprising the trench or test pit number followed by a two-digit number running from 01 to 99 (eg trench 1161TT contained contexts 116101, 116102 etc)

## **1.4 Variations**

### **1.4.1 The following agreed variations were actioned during the course of the fieldwork:**

Trench 1175TT relocated to the east to avoid footpath.

Trench 1177TT interrupted to preserve the line of a farm track.

Trench 1181TT relocated to the south to avoid overhead power lines.

Trench 1182TT extended to the west to determine the possible continuation of an archaeological feature.

Trench 1189TT relocated to the south to avoid overhead power lines.

Trench 1190TT relocated to the east to avoid overhead power lines.

Trench 1198TT relocated to the east to avoid overhead power lines.

Trench 1313TT relocated to the north to avoid footpath.

Trench 1314TT relocated to the north to avoid footpath.

Trench 1316TT relocated to the west to avoid overhead power lines.

Trench 1317TT relocated to the south to avoid footpath.

Trench 1318TT relocated to the north to avoid footpath.

Trench 1322TT relocated to the east to avoid footpath.

Trench 1324TT not excavated because of high density of buried power lines.

Trench 1325TT not excavated because of high density of buried power lines.

Trench 1327TT relocated to the north to avoid overhead power lines.

Trench 1334TT relocated to the south to avoid overhead power lines.

Trench 1336TT relocated to the north to avoid overhead power lines.

Trench 1344TT relocated to the west to avoid groundwater monitoring borehole.

Trench 1347TT relocated to the south to avoid buried power lines.

Trench 1348TT relocated to the south-east to avoid buried power lines.

Trench 1354TT relocated to the west to avoid buried power lines.

Test pit 2008TP relocated to the south-east to avoid pile of tarmac scalplings.

Test pit 2010TP relocated to north-east to avoid area of tarmac.

Test pit 2011TP relocated to north-east to avoid area of tarmac.

Test pit 2012TP relocated to south-west to avoid greenhouse.

Additional trench 3053TT excavated

Additional test pit 3065TP excavated

Geotechnic pits excavated below 1.20 m depth in trenches 1327TT, 1330TT, 1333TT, 1339TT.

Geotechnic pits excavated below 1.20 m depth in trenches 1161TT, 1181TT, 1313TT, 1322TT and 1323TT to establish thickness of colluvial deposits sealing archaeological deposits.

## **2 RESULTS**

### **2.1 General**

- 2.1.1 In summary, 85 evaluation trenches and 10 test pits were excavated within the eight defined plots (**Figures 2 and 3**), revealing a large number of archaeological features and deposits, almost all of which were investigated. These features were predominantly, but not exclusively, located on the lower ground in or towards the valley floor in the south and south-east parts of the site.
- 2.1.2 A deposit of burnt flint of probable prehistoric (? Neolithic/Bronze Age) date was found sealed beneath *c.* 2 m of colluvium and topsoil/subsoil at the north end of the site in trench 1161TT. It is suggested that this may represent part of a burnt mound or spread adjacent to the River Ebbsfleet.
- 2.1.3 At least one, and possibly two shallow ditches containing Early Iron Age pottery were located on the higher ground on the east side of the site in trenches 1168TT and 1197TT.
- 2.1.4 A large number of features and deposits of Romano-British date, almost all assigned to the 1st - 2nd century AD, were found predominantly on the lower ground in Areas A and B. These are likely to represent peripheral, domestic settlement extending around *c.* 500 m of the north-west edge of the small town of *Vagniacae*. In Area A, to the west, the remains of a metalled surface, probably a road aligned approximately north-west/south-east was found in trench 1329TT. A group of at least five inhumation burials was

recorded in trench 1348TT, close to the postulated line of the road, and features including ditches, pits and post-holes were present in trenches 1341TT, 1346TT and 1347TT, all in the immediate vicinity of trench 1348TT. Further away, a spread of Romano-British finds was found in trench 1340TT and a single gully, possibly of the same date, in trench 1326TT. In Area B, to the east, evidence for 1st - 2nd century AD Romano-British settlement including ditches, pits, wall foundations, post-holes and gullies was concentrated towards the south in trenches 1313TT, 1314TT, 1318TT 1319TT, 1322TT and 1323TT. Only one feature of this date was found on the higher ground to the east; this was a large ditch in trench 1183TT. Some of these features and deposits lay at very shallow depth, truncated by the plough, but towards the base of the slope in the valley floor they were sealed by up to *c.* 2 m of colluvium. Most of the features produced quite large quantities of pottery, with a restricted range of other finds. The test pits within Springhead Nurseries revealed 1st - 2nd century AD Romano-British deposits to survive across an extensive area, in some places at very shallow depth. Several surfaces of chalk or chalk and flint were recorded, probably floor or yard surfaces, at least two gravel surfaces (possibly, though not certainly, natural gravel) and several less well defined spreads of material, perhaps occupation deposits or middens. At least two pits or ditches were also present.

- 2.1.5 Late Roman features were confined to the higher ground in the eastern half of Area B, and comprised two substantial ?enclosure ditches in trench 1168TT and a shallow gully 450 m to the south-east in trench 1200TT. No features or deposits and only a very small quantity of late Roman finds was recovered from the area(s) of earlier Roman occupation.
- 2.1.6 The only post-Roman features were a series of unmortared 'dwarf walls' in trench 3053TT immediately east of the present source of the River Ebbsfleet. These walls are likely to represent the remains of watercress beds, perhaps those known to have been established at the beginning of the 19th century when watercress was first cultivated in beds.
- 2.1.7 A context inventory (by trench) is provided in **Appendix 1**, whilst the principal features and deposits of archaeological interest are described below.

## 2.2 Stratigraphy

- 2.2.1 The geology is locally complex and comprises a variety of superficial (drift) deposits, in some areas subsequently reworked. The stratigraphic sequence identified within the evaluation area can be broadly summarised as:
- *Chalk* (provisionally identified at the base of a geotechnic pit in trench 1322TT, though this may have represented a chalk surface).
  - *Chalky 'Head'* deposit (recorded in the base of geotechnic pits in trench 1339TT, and possibly also in trench 1322TT).

- *?Reworked Thanet Sand* (recorded in geotechnic pits in trenches 1333TT and 1339TT, with some evidence for periglacial ice wedges and hollows in the latter).
- *Plateau gravels* (recorded on the higher ground on the east side of the site in trenches 1180TT, 1183TT, 1184TT, 1185TT, 1186TT, 1187TT, 1190TT, 1191TT, 1192TT, 1193TT, 1194TT, 1198TT, 1199TT, 1200TT, 1312TT).
- *Valley gravels* (possibly recorded in trench 3053TT),
- *Loessic sand/'Brickearth'* (recorded in all trenches other than those containing plateau and ?valley gravels - ie over virtually all of the central and western parts of the site. A geotechnic pit in trench 1327TT showed it to be at least 1.65 m thick in that part of the site).
- *Colluvium* was present in several trenches on the valley floor and at the foot of the sloping valley sides, particularly on the more steeply sloping east side (trenches 1161TT, 1313TT, 1322TT 1323TT and 1335TT), with a maximum recorded thickness of 1.7 m in trench 1161TT. The colluvium comprised a distinctive chalk-flecked brownish yellow clayey silt containing some small to medium sub-rounded flint gravel; this deposit became lighter in colour and more calcareous towards the upper profile. Where identified, the colluvium sealed archaeological features of probable prehistoric and Romano-British date and is therefore likely to have resulted from ploughing in the post-Roman period.
- *Developed subsoil*, characterised as brown to brownish yellow fine sandy silt containing occasional chalk flecks and small subrounded flint gravel.
- *Topsoil*, comprising 0.2 - 0.4 m thickness of mid to dark brown/greyish brown sandy loam/clayey loam with moderate amounts of small to medium subrounded flint gravel, and very occasional small chalk flecks. Towards the western edge of the site an earlier buried topsoil horizon of similar matrix was encountered (trench 1349TT), perhaps resulting from construction work associated with the embanked section of the A2 Watling Street immediately to the south. A dark to very dark greyish brown clay loam representing a possible buried soil in trench 1313TT may have derived from the construction or subsequent cleaning out of the adjacent watercress beds in the 19th or 20th centuries.

## 2.3 Structural Report (Figures 5 - 15)

### *Prehistoric deposits*

#### *Trench 1161TT (Figure 5)*

- 2.3.1 This north - south aligned trench was located at the northern end of Plot 1 (Area B), the ground surface descending gently from 5.02 m aOD (S) to 4.20 m aOD (N). A geotechnic pit at the south end of this trench towards the bottom of the Ebbsfleet valley (c. 30 m to the east of the present course of the River Ebbsfleet) revealed the surface of a deposit of burnt flint and charcoal (**116105**) at a depth of approximately 2.2 m below present ground surface. This deposit, at c.2.80 m aOD, was sealed beneath 1.7 m of colluvium and was not further investigated; it remains undated though a prehistoric (Neolithic - Bronze Age) date is considered likely.

#### *Trench 1168TT (Figure 5)*

- 2.3.2 This east - west aligned trench was located straddling the brow of the slope at the northern end of Plot 4 (Area B), the ground surface descending from 18.92 m aOD (E) to 15.51 m aOD (W). It contained a north to south aligned ditch (**116810**) which was up to 1.5 m wide and 0.5 m deep, and had an irregular, U-shaped profile. The fill comprised a yellowish brown silty clay loam which produced six sherds of Early Iron Age pottery.

#### *Trench 1180TT (Figure 6)*

- 2.3.3 This east - west aligned trench was located on the plateau above the slope in the south-west corner of Plot 2 (Area B), at a height of c. 26.20 m aOD. This trench contained three shallow, undated features of possible prehistoric date. Towards the east end was a north to south aligned ditch (**118003**), approximately 1 m wide and 0.25 m deep, which cut a possible post-hole (**118006**), 0.8 m in diameter and 0.35 m deep. Towards the west end was a rather more amorphous feature (**118009**), possibly a gully/ditch or a scoop, 0.2 m deep. All of these features contained dark yellowish brown gravelly fills, but none produced any finds

#### *Trench 1195TT (Figure 6)*

- 2.3.4 This east - west aligned trench was located slightly below the brow of the slope, centrally within Plot 4 (Area B), the ground surface descending from 24.77 m aOD (E) to 17.38 m aOD (W). This trench revealed two shallow linear features, either small ditches or gullies (**119503** and **119505**), which lay approximately 4 m apart, aligned north to south, and were sealed beneath 0.3 m of topsoil/subsoil. Both features were 0.75 m wide but only 0.1 m deep, and are likely to have been heavily truncated by ploughing and erosion. They were filled with yellowish brown silty sand, with 119503 containing more gravel, but neither produced any finds. A prehistoric date is considered most likely for these features, but a later date cannot be ruled out.

#### *Trench 1197TT (Figure 7)*

- 2.3.5 This north - south aligned trench was located straddling the brow of the slope towards the south-east corner of Plot 4 (Area B), the ground surface

descending from 27.51 m aOD (N) to 24.88 m aOD (S). This trench contained a single, shallow ditch (**119705**) aligned approximately north-west to south-east, at 90° to the slope. The fill of brown, gravelly, sandy silt produced two sherds of Early Iron Age pottery and two small sherds of possible Romano-British pottery, the latter perhaps intrusive in this context.

***Early Romano-British (1st - 2nd century AD) deposits***

***Trench 1183TT (Figure 6)***

- 2.3.6 This north - south aligned trench was located on the plateau above the slope in the north-west corner of Plot 5 (Area B), at a height of *c.* 27.50 m aOD. This trench revealed a substantial east to west aligned ditch, **118303**, which was approximately 4.5 m wide, 0.9 m deep and sealed by 0.3 m of topsoil/subsoil. It had a broad, U-shaped profile, almost certainly truncated by the plough, with a shallow 'step' on the south side. Four fills were distinguished, though all were similar yellowish brown slightly loamy sandy silts containing varying amounts of flint gravel. The upper fill, **118302**, was very gravelly and produced the largest quantity of finds including pottery of 1st century AD date and animal bone; a soil sample taken from this layer proved very unproductive in charred plant remains. Layer **118304** contained less gravel and fewer finds, with layer **118305**, a distinctive layer of brown silt, perhaps representing a tip line (though it produced no finds) or layer of washed in material. The primary fill, **118306**, contained several patches of gravel probably derived from erosion of the sides, but no finds.

***Trench 1313TT (Figure 7)***

- 2.3.7 This north - south aligned trench was located on the valley floor at the southern end of Plot 4 (Area B), at a height of *c.* 7.50 m aOD. Topsoil up to 0.25 m thick overlay a layer of redeposited soil, **131302**, a dark to very dark greyish brown clay loam, 0.65 m thick, which contained a few fragments of modern brick and tile along with some lenses of yellow sand. It is possible that this layer represents material derived from the scouring out of this part of the River Ebbsfleet, either for the construction of watercress beds in the 19th century, or from subsequent maintenance or clearance work. Below this layer, at *c.* 6.70 m aOD, was a layer of colluvium, **131303**, 0.9 m thick, which had built up at the bottom of the slope. A geotechnic pit dug at the north end of the trench revealed what appeared to be the surface of archaeological deposits, **131304**, a dark greyish brown/very dark greyish brown soil, at 5.70 m aOD (1.80 m below present ground surface). These deposits were not investigated further.

***Trench 1314TT (Figure 7)***

- 2.3.8 This east - west aligned trench was located on the slope towards the south-eastern boundary of Plot 4 (Area B), the ground surface descending from 23.28 m aOD (E) to 18.75 m aOD (W). Thicknesses of topsoil/subsoil within this trench were recorded as 0.30 m and 0.50 m at the east and west ends respectively. A complex of deposits was present in the western half of the trench, perhaps all part of a single feature - possibly a hollow way or ditch running approximately south to north up the slope. This feature(s) was

investigated by a series of slots excavated along the southern edge of the trench which showed it to be between 8.50 m and 10 m wide, and up to 1 m deep with a steeply sloping east edge, a gently sloping west edge and a 'stepped' base. The west edge, **131422**, was easily defined, but the east edge, **131419**, was much less clear (only identified in section) and some doubt remains as to whether or not this has been correctly identified; layer **131412**, for example, may have been a fill, rather than natural, slightly gravelly brickearth. The upper fill of cut **131419** comprised a yellowish brown fine sandy silt (**131407**) containing a small quantity of pottery, and this sealed a 0.10 m thick layer of flint gravel (**131416**) in the base of the feature. Cuts **131421** and **131422** to the west each 'stepped down' approximately 0.60 m, with layers **131408** and **131409**, in cut **131421**, probably the same as layers **131407** and **131426** respectively to the east. At least three further fills were identified in this central part of the feature: **131404/131405** - a very dark greyish brown/black silty loam which produced a substantial quantity of pottery, and may represent a truncated midden deposit in a hollow in the upper surface of the largely infilled feature; below this was layer **131406/131414**, a brown to yellowish brown fine sandy silt, perhaps filling a separate gully/ditch cut, **131420/131423**; overlying primary layer **131411/131415**, a yellowish brown fine silty sand containing several lenses of charcoal, perhaps representing natural silting. The two lower fills contained comparatively little pottery. A metalised surface, **131416**, extended at least 2.5 m to the west of the possible hollow way/ditch. This surface was up to 0.15 m thick, thinning out to the west, and overlay natural brickearth. It may have been part of the same, but discontinuous spread of gravel as **131408** and **131426** to the east, perhaps cut or worn away in the centre. The eastern half of the trench was devoid of features, but layer **131424** (not excavated), which contained a few fragments of oyster shell, may have been an area of reworked/redeposited natural, perhaps filling a shallow feature, and possibly derived from erosion/slopewash.

#### *Trench 1318TT (Figure 8)*

- 2.3.9 This north - south aligned trench was located on the slope towards the south-eastern boundary of Plot 4 (Area B), the ground surface descending from 16.96 m aOD (N) to 12.37 m aOD (S). This trench contained a variety of features, all dated to the 1st - early 2nd centuries AD, sealed beneath 0.20 - 0.30 m of topsoil/subsoil. Towards the south end was a ?sub-circular pit, **131808**, 1.50 m in diameter and 0.80 m deep (base augered), the upper fill of which contained 30 - 40% small chalk lumps. This pit was cut by a small pit or post-hole, **131806**, and two other small pits or post-holes (**131810** and **131814**) were exposed a short distance to the north on the extreme western edge of the trench. There was an uncertain relationship between these features and a shallow, sub-rectangular post-hole, **131816**, which cut a narrow flat-bottomed slot or gully, **131812**, running north-west to south-east across the trench. Approximately 12 m to the north of this group of features was a substantial ditch, **131821**, which was also aligned north-west to south-east. This ditch was 3 m wide with an estimated depth of 1.30 m (base augered), and had fairly steeply sloping sides and a ?U-shaped profile. At least two fills were distinguished: an upper fill (**131819**) of yellowish brown



clayey silt with common flint gravel inclusions, and a lower fill (**131820**) of dark yellowish brown clayey silt containing much less gravel although several large flint nodules were recorded towards the base on the north side of the ditch. Both fills were relatively prolific in pottery. At the north end of the trench was a complex of deposits which included a truncated course of chalk and flint wall foundations, **131827/131830**, aligned approximately north-north-west to south-south-east, with **131827** perhaps marking a corner to the structure. A slot was excavated across these wall foundations and adjacent deposits. Although these could not be interpreted with certainty within the limits of the trench, some complexity was suggested. The deposits appeared to be approximately horizontal, suggesting that the structure had been built on a terrace cut into the slope (largely destroyed by ploughing), with layers **131823** and **131831**, containing much burnt daub and charcoal, probably representing a destruction deposit associated with it. To the south-west of the wall foundations and the possible destruction deposits was a spread of dark greyish brown silty loam, **131824**, which extended as far south as ditch **131821**.

*Trench 1319TT (Figure 9)*

- 2.3.10 This east - west aligned trench was situated on the slope, and centrally located within Plot 6 (Area B), the ground surface descending from 22.06 m aOD (E) to 17.61 m aOD (W). This trench revealed a variety of features sealed beneath 0.5 - 0.8 m of topsoil/subsoil. At the west end were two shallow gullies, **131904** and **131906**, which lay at right angles to each other. The larger gully, **131906**, ran north-west to south-east, was approximately 1 m wide, 0.20 m deep and had a flat base; the smaller gully, **131904**, extended to the west of this, was 0.50 m wide, 0.10 m deep and had an open U-shaped profile. Both gullies were filled with a homogeneous dark greyish brown soil, with no evidence of one having cut the other, and it seems probable that they formed part of a system of shallow gullies/ditches which may have been structural features, possibly beam slots. To the east of these gullies was an irregular line of post-holes (**131916**, **131923**, **131925**, **131929**, **131931**), of which only one was excavated (**131916**); this was 0.4 m in diameter and 0.2 m deep. Two of the post-holes, **131929** and **131931**, cut a thin spread of gravel, **131909**, perhaps the truncated remains of a yard surface overlying natural brickearth. Immediately to the east of this gravel spread was a cut(s) (**131910**, **131912**, **131914**) running across the trench, approximately 3 m wide and 0.10 m deep which appeared to be part of a shallow terrace cut into the slope. The main fill (**131911**) was a very dark greyish brown sandy loam which produced a relatively large assemblage of pottery. The eastern half of the trench was devoid of features and deposits except for a shallow, bowl-shaped pit, **131921**, at least 1.50 m wide and 0.40 m deep which was partly exposed at the east end. This contained several fills which produced pottery.

*Trench 1322TT (Figure 9)*

- 2.3.11 This east - west aligned trench was located towards the foot of the slope in the south-western corner of Plot 6 (Area B), the ground surface descending gently from 13.61 m aOD (E) to 11.21 m aOD (W). Topsoil/subsoil up to 0.35 m thick in this trench overlay colluvium, **132202**, revealed in a

geotechnic pit at the west end of the trench. At this point, the colluvium was 1 m thick, with the upper surface at 11.10 m aOD (1.30 m below present ground surface), and sealed a layer of homogeneous, very dark greyish brown sandy loam, **132203**, approximately 0.6 m thick. This layer was seen to contain charcoal, burnt clay, Romano-British pottery and animal bone, but was not further investigated; it overlay ?natural chalk, **132204**, at 9.50 m aOD (approximately 1.90 m below present ground surface). It is possible that **132204** may have been a chalk floor/yard surface similar to those recorded in, for example, 2012TP, 2013TP and 2014TP, rather than natural chalk, but this could not be established.

*Trench 1323TT (Figure 10)*

- 2.3.12 This north - south aligned trench was located on the valley floor towards the southern corner of Plot 6 (Area B), at a height of *c.* 16.50 m aOD. Topsoil/subsoil up to 0.6 m thick in this trench overlay a similar thickness of colluvium, **132303**, and this in turn sealed a complex of deposits at *c.* 15.30 m aOD. These deposits were recorded but, at a depth in excess of 1.2 m below ground surface, were subject to only very limited further investigation (augering) due to health and safety considerations. The most obvious 'features' were two roughly parallel bands of chalk with occasional flints, **132308** and **132309**, up to 0.75 m wide, which lay approximately 2.5 m apart and were aligned north-north-west to south-south-east. Removal of a small segment of **132308** showed it to be vertically-sided (?filling a trench), but of unknown height/depth, and it possibly represented a wall foundation. The layer between the two possible wall foundations, **132305**, and those to the south (**132306** and **132307**) and north (**132302**, **132303** and **132304**) were all silty clay loams varying in colour from yellowish brown to brown to dark greyish brown, but their interpretation remains uncertain. They all contained pottery, but none obviously represented floor or yard surfaces. Augering at the north end of the trench encountered chalk at a depth of 14.45 m aOD (approximately 2.20 m below present ground surface, but it is uncertain whether this represented *in situ* natural chalk, or a chalk floor or yard surface.

*Trench 1326TT (Figure 11)*

- 2.3.13 This north - south aligned trench was located on the valley floor towards the northern boundary of Plot 7 (Area A), at a height of *c.* 9.10 m aOD. A shallow, U-shaped gully, **132605**, sealed by 0.30 m of topsoil/subsoil, was the only feature in this trench. It was aligned east to west, 0.70 m wide and 0.25 m deep, and filled with two layers of compact greyish brown/brown sandy silt.

*Trench 1329TT (Figure 11)*

- 2.3.14 This north - south aligned trench was located on the valley floor towards the northern boundary of Plot 7 (Area A), at a height of *c.* 7.30 m aOD. The eastern edge of an apparently linear band of gravel, **132906**, was exposed at the south end of this trench. The gravel was at least 2 m wide, aligned approximately north-west to south-east, and was shown on limited excavation to comprise two components - a compact, orange gravel, **132907**,

to the south, and a less compact, 'dirty' gravel, **132903**, to the north. These gravels, which were exposed but not further excavated, are thought likely to represent a more central part and the eastern edge respectively of a metalled road or track running approximately north-west to south-east across this area. The gravels were up to 0.2 m thick, lay directly on natural brickearth, and were sealed beneath 0.4 - 0.5 m of topsoil/subsoil. At the time of excavation this road was visible as a cropmark in the cereal extending approximately 20 m to the south-east of trench 1329TT, perhaps reflecting the extent of surviving metalling which had elsewhere been ploughed away. Immediately to the north-east of gravel **132903** was a band of almost black silt, **132904**, which was 2.50 m wide and 0.15 m thick, lapped over the edge of the road and had a well-defined limit to the north-east. However, a slot excavated across this deposit revealed no cut, and layer **132904**, which contained some pottery and was extremely rich in cereal chaff, might best be interpreted as a deposit which had accumulated in a shallow hollow along the edge of the road. The remainder of the trench, to the north, contained a spread of greyish brown slightly stoney soil, **132910**, which contained some Romano-British pottery and animal bone. This layer was 0.25 m thick (where investigated at the north end of the trench) and may represent a buried soil of Romano-British date, probably disturbed by later ploughing, with the finds perhaps deriving either from manuring or midden deposits. No roadside ditch(es) was found on the north side of the road, but this may have lain beneath layer **132910** which remained largely unexcavated.

*Trench 1335TT (Figure 12)*

- 2.3.15 This east - west aligned trench was located on the valley floor, slightly to the north-east of the centre of Plot 7 (Area A), at a height of *c.* 8.75 m aOD. Although no features were found in this trench, a possible Romano-British buried soil, **133505**, was present, similar to layer 132910 in trench 1329TT. This deposit was absent at the east end of the trench, but a geotechnic pit showed it to be 0.35 m thick at the west end, where it lay in a shallow hollow, sealed by up to 0.45 m of colluvium (**133503**). Two slots excavated through layer **133505** showed it to contain a low density of pottery and animal bone.

*Trench 1341TT (Figure 12)*

- 2.3.16 This east - west aligned trench was located on the valley floor towards the eastern boundary of Plot 7 (Area A), the ground surface descending gently from 9.25 m aOD (W) to 7.97 m aOD (E). Two features were present, both at the west end of the trench. Ditch **134103** was aligned north-west to south-east, had an irregular (?recut) profile, and was 1.50 m wide and 0.25 m deep. Feature **131405**, approximately 3 m to the south, may have been a small pit or possibly a ditch terminal. It was 1 m wide, 0.5 m deep, and had a U-shaped profile. Both features were filled with very dark greyish brown sandy silt loams which contained some pottery. Ditch **134103** may have marked a side ditch to the road found in trench 1329TT, which perhaps ran to the west of trench 1341TT. It is possible, however, that this road ran to the east of trench 1341TT, or, across the east end of the trench, and it may be of significance that a 16 m wide zone of slightly darker natural brickearth,

**131407**, was noted towards this end of the trench; this may have marked the former presence of metallings removed by the plough, though no concentration of flint gravel was apparent in the overlying subsoil.

*Trench 1346TT (Figure 12)*

- 2.3.17 This north-east - south-west aligned trench was located at the foot of the slope overlooking the valley floor, towards the eastern boundary of Plot 7 (Area A), the ground surface descending from 11.47 m aOD (SW) to 9.92 m aOD (NE). Three features were recorded, lying beneath topsoil/subsoil which was only 0.30 m deep in this area, and all had probably been truncated by ploughing. Feature **134602** was a large, circular post-hole or small pit, 0.70 m in diameter and 0.60 m deep, with a flat base. This was filled with a very dark greyish brown sandy loam, and was the only feature which produced pottery. To the south-west of this was a small, shallow post-hole, **134604**, and a length of curvilinear gully, **134606**, aligned approximately north-west to south-east, 0.50 m wide and 0.2 m deep. It is possible that all of these features may have served structural functions.

*Trench 1347TT (Figure 13)*

- 2.3.18 This north-east - south-west aligned trench was located at the foot of the slope overlooking the valley floor, at the south-eastern boundary of Plot 7 (Area A), the ground surface descending from 11.16 m aOD (SW) to 9.26 m aOD (NE). Several features were identified including at least two ditches aligned north-west to south-east, a hearth, and an enigmatic complex possibly comprising one or more ditches and at least one pit. All of these features were sealed by up to 0.6 m of topsoil/subsoil. At the north-east end of the trench was a shallow, flat-bottomed cut, **134715**, the north edge of which lay outside the trench. It is thought most likely that this was a ditch, at least 0.8 m wide and 0.2 m deep, and conceivably may have been a ditch along the south edge of the road recorded in trench 1329TT (if this ran between trenches 1347TT and 1348TT), or a southern boundary to the inhumation cemetery recorded in trench 1348TT less than 20 m to the north. The fill of **134715** was a brown silty loam which was noticeably paler and contained fewer finds compared to the other features in the trench. Ditch/gully **134704** lay approximately 12 m to the south-west of **134715**, on a similar alignment, and was 0.95 m wide and 0.40 m deep. It contained three fills, the upper ones comprising pale yellowish brown/brown sandy silts, with the primary one, **134707**, being a very dark greyish brown silty loam and containing more pottery. Ditch/gully **13704** and feature **134708** cut a non-homogenous mixed layer of yellowish brown silt and silty loam, **134703**, which overlay natural brickearth, was up to 0.15 m thick, and extended over part of the northern half of the trench. This layer may represent the disturbed surface of the natural brickearth, but this is uncertain. The nature of feature **134708**, and its relationship to the group of features to the south (comprising **134708**, **134713**, **134717** and **134719**) are unclear since all contained virtually identical fills of very dark greyish brown/black sandy silt loam which were almost indistinguishable from each other during excavation. Feature **134708** appears to have been a shallow, flat-bottomed cut approximately 0.20 m deep and at least 4.50 m wide if, as seems likely, it

extended as far to the south-west as and included cut **134717**. If cut **131419**, with a gently sloping south-western edge, also formed part of this feature then it would have been between 12 and 13 m wide, and might be described as a broad, shallow cut, aligned north-west to south-east, with well-defined edges and a homogeneous fill. It may have been a track or hollow way, but the relatively smooth profile observed, with no evidence of wheel ruts, and the homogeneous fill containing a substantial quantity of pottery do not make this a convincing interpretation. Another factor which weighs against this interpretation was the presence of feature **134713**, probably either a pit or a ditch, which lay in the centre of and appeared to form part of the same complex of features. Only a small part of feature **134713** was exposed and investigated, and its extent remains unknown. However, it appears to have been up to 2.5 m wide, between 1.5 and 1.8 m deep (depending on the level from which it was cut), had a vertical edge on the north side, and contained an apparently homogeneous fill of very dark greyish brown/black silty loam; like the other features in this complex, it was relatively prolific in pottery. Further, more extensive work would be necessary to resolve the form, function and relationship of the various elements of this complex of features. A hearth, **134721**, up to 1 m across, had been built on the fill of cut **134719**, and lay immediately beneath topsoil/subsoil. This hearth comprised an irregular patch of red, burnt clay incorporating some Romano-British roof tile, surrounded on the north side by several large flints, lumps of sandstone and chalk, and fragments of brick and tile. This may have been a domestic hearth, of ?early Romano-British date, but no associated structural remains were identified within the excavated area.

*Trench 1348TT (Figure 14)*

- 2.3.19 This north - south aligned trench was located on the valley floor, towards the eastern boundary of Plot 7 (Area A), at a height of c. 8.40 m aOD. At least three, and possibly as many as five graves containing inhumation burials were identified in this trench, sealed beneath 0.3 - 0.4 m of topsoil/subsoil; no human burials were found in any other trench. The graves were aligned approximately north-west to south-east, with only one example of possible intercutting. All of the graves were backfilled with natural brickearth containing few inclusions or finds, making their definition, in some cases, difficult. At the north end of the trench, machining exposed several fragments of longbones and pelvis representing the *in situ* but almost entirely truncated remains of a burial, **134810**, which was subsequently removed. Very limited investigation of what was thought to be the associated grave cut revealed the skull of a second individual, **134811**, less than 0.2 m beneath **134810**; this was left *in situ* and no further investigation of the grave was undertaken. It is uncertain whether these remains represent two burials in a single grave, or individual burials in separate graves, one cutting the other, which were not distinguished in excavation. Towards the middle of the trench was an oval-shaped feature, **134815**, measuring 2.50 m by 1.25 m, which was left unexcavated, but almost certainly represents a further grave. Feature **134812** was only partly excavated, but can be interpreted as a grave with reasonable confidence. Excavation at the south-east end of this sub-rectangular, vertically-sided feature revealed a small group of rabbit bones in

the south-east corner at a depth of 0.45 m, but no further excavation was undertaken; it is thought likely that an inhumation burial lay at greater depth within this grave. At the south end of the trench was grave **134802** containing a inhumation burial at a depth of 0.80 m (approximately 1.2 m below present ground surface). This burial was partly uncovered, and four probable coffin nails recorded within the restricted area investigated (these, and the human bone were not removed). The upper part of the grave appeared to have been cut by a shallow ditch, **134803**, approximately 1 m wide and 0.3 m deep, aligned, like the graves, north-west to south-east, and filled with dark greyish brown silty loam containing early Romano-British pottery. This relationship and the fact that the grave fills contained comparatively little pottery together suggest that the cemetery was of early Romano-British date, and may have predated the spread of settlement into this area.

*Test pit 2007TP (Figure 15)*

- 2.3.20 This test pit was located at a height of 12.98 m aOD, within an area of rough ground towards the western boundary of Plot 8 (Area A). It revealed approximately 0.4 m of topsoil/subsoil overlying a layer of dark brown silty loam, **200702**, which contained early Romano-British pottery. This layer, at least 0.55 m thick, overlay and filled the upper profile of a probable pit, one edge of which may have been exposed in the north-east corner of the test pit cutting what appeared to be natural brickearth (**200703**). However, it is not certain that **200703**, the upper surface of which lay at 12.30 m aOD, was natural brickearth, and it may have been a layer of redeposited natural in the pit (the depth of which was not ascertained).

*Test pit 2008TP*

- 2.3.21 This test pit was located at a height of 11.84 m aOD, within an area formerly covered by a tarmacadam surface towards the south-western boundary of Plot 8 (Area A). Prior removal of this tarmac had exposed the surface of natural brickearth, probably truncated, at a height of 11.74 m aOD. Although no archaeological features or deposits were identified within this test pit, it is included as a 'negative' result within an area of proven intensive activity throughout the Early Romano-British period.

*Test pit 2009TP*

- 2.3.22 This test pit was located at a height of 11.33 m aOD, within an area of tarmacadam surface towards the south-western boundary of Plot 8 (Area A). The tarmac surface was 0.15 m thick, and sealed a layer of gravelly make-up/subsoil 0.30 m thick overlying natural brickearth, the surface of which lay at 10.90 m aOD. As with test pit 2009TP, although no archaeological features or deposits were identified within this test pit, it is included as a 'negative' result within an area of proven intensive activity throughout the Early Romano-British period.

*Test pit 2010TP (Figure 15)*

- 2.3.23 This test pit was located at a height of 11.80 m aOD, within the nursery propagation area towards the south-western boundary of Plot 8 (Area A). Between 0.20 and 0.25 m of topsoil/subsoil overlay a thin layer of dark greyish brown silty loam, **201003**, 0.10 m thick. No pottery was recovered from this layer, though it is thought likely to have been of Romano-British date. Natural brickearth lay immediately below this at a height of 11.50 m aOD. The only feature present was a modern trench, probably a pipe trench (**201005**).

*Test pit 2011TP (Figure 15)*

- 2.3.24 This test pit was located at a height of 10.56 m aOD, within the nursery propagation area towards the south-western boundary of Plot 8 (Area A). Up to 0.50 m of topsoil/subsoil sealed a homogeneous layer of dark greyish brown silty loam, **201103**, containing a substantial quantity of Romano-British pottery. This layer was up to a maximum of 0.9 m thick and filled what appears to have been a shallow scoop, **201104**, in the south-east corner of the test pit. The upper surface of natural brickearth was recorded at 9.55 m aOD.

*Test pit 2012TP (Figure 15)*

- 2.3.25 This test pit was located at a height of 9.79 m aOD, within the nursery propagation area towards the south-western boundary of Plot 8 (Area A). Approximately 0.6 m of topsoil/subsoil containing modern debris (eg plastic sheet) overlay up to 0.4 m of yellowish grey/yellowish brown sandy silt loam, **201203**, containing Romano-British pottery. This sealed a compact chalk and flint floor or yard surface, **201204**, at 8.90 m aOD (0.95 m below present ground surface). This surface and the underlying deposits were not further investigated and the height of the natural brickearth was not ascertained.

*Test pit 2013TT (Figure 15)*

- 2.3.26 This test pit was located at a height of 7.48 m aOD, within an area of lawn towards the south-eastern corner of Plot 8 (Area A). This test pit revealed approximately 0.4 m of turf/topsoil/subsoil of recent date (subsoil **201303** contained plastic sheet), sealing a sterile, chalk-flecked, compact sandy clay loam (**201304**). This layer was probably of post-Roman date, and may represent a (recently) buried subsoil. This in turn sealed layer **201305**, a comparatively loose, dark greyish brown sandy loam, up to 0.25 m thick, containing much early Romano-British pottery, oyster shell and animal bone; several large flints, **201306**, perhaps representing part of a collapsed structure or demolition debris lay at the base of this layer. Below this was **201307**, a greyish brown sandy loam containing patches of yellowish sand; this layer produced comparatively few finds. Finally, part of a rough chalk floor or yard surface, **201308**, was exposed in a small sondage in the north-east corner of the test pit at a height of 6.20 m aOD (1.30 m below present ground surface). This surface was not further investigated and the height of the natural brickearth not ascertained.

*Test pit 2014TP (Figure 15)*

- 2.3.27 This test pit was located at a height of 6.63 m aOD, within an area of rough ground adjacent to a car park towards the south-eastern corner of Plot 8 (Area A). Up to 0.35 m of topsoil overlay a very compact subsoil, **201402**, and below this was a very dark greyish brown silty clay loam, **201403**, up to 0.5 m thick, which contained early Romano-British pottery. This sealed a chalk floor or yard surface incorporating some flint pebbles, **201404**, at a height of 5.65 m aOD (approximately 0.90 m below present ground surface). This surface was not further investigated and the height of the natural brickearth not ascertained.

*Test pit 2015TP (Figure 15)*

- 2.3.28 This test pit was located at a height of 5.46 m aOD, within an area of rough ground adjacent to a car park towards the south-eastern corner of Plot 8 (Area A). Layers **201501 - 03** comprised modern make-up (including tarmac fragments) 0.30 m thick, and below these was a layer of dark grey silty clay loam subsoil, **201504**, 0.50 m thick which contained modern (19th - 20th century) pottery and glass. This sealed three consecutive layers of dark grey to very dark grey silty clay loam/clay loam, **201505 - 07**, together up to 0.6 m thick, which contained some early Romano-British pottery and a few fragments of possibly intrusive modern glass. The surface of layer **201507** sloped quite steeply down to the west (towards the River Ebbsfleet), and an undelying layer/surface of angular, medium sized flints, **201508**, also dipped slightly in this direction. These flints which lay at *c.* 4.0 m aOD (1.40 m below present ground surface) may have been *in situ* valley gravel rather than a deliberately laid surface, but this could not be established within the confines of the test pit. No deposits which can certainly be ascribed a Romano-British date were identified.

*Roman architectural fragments*

- 2.3.29 During excavation of the test pits, three pieces of monumental masonry comprising part of a plain, undecorated column and two column bases (or ?capitals) were re-discovered in the undergrowth between test pits 2014TP and 2015TP. These have been drawn (drawings in archive) and left where they were found. Discussion with the owners of Springhead Nurseries revealed that these had lain in this area for many years and had, at one time, been set up in the nursery car park with a 'marble basin' (since stolen) on the top. Attention was also drawn to another column base, cracked but otherwise in excellent condition, in the river gravels beneath the concrete bridge across the River Ebbsfleet between Springhead Nurseries and a house called 'The Springs'. This has also been drawn, and may have been associated with a Roman column recorded earlier in probably the same location (Penn 1966, 76) - perhaps that still lying in the area (see above). The source of these architectural fragments is unknown, as is the date of their original discovery, and how long they have been in their present locations. However, it is quite likely that they may have been discovered during the construction of watercress beds in this area from the beginning of the 19th



century, and may have come from a substantial structure adjacent to or in the immediate vicinity of the source of the River Ebbsfleet.

***Later Romano-British (3rd - 4th century AD) deposits***

***Trench 1168TT (Figure 5)***

- 2.3.30 As noted above, this east - west aligned trench was located straddling the brow of the slope at the northern end of Plot 4 (Area B), the ground surface descending from 18.92 m aOD (E) to 15.51 m aOD (W). Two substantial Later Romano-British ditches were identified at the west end of this trench, sealed by approximately 0.3 m of topsoil/subsoil. Two phases of activity were represented, both assigned to the later Romano-British period, with an earlier ditch, **116809**, cut by a later ditch, **116808**. Ditch **116809** was the larger of the two, aligned north to south (along the crest of the slope), 4.50 m wide and 1.30 m deep (depth determined by augering), and appears to have had an asymmetrical profile with a more steeply sloping western edge. The fill, as far as was excavated, was a homogeneous yellowish brown silty clay loam containing comparatively little pottery, although a large base sherd from an indented beaker was recovered suggesting a late 2nd - 3rd AD century date for the infilling of this feature. Ditch **116808** was aligned east to west, but turned to the south at the west end of the trench, perhaps marking the north-west corner of an enclosure. This ditch was 2.30 m wide, 1 m deep, and had a V-shaped profile with some evidence for a shallow recut on the west side. Three fills of yellowish brown slightly loamy clayey silts were recorded, the uppermost, **116803**, containing common chalk flecking and small lumps. These fills produced a few pieces of worked flint, but no pottery, and some doubt must remain as to whether it was a Romano-British rather than a later feature. Trench 1168TT also contained an early Iron Age ditch/gully (see above).

***Trench 1200TT (Figure 7)***

- 2.3.31 This east - west aligned trench was located on the plateau above the slope towards the southern boundary of Plot 5 (B), at a height of *c.* 29.45 m aOD. A gravelly topsoil/subsoil 0.40 m thick overlay a single feature, gully **120003**, which is likely to have been heavily truncated by the plough. This gully was aligned approximately north to south, 0.40 m wide, 0.05 m deep, and filled with a brown, slightly gravelly loamy sandy silt which produced a small quantity of late 3rd - 4th century AD pottery. No archaeological features were recorded in any of the surrounding trenches.

***Post-medieval (?early 19th century) deposits***

***Trench 3053TT (Figure 10)***

- 2.3.32 This south-east - north-west aligned trench was located on the valley floor, at the south-western edge of Plot 4 (Area B), at a height of *c.* 6.35 m aOD. This trench lay in an area of rough grass in the base of the valley, at an average height of 6.35 m aOD, on the east side and adjacent to the present source of the River Ebbsfleet. A substantial deposit of topsoil/subsoil/recent make-up, 1.20 m thick, overlay a series of seven, 'dwarf walls' built of

unmortared flint cobbles and occasional fragments of animal bone (walls **305304 - 09**). These walls were aligned either north to south or east to west, lay at a height of *c.* 5.40m aOD, were 0.30 m wide and stood to a maximum height of three courses. No foundation trenches were observed, and the walls were built on a dark grey/black silty clay loam which contained some chalk flecking (layer **305310**). Removal of a small area of this layer by machine at the north end of the trench revealed a layer of gravel, **305311**, possibly valley gravel, similar to that exposed at the base of 2015TT and 2065TT. These walls and the underlying layer were not found in association with any datable material, but it is suggested that they were part of the watercress beds known to have been established here from the beginning of the 19th century. No deposits which can certainly be ascribed a Romano-British date were identified, and if any did exist then they may have been removed during construction of the watercress beds or subsequent clearing out of this part of the river valley.

*Test pit 2065TP (Figure 15)*

- 2.3.33 This test pit was located at a height of 5.84 m aOD, within an area of rough ground adjacent to a car park towards the south-eastern corner of Plot 8 (Area A). Up to 0.30 m of modern make-up overlay successive layers of dark brown to dark yellowish brown sandy silt loams, **206503 - 05**, which produced very small quantities of late post-medieval/modern finds. These layers sealed a deposit of flint gravel, **206506**, shown to be at least 0.35 m thick which may have been a deliberately laid surface or, and perhaps more likely, *in situ* valley gravel. Overlying this gravel, at *c.* 4.80 m aOD was a group of flint nodules, **206507**, which appeared to form a linear arrangement, two courses high, along the southern edge of the trench. It is suggested that these may represent part of the 19th century watercress beds (also exposed in trench 3057TT), covered by dumps of more recent debris. No deposits which can certainly be ascribed a Romano-British date were identified

## 2.4 Artefactual Report by Lorraine Mephram

- 2.4.1 Artefacts in a range of material types were recovered from a number of trenches during the evaluation. All finds have been cleaned, with the exception of metalwork, marked where appropriate, and quantified by material type, both by number and by weight, within each context. Artefact quantifications are presented in **Appendix 2**. Following quantification, the assessment phase has involved a brief scan of the complete artefactual assemblage and the recording of spot dates by context for pottery, together with broad details of the nature, range and condition of the various artefact categories, which are summarised by material type below.
- 2.4.2 The date range of the assemblage as observed from the spot-dating is largely early Romano-British (1st to 2nd century AD), with very small quantities of later prehistoric (Late Bronze Age/Iron Age), later Romano-British (3rd to 4th century AD) and post-medieval/modern material.

### Pottery

- 2.4.3 The pottery assemblage contains sherds of prehistoric, Romano-British and post-medieval date.
- 2.4.4 A small quantity of sherds have been identified as prehistoric, largely on the basis of fabric type. Most of these sherds are abraded body sherds in coarse, flint-tempered fabrics which are generally characteristic of the Late Bronze Age or Early Iron Age ceramic traditions of the early 1st millennium BC. A few sherds are in coarse sandy fabrics, some with organic material, and a similar date range is likely, given the presence of one diagnostic sherd, a rim sherd from a bipartite jar with finger-impressed decoration around the shoulder (trench 1197TT).
- 2.4.5 Romano-British pottery constitutes the bulk of the assemblage. No detailed fabric analysis has been undertaken as part of the assessment phase, but broad fabric groups have been defined and pottery quantified within these groups. Totals are presented in **Table 1**, which also indicates the range of vessel forms represented in each fabric group. The general condition of the Romano-British assemblage is good, with sherds relatively unabraded, although the friable nature of the coarse shelly wares has led to some lamination and flaking of surfaces.

Fabric group	No. sherds	Weight (g)	Vessel forms
<b>'Native' ('Unromanised') Wares</b>			
Shelly wares	460	7441	Large everted rim storage jars, often with decorated shoulder bands; bead rim jars and bowls
Sandy/shelly wares	69	1195	Bead rim jars and bowls
Grog-tempered wares	111	1663	Large everted rim storage jars, often with decorated shoulder bands; smaller jars (including cordoned jars)
Sandy wares	78	720	Bead rim jars and bowls, lids
Flint-tempered wares	4	11	<i>no diagnostic sherds</i>
<b>'Romanised' Wares: Coarsewares</b>			
Reduced/grey wares	622	5361	Bead rim jars and bowls; everted rim jars (including cordoned jars); pie dishes; 'dog dishes', lids
Oxidised wares	23	260	<i>no diagnostic sherds</i>
Buff/cream wares	31	341	<i>no diagnostic sherds</i>
<b>Finewares</b>			
Fine greywares	225	1047	Biconical, poppyhead and butt beakers
Fine oxidised wares	157	991	Flagons and beakers, frequently white-slipped
Fine white/buff wares	26	244	<i>no diagnostic sherds</i>
Misc. colour coats	3	28	<i>no diagnostic sherds</i>
Mortaria	4	154	Verulamium region; SE England/NW France
<b>Imports</b>			
Samian	68	397	Drag. 18/31, 36, 37
Amphorae	25	901	Dressel 20
Other	4	21	colour-coated beakers and ?platter

**Table 1: Quantification of Romano-British pottery**

- 2.4.6 The group of 'native' or 'unromanised' wares comprises a range of fabrics which are all characteristic of the pre-Conquest ceramic traditions of the region, and which continued to be manufactured into the early Romano-British period, at least as late as the early 2nd century AD. They are likely to be of at least fairly local manufacture. There is no reason to assume that any of these wares found during the evaluation are of pre-Conquest date, since they largely occur in association with post-Conquest 'romanised' wares; their likely date range is mid 1st to early 2nd century AD.
- 2.4.7 The 'romanised' coarsewares and finewares would appear to be at least partly contemporary, given their frequent association with the 'unromanised' wares. The coarse reduced/greywares undoubtedly include the products of several different sources, although no attempt has been made at this stage to identify all the possible sources. It is likely, however, that a large proportion of these wares derived from the local industry of the North Kent marshes, including Upchurch; a kiln producing 'Upchurch-type' pottery has been found in Springhead (Pollard 1988, 87, citing Jessup 1928). The reduced wares also include 'Black Burnished ware category 2' (BB2) which was manufactured in the same area of North Kent. Vessel forms present - bead rim jars and bowls, cordoned jars, pie dishes and 'dog dishes' - would indicate a potential date range of mid 1st century to late 2nd century AD, although the actual range could be narrower, perhaps mid 1st to mid 2nd century. Only two contexts produced forms definitely of later date: a folded or indented beaker of late 2nd or 3rd century type (trench 1168TT), and an everted rim jar of 3rd/4th century AD type, associated with Oxfordshire colour-coated ware (trench 1200TT).
- 2.4.8 The finewares are dominated by the fine greywares which are ubiquitous in west Kent in the early Romano-British period, and almost as numerous are similar oxidised wares, frequently white-slipped; here the greywares occur in various beaker forms while the oxidised wares, particularly the white-slipped variants, appear to be used almost exclusively for flagons, with a small number of bowls/dishes. Both types were produced in North Kent, although the fine greywares could also include products of the London area. Other finewares include a small group of fine buff and whitewares, which may include some Canterbury wares, two colour-coated sherds of uncertain origin, one sherd of Oxfordshire colour coated ware, and four sherds of whiteware mortaria, possibly Brockley Hill types from the Verulamium region.
- 2.4.9 Imports are represented by samian from both southern and central Gaul, Dressel 20 amphorae, two sherds of Central Gaulish colour-coated ware, one possible sherd of *terra rubra* and one possibly of *terra nigra*.
- 2.4.10 A small quantity of 19th/20th century pottery was found in a few trenches, in some cases apparently intrusive in Romano-British contexts. This consists of unglazed redwares, probably flowerpots, and English stonewares.

#### ***Ceramic Building Material***

- 2.4.11 With the exception of three fragments of modern roof tile (test pit 2013TP, trench 3053TT), all of the ceramic building material is probably or definitely

of Romano-British date. Identifiable fragments of *tegulae*, *imbrices* and box flue tiles are present, while the remainder consists of smaller, undiagnostic pieces. A brief scan has indicated that a range of fabric types are represented, although no attempt has been made at this stage to define these more closely.

***Opus signinum***

- 2.4.12 A small number of fragments of *opus signinum* were identified, all from trench 1318TT. The fragments show some variation in colour but are otherwise visually similar. Twelve of the fragments have surviving surfaces, one irregular and one with two angled surfaces, and of these four have traces of white surface plaster, one with a faint red stripe. The fragments are all small and are not reconstructable.

***Fired Clay***

- 2.4.13 The fired clay comprises small, abraded fragments, largely in a soft, poorly-fired sandy fabric with some organic material. No surfaces or other diagnostic features were observed, but it is likely that this material is of structural origin. More than half the total fired clay by weight came from a single context (trench 1319TT), and substantial groups were also found in trenches 1318TT and 1347TT. In all cases associated pottery would indicate a Romano-British date.

***Clay Pipe***

- 2.4.14 A small number of post-medieval clay pipe fragments were recovered (trench 1183TT, test pit 2011TP); all are stem fragments, one with a spur (stamped 'AJ').

***Worked and Burnt Flint***

- 2.4.15 The small worked flint assemblage includes very little that is diagnostic. Three retouched (or possibly retouched) pieces were noted (trenches 1168TT, 1347TT and 1183TT), as well as one hammerstone (trench 1329TT), one broken notched piece which might be a microburin (trench 1168TT), and one bifacially worked core tool, possibly a rough-out (trench 1173TT). The possible microburin and the core tool, as well as one single platform core (trench 1335TT), are likely to be of Mesolithic/Neolithic date; the remainder of the assemblage is not chronologically distinctive. All the flint derives from locally exploited gravel sources.
- 2.4.16 Burnt, unworked flint was also recovered in small quantities from several trenches. This material type is intrinsically undatable but is frequently found associated with prehistoric artefacts, occasionally as large concentrations described as 'burnt mounds', such as has been suggested for the concentration of burnt flint noted (but not collected) in trench 1161TT.

***Glass***

- 2.4.17 Of the seven pieces of glass recovered, all are likely, on the basis of associated pottery, to be of Romano-British date. Five are from vessels, including two folded tubular rims, while the remaining two fragments would appear to be window glass (test pit 2015TP).

***Slag***

- 2.4.18 Three fragments of slag were recovered (trench 1319TT, test pit 2011TP), all iron smithing slag.

***Stone***

- 2.4.19 All of the stone recovered comprises fragments of lava querns, which are likely to be of Continental origin. Three pieces of monumental masonry were recorded in the field but were not removed from site (see section 2.3.29).

***Worked Bone***

- 2.4.20 One worked bone object was recovered, a pin with a grooved conical head, a type which is generally dated to the early Romano-British period (eg. Crummy 1983, fig. 18).

***Human Bone***

- 2.4.21 Human bone in the form of fragments of femur and pelvis was recovered from one inhumation burial (**134810**) in trench 1348TT. Although other burials were located in this trench (see above), no further human bone was removed.

***Metalwork***

- 2.4.22 Metalwork included both copper alloy and iron objects. Metal objects, particularly the ironwork, are in a corroded condition, and the corrosion is active although temporarily stabilised through airtight packaging with a drying agent (silica gel).
- 2.4.23 With the exception of one knife blade and tang, the iron consists entirely of nails and other structural items. The copper alloy comprises a coin (late 3rd century AD radiate copy) a Colchester type brooch (1st century AD), a needle, a strip, a sheet fragments and a tubular object of unknown function. In addition to the datable objects, all of the metal objects are likely to be of Romano-British date on the basis of associated finds.

***Animal bone***

- 2.4.24 About 700 bone fragments were recovered from 23 contexts (**Appendix 3**). The assemblage was rapidly scanned to indicate the general distribution of species (table 00) and the faunal elements are recorded in the archive assessment. The bone was well preserved but highly fragmented and is stored comfortably in two standard museum boxes. Preservation was notably different (the bones were darker coloured), though just as fragmented in trench 2011, 2013 and 2065.
- 2.4.25 The species present are predominately sheep and cattle, with some pig. Some possible horse remains were recovered which are of note. The remains of a single dog skull was recovered and one possible fish vertebrae from sieving. A number of possible bird bones were also present from a single context.
- 2.4.26 Most of the bones in the assemblage were longbone fragments, ribs and a number of scapula, there were relatively few teeth, mandibles, horncores or

phalanxes. Some of the bone displayed evidence of being burnt and cut marks (metal knife) were noticed on some of the long bones. During the rapid scan, no obvious signs of dog gnawing or of heavy weathering were noted.

- 2.4.27 The assemblage is typical of a rural domestic Romano-British site; the remains representing standard domestic consumption, though the presence of horse is of interest. There is no indication of high status. High levels of fragmentation probably accord with disposal being the result of accidental accumulation or sweeping of debris, rather than deliberately placed deposits.

## **2.5 Environmental Report by Michael J Allen**

### ***Charred plant remains***

- 2.5.1 Ten bulk samples were taken from a range of Romano-British features for the retrieval and assessment of charred plant and charcoal remains. The samples comprised 9 bulk samples of 15 litres and a single sample of 10 litres.
- 2.5.2 The samples were processed by standard flotation methods, as outlined below; Samples were pre-soaked in water, often with the addition of small quantities of hydrogen peroxide (100vol. c. 30% H<sub>2</sub>O<sub>2</sub>). After soaking the samples were transferred to the flotation tank, where they were placed in 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 residues were fractionated into 5.6 mm, 2 mm and 1 mm fractions and dried (**Appendix 4**) with the exception of sample 1000 where the flot was retained on a 0.25mm mesh and the residue fractionated into 5.6mm, 2mm 1mm and 0.5mm fractions. The coarse fractions (>5.6 mm) were sorted, weighed and discarded.
- 2.5.3 The flots were scanned under a x10 - x30 stereo-binocular microscope and presence of charred remains quantified by Sarah Wyles (**Appendix 4**), in order to present information about preservation and to assess the potential significance of the charred plant and charcoal assemblages.

### ***Area A (trenches 1329TT, 1335TT, 1341TT, 1346TT and 1347TT)***

- 2.5.4 Three of the flots were significantly larger than normal while two were small (average flot size for 10 litres is 60 millilitres). The small flots contained between 50% and 80% rooty material which can be indicative of possible stratigraphic movement (ie mixing of intrusive charred remains from other periods).
- 2.5.5 All samples contained high numbers of charred grain fragments with samples from feature/ditch **134713** and the deposit adjacent to the road (**132904**) being particularly rich. Charred chaff was recorded in all except that from the ?midden (context **133504**) and exceptionally high quantities were recorded in the flots from feature/ditch **134713** and the deposit adjacent to the road (**132904**). A few charred weed seeds, including hazel nut fragments, were observed in most of the samples. Charred pea/beans were also recorded from pit/ditch terminal **134105**.

*Area B* (trenches 1168TT, 1183TT, 1314TT and 1319TT)

- 2.5.6 Samples from Area B produced smaller than average flots, with 10% to 80% rooty material and high numbers of uncharred weed seeds. The charred remains are poor, and the likelihood of stratigraphic movement of these remains is high.
- 2.5.7 Samples from the ditches on the higher ground to the north-east were particularly poor; only one contained a few charred weed seed fragments. In contrast, flots from 'cut' **131910** and midden ?**131423** contained very high numbers of charred grain fragments, and low numbers of charred weed seeds. A large quantity of charred chaff fragments was also observed in the ?midden sample, along with a few charred pea/beans.

***Charcoal***

- 2.5.8 Charcoal was noted from the flots of the bulk samples and is recorded in **Appendix 4**. Samples from Area A contained only a few charcoal pieces of greater than 5.6mm. The majority of the samples from Area B also produced few large charcoal pieces. A substantial quantity of charcoal was, however, retrieved from the ?midden **131423**, and this comprised mainly large wood fragments.



## STATEMENT OF IMPORTANCE

### 3 CONCLUSIONS

#### 3.1 Extent of Archaeological Remains

- 3.1.1 Archaeological features were predominantly concentrated in trenches and test pits on the lower slopes and in the valley floor (below *c.* 15 m aOD) in the south and south-eastern parts of the site, on either side of the River Ebbsfleet (**Figure 4**). (To the east, in Area B, in trenches 1313TT, 1314TT, 1318TT, 1319TT, 1322TT and 1323TT; to the west, in Area A, in trenches 1326TT, 1329TT, 1335TT, 1341TT, 1346TT, 1347TT and 1348TT; and in between, within Springhead Nurseries, in test pits 2007TP, 2010TP, 2011TP, 2012TP, 2013TP, 2014TP, 2015TP and 2065TP). The finds suggest that nearly all of this activity belongs to the early Roman period (1st - early 2nd century AD). Activity appears to have been quite dense in these areas, all of which lay on the north-west periphery of the Roman town of *Vaginacae*.
- 3.1.2 At the north end of the site, in the valley floor, deposits of probable prehistoric date (?Neolithic/Bronze Age) underlay colluvium in trench 1161TT.
- 3.1.3 Towards the south end of the site, within the valley floor, features probably forming part of the early (19th century) watercress beds survived in trench 3053TT.
- 3.1.4 Further concentrations of features were recorded on the higher ground to the north-east, on the edge of the plateau (trenches 1168TT, 1180TT, 1183TT and 1200TT), and on the slope immediately to the south-west (trenches 1195TT and 1197TT). These concentrations appear to represent less dense activity of three or more periods: Early Iron Age, early Romano-British (1st - 2nd century), and later Romano-British (3rd - 4th century).
- 3.1.5 No features were found to correspond with the concentration of Romano-British pottery recovered during earlier fieldwalking (URL 1994), and it is considered likely that this material derived from activity higher up on the crest of the slope (possibly associated with the ditch in trench 1183TT).

#### 3.2 Nature of Archaeological Remains

- 3.2.1 Most of the archaeological features survived as cuts excavated into the surface of *in situ* subsurface geological deposits, but varying thicknesses of stratified deposits were present in several trenches and test pits. These comprised probable prehistoric deposits in trench 1161TT; Romano-British deposits in trenches 1313TT, 1314TT, 1318TT, 1319TT, 1322TT, 1323TT, 1329TT and 1335TT, test pits 2012TP, 2013TP and 2014TP, and possibly also test pits 2015TP and 2065TP; and post-medieval deposits in trench 3053TT. All features were sealed by a developed subsoil or colluvium.

### *Prehistoric*

- 3.2.2 A deposit of burnt flint was recorded in trench 1161TT, sealed beneath more than 2 m of colluvium. This deposit was not further investigated and its extent, thickness and date are unknown, but it may represent part of a prehistoric (?Neolithic/Bronze Age) boiling mound or more extensive spread of burnt flint adjacent to the River Ebbsfleet. Excavations less than 100 m to the south, on the west side of the River Ebbsfleet, revealed Neolithic ('Ebbsfleet') pottery and an associated timber trackway (Burchell and Piggott 1939).
- 3.2.3 Early Iron Age activity was represented by a shallow ditch in trench 1168TT, and possibly another in trench 1197TT. Several undated features including at least three shallow ditches or gullies and one possible post-hole in trenches 1180TT and 1195TT may also belong to this period. The Early Iron Age features are likely to represent field boundaries, perhaps associated with nearby settlement, on the higher ground on the east side of the site.

### *Early Romano-British (1st - 2nd century)*

- 3.2.4 In Area B, the metalled surfaces in trench 1329TT have been interpreted as part of a road running approximately south-east to north-west. The precise alignment was difficult to determine within the limits of the trench, and its course uncertain as it was not identified in any of the other trenches. To the south-east, it may have run between trenches 1335TT and 1336TT, 1341TT and 1346TT, and 1347TT and 1348TT, a course hinted at by a cropmark visible for approximately 20 m to the south-east of trench 1329TT; this possibly indicated the extent of surviving metalling which had elsewhere been truncated by the plough. It is unclear which side of trench 1326TT it ran. This road is likely to have been part of the same road (Road R2) identified during recent investigations at Springhead Nurseries (Smith 1991, 332-3) which probably followed the lower ground in a north-westerly direction towards Swanscombe, and perhaps represented part of a through-settlement route for the Watling Street. No roadside ditches were found within the excavated areas of the trenches; a spread of dark soil adjacent to the east side of the road in trench 1329TT was particularly rich in chaff indicating that crop processing had been carried out in the vicinity. Further away, to the north, was a spread of lighter soil containing a relatively low density of finds which may represent a buried (?agricultural) soil or perhaps the dispersed remains of a midden; a similar spread of soil was encountered to the south, in trench 1335TT, sealed by colluvium, and together these may have been part of a more extensive spread truncated or removed by the plough.
- 3.2.5 The four or five graves containing human burials found in trench 1348TT are likely to represent part of a small inhumation cemetery (no graves were found in any of the surrounding trenches) adjacent to the road, which probably lay to the south. No physical boundaries to the cemetery were certainly identified within any of the trenches, and little can be said about the layout of the

cemetery. The graves were aligned approximately north-to-south, with one or possibly two examples of more than one inhumation in a grave (though in one case this may have resulted from the intercutting of graves, and in the other, the deposition of a neonate in an adult grave). Grave fills contained few finds and no grave goods were found in the limited areas investigated; probable coffin nails were recorded in one grave. No other features were identified in trench 1348TT with the exception of a possible ditch which post-dated at least one of the burials.

- 3.2.6 A series of features were recorded in trench 1347TT, the majority being ditches, lying parallel to each other and aligned north-west to south-east like the road. Three of these features were small, shallow ditches, perhaps defining plots or boundaries adjacent to the road, and one of these may have been a boundary to the cemetery to the north. One similarly aligned feature, **134719**, possibly a ditch, although shallow was much wider than the others, and its exact form and function remain unclear. A hearth overlying this ditch indicates more than one phase of activity, but no associated structure was identified. The relatively large amount of pottery recovered from the features in this trench, compared to those in surrounding trenches, suggests that this lay closest to if not actually within the main area of activity.
- 3.2.7 Two gullies and a probable post-hole in trench 1348TT provide some structural evidence, either for a buildings or fences, and a small number of features in trenches 1326TT and 1341TT suggest that activity continued across this area, adjacent to the road, but petered-out to the north-west.
- 3.2.8 In Area B, to the east, various features and deposits indicating occupation were found to be present, most clearly in trenches 1314TT, 1318TT and 1319TT, but also in trenches 1313TT, 1322TT and 1323TT where the depth of colluvium precluded further investigation. As in Area A to the west, these features and deposits appear to represent peripheral settlement around the north-west edge of *Vagniacae*.
- 3.2.9 In trench 1314TT the remains of a metalled surface may represent the part of a gravel surface, or a track or a path running northwards up the slope (perhaps to a possible enclosure; see trench 1183TT). The extent of this metalled surface was not determined, and it appeared to have been cut away by a large feature probably aligned north to south. This may have been a ditch, but its position, width and somewhat irregular profile suggest the possibility that it was a hollow way, with the gravel perhaps representing one or more phases of associated metalling. This feature was not found in any of the other trenches, but may have run to the east of trench 1318TT. The lower fills comprised almost entirely redeposited sandy loess, probably washed or blown in, containing comparatively few finds. However, the upper fill comprised a dark, 'midden-like' deposit which contained a large quantity of pottery which had been deposited or accumulated in a hollow in the upper surface of the largely infilled feature. The upper fill may represent a remnant of a more extensive spread which has been ploughed away and/or eroded on the slope. Several amorphous spreads/scoops towards the east end of the trench which contained

inclusions of oyster shell may represent natural features created by rainwater run-off and slopewash. These may be in association with human activity, but similar features were not observed elsewhere.

- 3.2.10 At the northern end of trench 1318TT, the truncated remains of part of a structure with chalk footings was exposed. Several adjacent spreads appear to have been associated with this structure and probably represent remains including a floor surface, an occupation deposit and a destruction level respectively. A narrow slot and one or more post-holes towards the south end of the trench may represent the remains of another structure(s), possibly a fence. Other features included at least one pit, and a substantial ditch lying between the two groups of structural remains; this may have represented a major boundary feature, possibly a settlement boundary, although its chronological relationship to the other features is uncertain.
- 3.2.11 The patchy remains of a metalled surface in trench 1319TT are likely to represent part of a yard surface. This surface was cut by several post-holes indicating the existence of at least one structure; two slots or gullies towards the west end of the trench may also have served a structural function. Other features included a possible terrace, perhaps created for a structure, and a shallow pit at the east end of the trench.
- 3.2.12 Probable Romano-British deposits (generally represented by dark greyish brown soils containing Romano-British finds) were recorded in trenches 1313TT, 1322TT and 1323TT, sealed below depths of colluvium between 1.2 and 1.8 m thick which precluded any further detailed investigation. The thickness of these deposits has not been ascertained, although augering in trench 1323TT indicated them to be *c.* 0.8 m deep there. Discrete features were identified only in trench 1323TT where two roughly parallel bands of chalk have been interpreted as possible footings for a structure. However, pits, post-holes and other features might be expected to be present on the basis of the results from trenches 1314TT, 1318TT and 1319TT which are thought to lie on or nearer to the periphery of the settlement.
- 3.2.13 A substantial ditch, possibly an enclosure or boundary ditch, was found in trench 1183TT towards the edge of the higher ground to the north-east of the main identified area of early Romano-British settlement. No return for this ditch was located and its extent is unknown; no contemporary features were certainly identified in the surrounding trenches. The fills of this ditch were quite different to those in, for example, trenches 1314TT, 1318TT and 1319TT, being lighter in colour and more gravelly, and containing comparatively little pottery but more animal bone.
- 3.2.14 All of the test pits, except test pits 2008TP and 2009TP, produced evidence for Romano-British activity. Test pits 2008TP and 2009TP both lay within the area of Romano-British settlement, but revealed ?truncated natural brickearth lying directly beneath a tarmac surface. In test pits 2007TP and 2010TP - 2014TP between 0.25 m (test pit 2010TP) and 0.75 m (test pit 2013TP) of topsoil/subsoil or recent make-up overlay deposits containing Romano-British

material. These deposits, generally between 0.3 and 0.4 m thick comprised dark greyish brown loamy soils and probably represent a post-Roman agricultural soil mixed with earlier deposits. Probable pits, cutting natural brickearth, were found in test pits 2007TP and 2011TP, although the fills of these and the overlying deposits could not be differentiated. In test pits 2012TP, 2013TP and 2014TP, chalk surfaces, perhaps floors within buildings or associated yard surfaces, were encountered at depths of up to 1.30 m below present ground surface (the full thicknesses of of archaeological deposits in these test pits were not ascertained). In test pits 2065TP, a layer of flint gravel at least 0.35 m thick was encountered at a depth of 1.10 m below present ground surface, overlain by deposits which contained post-medieval tile and pottery. Gravel was also encountered in test pits 2015TP, at a depth of 1.40 m below present ground surface, perhaps the same horizon (? *in situ* valley gravel) as that encountered in test pits 2065TP; a small quantity of Romano-British pottery was recovered layers overlying this gravel. It is unclear whether any of the deposits in test pits 2015TP and test pits 2065TP represent *in situ* Romano-British deposits; on balance this is considered unlikely, and if the gravel was not *in situ* valley gravel then it may have been associated with the 19th century watercress beds in this area. The construction of these may have involved the removal of any earlier deposits in this low-lying area around the source of the River Ebbsfleet. However, it should be borne in mind that earlier excavators found what they interpreted as a 'pebbled surround' to a (Roman) harbour in this area, comprising a basin revetted with flints, surrounded on all sides by a metalled road of Roman origin (Penn 1965, 113). This was perhaps the same gravel as encountered in test pits 2015TP and 2065TP and also in trench 3053TT on the opposite (east) side of the River Ebbsfleet, which is now thought most likely to represent *in situ* valley gravel.

*Later Romano-British (3rd - 4th century)*

- 3.2.15 Two relatively substantial ditches, one cutting the other, were found in trench 1168TT, towards the top of the slope. One of these ditches formed a corner to a possible enclosure extending to the south, but no ditches or other features were found in any of the surrounding trenches and it must be assumed that any returns or continuations of these features lay between the trenches. Only the earlier of the two ditches produced pottery, albeit in small quantities, and the later ditch cannot be securely attributed to the same, later Romano-British period, although this is considered most likely.
- 3.2.16 The only other feature attributed to this period was a shallow ditch or gully 450 m to the south-east in trench 1200TT.
- 3.2.17 No features and only a small quantity of later Romano-British pottery came from any of the trenches and test pits which contained 1st - 2nd century features and finds. This suggests, perhaps surprisingly, that the settlement shrunk in the later period, at least around the north-west periphery of the town and in the vicinity of the source of the River Ebbsfleet.

*Post-medieval (?early 19th century)*

- 3.2.18 The series of low, unmortared flint 'dwarf walls' in trench 3053TT formed a group of adjoining square or rectangular 'compartments', each 5 m or more across and aligned approximately north to south or east to west; a possibly similar feature was also recorded in test pit 2065TP. These walls probably represent watercress beds, constructed on a gravel substrate in order to provide fresh, slowly flowing water ideal for cultivating watercress. Watercress is known to have been grown at Springhead since the early 19th century, and was the earliest site in Britain where commercial watercress cultivation was undertaken (ie grown in beds rather than simply being collected).

**3.3 Character of the site**

*Prehistoric*

- 3.3.1 The undated burnt flint deposit in trench 1161TT probably represents part of a prehistoric (Neolithic/Bronze Age) burnt mound or more extensive spread of debris on the east bank of the River Ebbsfleet. Such debris, often associated with 'boiling pits' is likely to have derived from heating water, perhaps for cooking, and contemporary settlement is likely in the vicinity. The 'Ebbsfleet' Neolithic pottery site with an associated timber trackway was excavated approximately 100 m to the south, on the west bank of the River Ebbsfleet, and it is possible that the burnt flint deposit in trench 1161TT may have been contemporary and possibly associated with this.
- 3.3.2 Only a low density of of struck flint was recovered during the evaluation, all as residual material in later features or topsoil/subsoil; most came from trenches in Area A on the east side of the River Ebbsfleet, but no concentrations were apparent.
- 3.3.3 The Early Iron Age ditch in trench 1168TT, the other likely example in trench 1197TT, and the undated but possibly prehistoric features in trench 1180TT and trench 1193TT all suggest low density occupation or activity at this time. This most probably represents agricultural activity on the higher ground on the east side of the site.

*Early Romano-British (1st - 2nd century)*

- 3.3.4 There seems little doubt that the remains of this period represent occupation around the north-west periphery of the Roman town of *Vagniacae*. This was a major settlement established on the Roman road leading from Dover to London, at the junction of the road with the River Ebbsfleet. It was founded at the time of the Conquest in AD 43, and occupied until the 4th century AD. Earlier excavations have revealed an important temple complex, an irregular street layout, a number of domestic buildings and some evidence for industrial activity; a richly furnished, walled cemetery has been found nearby.

- 3.3.5 The probable road found in trench 1329TT is likely to have been a continuation of that designated R2 (Penn 1965, 109), the main branch road leading north-west in the direction of Swanscombe, and this would have formed a focus for activity extending out to the north-west of the settlement in Area A. Evidence from the evaluation indicates a linear zone of activity represented by post-holes, ditches, pits and a small cemetery alongside this road; there is also evidence for crop processing in the immediate vicinity, and areas of domestic rubbish disposal either in the form of middens or as more general manuring on fields adjacent to the road outside the settlement. This pattern of largely domestic activity would appear similar to that adjacent to a road found on earlier excavations leading out of the town to the south-west (Philp 1996). The test pits also demonstrated evidence for occupation, again probably focused on road R2; no structural remains were clearly identified, but the chalk surfaces in 2012TP - 2014TP are likely to represent floor surfaces within buildings, or yard surfaces, on either side of the road.
- 3.3.6 Further to the east, in Area B, a possible hollow way has been identified, perhaps leading up on to the higher ground to the north. If this interpretation is correct, then this may have provided a focus for activity in this area on the edge of the settlement. There is evidence for contemporary timber and possibly also stone structures, ditches marking plots or boundaries, pits and at least one gravelled surface, all likely to represent domestic occupation towards the foot of the slope on the east side of the Ebbsfleet valley.
- 3.3.7 The ditch to the north (in trench 1183TT), at the top of the slope, appeared to lie outside the settlement and may represent part of a contemporary enclosure or field system.
- 3.3.8 The pieces of monumental masonry comprising part of a column and three column bases/capitals, rediscovered in Springhead Nurseries car park, may indicate the former presence of a substantial masonry structure in the vicinity (ie a temple or baths), though where they originally came from is not known. Possibly, they were recovered during the construction of watercress beds in the 19th century at the head of the River Ebbsfleet, but there is no record of their discovery.

*Later Romano-British (3rd - 4th century)*

- 3.3.9 Comparatively few features and finds of this period were present, and no features or deposits were identified within the area of early Romano-British activity, suggesting perhaps that there had been some shrinkage of the settlement in this area by the end of the 2nd century. The only features which were identified lay on the higher ground to the north, and these comprised a small number of ditches and gullies probably representing parts of enclosures or field systems associated with agricultural activity.

*Post-medieval (?early 19th century)*

- 3.3.10 The structural remains encountered in 3053TT, and possibly also in 2065TP, were almost certainly part of the watercress beds established in this area from the beginning of the 19th century (Penn 1966).

**3.4 Site chronology**

- 3.4.1 The burnt flint deposit in trench 1161TT remains undated, but is likely to be of prehistoric (Neolithic - Bronze Age date).
- 3.4.2 A small quantity of pottery sherds has been identified as prehistoric and have been assigned to the Late Bronze Age or Early Iron Age ceramic traditions of the early 1st millennium BC. At least one shallow ditch (in trench 1197TT) has been assigned to this period.
- 3.4.3 Romano-British pottery constitutes the bulk of the assemblage, and the vast majority of this broadly dates from the 1st century through to the 2nd century AD. This includes a group of 'native' or 'unromanised' wares characteristic of the pre-Conquest ceramic traditions of the region, and which continued to be manufactured into the early Romano-British period, at least as late as the early 2nd century AD. However, there is no reason to assume that any of these wares found during the evaluation are of pre-Conquest date, since they largely occur with post-Conquest 'romanised' wares.
- 3.4.4 The 'romanised' coarsewares and finewares would appear to be at least partly contemporary, given their frequent association with the 'unromanised' wares. The vessel forms present would indicate a potential date range of mid 1st century to late 2nd century AD, although the actual range could be narrower, perhaps mid 1st to mid 2nd century. Virtually all of the features and deposits examined during the present evaluation are likely therefore to belong to this phase of settlement.
- 3.4.5 Only two features, both on the higher ground to the east, produced forms definitely of later date: a folded or indented beaker of late 2nd or 3rd century type (1168TT), and an everted rim jar of 3rd/4th century AD type, associated with Oxfordshire colour-coated ware (1200TT).
- 3.4.6 A small quantity of 19th - 20th century pottery was found in a few trenches. In some cases apparently intrusive in Romano British contexts or mixed with earlier, residual material. This later material is likely to be contemporary with the watercress beds established in the 19th century and the pleasure gardens which were also in existence at this time (Penn 1966).



### **3.5 Truncation by ploughing and other activities**

- 3.5.1 Modern ploughing has truncated features on the higher parts of the site, particularly on the plateau to the east (ie features in trenches 1180TT, 1183TT and 1200TT), and a combination of ploughing and water/wind erosion has led to the truncation of features on the steeply sloping ground on the east side of the River Ebbsfleet (most clearly in trenches 1194TT, 1314TT, 1318TT, 1319TT). Some truncation by ploughing was also evident in trenches to the west (particularly in trenches 1141TT, 1146TT, 1147TT, 1148TT). However, it is considered unlikely that there was ever any great depth of stratigraphy in these areas as they were either peripheral in terms of Romano-British urban settlement or lay outside the town.
- 3.5.2 The eroded material that moved downslope as a result of ploughing formed substantial depths of colluvium in and towards the base of the Ebbsfleet valley in this area. This material has sealed and therefore protected earlier remains of both probable prehistoric date (in trench 1161TT) and Romano-British date (in trenches 1313TT, 1322TT, 1323TT, and to a lesser extent in 1335TT and 1336TT), though the exact nature and thickness of these buried archaeological deposits remains to be established.
- 3.5.3 Stratified Romano-British deposits including probable floor/yard surfaces and associated occupation deposits have been demonstrated to survive within some of the test pits towards the valley floor, particularly those adjacent to the postulated line of the Roman road (ie 2012TP, 2013TP, 2014TP), though the full thickness of these deposits remains to be established. In others, truncation of deposits has resulted from the laying of tarmac (2008TP, 2009TP), and probably also from the construction of watercress beds in the 19th century and the subsequent clearing out of the actual spring head and adjacent channel in the 20th century (3053TT, 2015TP, 2065TP). During this latter work, it is likely that all ancient deposits were removed from the bed of the river and the immediate vicinity (Penn 1965, 113), a probability seemingly confirmed by the evaluation work in this area.

## **4 IMPORTANCE OF REMAINS**

### **4.1 Scheduled monument criteria**

- 4.1.1 The importance of the site of the major Roman settlement at Springhead (*Vagniacae*) is acknowledged in its status as a Scheduled Ancient Monument (Kent No. 158). The scheduled area covers the main area of the Roman town (to the south of the A2), including the known temple complex, but does not extend to cover the area evaluated here. The site of another Roman temple, to the south-east, is scheduled separately (Kent No. 198).

## 4.2 Condition

- 4.2.1 The deposits of probable prehistoric date sealed beneath colluvium in trench 1161TT are likely to be well preserved.
- 4.2.2 The majority of the Romano-British features recorded in the evaluation survive as features cutting the surface of *in situ* geological deposits. These features include pits, ditches, post-holes and graves, and can generally be expected to be well-preserved, particularly where sealed beneath colluvium. No substantial masonry remains were present, but a small number of stone foundations or footings were recorded; such remains are likely to be well-preserved where they have escaped ploughing (ie sealed beneath colluvium or within the area covered by Springhead Nurseries). Stratified deposits including probable floor or yard surfaces survive in the vicinity of the projected line of the Roman road running north-west to south-east through the area of Springhead Nurseries, and probably reflect the nature (ie structures), density and longevity of activity which might be expected alongside the road. Remnants of stratified deposits also survive elsewhere, most notably the metallings on the road surface in trench 1329TT, the possible floor, occupation and destruction deposits in trench 1318TT, and the spreads of gravel/cobbling in trenches 1314TT and 1319TT. Less well-defined deposits containing a relatively low density of finds, perhaps reflecting middens and/or buried soils, survive beneath colluvium towards the west side of the site (trenches 1329TT and 1335TT), on the edge of the settlement where other features were apparently absent. Stratified deposits of uncertain nature and thickness, lying within the area of settlement, also survive and can be expected to be well-preserved sealed beneath colluvium in trenches 1313TT, 1322TT and 1323TT at the south end of the site.
- 4.2.3 On the basis of the evaluation results, it can be concluded that remains of probable prehistoric (?Neolithic/Bronze Age) date may survive both beneath the colluvial deposits on the valley floor, as well as towards the higher ground to the north-east. In addition, the overall layout of the section of the Romano-British settlement of *Vagniacae* (in all its phases) within the evaluation corridor (**Figure 4**) would appear to be well-preserved and recoverable. Remains of the 19th century watercress beds are also well-preserved beneath more recent deposits.
- 4.2.4 The artefactual assemblage as a whole, and in particular the Romano-British pottery assemblage, is of crucial importance for the interpretation of the chronology, development and nature of the site, particularly given the fact that little artefactual material from the site has as yet been published.
- 4.2.5 The pottery assemblage provides the most useful dating tool; the description of the assemblage has shown that both fabrics and forms may be identified which are chronologically distinctive and which serve to enhance the stratigraphic information in order to elucidate the sequence of site development. Other chronological information comes from the metalwork.

- 4.2.6 The range of wares amongst the pottery assemblage is also useful from the point of view of identifying various sources of supply to the site, at local, regional and international levels, and hence providing information on trade and exchange. This information can be augmented by the imported quernstones.
- 4.2.7 Details of the nature and function of the site can be gleaned from the range of material types present: structural information in the form of ceramic building material, *opus signinum*, fired clay, possible window glass and iron objects; functional information in the form of metalworking slag and quernstones. Some assessment of settlement status might be inferred from the presence and/or proportions of pottery finewares (including imports) and glass vessels.
- 4.2.8 Palaeoenvironmental evidence has been shown to survive. Preservation of charred plant remains in several of the Romano-British features sampled is good to exceptional. The presence of grain, chaff and weed seeds has the potential to determine in detail the functions of the features and specific activities on site (eg crop processing/storage), and also details about the Romano-British farming economy. Weed seeds may enable the time of year of harvest, and the soil type cultivated to be determined. Animal bone is also present in some quantity, and can generally be expected to be well-preserved and thus provide information on animal husbandry as well as site economy. Molluscs, mostly oyster shells, are also present and similarly well-preserved. Pollen is unlikely to survive undisturbed unless waterlogged conditions are locally present.
- 4.2.9 From the assessment of the charred plant remains alone, it is evident that relatively large scale crop processing and/or storage facilities were present within the immediate vicinity. Furthermore, there is distinct spatial variation between the features which lay on the lower ground, within the settlement, and those on the higher ground to the east/north-east which probably defined enclosures or marked field boundaries.

### **4.3 Period**

- 4.3.1 Prehistoric settlement patterns are not well-documented in the area. The principal exception is the Ebbsfleet Neolithic pottery site and associated timber trackway on the west side of the Ebbsfleet valley immediately outside the evaluation area (Burchall and Piggott 1939). Further work within the evaluation area could contribute significantly to understanding early prehistoric settlement and the environment within this part of the Ebbsfleet valley, and would be of regional importance.
- 4.3.2 The one or two Early Iron Age features and associated pottery are of local importance. However, although the nature of the Iron Age occupation in Kent is not well understood, it is unlikely that further work within the evaluation area could contribute much further to understanding this.

- 4.3.3 The Roman period is well-represented in Kent by sites of various types, but little is known about the nature and development of many of these. The town of Springhead (*Vagniacae*) is of particular significance because of its important temple complex associated with a spring which made the site a unique religious centre which flourished throughout the Roman period. A complex of early ditches and pits of votive character has been recorded underlying Roman levels in one (central) area, and this strongly suggests that the site was an important religious centre in the pre-Roman Iron Age (Harker 1980, 288). However, it is unlikely that further work within the evaluation area could contribute significantly to an understanding of the site's development at this time.
- 4.3.4 There is some evidence to suggest that a Roman fort existed at Springhead in the 1st century AD, and that the settlement subsequently developed into a small town of some importance covering an area of c. 8 - 10 hectares which, besides the temple complex, included an irregular street layout (reflecting the location of the spring), a number of domestic buildings, evidence for industry including potting, and a richly-furnished walled cemetery nearby (Penn 1965). Although there have been several earlier excavations at Springhead (eg Penn 1965; Harker 1980; Philp and Chenery 1996) much of the detail, particularly relating to the finds, remains unpublished. Further work within the evaluation area would add significantly to knowledge of the extent, character and occupation sequence of the settlement in the 1st - 2nd century AD, contribute to a better understanding of the ceramic sequence, and provide important information on the environment and economy of the site which has so far received little attention.
- 4.3.5 The late Romano-British phase within the evaluation area at Springhead appears to be limited. This may be due to modern truncation of later deposits, but this must be considered unlikely given the shortage of even superficial finds later than the 2nd century. This lack of material may indicate that the settlement had shrunk by this time, at least around the north-western edge, although there is evidence for activity, probably associated with agriculture, on the higher ground to the north. It is unlikely that further work within the evaluation area could add much to knowledge of this, later phase of the settlement, though it may provide further information on activity in the immediately surrounding area.
- 4.3.6 The 19th century watercress beds are of local importance, but it is doubtful whether further work would contribute much additional information.

#### **4.4 Rarity**

- 4.4.1 The probable prehistoric activity of ?Neolithic or Bronze Age date would add significantly to our knowledge as sites, particularly settlements, are comparatively rare, and there has been relatively little modern excavation and research covering these periods in west Kent.

- 4.4.2 Iron Age sites in Kent are comparatively rare; few large-scale excavations have been carried out to modern standards, and the quality of the evidence is poor.
- 4.4.3 Springhead (*Vagniacae*) was one of several smaller Roman towns or ports in Kent, with Canterbury (Durovernum) the chief town of the *civitas*. The smaller towns or ports included Rochester, Ospringe, and perhaps Crayford, all of which also lay by the course of Watling Street, as well as Dover and Richborough on the coast. Comparatively little large-scale work has been undertaken in these settlements, with the principal exception being that of Canterbury and, to a lesser extent, Dover, Richborough and Springhead itself.
- 4.4.4 Springhead must be considered unique amongst these settlements because of the complex of temples present. Although there have been a series of excavations at Springhead since the 1950s, the majority of this work remains unpublished other than in note form. No detailed information has been published on the finds assemblage as a whole, and there has been an almost total lack of consideration of the economic and environmental aspects of the site. Previously investigated areas are now either scheduled or built over, and the evaluation area represents probably the last area within the settlement available for excavation, other than that currently occupied by Springhead Nurseries.

## **4.5 Vulnerability**

- 4.5.1 The evaluation has confirmed that a substantial part (c. 2 hectares) of the Roman settlement site, as well as several surrounding but smaller areas of probable early prehistoric (?Neolithic/Bronze Age), Early Iron Age, and early and late Romano-British activity, may be affected by the permanent land take for the construction of the CTRL.

## **4.6 Diversity**

- 4.6.1 The evaluation has indicated that a restricted range of prehistoric features are present comprising a possible burnt mound or more extensive spread of material, and one or more shallow ditches or gullies. However, it is clear that a considerable range of Romano-British features and deposits are present and these include a road, at least one possible hollow way, enclosure and boundary ditches. In addition pits, structural remains (of timber, and possibly stone, likely to represent buildings as well as, for example, fences), associated floor and yard surfaces, and a small cemetery are also present. There is good reason to suppose that the normal range of associated features, possibly including ovens and wells, for example, to be present, as well as evidence for industrial activity, although none was found in the evaluation.

## **4.7 Documentation**

- 4.7.1 The Ebbsfleet Neolithic pottery site has been published (Burchall and Piggott 1939), but of the various excavations undertaken within the Roman town of Springhead, the majority remain unpublished or are published in summary form only. A short account of the earlier finds made on the site (predominantly in the 19th century, when the watercress beds were established and the area opened as a pleasure garden) has been published (Penn 1965), as has the early work on one of the cemeteries (Jessup 1928). A series of interim reports outline the results of work undertaken between 1952 and about 1988 by the late W S Penn and the late S R Harker respectively (Penn 1957, 1958, 1959, 1960, 1962, 1964, 1965, 1967, 1968; Harker 1969, 1970, 1971, 1980). Two useful maps of all known discoveries have been collated (Penn 1965; Harker 1980). Unfortunately, both Penn and Harker died before full reports on their excavations had been prepared. Brian Philp undertook excavations in 1963-4 during construction of the A2 (Philp in prep.), and in 1991-4 (Philp 1996), but there is no comprehensive discussion of the finds and no environmental sampling was apparently undertaken. More specific, short reports have appeared on some of the monumental masonry (Blagg 1979), and on the location and alignment of Road R2 (Smith 1991) - probably the same road encountered in the evaluation.

## **4.8 Group value**

- 4.8.1 The burnt flint deposit of probable prehistoric date will have additional value if it proves to be contemporary with the Ebbsfleet Neolithic pottery site approximately 100 m to the south.
- 4.8.2 The Romano-British settlement at Springhead (*Vagniacae*) was one of several small towns along Watling Street. Although none of these other towns will be affected by the railway route, Springhead, with its unique complex of temples, has additional value when seen in this regional setting of other settlements.

## **4.9 Potential**

### ***Structural***

- 4.9.1 The burnt flint deposit of probable prehistoric date offers some potential for contributing to the understanding of early prehistoric settlement and agricultural activity in the area.
- 4.9.2 There appears to be good potential for examining a range of evidence associated with the Romano-British settlement. This includes not only the range of features and structures which might be expected from a peripheral area of urban settlement of this type, including probable ribbon development alongside a road, but also the possible agricultural enclosures and associated features which lay immediately outside the town.

### ***Artefactual***

- 4.9.3 The small prehistoric pottery and flint assemblage is useful as an indicator of activity, but is otherwise of limited significance, and there is little potential for further analysis.
- 4.9.4 The faunal assemblage itself has few (less than 5) measurable bones due to fragmentation and in its current form would require only a scan by a recognised faunal analyst. The potential for the site will however, depend upon the presence of well-sealed contexts which might provide a less fragmented assemblage. If so, the faunal element would contribute to the understanding of the economics of the settlement.
- 4.9.5 Further work on the Romano-British material assemblage should concentrate on the detailed analysis of the large quantity of pottery, in order to identify and quantify the full range of fabric types and vessel forms present at a level sufficient for comparison with other sites in the region. This has a high potential to inform a discussion of the assemblage in its local and regional context, and also its chronological, functional and economic implications for the site.

### ***Environmental***

- 4.9.6 The assessment indicates significant potential for examining the environmental evidence that is lacking from previous work at Springhead. This should include material from the area of probable prehistoric activity adjacent to the River Ebbsfleet, as well as the Romano-British settlement. No waterlogged remains are likely to be encountered, but substantial quantities of charred plant remains from Romano-British contexts exist in a good state of preservation, including much debris from crop processing. This material can not only contribute to an understanding of various site activities, but may also provide important information about the Roman agrarian economy in Kent.

## **4.10 Concluding Remarks**

- 4.10.1 An earlier environmental statement (URL 1994) had identified the potential for archaeological remains within the evaluation area. This potential was defined as prehistoric finds scatters and the possible remains of a small Roman town with a unique complex of temples part of which, including an area adjacent to the construction site south of the A2, is a scheduled monument.
- 4.10.2 The evaluation detected prehistoric activity sealed beneath colluvium adjacent to the Ebbsfleet, together with some indication of a presence during the Iron Age. No features associated with the surface finds scatters were detected, suggesting that the surface material may have moved down slope from its original location.
- 4.10.3 The northern extent of the Roman town of Vagniacae has been well defined. The evaluation has provided an insight into the nature of the settlement in this area (e.g. roadside activities consisting of cemeteries, crop processing and structural remains). In addition, it appears from the results of this phase of

fieldwork that the area of the Roman town north of the modern A2 thrived during the 1<sup>st</sup> and 2<sup>nd</sup> centuries, with a possible contraction of the settlement in the later Roman period.

- 4.10.4 In conclusion, the archaeological potential identified in the environmental statement (URL 1994) has been substantially realised.



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