Channel Tunnel Rail Link
Union Railways Ltd

Waterloo Connection, Southfleet, Kent

ARC SSR 98

Archaeological Evaluation Report

Contract No. 194/870

Environmental Statement Route Window No. 14

Oxford Archaeological Unit

February 1998

UNION RAILWAYS LTD

WATERLOO CONNECTION, SOUTHFLEET, KENT

ARC SSR 98

ARCHAEOLOGICAL EVALUATION

Environmental Statement Route Window No. 14

OS GRID TQ 616720

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WATERLOO CONNECTION, SOUTHFLEET, KENT

ARCHAEOLOGICAL EVALUATION

CONTENTS

List of Appendices

List of Figures

List of Tables

WATERLOO CONNECTION, SOUTHFLEET, KENT

ARCHAEOLOGICAL EVALUATION

SUMMARY

The Oxford Archaeological Unit was commissioned by Union Railways Ltd to conduct a field evaluation of a 2.23 ha site on farmland adjacent to Station Road (B262), Southfleet, Kent (TQ 616 720). The evaluation formed part of a wider programme of archaeological investigations along the route of the Channel Tunnel Rail Link (CTRL). The site is situated on the western slope of a dry valley, with Upper Chalk solid geology overlain by natural drift deposits predominantly of sand, with some clay and gravel.

Ten evaluation trenches were excavated and archaeological features were located in three of the trenches. All of the features were located on the upper half of the valley slope. Artefactual material was, in most cases, residual and quite sparse, and only four of the features can be dated with a reasonable degree of certainty.

A shallow ditch was ascribed to the Middle or Late Bronze Age and a second ditch may date to the same period. A pit and ditch both produced pottery of the late 1st- or 2nd-century AD. The pit also contained a number of conjoining sherds of late Iron Age pottery and in this instance the later pottery may have been intrusive. A number of other features were excavated but could not be securely dated.

Colluvial deposits up to 2.5m deep were recorded at the bottom of the valley slope. The colluvium produced a flint core and other struck flints of Mesolithic or Early Neolithic date as well as flints of Bronze Age date.

SECTION 1: FACTUAL STATEMENT

1 BACKGROUND

1.1 Introduction

1.1.1 The Oxford Archaeological Unit (OAU) undertook an archaeological field evaluation (Fig. 1), between 19th and 23rd January 1998, on farmland adjacent to Station Road (B262) and south of the A2, Southfleet, Kent (NGR TQ 616720; URL Grid Ref. 4160052000) on behalf of Union Railways Limited (URL). The evaluation forms part of a programme of archaeological investigation along the line of the Channel Tunnel Rail Link (CTRL), the aim of which is to assess the effect of the construction of the new railway upon the cultural heritage of the site. An Environmental Assessment has been prepared (URL 1994). The site lies within Environmental Statement Route Window No.14.

1.1.2 The work was carried out according to a Written Scheme of Investigation, prepared by URL and agreed with the County Archaeologist and English Heritage, detailing the scope and methods of the evaluation, including this report. The area of the evaluation is shown in Figure 2.

1.2 Geology, topography and land-use

1.2.1 The site lies between 32m and 15m above Ordnance Datum (OD) on the western slope of a dry valley. British Geological Survey (BGS) mapping shows the area as sand of the Thanet Beds, overlying Upper Chalk bedrock (Survey Sheet No. 271), although in the field small areas of clay and gravel were also observed.

1.2.2 The evaluation area is presently arable land, partly under winter wheat and partly unplanted. Directly to the west of the site is the cutting of the disused Gravesend West Railway and a public footpath forms the eastern boundary of the site, running south-west from Station Road to Dale Road.

1.3 Archaeological background

1.3.1 The Springhead Roman complex lies in close proximity to the north of the evaluation area, and includes the site of the small Roman town of *Vagniacae* (SAM KE 158) and a Roman temple (SAM KE 198).

1.3.2 Some 160m to the north of the site, to the south of the Springhead scheduled area, an excavation by Kent Archaeological Rescue Unit uncovered a scattering of Romano-British pits and ditches and a number of burials (Philp and Chenery 1997).

1.3.3 On the opposite side of the valley from the evaluation site, recent work (referred to as Pepper Hill) undertaken on behalf of URL has revealed a Roman cemetery positioned alongside a hollow way (Williams *et al,*1998).

2 AIMS

2.1 While no formal Written Scheme of Investigation was prepared for this site, the general aims of the evaluation, which are reiterated below, were the same as those for previous evaluations undertaken for URL.

2.1.1 To determine the presence/absence, extent, condition, character, quality and date of any archaeological remains within the evaluation area.

2.1.2 To determine the presence and potential of environmental and economic indicators preserved in any archaeological features or deposits.

2.1.3 To determine the local, regional, national and international importance of such remains, and the potential for further archaeological fieldwork to fulfil local, regional and national research objectives.

2.2 In addition to the general aims, the evaluation was also designed to determine whether the Roman cemetery at Pepper Hill (see Section 1.3.3) extended into the evaluation area.

3 METHODS

3.1 General

3.1.1 The detailed statement on the methods used in the evaluation was also the same as that contained in the Written Scheme of Investigation prepared by URL for other evaluations undertaken in connection with the CTRL, and agreed with the County Archaeologist and English Heritage. The following is intended only to amplify certain aspects of the evaluation methodology.

3.2 Survey

3.2.1 The trench locations were surveyed by P H Matts, Building & Civil Engineering Land Survey (Reading) based on a trench location plan provided by URL. Trench 3149TT was subsequently repositioned to avoid a modern fence. This new position was re-surveyed by P H Matts.

3.2.2 The trenches have been digitally plotted using AutoCAD graphics programme (Fig. 2). All survey points are based upon the URL local grid rather than the National Grid.

3.2.3 The evaluation area falls within URL's Route Window No.14.

3.3 Excavation

3.3.1 Ten trenches were excavated over the 2.23 ha site. All trenches were 30 m long and 2 m wide.

3.3.2 The topsoil and soil layers were excavated under close archaeological supervision using a 360° mechanical excavator with a 2m toothless ditching bucket. Excavation continued to the top of archaeologically significant deposits or to the surface of underlying geological layers. In areas where possible colluvial deposits were present, machine excavated test-pits were dug in order to verify the full depth of such deposits. In Trenches 3141TT and 3142TT, the test pits exceeded 1.2m in depth and, for safety reasons, were recorded from the surface and immediately back-filled.

3.3.3 Archaeological finds were hand-retrieved from machine-excavated deposits on an opportunistic basis. Spoil heaps were also inspected for superficial finds but not rigorously searched.

3.3.4 Machine-excavation resulted in a generally clean trench base which was not hand cleaned except where archaeological deposits were suspected. Sample sections of all trench sides were cleaned and drawn. All suspected archaeological features were examined by hand excavation.

3.3.5 Bulk environmental samples were taken from ditches in Trenches 3145TT and 3150TT and from three ditches and a pit in Trench 3148TT (Appendix 3).

3.4 Recording

3.4.1 Recording followed the standard OAU single context recording system (Wilkinson ed. 1992). A running sequence of context numbers was adopted for each trench prefixed with the final two digits of the trench number. Plans were drawn at 1:50 or 1:100. Sections were drawn at 1:20. All evaluation records were prefaced by the site code ARC SSR 98.

3.4.2 All trenches, archaeological features and a sample section from each trench were photographed using colour slide and black and white print film.

4 RESULTS

4.1 Presentation of results

4.1.1 Descriptions of individual trenches are presented in Section 5. They are divided into those which contained archaeological features, those which contained colluvial deposits and trenches containing no archaeological features. A summary of all contexts and finds is presented in the archaeological context inventory (Section 6). Detailed reports on the pottery, flint, and environmental indicators are contained in Appendices 1-3.

4.2 General Stratigraphy

Modern deposits

4.2.1 In all trenches the upper 0.25m to 0.50m consisted of modern ploughsoil. The modern ploughsoil overlay an earlier ploughsoil in Trenches 3144TT, 3147TT, and 3148TT. Where features were present they were generally cut from beneath this deposit, except for Pit 4812 in Trench 3148TT (see 5.2.7).

Colluvial and drift deposits

4.2.2 Colluvium was observed at the bottom of the valley slope (Trenches 3141TT and 3142TT), and contained struck flints of Mesolithic/Early Neolithic and Bronze Age date, as well as burnt flints. No features were cut into the colluvium. In Trench 3141TT the colluvium had a clear boundary with the underlying light grey-brown sand drift deposits (Fig. 5). In Trench 3142TT the underlying drift deposits were not so easy to distinguish, exhibiting banding of different coloured sands and clay sands. The best indication of their natural nature was the absence of artefactual evidence.

4.3 Summary of the archaeology

4.3.1 A ditch in Trench 3148TT contained five sherds of pottery of Middle or Late Bronze Age date. The ditch was shallow, and it is likely that much of it had been ploughed away.

4.3.2 A large and well-defined pit in Trench 3148TT produced a single sherd of late 1st- or 2nd-century AD pottery and 11 sherds of Late Iron Age pottery from the upper fill. The same context also contained residual Bronze Age pottery and flint flakes. A nearby ditch in the same trench contained a similar assemblage, but no residual Bronze Age pottery. A small gully ran parallel to the ditch and may therefore be of the same date, although the gully contained no finds.

4.3.3 Another ditch in Trench 3148TT yielded a single struck flint flake of possible Mesolithic or Early Neolithic date. Although this may have been residual, on stratigraphic grounds a prehistoric date is likely for this feature.

4.3.4 None of the other features were securely datable. One of two shallow ditches in Trench 3145TT yielded two struck flint flakes, and a 'V-shaped' ditch in Trench 3150TT yielded a single flint flake, each consistent with a Bronze Age date, but possibly residual. A substantial ditch in Trench 3148TT produced no dating evidence, but did contain seven fragments of burnt unworked flint. A small pit, also in Trench 3148TT, produced no finds but is of recent origin as it was cut into the top of the buried ploughsoil.

4.4 Site archive

4.4.1 The site archive has been compiled in accordance with the specification prepared by URL. It includes six electronic datasets for the Fieldwork Event, Contexts, Bulk Finds, Finds, Environmental Samples and Graphical Output.

5 TRENCH DESCRIPTIONS

5.1 Trench 3145TT (Fig. 3)

5.1.1 Two small plough-truncated ditches were identified, sealed beneath 0.32m of topsoil, and cutting light yellow-brown sand natural.

5.1.2 Ditch 4503, orientated north-north-east to south-south-west, had steep sloping sides and a rounded base. It was 0.40m wide and survived to a depth of 0.18m. The silty-sand fill (4504) produced no finds.

5.1.3 Ditch 4505, orientated west-north-west to east-south-east, had slightly irregular steep sides and a rounded base. It was 0.80m wide and survived to a depth of 0.45m. The silty-sand fill (4506) produced two struck flint flakes of possible Bronze Age date and some burnt unworked flint. Environmental sample 2, taken from Fill 4506, contained a large quantity of charcoal typical of hawthorn, apple or pear (Appendix 3).

5.1.4 Ditch 4505 was possibly re-cut by a later ditch, Ditch 4507, although this may have simply been the tertiary fill of Ditch 4505. It had a similar profile to Ditch 4505, but was 0.6m wide and 0.28m deep. It contained a silty-sand fill (4508) which produced no finds.

5.2 Trench 3148TT (Fig. 4)

5.2.1 Seven features were located in this trench. All except one were sealed beneath approximately 0.3m of modern ploughsoil (4819) and 0.3m of a deposit interpreted as plough-disturbed natural or buried ploughsoil (4818). The features were cut into the mixed sand and gravel drift geology (4817). The profile of Features 4801 and 4810 suggests that they have particularly suffered from plough truncation.

5.2.2 Ditch 4801, orientated north-east to south-west, was 1.35m wide and 0.3m deep. The sandy-silt fill (4802) contained burnt flint and a struck flint flake of Mesolithic or Early Neolithic date. Ditch 4801 was cut by Ditch 4803 and Gully 4805.

5.2.3 Ditch 4803, orientated north-west to south-east, was 0.93m wide and 0.24m deep with a shallow 'dish-shaped' profile. The sandy-silt fill (4804) contained two sherds of Late Iron Age pottery, including a rim sherd, and two small sherds of later 1st- or 2nd-century AD pottery. Fill 4804 also contained residual struck flints of Mesolithic/Early Neolithic and Bronze Age dates. Environmental sample 6 from Fill 4804 contained no charred remains (Appendix 3).

5.2.4 Gully 4805 was 0.26m wide and 0.13m deep with a rounded 'U-shaped' profile. The sandy-silt fill (4806) produced no finds.

5.2.5 An oval pit (4807) with vertical sides and a flat base was only partly within the confines of the trench. It was 0.78m deep and 0.84m long, and contained two fills (4808 and 4809). Both fills were sandy-silts and the upper fill (4808) contained late Iron Age and residual Bronze Age pottery, in addition to a single

large sherd of the later 1st- or 2nd-century AD. Environmental sample 4 taken from Fill 4809 contained a small amount of hulled wheat (Appendix 3).

5.2.6 Ditch 4810, aligned roughly parallel to Ditch 4803, was 0.7m wide and 0.15m deep with a shallow 'dish-shaped' profile. The sandy-silt fill (4811) produced five sherds of pottery of Middle or Late Bronze Age character.

5.2.7 Pit 4812 was slightly irregular with a 'bowl-shaped' profile, and not fully exposed within the trench. It was at least 0.75m long and 0.44m deep, and the sandy-silt fill (4813) contained no finds. It is likely that 4812 is a recent feature as it was cut from the top of the buried ploughsoil (4818).

5.2.8 Ditch 4814, located at the extreme east end of the trench, was not fully revealed within the trench. It was orientated north-east to south-west and had steep sides and a flat base. It was 1.7m wide and 0.58m deep. It contained two sandy-silt fills (4815 and 4816) which did not yield any datable material although fill 4815 did contain unworked burnt flint. Environmental sample 3 contained indeterminate cereal grains (Appendix 3).

5.3 Trench 3150TT (Fig. 3)

5.3.1 Ditch 5005, orientated north-west to south-east, was cut from the top of the natural gravel beneath 0.34m of modern ploughsoil. It was 1.25m wide and a maximum of 0.62m deep, with a 'U-shaped' profile. A shallow slope at the top of the north-east side of the ditch accounted for 0.5m of the width. The fill (5004) contained a single retouched struck flint of possible Bronze Age date. Environmental sample 1 from Fill 5004 contained no charred remains (Appendix 3).

5.4 Trenches 3141TT and 3142TT (Fig. 5)

5.4.1 Colluvial deposits were recorded in these trenches, at the bottom of the dry valley, and test pits were machine excavated to establish the depth of the deposits.

5.4.2 In Trench 3142TT the colluvium (4202) was a thin silty-clay layer, 0.15m thick, and was only present in the western half of the trench. It contained a single retouched flint flake of a possible Bronze Age date. The boundary between Layer 4202 and the underlying drift geology (4204) was hard to distinguish due to the similarity of composition and colour between the colluvium and the upper part of the underlying deposits. The test pit showed that it was composed of banded deposits of sand and clay-sand (4204, 4203 and 4205).

5.4.3 The colluvial deposits seen in the test pit in Trench 3141TT were deeper, extending to 2.75m below the present ground surface, where Thanet sand (4105) was encountered. Three silty- and clay-sand colluvial deposits (4102, 4103 and 4104) were recorded. Layers 4202 and 4203 produced struck flint flakes of possible Bronze Age date, and the latter also contained a flint core of possible Mesolithic or Early Neolithic date. The lowest colluvial deposit (4104) was olive brown in colour and contained charcoal fragments, but could only be

observed from the surface because of the depth of the machine excavated test pit.

5.5 Trenches 3143TT, 3144TT, 3146TT, 3147TT and 3149TT.

5.5.1 This group of trenches contained no identifiable archaeological features. Buried ploughsoil or plough-disturbed natural was present in Trenches 3144TT, 3146TT and 3147TT, with a maximum thickness of 0.2m. In Trench 3146TT it was limited to the western end of the trench. In Trenches 3143TT and 3149TT the modern ploughsoil overlay the natural drift geology directly.

6 ARCHAEOLOGICAL CONTEXT INVENTORY

Meso = Mesolithic
Eneo = Early Neolithic
BA = Bronze Age
M-LBA = Middle to Late Bronze Age
LIA = Late Iron Age
ERom = Early Roman
Post-medieval = AD 1500 to AD 1800

TRENCH	CONTEXT	TYPE	ASSOCIATION	FINDS	NUMBER	DATE
3141 TT	4101	topsoil	overlies 4102			
3141 TT	4102	colluvium	overlain by 4101	flint burnt flint	6 1	BA
3141 TT	4103	colluvium	overlies 4104	flint	1	Meso/ENeo
3141 TT	4104	colluvium	overlies 4105			
3141 TT	4105	natural	overlain by 4104			
3142 TT	4201	topsoil	overlies 4202	pottery	4	19th-century
3142 TT	4202	colluvium	overlies 4204	flint	1	Meso/ENeo
3142 TT	4203	natural	overlies 4205			
3142 TT	4204	natural	overlies 4203			
3142 TT	4205	natural	overlain by 4203			
3142 TT	4203	natural	overlain by 4202			
3143 TT	4301	topsoil	overlies 4302			
3143 TT	4302	natural	overlies 4303			
3143 TT	4303	natural	overlies 4304			
3143 TT	4304	natural	overlain by 4303			
3144 TT	4401	topsoil	overlies 4402			
3144 TT	4402	natural	overlies 4403			
3144 TT	4403	natural	overlain by 4402			
3145 TT	4501	topsoil	overlies 4502			
3145 TT	4502	natural	overlain by 4501			
3145 TT	4503	ditch/gully	filled by 4504			
3145 TT	4504	fill	fill of 4503			
3145 TT	4505	ditch	filled by 4506			
3145 TT	4506	fill	fill of 4505	flint burnt flint	2 2	BA
3145 TT	4507	gully	filled by 4508			
3145 TT	4508	fill	fill of 4507			
3146 TT	4601	ploughsoil	overlies 4602			
3146 TT	4602	subsoil	overlies 4603			
3146 TT	4603	natural	overlain by 4602			
3147 TT	4701	ploughsoil	overlies 4702			
3147 TT	4702	subsoil	overlies 4703			
3147 TT	4703	natural	overlain by 4702			
3148 TT	4801	ditch	filled by 4802			
3148 TT	4802	fill	fill of 4801	flint burnt flint	1 2	Meso/ENeo
3148 TT	4803	ditch	filled by 4804			
3148 TT	4804	fill	fill of 4803	pottery flint burnt flint	5 6 5	LIA/ERom Meso/ENeo
3148 TT	4805	ditch	filled by 4806			
3148 TT	4806	fill	fill of 4805			
3148 TT	4807	pit	filled by 4808,4809			
3148 TT	4808	fill	fill of 4807	pottery	13 4	LIA/ERom M-LBA

TRENCH	CONTEXT	TYPE	ASSOCIATION	FINDS	NUMBER	DATE
				flint burnt flint	1 2	BA
3148 TT	4809	fill	fill of 4807			
3148 TT	4810	ditch	filled by 4811			
3148 TT	4811	fill	fill of 4810	pottery	5	M-LBA
3148 TT	4812	pit	filled by 4813			
3148 TT	4813	fill	fill of 4812			
3148 TT	4814	ditch	filled by 4815, 4816			
3148 TT	4815	fill	fill of 4814			
3148 TT	4816	fill	fill of 4814	burnt flint	7	
3148 TT	4817	natural	overlain by 4818			
3148 TT	4818	ploughsoil	overlies 4817			
3148 TT	4819	ploughsoil	overlies 4818			
3149 TT	4901	ploughsoil	overlies 4902			
3149 TT	4902	natural	overlain by 4901			
3150 TT	5001	ploughsoil	overlies 5002-5005	pottery	1	Post-medieval
3150 TT	5002	natural	cut by 5005			
3150 TT	5003	natural	cut by 5005			
3150 TT	5004	fill	fill of 5005	flint burnt flint	1 1	BA
3150 TT	5005	ditch	filled by 5004			

SECTION 2: STATEMENT OF IMPORTANCE

7 CONCLUSIONS

7.1 Extent of archaeological deposits (Fig. 6)

7.1.1 Archaeological features were found in Trenches 3145TT, 3148TT and 3150TT. The majority of the features were recorded in Trench 3148TT in a more elevated position, overlooking the dry valley.

7.1.2 Colluvial deposits containing artefactual evidence were present in Trenches 3141TT and 3142TT, at the bottom of the dry valley slope.

7.2 Date and character

7.2.1 Few of the recorded features can be dated with any certainty. In Trench 3148TT, Ditch 4810 can probably be dated to the Middle or Late Bronze Age and Ditch 4505 in Trench 3145TT may be of the same period. Pit 4807 probably dates to the late 1st- or 2nd-century AD or later. Ditch 4803, in the same trench, may be of the same date but it is possible that the later artefactual material from this feature is intrusive, in which case a Late Iron Age/early Roman date is possible (see Appendix 1).

7.2.2 Struck flint was recovered from a number of locations across the site. Little of this was from securely dated features, and generally the flint was not particularly diagnostic (see Appendix 2). The early prehistoric flintwork does not suggest occupation, but rather a background scatter.

7.2.3 The character of the Bronze Age activity is difficult to assess on the limited evidence from the evaluation. The limited quantity of artefactual material does not suggest domestic activity on the site, although the number and size of the pottery sherds recovered from a single trench (3148TT) indicates that such activity may have occurred nearby.

7.2.4 Small amounts of unworked burnt flint were recovered from several features and colluvial deposits (Appendix 2). None of this was in securely datable contexts but burnt flint is common in a wide variety of prehistoric contexts.

7.2.5 The Late Iron Age/early Roman pottery, much of it conjoining pieces from a limited number of vessels, also indicates nearby occupation activity. However, the features themselves probably date to slightly later in the Roman period and may form part of a field system.

7.3 Environmental evidence

7.3.1 The environmental potential of the site is limited. Charred plant remains were present at low levels in three of the samples (from Contexts 4506, 4809 and

4816) but preservation was poor. Context 4506 also produced large quantities of Pomoideae charcoal (Appendix 3).

7.3.2 Animal bone was not found on the site. This may be due, at least in part, to the acidic nature of the soils.

7.3.3 Mollusca were absent from the site.

8 IMPORTANCE OF ARCHAEOLOGICAL DEPOSITS

8.1 Survival/Condition

8.1.1 The site has been truncated by post-Roman ploughing, especially at the top of the valley slope where most of the features were recorded.

8.2 Period

8.2.1 A range of periods, including the Mesolithic/Early Neolithic, Bronze Age, late Iron Age and early Roman, are represented by artefactual material. Although few of the features can be confidently dated to a particular period, they are most likely to date to the Bronze Age and to the late 1st- or 2nd-century AD.

8.3 Rarity

8.3.1 Few Mesolithic sites have been recorded in Kent and most finds, as in this case, have been of isolated implements. Evidence of the early Neolithic in Kent is fairly widespread but is of poor quality (Champion and Overy 1989, 22). This lack of evidence is probably due to a lack of fieldwork, rather than to a real absence of sites.

8.3.2 Material of the middle and later Bronze Age is increasingly being recorded in northern Kent. Evaluation work in connection with the CTRL has recorded Bronze Age features at, for example, Singlewell (URL 1997a), White Horse Stone (URL 1997b) and Hollingbourne (URL 1996b).

8.3.3 Roman sites, many of which have suspected or proven Late Iron Age antecedents are relatively common in Kent (Drewett *et al*, 1988). Sites of Roman date are well known in the immediate vicinity of the evaluation area, with the Springhead complex nearby (Penn 1965), and a series of Romano-British pits and ditches some 160m to the north of the site (Philp and Chenery 1997). Recently, a Roman cemetery and other features have been excavated on the opposite side of the dry valley at Pepper Hill (Williams *et al*, 1998).

8.4 Fragility/vulnerability

8.4.1 The archaeological deposits are vulnerable to modern agricultural practices. Truncation by ploughing is already quite severe and is likely to continue under present circumstances.

8.5 Diversity

8.5.1 The archaeology present on the site has a wide chronological range although many of the finds are likely to be residual. Most of the features present are ditches and are likely to represent field boundaries although at least one possible Roman pit was located in Trench 3148TT.

8.6 Documentation

8.6.1 There is no documentation prior to the Assessment of Historic and Cultural Effects (URL 1994) relating to the evaluation area.

8.7 Group value

8.7.1 The Mesolithic/Early Neolithic flintwork is almost certainly from secondary contexts and, as such, has limited value.

8.7.2 The evaluation is one of a number of sites on the line of the Channel Tunnel Rail Link with evidence of Bronze Age activity, although there are no other sites in the immediate vicinity. The value of the site would be enhanced when placed in this context, although only one feature can be assigned to this period with any confidence.

8.7.3 Late Iron Age and early Roman activity is well documented in the locality with the nearby Springhead complex, a series of Romano-British pits and ditches 160m to the North of the site (Philp B and Chenery M 1997)and most recently the discovery, of a Roman cemetery on the opposite side of the dry valley from the evaluation site (Williams *et al*. 1998). The site is therefore of local value in this context.

8.8 Potential

8.8.1 The site has some potential to increase understanding of the archaeology of the region although plough truncation of features, the residual nature of much of the artefactual material, and poor preservation of environmental evidence reduce the overall potential of the site.

8.8.2 The environmental potential of the site is very low. The sandy acidic soils probably do not favour the preservation of animal bones or mollusca.

8.9 Overall conclusions

8.9.1 The evaluation has identified a low level of both Bronze Age and Roman features, largely at the top of the valley slope. In addition, conjoining pottery sherds from a limited number of Late Iron Age/Early Roman vessels were recovered from slightly later features. The very small amount of charred

material suggests that there was little or no domestic occupation within the evaluation area, although the quantity and nature of the pottery recovered suggests that occupation may have occurred nearby in both the Bronze Age and Late Iron Age/Early Roman periods.

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APPENDIX 1

The Pottery
by Paul Booth, Oxford Archaeological Unit

1 Introduction

1.1 Some 30 sherds (436 g) of pottery were recovered in the evaluation. Of this, five sherds (94 g), from topsoil contexts in Trenches 3142TT and 3150TT, were of 18th-19th century date and require no further comment. The remaining sherds, all from Trench 3148TT, included material of Bronze Age, Late Iron Age and Roman date. The pottery was recorded by context in terms of broad fabric categories for the purposes of assigning dates, with quantification by sherd count and weight. Vessel type, where identifiable, was also recorded, and other characteristics were noted as appropriate. Coding followed the standards established in the OAU prehistoric and Roman pottery recording system. The pottery was in moderately good condition with a reasonable average sherd weight (13.7 g for the prehistoric and Roman material) and relatively little abrasion. Preservation of surfaces (owing to soil conditions) was average.

2 Fabrics and Chronology

2.1 Three main traditions were represented by the material, the first consisting of hand made flint-tempered fabrics. The second tradition consisted primarily of shell-tempered, sand-tempered and grog-tempered fabrics of Late Iron Age character, and the third of Romanised fabrics dating from the mid-late 1st century AD onwards.

Bronze Age

2.2 Five sherds in a moderately coarse flint-tempered fabric with a few quartz sand inclusions occurred with no associated material in Context 4811 in Trench 3148TT. One of these sherds had a raised cordon with notches. This feature and the fabric indicate a Bronze Age date, but the form of the vessel with the cordon was uncertain, so either a Middle or Late Bronze Age date is possible. A further four small sherds in a very similar fabric from Context 4808 in Trench 3148TT could have been of similar date but must have been residual here. Total: 9 sherds, 95 g.

Late Iron Age

2.3 Thirteen sherds (229 g) were assigned somewhat tentatively to the Late Iron Age. Three fabrics, respectively shell-, sand- and grog-tempered, were represented. All the sherds were oxidised and those in the first two fabrics were handmade. The shell-tempered sherds (8 sherds, 118 g) were all from a single vessel of unknown form. Subsidiary inclusions in the fabric were quartz sand and occasional grog or clay pellets, and on the surface of the sherds the shell was leached out. The sand-tempered sherds, (3 sherds, 63 g) also had fine voids in

the fabric, which could have contained shell or organic inclusions. These sherds were again from a single vessel, a jar with grooves and a narrow band of burnished lattice decoration on the shoulder. The third fabric type was grog-tempered, the two sherds (48 g, including the only rim from the site) being from a jar with a cordon on the shoulder, perhaps of Thompson's type B1-3 (cf Thompson 1982, 103, particularly No. 7.9, from Swarling). All these fabrics are consistent with regional traditions in the Late Iron Age, though only the sand and grog-tempered ones could be described as being of `Belgic' type. This material could date to either side of the Roman conquest.

Roman

2.4 More Romanised potting traditions were represented by three sherds (18 g). Two were in fairly fine sand-tempered reduced fabrics (R30 in the OAU system coding), and the third was a small fragment in a fine oxidised fabric (O10), both likely to originate within the region. None of these pieces was diagnostic of form, but a late 1st-2nd century date is thought likely.

3 Context

3.1 Only three contexts, all in Trench 3148TT, produced dating material. Of these, Context 4811 contained only Middle or Late Bronze Age sherds, which are likely to indicate the date of the feature. Pottery in Contexts 4808 and 4804 was more mixed, however. The former of these contained probable residual Bronze Age sherds as well as Late Iron Age material and a single sherd of fabric R30. This last weighed 13 g and was probably too large to be seen as easily intrusive. It presumably therefore indicates a later 1st-2nd century *terminus post quem* for this feature. The two Roman sherds from Context 4804 were much smaller (3 and 2 grams) and could have been intrusive in a fill which otherwise contained only the joining fragments of a grog-tempered jar. If not intrusive, they also indicate a later 1st-2nd century *terminus post quem for* this context.

APPENDIX 2

The Worked Flint

by Philippa Bradley, Oxford Archaeological Unit

1 Introduction

1.1 Twenty pieces of worked flint and twenty pieces of burnt unworked flint (730 g) were recovered from colluvium, the fills of various ditches and a pit. No particularly diagnostic pieces were recovered, and this together with the small size of the assemblage recovered precludes any firm dating. However, it is possible to suggest broad date ranges for the material. The flint is summarised by context in Table 1.

Table 1 Assemblage composition

Context	Flake	Cores	Retouched forms	Burnt unworked flint	Total
4102	4*	-	2 (miscellaneous pieces)	1	7
4103	1	1 (opposed platform blade)	-	-	2
4202	1	-	-	-	1
4506	2	-	-	2	4
4802	1	-	-	2	3
4804	6	-	-	5	11
4808	1 (CRF)	-	-	2	3
4816	-	-	-	7	7
5004	-	-	1 (miscellaneous pieces)	1	2
Total	16	1	3	20	40

* includes one core rejuvenation flake (CRF)

2 Method

2.1 The flint was recorded using the standard OAU sheets. Some technological information, such as hammer mode and butt type, was recorded in order to aid the dating of the material. Raw materials and general condition of the flint were also noted. Burnt unworked flint was counted and weighed.

3 Raw materials and condition

3.1 The flint is mid brown or grey brown in colour with a thin, worn buff to white cortex. Cortication is generally light although a couple of pieces exhibited much heavier cortication (eg. from Context 4802). Some pieces, notably from the

colluvium, were abraded and worn. Cherty inclusions were noted within the flint but these do not generally seem to have affected the overall flaking qualities of the flint. These raw materials would have been available in the locality. The burnt flint was generally very heavily calcined to a grey or white colour, occasional pieces were tinged red.

4 Description and discussion

4.1 No diagnostic retouched pieces were recovered, and dating therefore relies on technological information. A single opposed platform blade core from Context 4103, a colluvial layer, is indicative of Mesolithic or earlier Neolithic flint reduction strategies. It has not been particularly well reduced but its platforms have been abraded indicating some care and control during the knapping process. Four soft-hammer struck flakes (from Contexts 4102, 4202, 4802 and 4804) and two core rejuvenation flakes (face/edge) may be contemporary with this core. The remaining material has been hard-hammer struck and there is little evidence for platform preparation or maintenance during knapping. Hinge fractures and other accidents of knapping were noted amongst this material. The three retouched pieces recovered (from Contexts 4102 and 5004) have miscellaneous trimming to one or more edges. The two pieces from Context 4102 may have been scrapers originally but later damage makes this identification uncertain. A Bronze Age date for these pieces and the hard-hammer struck flakes would not be out of place. However, the dating must remain tentative due to the lack of diagnostic pieces and the small size of the assemblage.

4.2 Worked flint has been found in the vicinity of Southfleet. A programme of field walking undertaken by OAU as part of the Channel Tunnel Rail Link (CTRL) has recovered flint scatters of mostly Neolithic and Bronze Age date but earlier material was also recovered (URL 1995, 15). Extensive scatters of mostly Bronze Age flintwork were recovered from Northfleet and Springhead (URL 1995, 22-23). A possible earlier element was noted within these collections which may date to the Neolithic or early Bronze Age. Smaller scatters of relatively undiagnostic material were found at Singlewell (URL 1995, 23). A fairly substantial later Bronze Age assemblage was found in association with pottery at Coldharbour Road, Gravesend (Bradley 1995, 398). A small quantity of possible Neolithic to early Bronze Age flintwork was also identified at the site.

APPENDIX 3

The Charred Plant Remains
by Ruth Pelling, Oxford University Museum

1 Introduction

1.1 Six soil samples were taken during the excavation of five ditches and one pit for the retrieval of charred plant remains. A total volume of 20 to 22 litres was processed by bulk water floatation for each sample. Flots were collected onto a 500µm mesh and allowed to air dry slowly before being submitted for evaluation. The purpose of the evaluation was to assess the quality and quantity of material present, the state of preservation and the potential for further sampling.

2 Laboratory Methods

2.1 Each flot was scanned under a binocular microscope at x10 to x20 magnification. Any charred plant remains noted were identified with reference to a modern comparative collection. The state of preservation of the material was also recorded.

3 Results

3.1 Occasional charred plant remains were present in three of the six samples (Table 2). The preservation of the material was very poor. Hulled wheat including *Triticum spelta* (spelt wheat) was identified in sample 4 (4809) on the basis of glume bases. Very poorly preserved indeterminate cereal grains were recovered from samples 2 (4506) and 3 (4816). Weed seeds include *Galium aparine* (goosegrass) and *Chenopodium* sp., both common arable species. Sample 2 contained a large quantity of charcoal including Pomoideous charcoal (hawthorn, apple, pear etc.).

4 Implications

4.1 Spelt wheat is the principle cereal found in Romano-British contexts, hence its occurrence in one of the present samples is not unexpected. The quantities and quality of material so far recovered is such as to suggest there is very little potential for further sampling.

Table 2 Summary of charred plant remains

	Sample	1	2	3	4	5	6
	Trench	3150	3145	3148	3148	3148	3148
	Context	5004	4506	4816	4809	4802	4804
	Feature type	ditch	ditch	ditch	pit	ditch	ditch
	Volume (litres)	20	20	20	22	20	22
Cerealia indet	Indeterminate grain	-	1	2	-	-	-
Triticum spelta	Spelt wheat glume base	-	-	-	1	-	-
Triticum sp.	Hulled wheat glume	-	-	-	3	-	-

	Sample	1	2	3	4	5	6
	Trench	3150	3145	3148	3148	3148	3148
	Context	5004	4506	4816	4809	4802	4804
	Feature type	ditch	ditch	ditch	pit	ditch	ditch
	Volume (litres)	20	20	20	22	20	22
	base						
Chenopodium sp.		-	-	2	1	-	-
Galium aparine	Goosegrass	-	7	-	-	-	-
Pomoideae	Hawthorn, apple, pear etc.	-	+++	-	-	-	-
charcoal							

+++ = frequent