An Archaeological Evaluation at Spring Vale, Dartford, Kent

NGR TQ 539960 174010

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Abstract

An archaeological evaluation was undertaken at Spring Vale, Dartford in advance of a residential development. The evaluation consisted of 4 trenches, with an additional geoarchaeological test pit, to evaluate the potential Palaeolithic deposits, located at the end of each trench. The results of the Palaeolithic test pits can be found in a separate report, Spring Vale, Dartford: Field Evaluation (Palaeolithic) by Francis Wenban-Smith (ref: BLUE: CC-036-A).

The natural gravels were identified between 4mOD and 4.3mOD. The earliest activity identified were two features, a pit and a gully cut into the natural gravels. No finds were recovered from these features but the overlying sequence of alluvium dating to the Late Iron Age to Roman period suggests a contemporary or earlier date. The alluvium was up to 0.7m thick and had occasional finds of a pottery sherd dating from the Late Iron Age to 2nd century AD and Roman CBM fragments. Above the alluvium were post-medieval dark earths and modern rubble and gravels.

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1.0 INTRODUCTION

1.1 Archaeology South-East (ASE), (a division of The Centre for Applied Archaeology at the Institute of Archaeology, University College London) was commissioned by CgMs Consulting Ltd to undertake an archaeological evaluation of land at Spring Vale, Dartford, Kent (centred NGR TQ 539960 174010) to address a condition for a programme of archaeological works attached to the planning consent for the scheme (Fig 1).

1.2 The site has planning permission for the construction of two residential units and the refurbishment of the existing house Ardwick Villa. Dartford Council's planning reference for the proposals is DA07/00806/FUL.

1.3 A Written Scheme of Investigation (WSI) outlining the requirements of the evaluation was prepared by Lorraine Darton of CgMs and was submitted and duly approved by the Kent County Council Archaeological Officer prior to the archaeological works taking place.

1.4 The underlying drift geology of the site is Taplow Terrace Gravels. Alluvium is located to the east of the site within the channel of the River Darwent. The solid geology of the site is Upper Chalk.

1.5 The fieldwork was undertaken by Giles Dawkes from 17th to 19th December 2007. The project was managed by Diccon Hart.

2.0 ARCHAEOLOGICAL BACKGROUND

2.1 The underlying Taplow terrace gravels have potential for Palaeolithic remains. The Crayford Brickearth and gravel sequence located several kilometres to the north-west of the site comprise of a deep fine-grained silt and sand deposit overlying the surface of Taplow Terrace Gravels. In these deposits, abundant undisturbed knapping scatters were preserved in association with faunal remains such as woolly rhinoceros, presumably exploited for food.

2.2 The site lies close to a known site of Iron Age activity at the former West Hill Hospital, where Iron Age urns were discovered and a recent excavation revealed evidence for Mid- to Late Iron Age settlement activity. The Iron Age settlement at West Hill was apparently abandoned by the Roman period, with a subsequent settlement developing at the centre of present-day Dartford.

2.3 A metalled Roman road surface found at Spital Street, approximately 50m to the north of the site, is believed to be part of the earlier alignment of Watling Street and was dated to the 1st century AD. A substantial quantity of pottery was recovered during the excavations at Spital Street.

2.4 The first edition Ordnance Survey map of 1883 shows the site lying within fields and orchards. By 1938, two large buildings, a Coach and Motor Works were built in the north-east and east of the site. By 1962, the buildings were demolished and replaced with a bakery in the eastern half and a depot in the southern third.

3.0 ARCHAEOLOGICAL METHODOLOGY

3.1 Four trial trenches were excavated, positioned on site where space was permissible (Fig 2) between 11th December and 13th December 2007.

3.2 The trial trenches were excavated under constant archaeological supervision. The trenches were dug by a 20 ton 360° tracked excavators fitted with a 2m wide toothless ditching bucket. All trenches were 8m long and 4m wide at the surface and stepped to 6m by 2m at a depth of 1m below ground level. The trenches were a maximum depth of 2.4m below ground level.

3.3 The excavations were taken down to the top of the fine-grained natural sediments overlying the gravel geology or to the surface of any significant archaeological deposit; whichever was higher. Revealed surfaces were manually cleaned in an attempt to identify individual archaeological features. The sections of the trenches were selectively cleaned to observe and record their stratigraphy. The removed spoil was scanned for the presence of any stray, unstratified artefacts.

3.3 All encountered archaeological deposits, features and finds were recorded according to accepted professional standards in accordance with the approved ASE Written Scheme of Investigation using pro-forma context record sheets. Archaeological features and deposits were planned at a scale of 1:50 and a general site plan was kept at 1:250. Deposit colours were verified by visual inspection and not by reference to a Munsell Colour chart. The spoil, from site clearance prior to development, was inspected by the archaeologist to recover any artefacts of archaeological interest.

3.4 A full photographic record of the work was kept (monochrome prints, colour slides and digital), and will form part of the site archive. The archive (including the finds) is presently held at the Archaeology South-East offices at Portslade, and will in due course be offered to Dartford museum.

3.5 Environmental samples were taken where appropriate. Three samples were taken, one from a pit fill and two from the deposits overlying the natural sand and gravel.

4.0 RESULTS

4.1 Trench 1 (Fig 3)

List of recorded contexts

Number	Type	Description	Max. Length	Max. Width	Max. Depth
1/001	Layer	Modern gravel & rubble	Tr.	Tr.	1.08m
1/002	Layer	Post-med dark earth	Tr.	Tr.	1.02m
1/003	Layer	Alluvium	Tr.	Tr.	0.63m
1/004	Fill	Gully Fill	2.25m	1.45m	0.28m
1/005	Cut	Gully	2.25m	1.45m	0.28m
1/006	Deposit	Natural	Tr.	Tr.	N/A

Summary

The natural geology of orange brown sandy gravel (1/006) was encountered at 2.4m below ground level or 4.30m OD.

Cutting the natural was gully [1/006], aligned north-west to south-east with shallow concave sides and a flat base. The fill was firm mottled grey and brown sandy clay (1/005) with frequent gravel. No finds were recovered from the fill.

Sealing the gully was firm orange brown sandy clay alluvium (1/003) with frequent gravel. Overlying (1/003) was soft dark brown clay silt (1/002) with occasional red post-medieval ceramic building material fragments (CBM), oyster shell fragments and moderate gravel inclusions. Overlying (1/002) was modern gravel and red CBM rubble layer (1/001).

4.2 Trench 2 (Fig 4)

List of recorded contexts

Number	Type	Description	Max. Length	Max. Width	Max. Depth
2/001	Layer	Modern gravel & rubble	Tr.	Tr.	1.06m
2/002	Layer	Post-med dark earth	Tr.	Tr.	0.61m
2/003	Layer	Alluvium	Tr.	Tr.	0.19m
2/004	Layer	Alluvium	Tr.	Tr.	0.25m
2/005	Deposit	Natural	Tr.	Tr.	N/A

Summary

The natural geology of banded orange brown gravel and coarse sand (2/005) was encountered at 1.92m below ground level or 4.22m OD.

Overlying the natural was a series of layers. The lowest layer was grey silty sand alluvium (2/004) with frequent gravel and a find of pottery sherd dating from the Late Iron Age to the 2nd century AD.

Above was mottled grey and brown sandy clay alluvium (2/003) with a find of Roman tile CBM fragment. Above (2/003) was dark brown clay silt (2/002) with post-medieval CBM fragments and oyster shell fragments and finds of two small abraded pottery sherds, dating to AD50-100. Above was modern gravel and red CBM rubble layer (2/001).

No cut features were identified.

4.3 Trench 3 (Fig 5)

List of recorded contexts

Number	Type	Description	Max. Length	Max. Width	Max. Depth
3/001	Layer	Modern gravel & rubble	Tr.	Tr.	0.44m
3/002	Layer	Post-med? dark earth	Tr.	Tr.	1.3m
3/003	Layer	Alluvium	Tr.	Tr.	0.39m
3/004	Layer	Alluvium	Tr.	Tr.	0.40m
3/005	Deposit	Natural	Tr.	Tr.	N/A

Summary

The natural geology of orange brown banded gravel and coarse sand (3/005) was encountered at 2.2m below ground level or 4.1m OD.

Overlying the natural was a series of layers. The lowest layer was stiff brown grey clay alluvium (3/004). Above was firm mottled grey and brown sandy clay with frequent gravel (3/003) and dark brown clay silt (3/002). Above (3/002) was modern gravel and red CBM rubble layer (3/001).

No cut features or finds were identified in the trench.

4.4 Trench 4 (Fig 6)

List of recorded contexts

Number	Type	Description	Max. Length	Max. Width	Max. Depth
4/001	Layer	Modern gravel & rubble	Tr.	Tr.	1.2m
4/002	Layer	Post-med dark earth	Tr.	Tr.	0.51m
4/003	Layer	Alluvium	Tr.	Tr.	0.37m
4/004	Layer	Alluvium	Tr.	Tr.	0.21m
4/005	Fill	Pit fill	1.12m	0.9m	0.46m
4/006	Cut	Pit	1.12m	0.9m	0.46m
4/007	Deposit	Natural	Tr.	Tr.	N/A

Summary

The natural geology of orange brown sandy gravel (4/007) was encountered at 2m below ground level or 4.0m OD.

Cutting the natural was subcircular pit [4/006] with steep concave sides and a flat base. The fill was grey with firm brown mottling sandy clay (4/005) with frequent gravel. No finds were recovered from the fill.

Sealing the pit was firm mottled orange and brown sandy silt alluvium (4/004) with a find, possibly intrusive, of a small CBM fragment of medieval or post-medieval date.

Above (4/004) was firm orange brown silty clay alluvium (4/003) with a find of Roman CBM fragment. Above was dark brown silty clay (4/002) with occasional red post-medieval CBM fragments.

Above was modern gravel and red CBM rubble layer (4/001).

5.0 THE FINDS by Anna Doherty

Context	Pottery	Weight(g)	CBM	Weight(g)
2/002	2	2	1	88
2/003			1	132
2/004	1	6		
4/003			1	8
4/004			1	4

Table 1: Finds quantification

Spot dates

2/002 AD 50-100
2/003 Roman
2/004 Late Iron Age-Early 2nd century AD
4/003 Roman
4/004 Medieval or Post-Med

Three sherds of pottery, weighing 8g were recovered from the evaluation trenches. In context [2/002] there were two small abraded oxidised sherds. One is in the 1st century white-slipped flagon fabric produced at Hoo Island. The other is a tiny fragment with no surfaces surviving, and it is difficult to determine whether it is pottery or CBM. Context [2/004] contains a sherd in a distinctive fabric with moderate large, iron-stained quartz of between 0.3-0.6mm, moderate red iron-rich inclusions and sparse fine shell of between 1-2mm. The sherd has prominent rilling indicating wheel-manufacture. Sandy wares with shell are often well represented in Late Iron Age to early Roman assemblages from West Kent and may have been in use into the early 2nd century (Pollard 1988, 40).

Three pieces of Roman CBM, weighing 228g were also recovered. Two from contexts [2/002] and [2/003] are tile fragments but there are no diagnostic form elements present. Another small CBM fragment from context [4/004] is probably medieval or post-medieval. No further work is required on the finds.

6.0 THE ENVIRONMENTAL SAMPLES by Dr. Lucy Allott

Three bulk samples were taken from contexts [2/003], [2/004] and [4/005] to establish evidence for environmental remains and to recover material to help date the deposits. The samples were bucket floated, the flots and residues were retained on 250µm and 500µm meshes respectively and were air dried prior to sorting and quantifying. The flots were sorted under a stereozoom microscope at x7-45 magnifications.

The samples contained uncharred vegetation and seeds suggesting a small amount of disturbance. Small quantities of wood charcoal, occasional charred crop seeds and land snail shells were also present. The crop seeds have been classed as indeterminate as they do not retain morphological characters suitable for identification.

A broken flint flake, small charcoal fragments, a single tooth fragment (cf. horse – Driver pers. comm.), an iron tack and several small pieces of iron rich material (possibly industrial debris) were recovered from the residues. Unfortunately none of these can be used to date the assemblage.

Environmental and archaeological remains were scarce within the samples and they do not hold any potential for further work.

Sample Number	Context	Context / deposit type	Sample Volume litres	Flot Volume ml	Flot weight (g)	Flot description (prior to sorting)	Charcoal <4mm	Charcoal >4mm	Indeterminate Charred crop seeds	Land Snail shells
1001	**4/005**	pit	40	<5	4	sediment rich	**		*	***
1002	**2/003**	alluvium layer (upper)	10	10	4	uncharred vegetation including seeds *Sambucus nigra*	**	*	*	
1003	**2/004**	alluvium layer (lower)	10	<1	<1	uncharred vegetation including seeds *Sambucus nigra*	*			

Table – Flot quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250)

Sample Number	Context Number	Molluscs	Bone/teeth	Charcoal <4mm	Charcoal >4mm	Lithics	Iron rich (poss industrial debris)	Fe
1001	**4/005**	1/3g						
1002	**2/003**		1/5g	**/2		*/9	**/17	*/3
1003	**2/004**							

Table – Residue quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250) and weight in grams

7.0 DISCUSSION

This programme of trenching has demonstrated the presence of archaeological remains in the area of development. The results of this investigation do permit some useful, if general observations to be made regarding the nature and date of past activity on the site and the extent to which the fieldwork can be seen to have fulfilled the original aims of investigation as set out in the *Written Scheme of Investigation*.

A similar stratigraphic sequence was recorded in each of the four trenches. The results can be broadly phased into four periods.

7.1 *Phase 1: Natural Gravels*

The natural sandy gravel was located at a height of between 4.30m OD and 4m OD. These deposits were evaluated by Francis Wenban-Smith for Palaeolithic remains. For the results see *Spring Vale, Dartford: Field Evaluation (Palaeolithic), ref: BLUE: CC-036-A.*

7.2 *Phase 2: ?Prehistoric/Roman Pit and Gully*

Cut into this gravel were the two features representing the earliest activity identified on site: gully [1/005] and pit [4/006]. No finds or datable material was recovered from either of these features, or from the deposits directly overlying the fills. However, the Phase 3 alluvium (2/004) found in Trench 2 directly overlay the natural gravels and contained a sherd pottery dating form the Late Iron Age to the 2nd century AD and it is reasonable to assume that these features were at least contemporary or even earlier than this date.

Features of Iron Age or Roman date on the site are not unexpected due to the close proximity of the Iron Age site at the former West Hill Hospital and of the Roman road at Spital Street.

7.3 *Phase 3: Late Iron Age/ Roman Alluvium*

Sealing the natural gravels and features was a series of alluvial layers identified in all four trenches: (1/003); (2/004); (2/003); (3/004); (4/004); (4/003). The only secure dating from these layers was in Trench 2: layer (2/004) contained a sherd pottery dating form the Late Iron Age to the 2nd century AD and above (2/003) contained Roman tile CBM fragment.

The alluvium was up to 0.7m thick and was generally grey in colour but in some instances had weathered to an orange brown.

7.4 *Phase 4: Post-Medieval Dark Earth*

Above the Phase 3 alluvial layers were dark brown silt clay layers with finds of post-medieval CBM fragments: (1/002); (2/002); (3/002); (4/002). These 'dark earth' soils almost certainly relate to the when the site was open fields and orchards throughout the post-medieval period.

7.5 *Phase 5: Modern Made Ground*

The uppermost layers of (1/001), (2/001), (3/001) and (4/001) consisted of modern rubble and gravel, and probably relate to the recent demolition of the former buildings on the site.

REFERENCES

Darton, Lorraine, 2007, *Specification for an Archaeological Evaluation at Spring Vale, Dartford*, CgMs

Pollard, R.J. 1988. *The Roman Pottery of Kent*. Kent Archaeological Society: Maidstone

ACKNOWLEDGEMENTS

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APPENDIX 1 Kent County Council SMR summary form

Site Name: Spring Vale, Dartford	
Site Address: Spring Vale, Dartford, Kent	
Summary: Archaeological Evaluation of 4 trenches, with a geoarchaeological test pit located at the end of each trench was undertaken at Spring Vale, Dartford in advance of a residential development.	
District/Unitary: Dartford	**Parish:** Dartford
Period(s): Late Iron Age, Roman, Post-medieval	
NGR (centre of site : 8 figures): TQ 539960 174010 **(NB if large or linear site give multiple NGRs)**	
Type of archaeological work (delete) Evaluation: Geoarchaeological investigation	
Date of Recording: 11/12/2008 to 14/12/2008	
Unit undertaking recording: Archaeology South-East	
Geology: Taplow Gravels	
Title and author of accompanying report: An Archaeological Evaluation at Spring Vale, Dartford, Kent by Giles Dawkes	
Summary of fieldwork results (begin with earliest period first, add NGRs where appropriate) No Palaeolithic finds were recovered from the site. The natural gravels were identified between 4mOD and 4.3mOD. The earliest activity identified were two features, a pit and a gully cut into the natural gravels. No finds were recovered from these features but the overlying sequence of alluvium dating to the Late Iron Age to Roman period suggests a contemporary or earlier date. The alluvium was up to 0.7m thick and had occasional finds of pottery and CBM fragments. Above the alluvium were post-medieval dark earths and modern rubble and gravels. **(cont on attached sheet)**	
Location of archive/finds: Presently Archaeology South-East, Portslade, East Sussex but ultimately Dartford Museum	
Contact at Unit: Giles Dawkes	**Date:** 10/01/2008