Archaeology South-East

ASE

An Archaeological Watching Brief at Hammer Hill Bridge, Stapleford, West Sussex

Planning Ref: N/A

NGR: 528173 127410
(TQ 28173 27410)

Project No: 4841
Site Code: HBS11

ASE Report No. 2011050
OASIS id: 95883

Sarah Porteus
With contributions by
Luke Barber, Karine Le Hégarat and Dylan Hopkinson

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Abstract

Archaeology South-East was commissioned by Four Delivery Ltd to undertake an archaeological watching brief during groundworks at the Staplefield Water Treatment Works. The groundwork excavations for the installation of a service trench and a compound area were monitored.

Residual worked flint of Mesolithic or early Neolithic date was recovered from the plough soil and an iron-working deposit was identified at the eastern edge of the site relating to Holmstead Forge. The excavations indicate that the forge extended across both banks of the river.

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1.0 INTRODUCTION

1.1 Site Background

1.1.1 Archaeology South-East were commissioned by Four Delivery Ltd to undertake a watching brief during ground works at the Hammer Hill Water Treatment plant (the site NGR 528173 127410, Fig.1).

1.2 Geology and Topography

1.2.1 The site occupies a relatively flat area of cultivated farmland alongside a stream area with gentle slope upwards to the north.

1.2.2 The underlying geology is Wealden Clay.

1.3 Planning Background

1.3.1 The works are part of ongoing improvements to the water treatment plant at Hammer Hill Bridge.

1.4 Aims and Objectives

1.4.1 The aim of the work was to ensure that any finds or features of archaeological interest to be impacted upon by the works were recorded to appropriate standards.

1.5 Scope of Report

1.5.1 This report represents the findings of the archaeological watching brief undertaken by Sarah Porteus (archaeologist) between the 7th and 10th of March 2011. The project was managed by Andy Leonard (fieldwork) and Jim Stevenson (post-excavation).

2.0 ARCHAEOLOGICAL BACKGROUND

2.1 An Historic Environment Record (WSCC HER) search of the area was undertaken upon which the archaeological background is based. The search revealed eight sites of archaeological interest within the 1km radius study area (Table 1) and an additional eight listed buildings including the church of 13th century origin and a number of buildings of later medieval and post-medieval date.

SMR number	Site name	Monument Type	Date
2787 – MWS89	Parkscape, Holmstead Place	Park	Post-medieval
4421 – MWS939	Holmstead Forge	Iron working Site, Pond Bay	c.1520-1664 Late medieval, early post – medieval
6204 – MWS4864	Brickfield on Tyes Farm	Brickworks	c.1843, post-medieval
6579 – MWS5360	Pill box	Pill box	1939-1945
6580 – MWS5361	Staplefield Anti-tank blocks	Anti-tank blocks	1939-1945
6578 – MWS5468	Staplefield pill box	Pill box	1939-1945
7102 – MWS7155	Anti-aircraft – The Kentish Gun Belt – Tyes Place	Anti-aircraft Battery	1939-1945
7532 – MWS7606	Pill box	Pill Box	1939-1945

Table 1: HER data within a 1km radius of the site

2.2 The oldest entry within the area is Holmstead Forge recorded through documentary evidence as having existed at the western edge of the site close to the present Hammer Hill Bridge (SMR number 4421-MWS939). The forge is thought to have belonged to the Chaloners in AD1520 , working in 1656 and ruined by 1664 (WSCC HER). Note is also made of works by the County Council in 1928 digging away the 'U' shaped pond bay to the west of the road, the location of the present works. The site is listed as an archaeologically sensitive area and possible SHINE (Site of Historic Interest Natural England) candidate.

2.3 Within the area in the post-medieval period was a parkscape (HER 2787 – MWS89) with the remainder of entries being of Second World War date.

3.0 ARCHAEOLOGICAL METHODOLOGY

3.1 All intrusive groundworks for the installation of a service trench and compound area (Fig. 2) were monitored by an appropriately qualified archaeologist.

3.2 All encountered deposits, features and finds were recorded according to accepted professional standards in accordance with West Sussex County Council standard conditions (WSCC 2008) using Archaeology South-East context record sheets. Deposit colours were verified by visual inspection and not by reference to a Munsell Colour chart.

3.3 The spoil from the excavations was inspected to recover any artefacts or ecofacts of archaeological interest. All finds recovered were labelled by context and retained for archive.

3.4 A full photographic record of the work was kept *(digital images)* and will form part of the site archive. The archive is presently held at the Archaeology South-East offices at Portslade and will be offered to a suitable local museum.

Number of Contexts	6
No. of files/paper record	1
Plan and sections sheets	0
Bulk Samples	0
Photographs	1 digital CD
Bulk finds	1 small box
Registered finds	0
Environmental flots/residue	0

Table 2: Quantification of site archive

4.0 RESULTS

4.1 List of recorded contexts

Number	Type	Description	Max. Length	Max. Width	Deposit Thickness	Height m.AOD
001	Dep	Topsoil	N/A	N/A	0.10	50.00
002	Dep	Subsoil	N/A	N/A	0.20-0.30	49.90
003	Dep	Stream dredging deposit	5.00	N/A	0.30	49.90
004	Nat	Wealden clay	N/A	N/A	N/A	49.40
005	Dep	Iron working deposit	15.00	N/A	0.20	49.60
006	Dep	Redeposited natural clay	30.00m	N/A	0.10	49.90

4.2 Groundworks in the western half of the site revealed the natural substrate Wealden Clay [004] with a seam of iron rich material at the centre of the site, overlain by a light yellowish brown clayey silt subsoil [002] of 0.23 to 0.30m thickness containing occasional iron stone and residual worked flint. This was in turn overlain by a loose brown fine clayey silt plough soil [001] of 0.10m thickness.

4.3 Groundworks in the eastern half of the site revealed more variable stratigraphy. Here the natural substrate [004] was overlain by a 0.30m thick deposit of subsoil [002], in turn overlain by a patchy layer (c. 30m in length) of redeposited natural yellow clay [006] in the central part of the field. This deposit was in turn overlain by 0.20m thick topsoil [001]. The origins of the clay [006] are uncertain, but it may derive from dredging of the stream or from the levelling (by ploughing) of an earthwork depicted on various historic maps (including the 1875 pre- WWII 1:2500 Ordnance Survey map).

4.4 At the far eastern end of the site the natural substrate [004] was directly overlain by a compact c. 0.20m thick deposit of iron-working waste [005] with slag and charcoal extending for c. 15m from the eastern edge of the field. The fact that the iron-working deposit [005] immediately overlay the natural substrate [004] here suggests that the area may have been stripped or quarried prior to deposition. At its western edge this deposit [005] was seen to rise up and then taper out below the subsoil [002] and was overlain by plough soil [001]. At its eastern edge, the plough soil [001] was overlain by dredged material [003] from the neighbouring field drain. The extent of the iron-working deposit was suggested by dark staining in the surrounding plough soil (Fig. 2).

5.0 THE FINDS

5.1 A small assemblage of worked flint and metalworking slag was recovered during the watching brief (Table 3).

Context	Flint	Wt (g)	Slag	Wt (g)
2	3	21		
5			5	2652

Table 3: Quantification of finds

5.2 The Flintwork by Karine Le Hégarat

5.2.1 Three struck flints weighing 21g were recovered from subsoil [002] during the watching brief. The small assemblage consists of pieces of debitage. Two artefacts are manufactured from fine grained brown flint. They are in a relatively poor condition and both pieces are broken and display post-depositional edge damage. They include the proximal end of a blade, which might be a product of blade-based industry (Mesolithic or Early Neolithic date) and a flake fragment. The latter piece exhibits multi-directional flake scar removals on the dorsal face, which might indicate an axe thinning flake (Neolithic period). The outer surface of the third piece is buff and slightly rolled off. The artefact is entirely re-corticated pale grey to white and displays some iron mould (rust marks). It consists of a tertiary flake and is otherwise undiagnostic.

5.3 The Metallurgical Remains by Luke Barber

5.3.1 Five pieces of slag were recovered from the site, all deriving from context [005]. Two conjoining pieces (1337g) from a flat 25mm thick slab of iron smithing slag are present. The pieces, which are notably magnetic, may well represent accumulation on the floor of a forge. A more weathered piece of very dense (and magnetic) smithing slag with adhering charcoal lumps is also present. The piece clearly still contains a significant quantity of iron. The last two pieces consist of fuel ash slag with adhering grey sandy clay hearth lining and charcoal lumps. These pieces are very slightly magnetic in places and are almost certainly from iron smithing. All in all the assemblage is probably the result of secondary, rather than primary, smithing although a larger sample would be needed to be certain.

6.0 DISCUSSION

6.1 The iron-working deposit recorded at the eastern edge of the site appears to be related to the system of earthworks on the other, southern side of the stream which are noted as 'old forge' on historic maps (including the 1875 pre- WWII 1:2500 Ordnance Survey map). The HER records the site as Holmstead Forge of late-medieval and early post-medieval date. A seam of iron rich material possibly 'shrave' was observed at a depth of 0.50m below surface level. The conditions for the occurrence of 'shrave' are poorly drained soils where there is alternate waterlogging and drying out (Cleere and Crossley 1995 p14), given the proximity of the river these conditions are likely to have been met at the site. No sample of the material was obtained though a photograph of the deposit was taken (Fig.2). Though relatively poor quality for use as an ore this type of iron may have been used in medieval bloomery forges (*ibid*). The forge is recorded in the later medieval period (SMR record 4421-MWS939), it may be that the post-medieval forge replaced an earlier bloomery forge which could have used the naturally occurring iron source and may be a reason for the location of the forge at the site. It was also noted that a number of trees on the south bank of the stream had been coppiced, often associated with charcoal production for iron working. The form of the slag suggests the area may in part have formed a smithing floor. The level of the iron-working deposit uncovered is similar to that of the stream and the deposit may relate to the location of the 'U' shaped pond noted as having been disturbed in 1928. The extent of darkened plough soil suggests the associated iron-working deposits extend further north than the monitored area (Fig.1).

6.2 Residual worked flint recovered from the subsoil is indicative of Mesolithic and Neolithic activity in the area.

7.0 CONCLUSIONS

7.1 The archaeological watching brief successfully identified deposits relating to a late-medieval and early post-medieval iron-working forge known to exist to the south of the river bounding the site to the south. A background scatter of Mesolithic or early Neolithic flint was also identified.

References

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English Heritage, 1991. *The Management of Archaeological Projects.* 2nd edition. London: English Heritage

IFA 2000. The Institute of Field Archaeologists' *Code of Conduct*

IFA 2001. The Institute of Field Archaeologists' *Standards and Guidance* documents

WSCC 2008 *Recommended Standard Archaeological Conditions, version b2*

WSCC HER

ACKNOWLEDGEMENTS

Archaeology South-East would like to thank 4Delivery Ltd for commissioning the work and Mark Taylor of West Sussex County Council for his assistance during the project.

SMR Summary Form

Site Code	HBS11					
Identification Name and Address	Hammerhill Bridge, Staplefield					
County, District &/or Borough	West Sussex					
OS Grid Refs.	528173 127410					
Geology	Wealden Clay					
Arch. South-East Project Number	4841					
Type of Fieldwork	Eval.	Excav.	Watching Brief √	Standing Structure	Survey	Other
Type of Site	Green Field √	Shallow Urban	Deep Urban	Other		
Dates of Fieldwork	Eval.	Excav.	WB. 7-10/3/11	Other		
Sponsor/Client	4Delivery					
Project Manager	Andy Leonard					
Project Supervisor	Sarah Porteus					
Period Summary	Palaeo.	Meso. √	Neo.	BA	IA	RB
	AS	MED √	PM	Other Modern		

100 Word Summary

Archaeology South-East was commissioned by Four Delivery Ltd to undertake an archaeological watching brief during groundworks at the Staplefield Water Treatment Works. The groundwork excavations for the installation of a service trench and a compound area were monitored.

Residual worked flint of Mesolithic or early Neolithic date was recovered from the plough soil and an iron-working deposit was identified at the eastern edge of the site relating to Holmstead Forge. The excavations indicate that the forge extended across both banks of the river.

OASIS Form

OASIS ID: archaeol6-95883

Project details	
Project name	An Archaeological Watching Brief at Hammer Hill Bridge, Staplefield, West Sussex
Short description of the project	Archaeology South-East was commissioned by Four Delivery Ltd to undertake an archaeological watching brief during groundworks at the Staplefield Water Treatment Works. The groundwork excavations for the installation of a service trench and a compound area were monitored. Residual worked flint of Mesolithic or early Neolithic date was recovered from the plough soil and an iron-working deposit was identified at the eastern edge of the site relating to Holmstead Forge. The excavations indicate that the forge extended across both banks of the river.
Project dates	Start: 07-03-2011 End: 10-03-2011
Previous/future work	No / No
Any associated project reference codes	HBS11 - Sitecode
Type of project	Recording project
Monument type	FORGE Medieval
Significant Finds	SLAG Medieval
Significant Finds	DEBITAGE Mesolithic
Significant Finds	DEBITAGE Early Neolithic
Investigation type	'Watching Brief'
Prompt	Planning condition
Project location	
Country	England
Site location	WEST SUSSEX MID SUSSEX HAYWARDS HEATH Hammer hill bridge
Postcode	RH17 6ES
Study area	1.00 Kilometres
Site coordinates	TQ 2817 2741 51.0311935681 -0.171958786249 51 01 52 N 000 10 19 W Point
Project creators	
Name of Organisation	Archaeology South-East
Project brief originator	Archaeology South-East
Project design originator	Archaeology South-East
Project	Andy Leonard

director/manager	
Project supervisor	Sarah Porteus
Type of sponsor/funding body	4D Ltd
Project archives	
Physical Archive recipient	Local Museum
Physical Contents	'Ceramics','Metal'
Digital Archive recipient	Local Museum
Digital Contents	'none'
Digital Media available	'Images raster / digital photography'
Paper Archive recipient	Local Museum
Paper Contents	'none'
Paper Media available	'Context sheet','Report'
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	An archaeological watching brief at Hammer Hill Bridge, Staplefield, West Sussex
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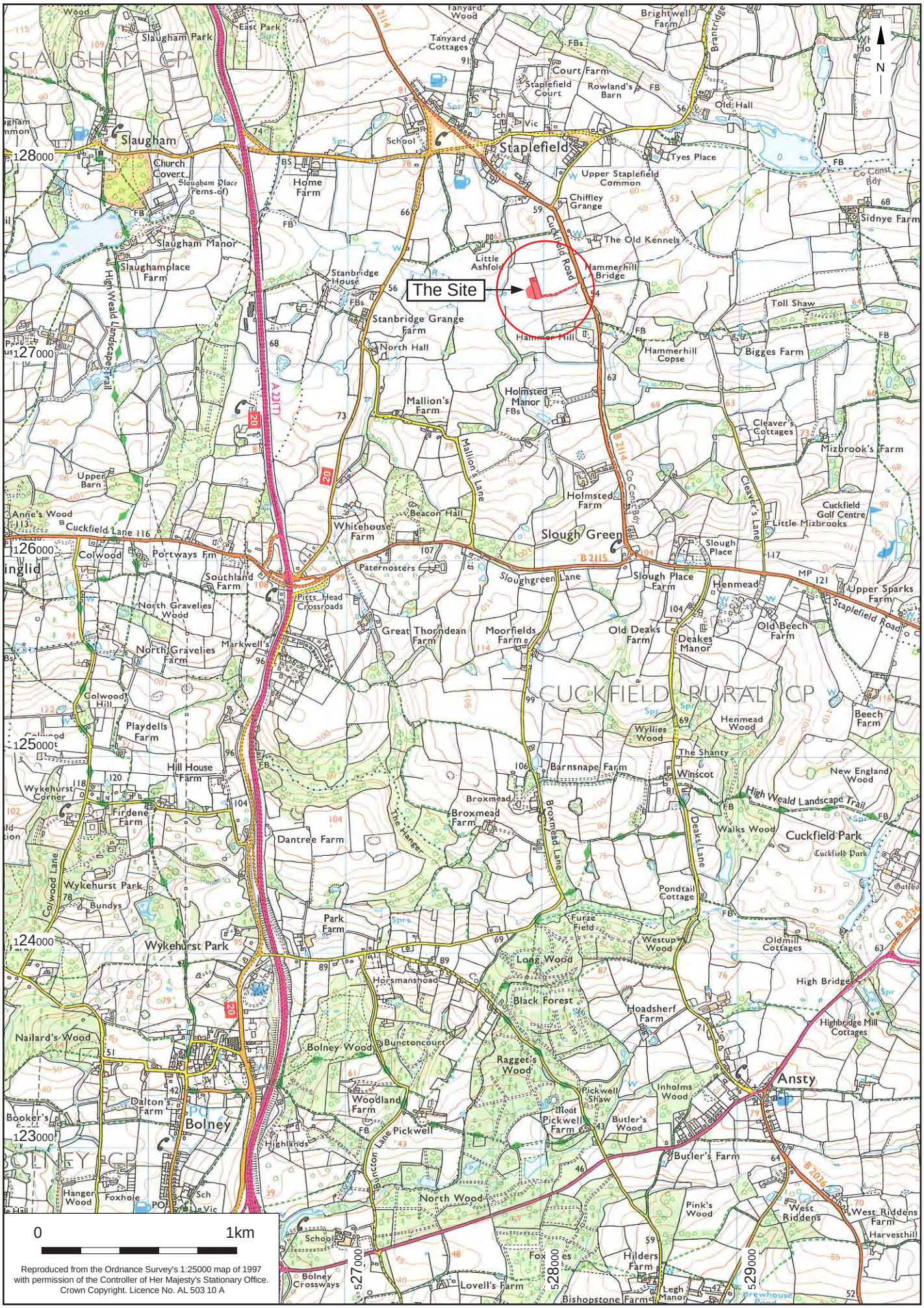
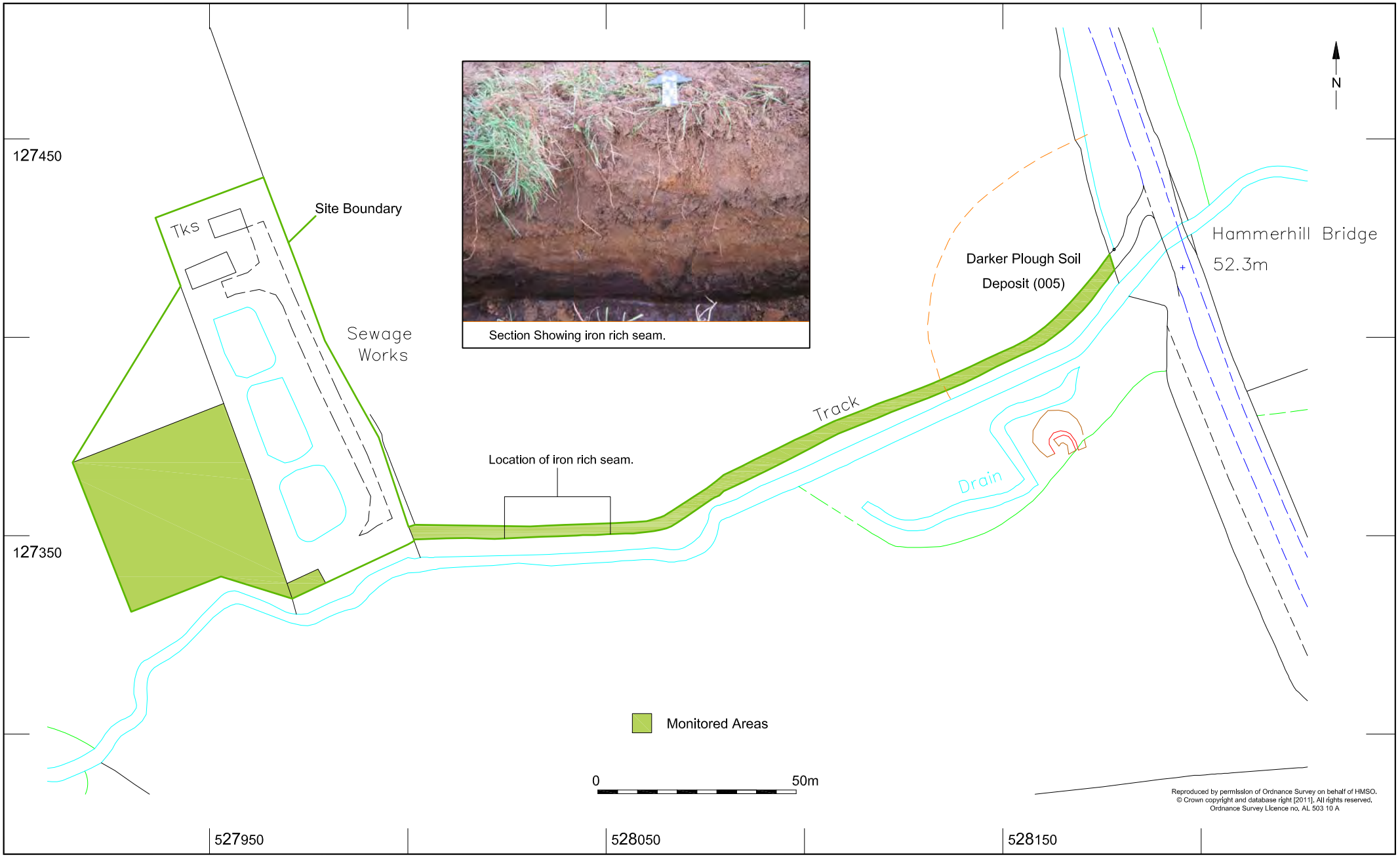


© **Archaeology South-East**		Hammerhill Bridge, Staplefield	Fig. 1
Project Ref: 4841	March 2011	Site location	
Report Ref: 2011050	Drawn by: DJH		



© Archaeology South-East		Hammerhill Bridge, Staplefield	Fig.2
Project Ref: 4841	March 2011	Monitored Areas	
Report Ref: 2011050	Drawn by: DJH		

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