

Report 2013/1266



nps archaeology

**Archaeological Trial Trench Evaluation at
Land off St Michael's Way, Wenhaston with Mells,
Suffolk**

WMH 038



Prepared for
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Location:	Land off St Michael's Way, Wenhaston, Suffolk
District:	Suffolk Coastal
Planning ref.:	Pre-application
Grid Ref.:	TM 4284 7533
HER No.:	WMH 038
OASIS Ref.:	norfolka1-151869
Client:	Hopkins Homes Ltd
Dates of Fieldwork:	29 January – 8 February 2013

Summary

Archaeological trial trench evaluation was conducted by NPS Archaeology on behalf of Hopkins Homes in January and February 2013 ahead of an application for planning permission to develop the site for residential housing.

A desk-based assessment was undertaken in May 2012 which concluded that the site appears to lie within an area of high archaeological potential. A geophysical (magnetometer) survey of the site was conducted in November 2012 and revealed numerous anomalies across the site, interpreted as buried archaeological remains.

Based on results obtained from the desk-based assessment and the geophysical results, ten trial trenches were excavated which targeted areas of geophysical features along with areas of unknown archaeological potential. Of those trenches that were excavated, eight produced evidence of archaeological features and deposits. Over twenty archaeological features were excavated mainly comprising of ditches and pits, also recorded was a formation of deposits known as 'buried soil' or 'dark earth'.

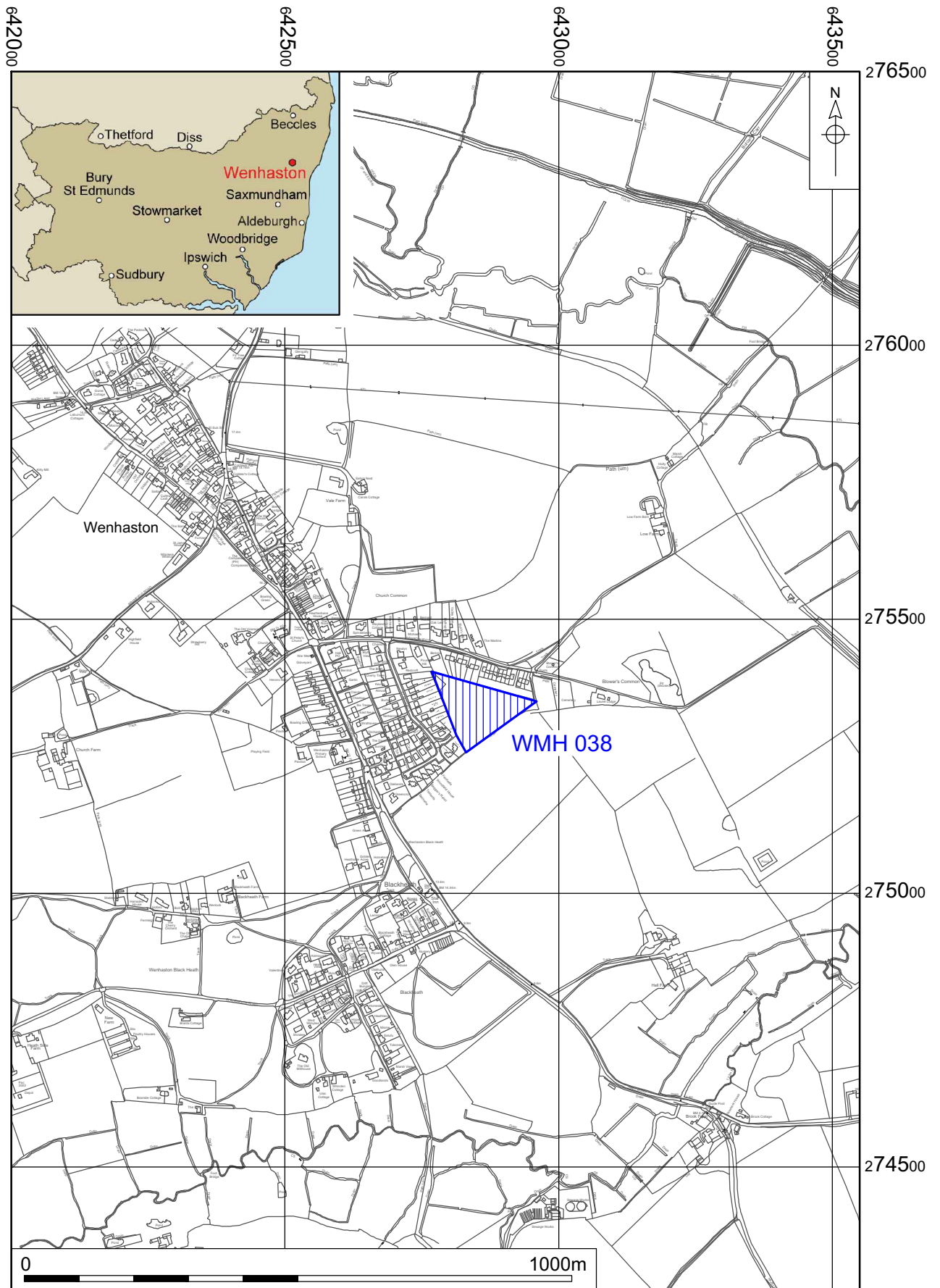
The earliest find recovered during the evaluation was a flint blade core from an unstratified deposit. This type of artefact is characteristic of later Mesolithic to earlier Neolithic blade production in East Anglia.

The majority of archaeological features and deposits have been attributed to the Romano-British period with a number of artefacts indicating predominately 2nd-century AD Roman occupation. With the exception of a few unstratified finds there was little evidence to suggest that occupation of the site continued beyond the 2nd or 3rd centuries AD. The presence of buried soils or dark earth may be evidence for deliberate dumping episodes and prolonged periods of settlement and abandonment or may be a result of the site's marginal location in relation to a more preferable location.

1.0 INTRODUCTION

A proposal to construct new houses and access road on land off St Michael's Way in the Suffolk village of Wenhaston (Fig. 1) required a programme of archaeological works to assess the potential effects of the proposals on the archaeological resource.

This work was undertaken to fulfil a planning condition set by Suffolk County Council Archaeological Services Conservation Team (Jess Tipper, 12 December 2012). The work was conducted in accordance with a Project Design and Method



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Figure 1. Site location. Scale 1:10,000

Statement prepared by NPS Archaeology (NPS/01-04-13-2-1266). This work was funded and commissioned by Hopkins Homes Ltd.

This programme of work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, following the guidelines set out in *National Planning Policy Framework* (Department for Communities and Local Government 2012). The results will enable decisions to be made by the Local Planning Authority about the treatment of any archaeological remains found.

The site archive is currently held by NPS Archaeology and on completion of the project will be deposited with the Suffolk Historic Environmental Record following the relevant policies on archiving standards.

2.0 GEOLOGY AND TOPOGRAPHY

The solid geology of the area is comprised of Crag Group - Sand. A sedimentary bedrock formed up to five million years ago in the Quaternary and Neogene Periods in a local environment previously dominated by shallow seas. The solid geology is overlain by superficial deposits of Lowestoft Formation – Sand and Gravel formed up to two million years ago in the Quaternary Period in a local environment previously dominated by Ice Age conditions (<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>).

The triangular area proposed for development lies south of the River Blyth on an interfluvium between the River Blyth and a shallow valley to the south-east. It is located to the east of Wenhaston village and covers an area of approximately 1.5 hectares, comprising one field. The proposed development area is bounded by St Michael's Way to the west and Narrow Way to the north (Fig. 1).

The western and central parts of the site (Trenches 3-9) are located on a north-south ridge at an elevation of 18.50m OD to 20.60m OD. The land slopes to the north-east and east (Trenches 1, 2 and 10) with the lowest point being the eastern end of Trench 1 at 15.62m OD.

3.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The archaeological and historical background to the site has been recently appraised in the Desk-Based Assessment prepared in advance of this stage of works (Sillwood 2012) and a summary of that evidence is presented below.

There are no known sites located within the boundary of the proposed development site.

Prehistoric Period (500,000 BC–AD 42)

The prehistoric period in the area is represented by evidence from the Neolithic through to the Iron Age, with no earlier material. Two probable Bronze Age barrows survive as ring ditches very close to the proposed development site itself (to the south-west). The topography of the area where the ring ditches are located lends itself to other instances of this type of funerary monument being present.

Although Roman activity in the area is a main focus it is possible that it had developed from a Late Iron Age settlement, although evidence to support this has not been recovered to date. The evidence for Iron Age activity is mainly in the form

of finds, although it is worth noting that there is a reasonable amount of coinage, possibly implying some kind of trading in the area at that time.

Roman Period (AD 41–AD 410)

A small town is believed to have been established in the area during the Roman period. Evidence recovered from excavations in the area has revealed buildings, boundary ditches and a timber palisade surrounding the settlement. Military associations cannot be ruled out, although this possibly takes the form of an army veteran (or veterans) settling in the area after retirement from the Roman army. The finds from the area are numerous, and the presence of other remains of Roman date on the western side of the village means that the Roman settlement is more extensive than first thought, and probably lies under what is now modern Wenhaston.

Anglo- Saxon Period (410–1066)

The Anglo-Saxon period, i.e. after the abandonment of the Roman town appears in the record mainly through the evidence of artefacts

It is believed that there is an Early Saxon cemetery in the vicinity of the development site, probably focussed to the south, where most of the finds have come from. No direct remains of this date have been found in the area.

During the Middle Saxon period there may also have been settlement at Wenhaston, given the likely presence of at least one domestic pit in excavations to the north of Narrow Way in 2009, and the possibility that some of the features identified there as Roman may in fact be Middle Saxon.

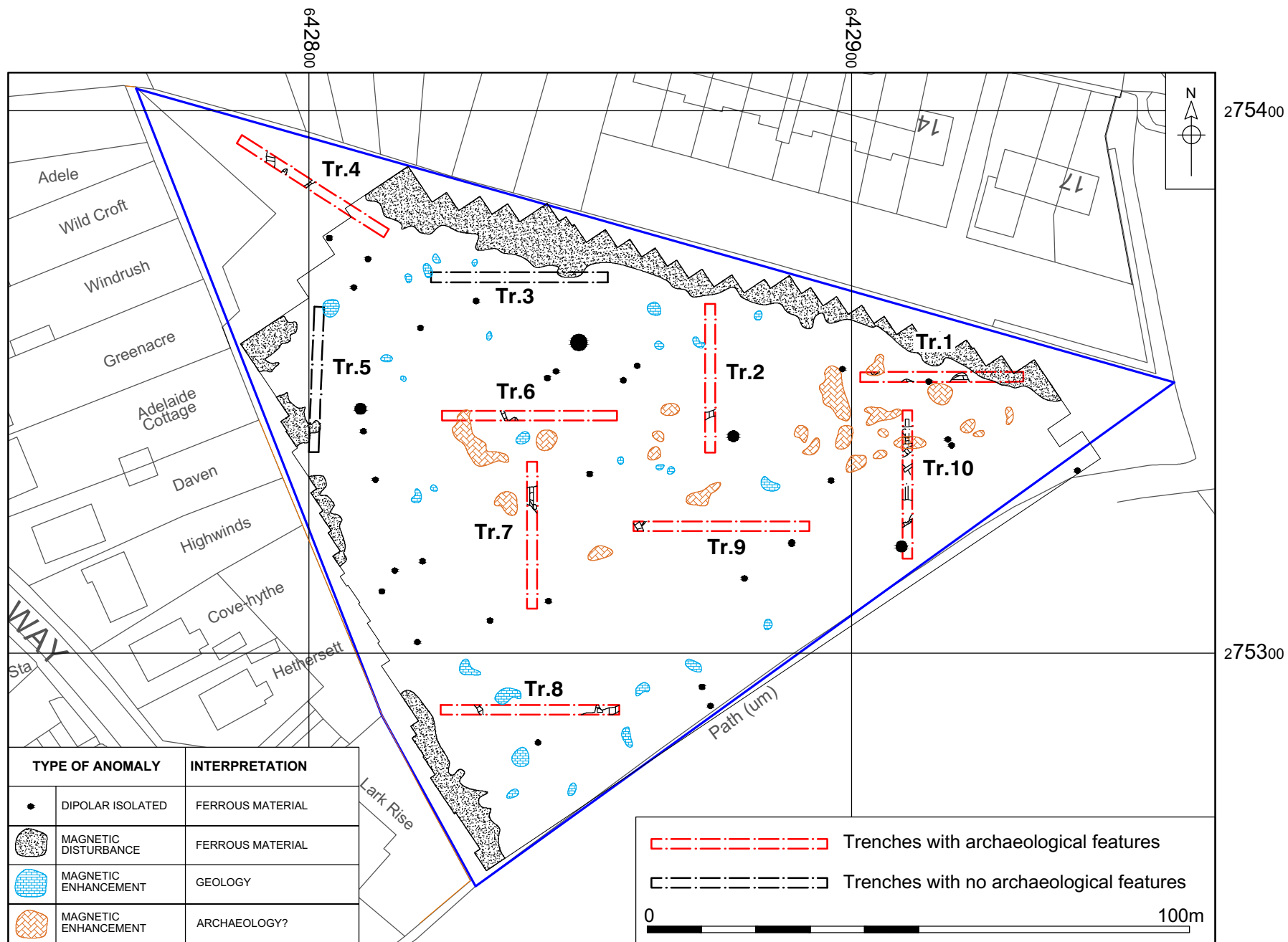
That there was settlement in Wenhaston in the Late Saxon period is certain, the church has possible Saxon origins and historical sources show that there was a presence in the area at that time. Wenhaston may have been the lesser of the two hamlets of Mells and Wenhaston as indicated in the Domesday Book. The presence of two commons (and a third in the hamlet of Blackheath) is of interest, along with the fact that Middle Saxon evidence in the area lies close to these commons.

Medieval to Post-medieval Period (1066–1900)

The proposed development is located on the edge of two commons, and would have provided an ideal area for settlement from the medieval through to the post-medieval periods. No buildings are depicted in the area on the earliest available mapping, although this does not exclude earlier structures which had disappeared by the time of the 1783 map. The site is close enough to the church and the commons to be possibly associated with two settlement centres.

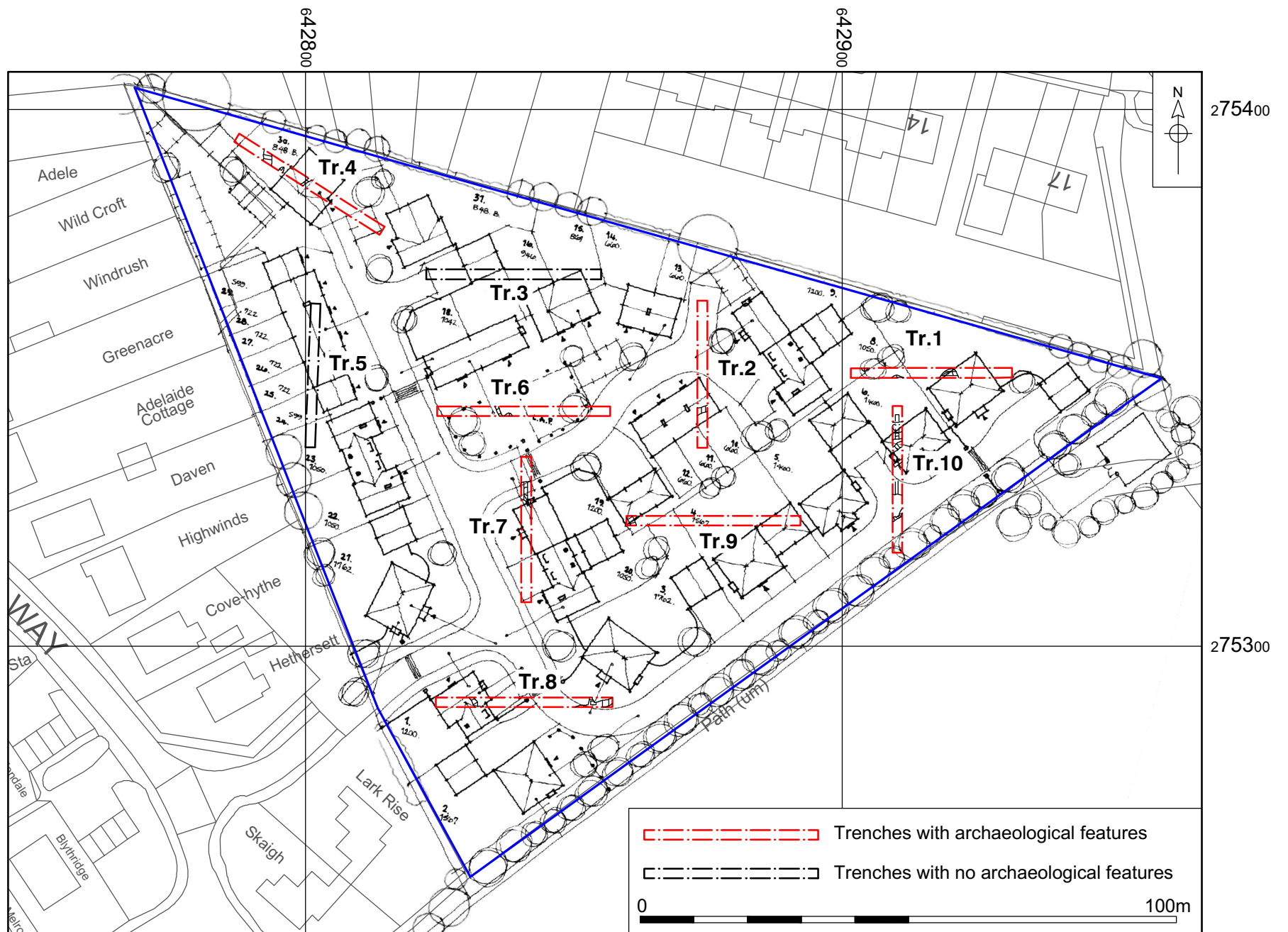
Recent work

Excavations nearby have demonstrated that archaeological evidence survives in the area, although it is relatively shallow at around 50cm below the surface and may indicate that features, if present, have been truncated.



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Figure 2. Location of trenches with geophysics results. Scale 1:1000



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Figure 3. Location of trenches with development plan. Scale 1:1000

4.0 METHODOLOGY

The objective of this evaluation was to determine as far as reasonably possible the presence or absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits within the development area.

A 3.5% sample (525.00m², 1.5ha) of the development area was evaluated with the majority of the trenches targeted on magnetic anomalies detected during the geophysical survey (Fig. 2). The 3.5% sample area was investigated by excavating an array of 10 trenches each measuring 30m by 1.80m. The field was fallow at the time of the evaluation.

Machine excavation was carried out with a hydraulic 360° excavator equipped with a 1.80m toothless ditching bucket and operated under constant archaeological supervision. The topsoil and subsoil were kept separate during the machining excavations and reinstated in the original soil formation.

Spoil, exposed surfaces and features were scanned with a metal-detector. All metal-detected and hand-collected finds other than those which were obviously modern, were retained for inspection.

A total of twelve environmental samples were taken. The samples came from deposits ([3], [12], [13], [15], [21], [28], [30], [34], [40], [44], [46] and [51]).

All archaeological features and deposits were recorded using NPS Archaeology pro forma. Trench locations, plans and sections were recorded at appropriate scales. Colour, monochrome and digital photographs were taken of all relevant features and deposits where appropriate.


All trenches and temporary benchmarks were located using a Leica GPS9000 surveying system.

Site access was good. Weather conditions were varied with high winds, rain and snow and ice. A high water table was encountered in Trenches 7 and 9 making the excavations of ditch [27] (Trench 7) and ditches [51] and [53] (Trench 9) difficult.

5.0 RESULTS

Tabulated information for Trenches 1 to 10 is presented below in trench number order.

A photograph illustrating each trench is included in the individual trench tables.

Trench 1				
 <p style="text-align: center;">Trench 1, looking east</p>		Figs 2-5, Plate 1		
		Location		
		Orientation	East - west	
		East	642934.246	275350.921
		West	642901.665	275350.920
		Dimensions		
		Length	30.00m	
		Width	2.20m	
		Average Depth	1.10m	
		Levels		
East End	15.627m OD			
West End	16.783m OD			
Context	Type	Description and Interpretation	Thickness	Depth BGL
1	Topsoil	Dark brown clayey sand	0.45m	0.00–0.50m
2	Subsoil	Mid orange brown clayey sand	0.14-0.25m	0.50–0.75m
12	?Buried soil	Dark brown silty sand	0.30-0.45m	0.75–1.05m
13	?Dark earth	Greyish black silty sand	0.10-0.40m	0.85–1.20m
14	Pit	Sub-circular in plan	0.70m	1.10–1.80m
15	Fill of [11]	Dark brown sandy silt	0.70m	1.10–1.80m
41	Pit	Sub-circular in plan	0.15m	1.15–1.30m
42	Fill of [41]	Dark brownish black sandy silt	0.15m	1.15–1.30m
43	Pit	Sub-circular in plan	1.00m	1.15–2.15m
44	Fill of [43]	Dark brownish black sandy silt	1.00m	1.15–2.15m
73	U/S find	Iron scale-tang knife, Roman glass, Roman tegula fragment, 50 sherds of Roman pottery, two unidentified copper-alloy objects, seven iron objects, seven iron nails, 1 lead object	--	--
Discussion				
<p>Trench 1 was located in the lowest part of the proposed development site and positioned within a hollow in the landscape. The hollow slopes south to north and west to east with Trench 1 ranging between 16.78m OD (west) and 15.62m OD (east). The excavated depth of Trench 1 was between 1m (west) and 1.20m (east) before naturally blackened silvery sands were reached.</p> <p>Four deposits ([1], [2], [12] and [13]) (Fig. 4 sections 1-6) were identified above the natural sands. Two of the deposits ([12] and [13]) are of particular archaeological interest and have been characterised as 'buried soils' or 'dark earth'. Their presence was recorded throughout Trench 1 and a similar dark earth deposit ([8]) was noted in the northern end of Trench 10, (Fig. 12, section 4) approximately 5.00m south of Trench 1 (Fig. 2)</p> <p>Below topsoil [1] and a narrow band of mid orange brown subsoil [2] was deposit [12]. This deposit was between 0.30m and 0.50m deep with undulating horizons between deposits [2] and [13] (Fig. 4, sections 1-6). It consisted of a homogeneous dark brown silty sand from which 12 sherds of</p>				

Trench 1

2nd– to early 3rd-century AD pottery was recovered. Environmental sample <6> (Appendix 6) was taken from this deposit and recovered goosegrass, bone, charcoal, burnt or fired clay, small coal fragments, black porous 'cokey' material and black tarry material.

Below deposit [12] was deposit [13] that varied in depth measuring between 0.10m and 0.40m deep and consisted of a greyish black silty sand. This deposit has the possibility of being a 'dark earth' often associated with the Roman period and mainly formed during dumping episodes or prolonged settlement abandonment. Recovered from deposit [13] were 13 sherds of mid 2nd-century AD pottery and an iron nail. Environmental sample <3> (Appendix 6) was taken from this deposit and recovered hazel, charcoal, burnt or fired clay, small coal fragments, black porous 'cokey' material and black tarry material.



Plate 1. Trench 1, north facing section showing deposits [12] and [13] and unexcavated pit [43], looking south-east.

Archaeological features in the form of pits [14], [41] and [43] were observed below deposit [13] and cutting into natural sands. However, it remains uncertain whether these pits were cut from above [13] or were sealed by it after possible settlement abandonment.

Pit [14] may give an indication that the pits were possibly contemporary with or of similar depositional period as dark earth [13] as it was sealed by a deep subsoil (or even buried soil) [12] (Fig. 4, section 1). Pottery recovered from deposit [15] in pit [14] comprised 50 sherds of 2nd century AD wares and also iron nails. Environmental sample <7> (Appendix 6) was taken from this deposit and recovered barley grains, hazel, bone, fish bone, charcoal, burnt or fired clay, small coal fragments, black porous 'cokey' material, vitreous material and black tarry material.

Pit [41] was located 8.00m west of the eastern end of the trench and was also seen to be sealed by deposit [13]. This pit was only partially exposed thereby limiting the amount of excavation that could take place. It was established that the feature measured 2.30m long by at least 0.50m wide by 0.20m deep. No finds were recovered from its fill [42] but it is considered to be contemporary with pits [14] and [43].

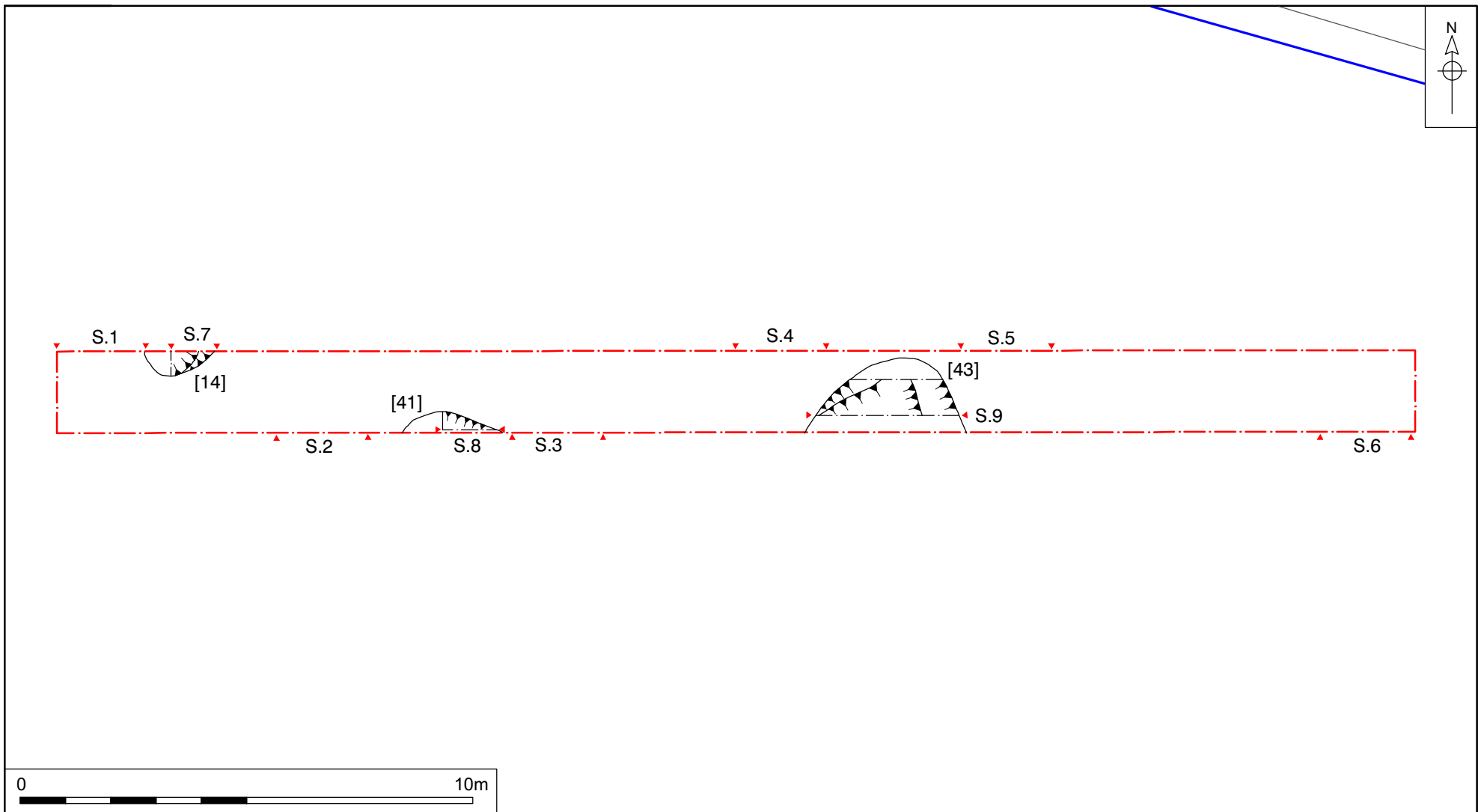
Pit [43] was located in the central part of the trench and almost covered the entire width of the trench, continuing beyond the southern limit. The northern part of the feature was rounded. It was anticipated that the feature would exceed safe limits of works especially considering that the overburden above this pit was 1.10m deep. Therefore, the edge of excavation was stepped in from the southern limits of excavation by 0.50m before excavations took place. Excavation of this pit

Trench 1

ceased after 0.90m from the natural ground surface at 15.04m OD (Fig. 4, section 9). Although, only limited excavations took place it was possible to demonstrate that the pit had a steeply sloping western edge and a near vertical eastern edge and the depth exceeded the 0.90m excavated depth. Pit fill [44] consisted of dark brownish black silty sand from which 10 sherds of mid 2nd-century AD were recovered. Environmental sample <12> (Appendix 6) was taken from this deposit and recovered bone, small mammal/amphibian, charcoal, burnt/fired clay small coal fragments, black porous 'cokey' material and black tarry material.

Trench 1 has proven to contain well-sealed archaeological features and deposits dating to the 2nd century AD.

Unstratified metal-detected and hand collected finds were recovered from the spoil upcast from the trench and numbered as context [73].



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Figure 4. Trench 1. Pits [14, 41 and 43], locations of sections 1-9. Scale 1:125

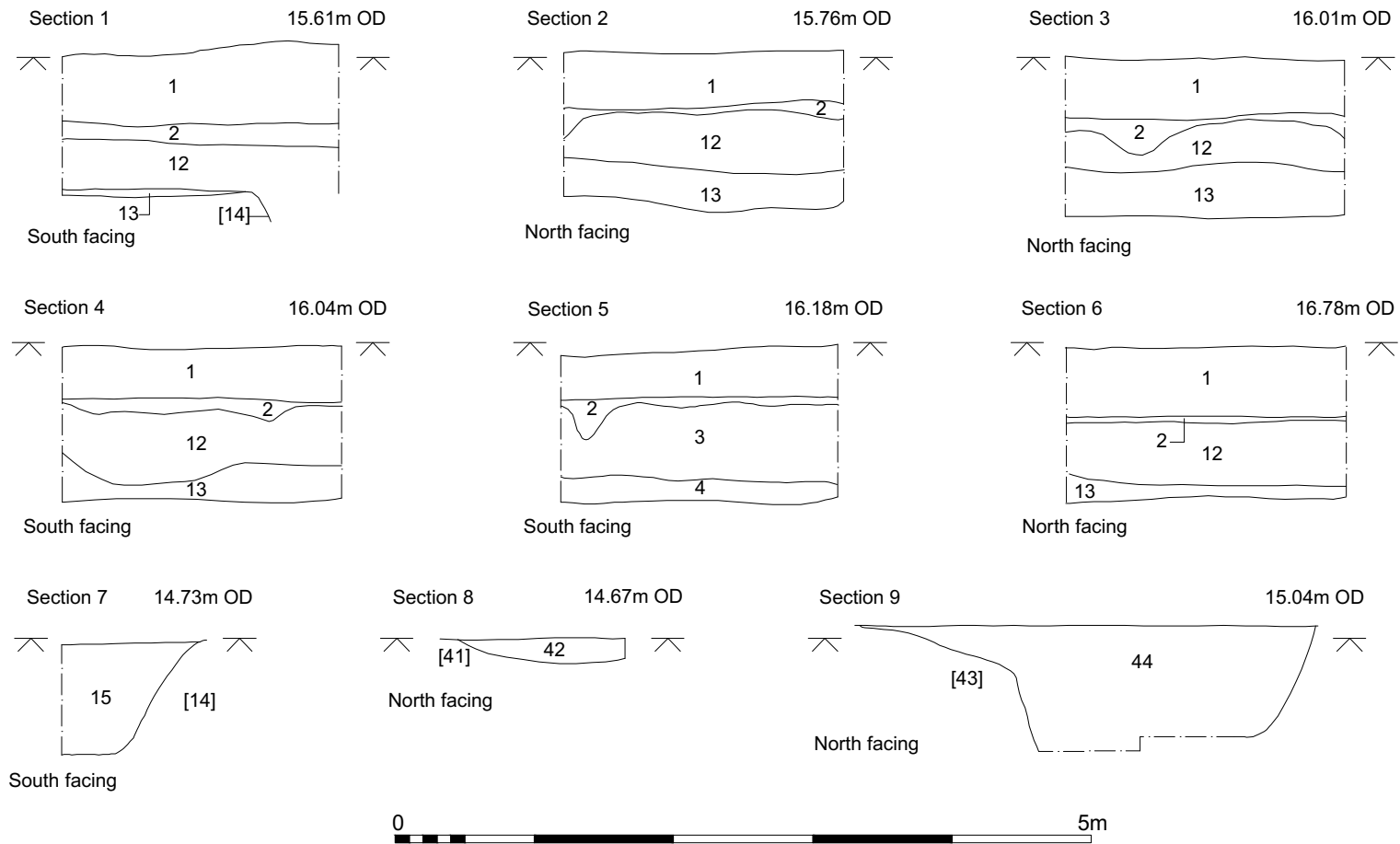



Figure 5. Trench 1, sections 1-9. Scale 1:50

Trench 2				
 <p style="text-align: center;">Trench 2, looking south</p>		Figs 2, 3 and 6		
		Location		
		Orientation	North - south	
		North End	642873.966	275364.396
		South End	642873.963	275337.006
		Dimensions		
		Length	30.00m	
		Width	1.80m	
		Average Depth	0.70m	
		Levels		
North End	18.188m OD			
South End	17.984m OD			
Context	Type	Description and Interpretation	Thickness	Depth BGL
1	Topsoil	Dark brown clayey sand	0.60m	0.00–0.60m
2	Subsoil	Mid orange brown clayey sand	0.10m	0.60–0.70m
45	Ditch	East-west aligned	0.50m	0.70–1.20m
46	Fill of [45]	Dark brown silty sand	0.50m	0.70–1.20m
74	U/S find	Roman iron punch, copper alloy Roman coin dated to the 1st – 2nd century AD, 6 sherds of Roman pottery	--	--
Discussion				
<p>Trench 2 was located on a south-facing slope ranging between 18.18m OD (north) and 17.98m OD (south) that forms the western part of the hollow noted in Trench 1.</p> <p>Ditch [45] was located in the southern part of the trench and was aligned east-west. The ditch crossed the trench and was 1.50m wide and 0.50m deep. It contained single fill [46] consisting of dark brown silty sand from which a single sherd of Roman pottery was recovered. Environmental sample <4> (Appendix 6) was taken from this deposit and recovered charred root/stem, bone, charcoal, burnt or fired clay, small coal fragments and black porous 'cokey' material.</p> <p>Unstratified metal-detected and hand-collected finds were recovered from the spoil upcast from the trench and given the context number [74].</p>				

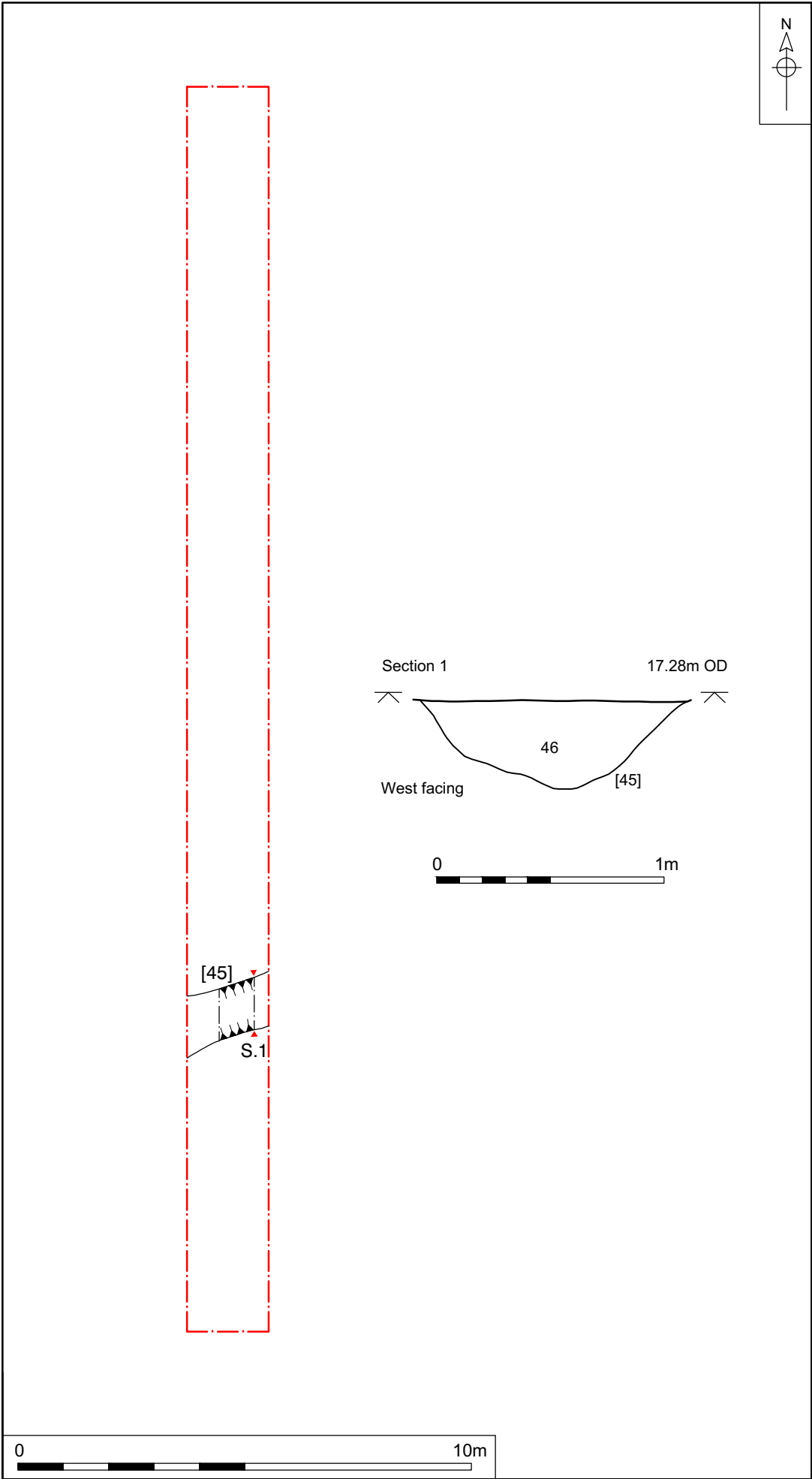


Figure 6. Trench 2. Ditch [45] at 1:125 and section 1 at 1:25

Trench 3



Trench 3, looking west

Fig. 2 (location)

Location

Orientation	East - west	
East End	642855.103	275369.288
West End	642822.483	275369.303

Dimensions

Length	30.00m
Width	1.80m
Depth	0.40m

Levels

East End	19.107
West End	20.163


Context	Type	Description and Interpretation	Thickness	Depth BGL
1	Topsoil	Dark brown clayey sand	0.30m	0–0.30m
2	Subsoil	Mid orange brown clayey sand	0.10m	0.30–0.40m
75	U/S find	Decorated lead sheet fragment, 3rd century AD silver Roman coin	--	--

Discussion

Trench 3 was located on the north-western edge of the proposed development site and was situated on a tract of land at an elevation of 19.10m OD (east) to 20.16m OD (west).

This trench was devoid of archaeological features and deposits.

Unstratified metal finds recovered from the upcast spoil from the trench were given the context number [75].

Trench 4				
 <p>Trench 4, looking west</p>		Figs 2, 3 and 7		
		Location		
		Orientation	North-west - south-east	
		North west End	642794.239	275390.883
		South east End	642814.455	275377.208
		Dimensions		
		Length	30.00m	
		Width	1.80m	
		Average Depth	0.50m	
		Levels		
North west End	20.602m OD			
South east End	20.357m OD			
Context	Type	Description and Interpretation	Thickness	Depth BGL
1	Topsoil	Dark brown clayey sand	0.30m	0–0.30m
2	Subsoil	Mid orange brown clayey sand	0.10m	0.30–0.40m
33	Ditch	North-west to south-east aligned	0.40m	0.40–0.80m
34	Fill of [34]	Dark brown silty sand	0.40m	0.40–0.80m
35	Pit/ditch termini	Pit / Ditch terminus	0.70m	0.40–1.10m
36	Fill of [35]	Dark brown silty sand	0.70m	0.40–1.10m
37	Ditch	North-east to south-west aligned	0.20m	0.40–0.60m
38	Fill of [34]	Dark brown silty sand	0.20m	0.40–0.60m
76	U/S find	Roman silver coin, Roman pottery, post-medieval pottery, undated decorated lead		
Discussion				
<p>Trench 4 was located on the western edge of the proposed development site and was situated on a higher tract of land ranging between 20.60m OD (north-west) and 20.35m OD (south-east). Two ditches ([33] and [37]) and ditch terminus/pit [35] were recorded in this trench (Fig. 6, sections 1-3).</p> <p>Ditch [33] was located in the west of the trench and was aligned north-west to south-east. The ditch measured at least 1.80m long by 1.50m wide and 0.40m deep. It contained single fill [34] consisting of dark brown silty sand (Fig. 6, section 1). No finds were recovered. Environmental sample <10> (Appendix 6) taken from this deposit recovered a fruit/nutshell fragment, charcoal, small coal fragments, black porous 'cokey' material and black tarry material.</p> <p>To the east of ditch [33] was ditch terminus/pit [35]. The feature extended beyond the edge of the trench; the part within the trench measured 0.50m long, 0.70m wide by 0.70m deep. It contained single fill [36] consisting of dark brown silty sand (Fig. 6, section 2). No finds were recovered. As only a limited amount of this feature was exposed within the trench, interpretation is difficult – a pit or the terminus of a ditch being the most likely descriptions.</p> <p>Narrow ditch [37] was crossed the central part of the trench and was 0.60m wide and 0.20m deep. It contained single fill [38] consisting of dark brown silty sand (Fig. 6, section 3). A single sherd from a samian ware bowl was recovered from the fill.</p> <p>A piece of decorated lead and a silver Roman coin of ?Hadrian AD 117-138 were recovered from the spoil upcast from the trench ([76]) along with post-medieval pottery and undated lead.</p>				

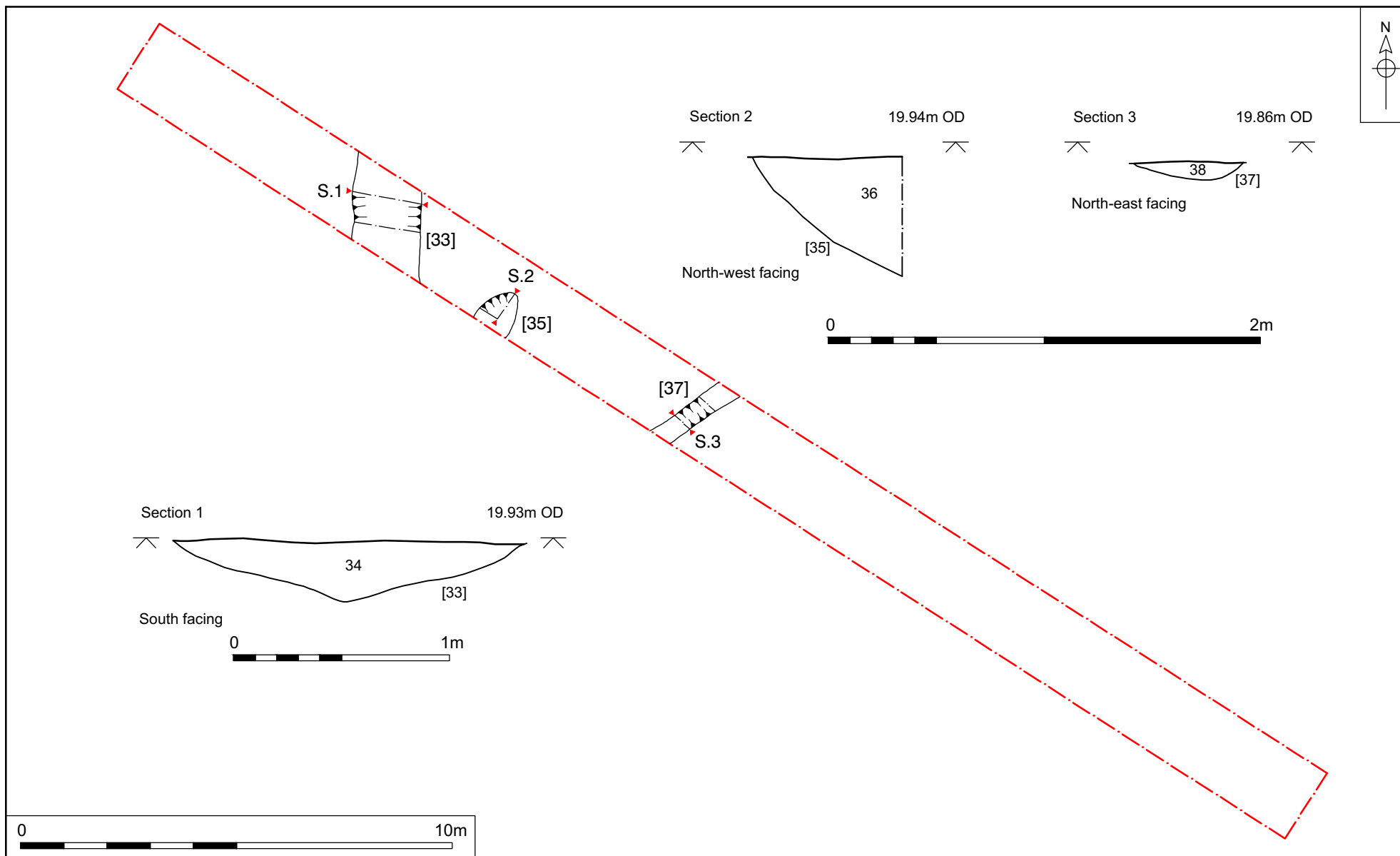


Figure 7. Trench 4. Ditches [33 and 37] and pit [35] at scale 1:125; sections 1, 2 and 3 at 1:25

Trench 5



Trench 5, looking west

Fig. 2 (location)

Location

Orientation	North-south	
North End	642801.890	275363.887
South End	642800.872	275337.067

Dimensions

Length	30.00m
Width	1.80m
Depth	0.50m

Levels

North End	20.54m OD
South End	20.32m OD

Context	Type	Description and Interpretation	Thickness	Depth BGL
1	Topsoil	Dark brown clayey sand	0.30m	0.00–0.30m

Discussion

Trench 5 was located on the western edge of the proposed development site and was situated on a tract of land at an elevation ranging between 20.54m OD (north) and 20.32m OD (south) .

This trench was devoid of archaeological features, deposits and finds.

Trench 6



Trench 6, looking east

Figs 2, 3 and 8

Location

Orientation	East-west	
East End	642857.374	275343.342
West End	642824.435	275343.679

Dimensions

Length	30.00m
Width	1.80m
Average Depth	0.60m

Levels

East End	18.59m OD
West End	19.85m OD

Context	Type	Description and Interpretation	Thickness	Depth BGL
1	Topsoil	Dark brown clayey sand	0.50m	0.00–0.50m
2	Subsoil	Mid orange brown clayey sand	0.10m	0.50–0.60m
47	Ditch	North west-south east aligned	0.30m	0.40–0.70m
48	Fill of [47]	Dark brown silty sand	0.30m	0.40–0.70m
49	Pit/ditch termini	Pit / Ditch termini	0.35m	0.40–0.75m
50	Fill of [35]	Dark brown silty sand	0.35m	0.40–0.75m
77	U/S find	10 sherds of Roman pottery, Roman tegula, modern copper-alloy button		

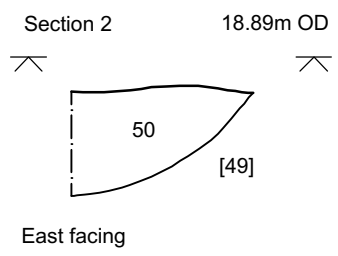
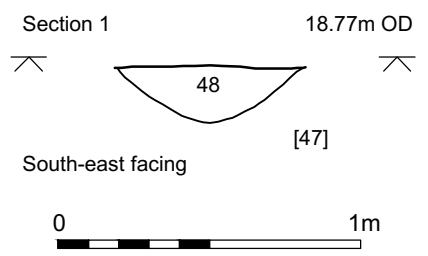
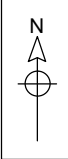
Discussion

Trench 6 was located in the centre of the proposed development site and was situated on an east facing slope ranging at an elevation between 18.59m OD (east) and 19.85m OD (west). Ditch [47] and pit/ditch terminus [49] were identified within this trench (Fig. 7, sections 1 and 2).

Ditch [47] was located in the western half of the trench and was aligned north-west to south-east. It crossed the trench and was 0.60m wide and 0.30m deep. It contained single fill [49] consisting of dark brown silty sand, (Fig. 7, section 1). No finds were recovered from this ditch.

Immediately to the east of ditch [47] was pit/ditch terminus [49]. This feature extended beyond the southern edge of the trench. Its recordable dimensions were 0.60m long by 1.50m wide by 0.35m deep. It contained single fill [50] consisting of dark brown silty sand (Fig. 7, section 2). Six fragments of 2nd-century AD pottery were recovered from this feature. Similar to pit/ditch terminus [35] recorded in Trench 4, this feature could be either a pit or the terminus of a ditch.


All unstratified metal-detected and hand-collected finds recovered from the soil upcast from the trench were numbered [77].



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Figure 8. Trench 6. Ditch [47] and pit [49] at 1:125; sections 1 and 2 at 1:25

Trench 7

 <p>Trench 7, looking north</p>	Figs 2, 3 and 9		
	Location		
	Orientation	North-south	
	North End	642841.144	275335.252
	South End	642841.125	275308.242
	Dimensions		
	Length	30.00m	
	Width	1.80m	
	Depth	0.85m	
	Levels		
North End	19.20m		
South End	19.74m		

Context	Type	Description and Interpretation	Thickness	Depth BGL
1	Topsoil	Dark brown clayey sand	0.35m	0.00–0.35m
27	Ditch/pit	?East-west aligned/sub-circular	0.55m	0.86–1.41m
28	Fill of [27]	Dark brown silty sand	0.55m	0.86–1.41m
39	Pit	Circular in plan	0.45m	0.86–1.31m
40	Fill of [39]	Dark brown silty sand	0.45m	0.86–1.31m
55	Deposit	Topsoil	0.35m	0.00–0.35m
56	Deposit	Sandy layer	0.06m	0.35–0.41m
57	Deposit	Subsoil	0.11m	0.41–0.52m
58	Deposit	Earlier subsoil layer	0.28m	0.52–0.80m+
59	Deposit	Pale sand	0.06m	0.80–0.86m+
60	Deposit	Yellowish sand	0.08m	0.80–0.88m+
61	Deposit	Whitish sand	0.12m	0.80–0.92m+
62	Deposit	Grey yellow sand	0.12m	0.80–0.92m+

Discussion

Trench 7 was located in the centre of the proposed development site and was situated on a north-facing slope at an elevation ranging between 19.20m OD (north) and 19.74m OD (south). Ditch [27] and pit [39] were identified within this trench (Fig. 8, sections 1 and 2).

It appears that there was a perched water table in the vicinity of Trenches 7 and 9 as these trenches were constantly flooded. Furthermore, the overburden within Trench 7 appears to have been altered by a series of events, possibly human intervention or natural occurrences such as flooding. Below the topsoil ([1] and [55]) were seven deposits ([56], [57], [58], [59], [60], [61] and [62]) (Fig. 8, section 1). Deposit [58] appears to be subsoil sealing archaeological features and deposits.

Pit/ditch [27] (Fig. 8, section 2) was located at the northern end of the trench. It crossed the trench, its width varying between 3.00m (on the west side) and 5.00m (east). The excavation of this feature was curtailed after 0.50m depth because of water continuously seeping into the excavated slot. One deposit ([28]) was allocated to the fill, although it is likely that it would have contained more than a single context. Deposit [28] consisted of dark brown silty sand with occasional large flint nodules. Recovered from [28] were 65 sherds of mid 2nd-century AD

Trench 7

pottery, Roman ceramic building material and fired clay. Environmental sample <2> (Appendix 6) was taken from this deposit and recovered charcoal, burnt or fired clay, small coal fragments and black porous 'cokey' material.

Because of the irregular nature of this feature and the amount of Roman debris it contained it is, on balance, considered to be more likely to be a pit rather than an east-west ditch. An equally large pit with comparable characteristics was partially excavated in Trench 1, pit [43], (Fig. 3) and also produced mid 2nd century AD pottery and ceramic building materials, therefore large domestic pits are not out of place on this site. Also because of the perched water table there is possibility of environmentally important water logged deposits surviving within these pits.

Pit [39] (Fig. 8, section 2) truncates the south-eastern end of pit/ditch [27]. It contained single fill [40] which produced two Roman tegula fragments. Environmental sample <5> (Appendix 6) was taken from this deposit and recovered goosegrass, bone, charcoal, burnt or fired clay, small coal fragments, black porous 'cokey' material and black tarry material.

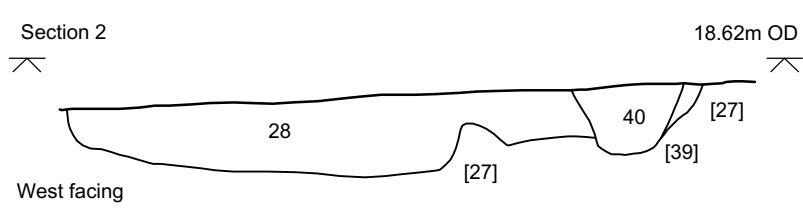
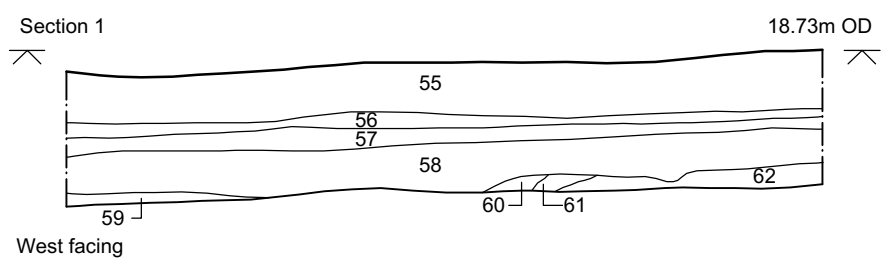
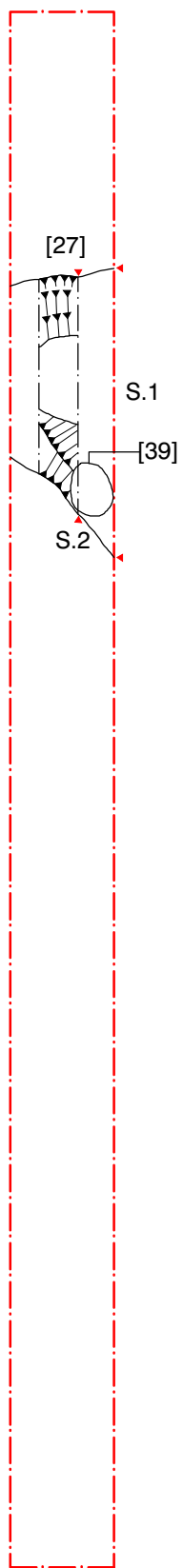



Figure 9. Trench 7. Ditch [27] and pit [39] at 1:125; sections 1 and 2 at 1:50

Trench 8					
 <p style="text-align: center;">Trench 8, looking north</p>			Figs 2, 3 and 10. Plate 2		
			Location		
			Orientation	East-west	
			East End	642857.237	275289.527
			West End	642824.300	275289.534
			Dimensions		
			Length	30.00m	
			Width	1.80m	
			Average Depth	0.45m	
			Levels		
East End	19.93m OD				
West End	20.32m OD				
Context	Type	Description and Interpretation	Thickness	Depth BGL	
1	Topsoil	Dark brown clayey sand	0.30m	0.00–0.30m	
2	Subsoil	Mid orange brown clayey sand	0.10m	0.30–0.40m	
20	Ditch	North east-south west aligned	0.20m	0.40–0.60m	
21	Fill of [20]	Mid brown silty sand	0.20m	0.40–0.60m	
22	Ditch	North east-south west aligned	0.20m	0.40–0.60m	
23	Fill of [22]	Mid greyish brown silty sand	0.20m	0.40–0.60m	
24	Ditch	North-south aligned	0.25m	0.40–0.65m	
25	Fill of [24]	Dark greyish brown silty sand	0.25m	0.40–0.65m	
29	Ditch	North west-south east aligned	0.20m	0.40–0.60m	
30	Fill of [29]	Mid brown silty sand	0.20m	0.40–0.60m	
31	Ditch	North-south aligned	0.15m	0.40–0.55m	
32	Fill of [31]	Mid brown silty sand	0.15m	0.40–0.55m	
79	U/S	Late Mesolithic/Early Neolithic struck flint core, copper-alloy Roman coin, 11 sherds of Roman pottery, Roman tegula fragment, Roman fired clay, copper-alloy medieval brooch, unidentified copper-alloy object, two undated pieces of lead.	--	--	
Discussion					
<p>Trench 8 was located in the southernmost part of the proposed development site and was situated on an east-facing slope at an elevation ranging between 19.93m OD (east) and 20.32m OD (west). Three ditches ([20], [29] and [31]) were identified within this trench (Fig. 9, sections 1-3).</p> <p>Ditch [20]=[22] (Fig. 9, section 1), was located at the eastern end of the trench extending beyond the eastern and southern limits of the trench. It was aligned approximately east-west and measured at least 7.00m long by 1.18m wide by 0.25m deep. It contained single fill [21]=[23] which produced seven sherds of 2nd- to 3rd-century AD pottery. Environmental sample <9> (Appendix 6) was taken from this deposit and recovered charcoal, bone, black porous 'cokey' material and black tarry material.</p> <p>Ditch [31]=[24] (Fig. 9, section 2), was aligned north-south with the northern end extending beyond the limits of excavation. The southern part of ditch [31] links to east-west ditch [20] but it is unclear</p>					

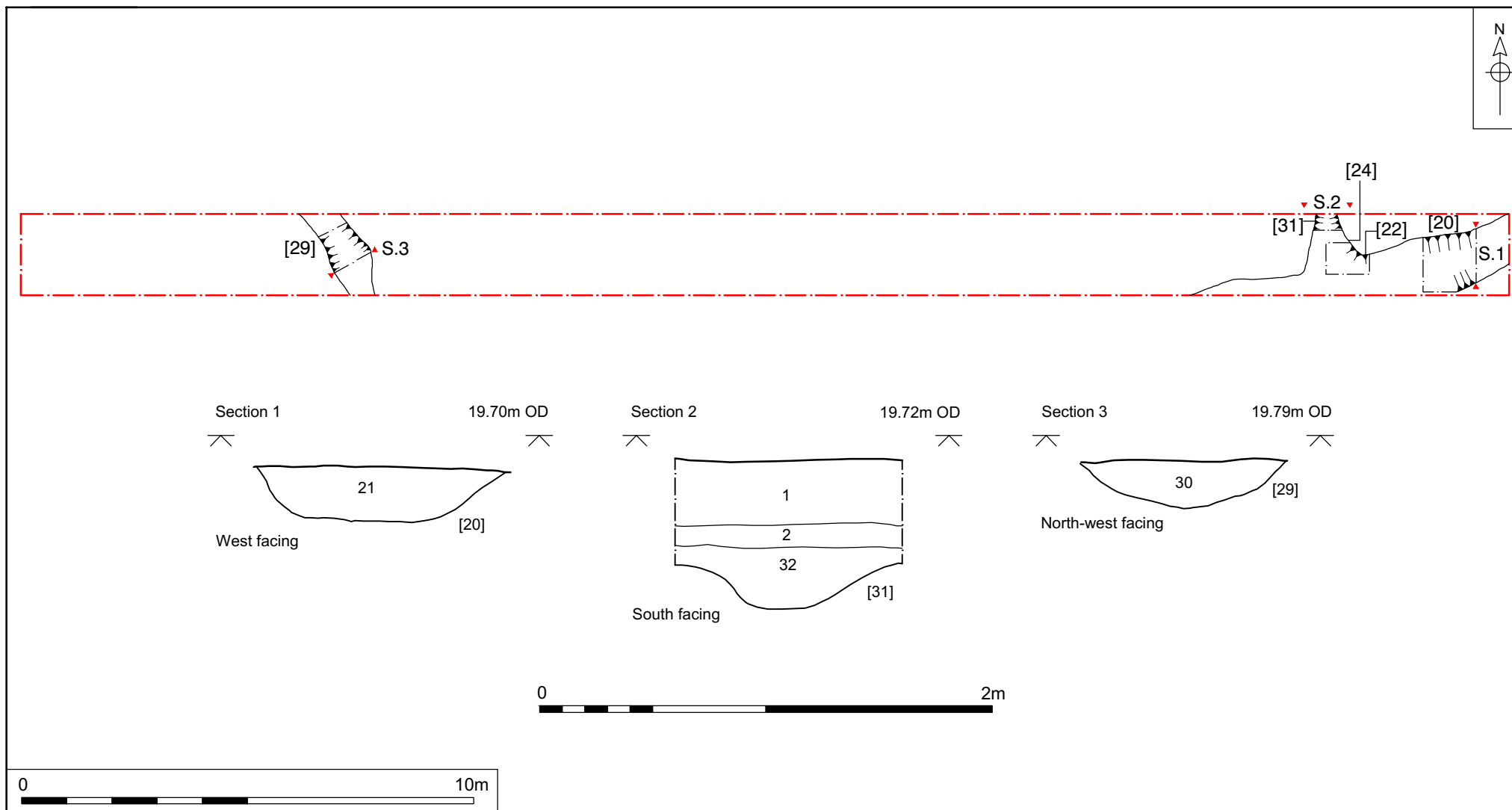
Trench 8

(because of the limits of excavation) whether ditch [31] continues south of ditch [20].

A slot was excavated between ditches [20] and [31], (Fig. 9) to try and establish a relationship between them but none was perceivable. However it is probable that they were contemporary with each other and form part of a Roman land division.

Ditch [29] (Fig. 9, section 3) was located at the western end of the trench. It was aligned north west to south-east and crossed the trench; it was 0.85m wide by 0.20m deep. It contained single fill [30]. No finds were recovered from this deposit. Environmental sample <11> (Appendix 6) was taken from this deposit and recovered fruit/nutshell fragment, charcoal, small coal fragments, black porous 'cokey' material and black tarry material.


The unstratified finds collected from the soil upcast from this trench ([79]) form an interesting group. The only worked flint from the site was recovered in the vicinity of this trench perhaps hinting that Late Mesolithic/Early Neolithic activity was present, perhaps located on an interfluvium with a plateau at 20m OD. Roman artefacts, including several sherds of pottery, ceramic building material and a coin of Hadrian (AD 117-138) were also present. An unusual sub-annular copper-alloy object with a central curving serpentine bar (Plate 3) was collected. Despite no exact parallels for the object being established it has similarities with medieval annular brooches of late 13th- to mid 14th-century date.



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Figure 10. Trench 8. Ditches [20, 22, 24, 29 and 31] at 1:125; sections 1, 2 and 3 at 1:25

Trench 9

 <p>Trench 9, looking west</p>	Figs 2, 3 and 11. Plate 2		
	Location		
	Orientation	East-west	
	East End	642892.305	275323.409
	West End	642859.796	275323.438
	Dimensions		
	Length	30.00m	
	Width	1.80m	
	Average Depth	0.60m	
	Levels		
East	17.75m OD		
West	18.61m OD		

Context	Type	Description and Interpretation	Thickness	Depth BGL
1	Topsoil	Dark brown clayey sand	0.40m	0.00–0.40m
2	Subsoil	Mid orange brown clayey sand	0.20m	0.40–0.60m
51	Ditch	North west-south east aligned	0.20m	0.60–0.80m
52	Fill of [20]	Mid brown clayey sand	0.20m	0.60–0.80m
53	Ditch/gully	North east-south west aligned	0.10m	0.60–0.80m
54	Fill of [22]	Mid greyish brown clayey sand	0.10m	0.60–0.80m
80	U/S Find	Copper-alloy Roman coin, nine sherds of Roman pottery	--	--

Discussion

Trench 9 was located in the central part of the of the proposed development site and was situated on an east-facing slope at an elevation ranging between 17.75m OD (east) and 18.61m OD (west). Two ditches [51 and 53] were identified within this trench (Fig. 10, sections 1 and 2). Excavations of these ditches were difficult due to the high water table and the sandy clay natural.

Ditch [51] (Fig. 10, section 1, Plate 2), was located at the western end of the trench and appears to be curvilinear in shape. It crossed the trench and was 1.10 wide and 0.20m deep. It contained single fill [52] which produced 28 sherds of Roman pottery dated to the 2nd century AD. Environmental sample <1> (Appendix 6) was taken from this deposit and recovered charcoal, burnt stone, small coal fragments, black porous 'cokey' material and black tarry material.

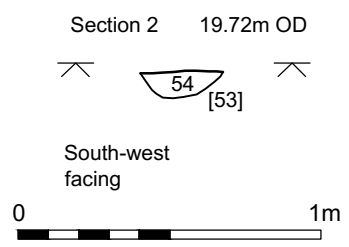
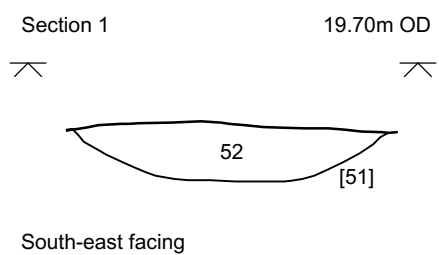
Narrow ditch or gully [53] (Fig. 10, section 1) was located to the east of ditch [51]. Ditch/gully [53] was aligned north-east to south-west. During excavation it was realised that ditch [53] was shallow (0.10m deep) and seemed to fade out before reaching ditch [51].

A Roman copper-alloy coin of Sestertius coin dated to 2nd century AD and nine sherds of Roman pottery were recovered from the soil upcast from the trench ([80]).

Trench 9




Plate 2. Trench 9, showing ditch [51], looking west

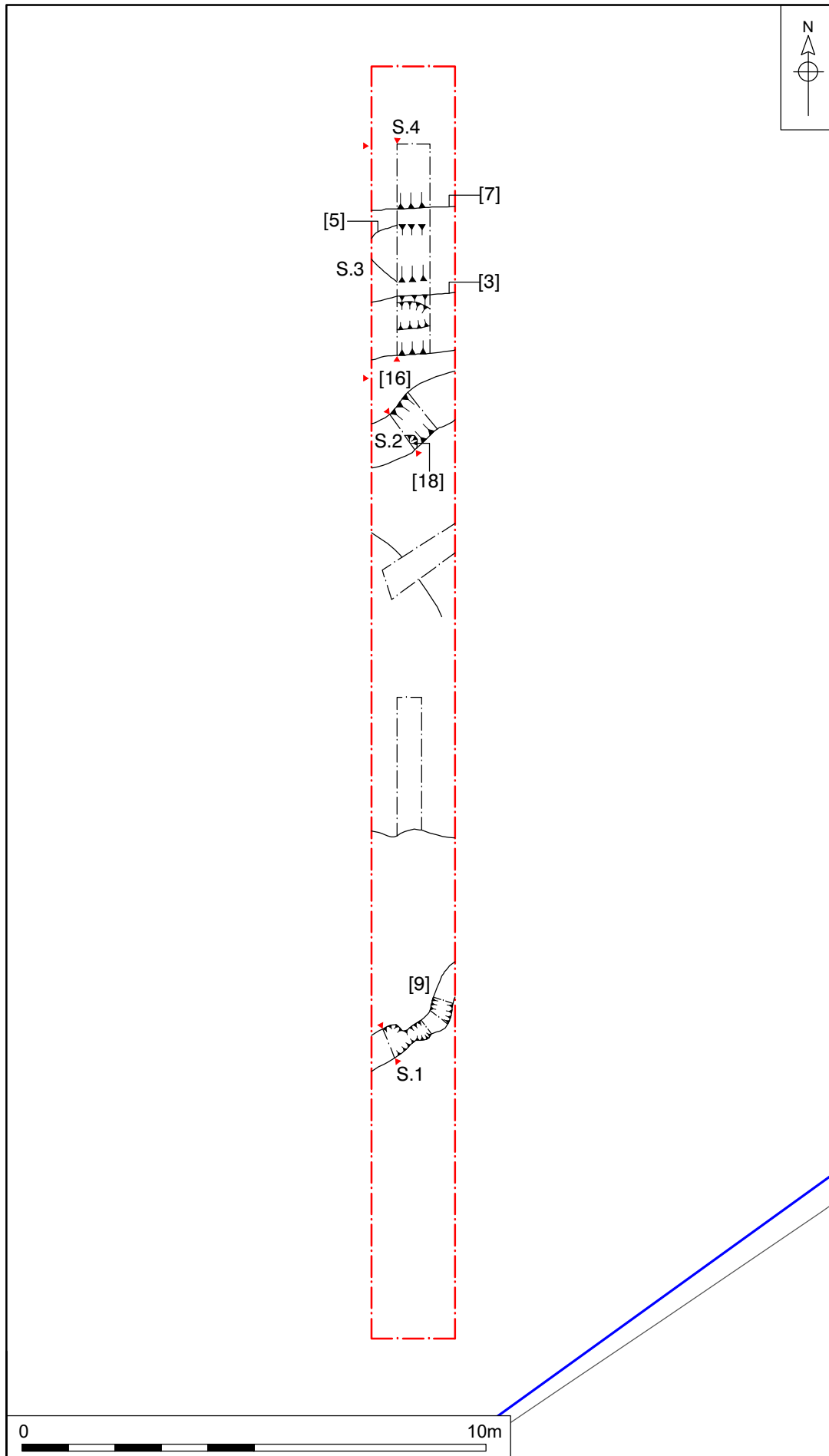


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Figure 11. Trench 9. Ditches [51 and 53] at 1:125; sections 1 and 2 at 1:25

Trench 10					
 <p style="text-align: center;">Trench 10, looking north</p>			Figs 2, 3 and 12		
			Location		
			Orientation	North-south	
			North End	642910.302	275344.805
			South End	642910.307	275317.393
			Dimensions		
			Length	27.00m	
			Width	1.80m	
			Average Depth	0.75m	
			Levels		
North End Top	16.519m				
South End Top	17.782m				
Context	Type	Description and Interpretation	Thickness	Depth BGL	
1	Topsoil	Dark brown clayey sand	0.30m	0.00–0.30m	
3	Ditch	East-west aligned	0.45m	0.75–1.20m	
4	Fill of [3]	Dark brown sandy silt	0.25m	0.75–0.95m	
5	Ditch	East-west aligned	0.20m	0.75–0.95m	
6	Fill of [5]	Dark brown sandy silt	0.20m	0.75–0.95m	
7	?Dark earth	Accumulation horizon	0.16m	0.75–0.91m	
8	Fill of [7]	Greyish black silty sand	0.16m	0.75–0.91m	
9	Ditch	Curvilinear in plan	0.15m	0.75–0.90m	
10	Fill of [9]	Dark brown sandy silt	0.15m	0.75–0.90m	
16	Ditch	Curvilinear in plan	0.15m	0.75–0.90m	
17	Fill of [16]	Dark brown sandy silt	0.15m	0.75–0.90m	
18	?Post hole/pit	Circular in plan	0.35m	0.75–1.10m	
19	Fill of [18]	Dark brown sandy silt	0.35m	0.75–1.10m	
26	U/S Find	Mid/late 4th- to early 5th-century AD pottery	--	--	
63	Void	--	--	--	
64	Topsoil	Dark brown clayey sand	0.30m	0.00–0.30m	
65	Deposit	Yellow grey sand	0.10m	0.30–0.40m	
66	Deposit	Grey brown sand	0.20m	0.40–0.60m	
67	Subsoil	Mid to dark greyish brown silty sand	0.20m	0.60–0.80m	
68	Deposit	Pale grey sand	0.07m		
69	Deposit	Pale greyish white sand	0.08m		
70	Fill of [3]	Mid brown silty sand	0.20m	0.95–1.15 m	
71	Deposit	Natural silvery white sand	0.15m +	0.75–0.90m	
72	Fill of [9]	Mid brown clayey sand	0.08m	0.90–0.08 m	

Trench 10				
81	U/S Find	Two Roman coins, Roman tegula, six sherds of Roman pottery, Copper-alloy sheet fragment		
Discussion				
<p>Trench 10 was located in the south-eastern part of the proposed development site and was situated on a north-facing slope ranging at an elevation ranging between 16.51m OD (north) and 17.78m OD (south). This trench was cut short at the eastern extent by 3.00m because of its close proximity to a public footpath. Four ditches ([3], [5], [9] and [16]), ?post-hole [18] and ?dark earth [8] were identified within the trench (Fig. 12, sections 1-4).</p> <p>Above the features were six deposits ([64], [65], [66], [67], [68], [69]) (Fig. 12, section 3) with a combined depth of 0.80m. The deposits, apart from subsoil [67], are probably modern overburden.</p> <p>Below, deposit [67] in the northern part of the trench was very clear horizon [7] comprising mid greyish black silty sand [8] was observed. Figure 12 section 4 shows horizon [7] overlying silvery white sand [71], which is potentially the same as the natural sand recorded in Trench 1.</p> <p>The Trench 1 results demonstrate that potential dark earth [13] directly overlies natural silvery white sands. Considering that the northern end of Trench 10 was located just 3.30m from the southern side of Trench 1 (Fig. 2) it is not surprising that deposits [8] and [13] share similar characteristics and may suggest that the potential dark earth survives on the higher (southern) part of a hollow at 15.11m OD sloping down to 14.66m OD in the lowest point recorded in Trench 1.</p> <p>Two ditches ([3] and [5]) were located south of potential dark earth [13] (Fig. 11). These ditches were aligned east-west and shared similar widths (1.20m). Northernmost ditch [5] was 0.20m deep and ditch [3] was 0.45m deep. Both ditches contained Roman pottery, with ditch [5] (fill [6]) producing pottery of 2nd-century AD date which parallels the date range for dark earth [13] in Trench 1. It is unclear whether the potential dark earth and ditches were contemporary but it is worth noting that the ditches were arranged perpendicular to the southern extent of the hollow which contained the dark earth. If it was deliberately planned that the ditches should bisect the higher southern slopes it may indicate that the potential dark earth was formed by episodes of dumping material rather than soil accumulation as the ditches could have acted as a boundary, effectively stopping hill wash forming in the hollow. Environmental sample <8> (Appendix 6) was taken from ditch [3] (fill [4]) and recovered bone, charcoal, burnt or fired clay, black porous 'cokey' material and black tarry material.</p> <p>Ditch [18] was located immediately south of ditch [3] and was roughly aligned north-east to south-west with a slight curve in the central part of the ditch. It crossed the trench and was 1.00m wide by 0.35m deep. Although not immediately apparent on the surface of ditch [18], the excavated section demonstrated that the ditch was truncated by post-hole or small pit [18] (Fig. 12, Section 4). No finds were recovered from the ditch or post-hole/pit.</p> <p>Located at the southern end of the trench was ditch [9] (Fig. 12, section 1). Ditch [9] was irregular in plan and roughly aligned north-west to south-east. It contained two fills ([10] and [72]) with the upper deposit [10] producing 10 sherds of Roman pottery.</p> <p>Unstratified metal-detected and hand-collected finds were collected from upcast soil from the trench spoil and numbered [81]. The Roman coins were dated to the 2nd and 4th centuries AD.</p>				



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 Figure 12. Trench 10. Ditches [3, 9, 16], ditch/pit [5], dark earth [7], ?post-hole [18] and locations of sections 1, 2, 3 and 4. Scale 1:125

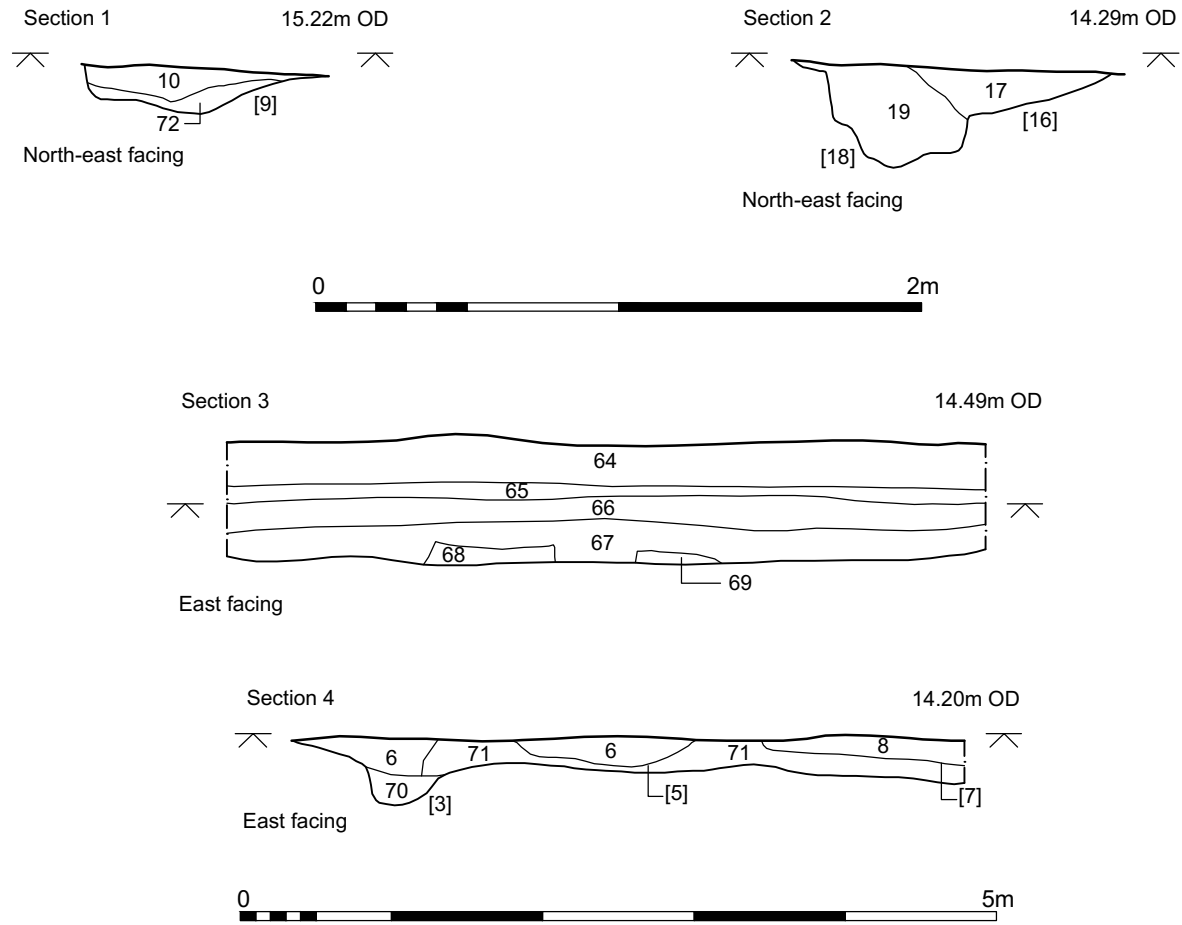


Figure 13. Trench 10, sections 1 and 2 at 1:25 and 3 and 4 at 1:50

6.0 FINDS

Finds were processed and recorded by count and weight, and information, including broad dating, was entered onto an Excel spreadsheet. Each material type has been considered separately and is presented below organised by material. A list of finds in context number order can be found in Appendix 2a.

6.1 Roman Pottery

by Andrew Peachey

6.1.1 Introduction

Trial-trench excavations recovered a total of 305 sherds (4,166g) of Roman pottery (Appendix 3) in a slightly to moderately abraded condition. The Roman pottery includes an imported mould-decorated samian ware bowl, white ware flagons, a range of locally-produced reduced wares, and locally-produced mortaria. These fabric and form types indicate the bulk of the assemblage dates to the 2nd century AD; probably, where diagnostic material is sufficient, within the mid 2nd century AD. However, an unstratified fragment of a 'Romano-Saxon' beaker also suggests that late Roman activity, in the latter half of the 4th century AD may have occurred on the site. The assemblage includes significant mid 2nd-century AD groups in dark earth [13], ditch [27] and pit [43], with further 2nd-century AD material relatively common in ditch and pit features, and as unstratified material.

6.1.2 Methodology

The pottery was quantified by sherd count, weight and R.EVE. Fabrics were examined at x20 magnification and assigned a code from the National Roman Fabric Reference Collection (Tomber and Dore 1998), or assigned an alpha-numeric code based on this system. Samian forms reference Webster (1996). All data was entered into a Microsoft Excel spreadsheet that will be deposited as part of the archive.

6.1.3 Fabric Descriptions

LEZ SA2	Lezoux samian ware 2 (Tomber and Dore 1998, 32)
UNS WH1	White ware. Cream to pale orange surfaces over a mid orange core. Inclusions comprise common quartz and calcareous grains (<0.2mm), sparse fine mica, and sparse red/cream clay pellets (0.25-1mm). Hard with a smooth to slightly powdery feel. Probably a West Stow product (West 1990, 76: fabric 1)
UNS WH2	White ware. Cream to very pale brown. Inclusions comprise common very fine quartz (<0.1mm, sparse to 0.25mm), sparse rounded chalk (0.25-0.5mm) and sparse fine mica. Probably produced at Ellingham (Hartley and Gurney 1997, 21: Fabric C)
UNS WH3	White ware. Cream to very pale orange-brown. Inclusions comprise common-abundant fine mica, common fine quartz (<0.1mm) and occasional red iron rich grains (0.25-0.5mm). A hard fabric with a finely abrasive to powdery feel. Possibly produced at Ellingham (Hartley and Gurney 1997, 21: Fabrics C/F) or Postwick (Bates and Lyons 2003, 99: fabric PWW) but other local production centres remain a possibility
GRS1	Sandy grey ware. Mid-dark grey surfaces over a slightly lighter core. Inclusions comprise common-abundant well-sorted quartz (0.1-0.25mm, occasionally to

	0.5mm), sparse dark grey iron rich pellets/ore (0.1-0.5mm), and occasional fine mica. A hard fabric with a powdery to slightly abrasive feel
GRS2	Sandy grey ware. Mid grey surfaces and core, typically slightly contrasting. Inclusions comprise common, moderately sorted quartz (0.1-0.5mm), sparse-occasional dark grey iron rich pellets/ore (0.1-0.5mm), with occasional fine mica and flint (<2.5mm). Hard with a slightly-moderately abrasive feel
GRS3	Sandy grey ware (storage jar fabric). Mid grey surfaces and core, typically slightly contrasting. Inclusions comprise common, moderately sorted quartz (0.1-0.5mm), sparse angular pale grey/cream clay pellets/degraded chalk (0.25-2mm), sparse dark grey iron rich pellets/ore (0.1-0.5mm) and occasional fine mica. Hard with a slightly abrasive to powdery feel
BSW1	Romanising grey ware. Black to dark grey surfaces, thin red margins and a dark grey core. Inclusions comprise common, well-sorted fine quartz (0.1-0.2mm), common fine mica, and sparse dark grey/red clay pellets (0.1-0.5mm). Moderately hard with a finely abrasive to powdery feel
BSW2	Romanising grey ware. Black surfaces and thin red margins over a mid grey core. Inclusions comprise common, poorly-sorted quartz (0.1-0.5mm), sparse reduced clay pellets/grog (0.25-1mm) and sparse fine mica. A moderately hard fabric with a slightly soapy to abrasive feel
WAT RE	Wattisfield/Waveney Valley region reduced ware (Tomber and Dore 1998, 184)
M1	Mortaria (East Anglian/Local). Pale brown to orange-brown. Inclusions comprise common sun-angular quartz, sometimes polycrystalline (0.25-0.7mm), sparse mica and occasional red/black angular ironstone (0.5-1.5mm). Trituration grits comprise a well-sorted mix of common rounded quartzite, white flint, possibly burnt and angular red/black ironstone (all typically 2-4mm). Comparable to mortaria fabrics found in kilns at Hacheston (Seeley 2004, 181-184).

Fabric Type	Sherd Count	Weight (g)	R.EVE
LEZ SA2	12	186	0.25
UNS WH1	12	156	0.2
UNS WH2	3	31	0.15
UNS WH3	2	53	0.00
GRS1	113	1818	3.00
GRS2	64	626	0.55
GRS3	5	244	0.00
BSW1	18	253	0.20
BSW2	50	390	0.00
WAT RE	22	252	0.00
M1	4	157	0.10
Total	305	4166	4.45

Table 1: Quantification of Roman fabric types

6.1.4 Distribution

The assemblage contains large (mid) 2nd-century AD groups (over 50 sherds/500g) in ditch [27] (fill [28]) and pit [14] (fill [15]), but further significant and contemporary diagnostic groups also contained in occupation layer [12], dark earth [13] and pit [43] (fill [44]). The pottery distributed in the remaining ditch and pit features appears homogeneous in character and chronology with the diagnostic 2nd-century AD groups, notably in ditch [51] (fill [52]). The presence of cross-

joining diagnostic sherds, notably of the samian ware bowl in both ditch [37] and pit [43] may be critical in understanding the homogeneous nature of the deposition of pottery across the site, and in defining a relatively narrow period of activity or occupation. A total of 95 sherds (1,268g) of the assemblage were recovered as unstratified material (including from 'spoil') and these are largely in keeping with the stratified sherds, including cross-joining sherds of mortaria, but also include from [26] the base of a late Roman (latter half of the 4th-century AD) coarse ware 'Romano-Saxon' beaker.

6.1.5 Discussion of Fabric and Form Types

The imported samian ware is limited to vessels from Lezoux (LEZ SA2) in central Gaul, in total 12 sherds (186g) from a minimum of two mould-decorated bowls and a single plain ware dish. The most significant of these vessels comprises a Dr.30 mould-decorated bowl, of which a large rim and body fragment were contained in ditch [27] (fill [28]), a smaller body sherd in pit [43] (fill [44]) with possible further body sherds present as unstratified material. The decorative scheme on the Dr.30 bowl includes an ovolo (Stanfield and Simpson 1958, 253: fig.44.2), natural leaf and stylised leaf (Rogers 1974: motifs H15 and J149), double-bordered medallion and flat bead border that are characteristic of the products of Doeccus I, who produced bowls at Lezoux between c.AD160/170-190/200. Vessels produced by Doeccus I (or his workshop) are renowned for crisp-moulded designs incorporating well-modelled leaf designs (Stanfield and Simpson 1958, 251-6) with both features evident on this bowl. Bowls incorporating alternative arrangements of the decorative elements on this vessel are known from Lezoux, London and Silchester (Stanfield and Simpson 1958: plates 149.27-8 and 151.61). Notably the body sherd from pit [44] is in an un-abraded 'fresh' condition, the sherd from ditch [27] slightly abraded with some slip removed, and the un-stratified sherds heavily abraded with illegible decoration, suggesting a degree of movement probably related to the open nature of the ditch within the 2nd century AD, and subsequent post-Roman re-deposition in plough-soil. A rim sherd and illegible (abraded) ovolo from a separate Dr.30 or Dr.37 mould-decorated bowl was also contained in dark earth [13], while a highly abraded (almost no slip remaining) fragment of an early-mid 2nd century AD Dr.18/31 plain ware dish was recovered as unstratified [73].

The white/cream wares in the assemblage (UNS WH1, UNS WH2 and UNS WH3) appear to be entirely derived from flagons from late 1st- to 2nd-century AD production centres in Suffolk and Norfolk. UNS WH1, almost certainly produced at West Stow, Suffolk, included a ring-necked flagon (West 1990, 77-8: type 1.3) contained in pit [43] (fill [44]), while a further two-rib strap handle was recovered as unstratified [73]. Production at the kilns at West Stow appears to have spanned the late 1st- to mid 2nd-centuries AD while in contrast the kilns at Ellingham, Norfolk, the likely source of UNS WH2 and UNS WH3 appear to have operated in the latter half of the 2nd century AD. Diagnostic sherds in UNS WH2 are limited to a flagon with an everted, reeded rim (Hartley and Gurney 1997, fig.12.29) recovered as unstratified [73], while UNS WH3 contained a very finely-tooled base of a flagon in ditch [51] (52). UNS WH3 is a very fine and very micaceous fabric, and while the Ellingham kilns are a likely source, other unknown local production centres cannot be discounted, or even the possibility it was a continental import.

The remaining coarse ware vessels in the assemblage comprise a range of utilitarian reduced wares, of varying relatively local production (GRS1-3, BSW1-2),

probably dominated by kilns c.20km to the south at Hacheston (Arthur 2004; Seeley 2004) and c.18km north at Ellingham (Hartley and Gurney 1997; Bates and Lyons 2003), but also including sparse sherds from the Wattisfield region to the west (WAT RE), and from other small-scale local kilns. Form types common in the most dominant fabrics: GRS1 and GRS2 include bead rim dishes and jars with everted bead rims, while also present are an s-profile necked bowl-jar with a girth groove, and a bag-shaped beaker. BSW1 also includes a horizontal-rimmed bowl, while body sherds in GRS3 are universally thick-walled suggesting they derive from storage jars. These form types are common in the 2nd-century AD kiln products at Hacheston and Ellingham, with the bag-shaped beaker (Arthur 2004: type 14A) notable for going out of production in the mid 2nd century AD. These forms are also well-attested in the Trajanic to early Antonine (early to mid 2nd-century AD) groups at Scole (Rogerson 1977, 174-185). Diagnostic rim sherds in WAT RE are limited to body sherds decorated with large barbotine dots, contained in ditch [27] (28), comparable to a early-mid 2nd century AD beakers recorded at Colchester (Symonds and Wade 1999, 423: vessel 58).

The only exception to the chronological pattern exhibited by these coarse ware form types is a single GRS1 beaker base recovered as unstratified [26]. This vessel comprised a beaker with a pedestal base and folded body, with the indented zones decorated with burnished leaf designs comparable to 'Romano-Saxon' vessels recorded at Caister-on-Sea (Darling and Gurney 1993: fig.144.243-4) and East Winch, Norfolk (Peachey forthcoming: fig.39.61), dating to the latter half of the 4th century AD and possibly into the early 5th century AD.

Mortaria in the assemblage are limited to sherds in fabric M1 from a single vessel, distributed in dark earth [13] and as unstratified [73]. The mortaria is a collared form type with grooves on the top and bottom of the exterior of the collar and a double groove on the interior, which originated with potters at Colchester (Hull 1963, 118: Cam.498) who had a strong influence on mortaria production in Norfolk and Suffolk, in part via migrant potters. The fabric appears consistent with production at Hacheston (Seeley 2004, 181-184) although similar, slightly finer mortaria fabrics are also known to have been produced at Ellingham (Hartley and Gurney 1997, 10) and Postwick c.35km to the north (Bates and Lyons 2003, 99: POM). Comparable mortaria, albeit with a greater undercut beneath the collar have been recorded in kiln deposits at Hacheston (Seeley 2004: fig.119.20 and 121.47) and Ellingham (Hartley and Gurney 1997, 10-11: types 1C-E), as well as in mid- to 2nd-century AD deposits at Scole (Rogerson 1977: vessel 237). The mortaria is also notable for having barely worn trituration grits, suggesting it was either broken in transit, as stock, or before it had incurred any degree of meaningful use.

6.1.6 Discussion

The quantity of this assemblage is limited by the constraints of sample provided by a trial trench evaluation, but provides a strong indication of Roman occupation in the 2nd century AD on the south side of the River Blyth at Wenhaston, with a focus in pottery groups from the sampled features on the mid 2nd century AD. The presence of a mould-decorated samian ware bowl, white ware flagons, local mortaria and a range of utilitarian reduced wares suggest domestic occupation of moderate to prosperous status, with strong affinities with 2nd-century AD groups from the settlement at Scole. Pottery supply to the site appears dependent on kilns

to the north at Ellingham and south at Hacheston, but a range of other products from the region and imports indicate the site was well-connected to Roman trade networks. The occupation on the site may relate to an area of Roman settlement to the east, and possibly extending beneath the modern village, which is postulated to have been a small Roman town (Plouviez 1995). Previous archaeological evaluations on Narrow Way, Wenhaston a short distance to the north-east recovered small groups of Roman pottery, including central Gaulish samian ware and other contemporary 2nd- to 3rd-century AD vessels (Goffin and Tester 2009, 19-20; Boulter 1998).

The context and preservation of the Roman pottery, including cross-joining sherds between layers and discrete features also suggests the 2nd-century AD ditch and pit deposits have the potential to contain significant further groups of contemporary pottery, with little contamination from later Roman occupation or post-Roman disturbance. However, the presence of an unstratified beaker dating to the latter half of the 4th century AD indicates that later Roman occupation may be present in the nearby area.

6.2 The Post-Medieval Pottery

by Rebecca Sillwood

A single piece of post-medieval stoneware (5g) was recovered from the spoil from Trench 4 ([76]).

6.3 Ceramic Building Material and Fired Clay

by Andrew Peachey

Trial-trench evaluation excavations recovered a total of 25 fragments (2,236g) of Roman ceramic building material (CBM) and 11 fragments (194g) of Roman fired clay (Appendix 4). The Roman CBM appears to represent tegula roof tile, and the fired clay possibly hearth or oven lining, but both are highly fragmented and abraded. The scarcity and preservation of these materials suggest that although they are probably derived from a Roman structure in the local area, it is unlikely to be in close proximity to this site.

The CBM was manufactured in a single oxidised orange to orange red fabric with inclusions of medium-coarse quartz (generally <0.5mm, occasionally to 1mm), sparse iron rich inclusions (0.25-3mm) and occasional flint (0.5-5mm). The Roman CBM fragments all appear to have formed part of 20-20mm thick flat tile, almost certainly tegula. The angular flange of a tegula was recovered as un-stratified (77), however the lack of diagnostic features and limited size of the remaining fragments dictates that the presence of other tile or brick types cannot be entirely discounted. Sparsely distributed fragments of Roman CBM were contained in ditches [3], [5], [27], [49], pits [14], [39], [43], and as unstratified [73], [77], [79] and [81].

The fired clay occurs in a mid orange-brown fabric with inclusions of common-abundant, moderately-sorted quartz (0.25-0.5mm, occasionally to 1mm), with occasional red iron-rich grains and flint (typically <5mm). In contrast with the well-fired CBM is only moderately hard and often slightly friable. A single fragment recovered as unstratified (79) exhibits a straight rod-like impression (10mm wide) passing through it, which suggests that the wet clay was packed around a wooden

frame before it was baked/fired, and therefore probably formed part of the superstructure and lining of an oven or hearth, rather than as sun-dried daub packed onto a wattle frame. Further small fragments of fired clay were also contained in ditches [5], [27] and pit [43].

6.4 Glass

by Rebecca Sillwood

A tiny fragment of glass (less than 1g) was recovered from Trench 1 ([73]).

The piece is very light blue in colour and is clear (rather than opaque). This is too small a fragment to define any form or type, but given its location it seems likely that this is a small fragment of a Roman vessel. The colour of the piece certainly does not preclude this, and it does not appear modern.

6.5 Synthetic

by Rebecca Sillwood

An intrusive fragment of modern synthetic floor tile was found in occupation layer [12], amongst Roman finds. This small piece (2g) was a brightly coloured fragment of Marley tile - a ubiquitous flooring in the 1960s and 1970s. This fragment has subsequently been discarded, but provides evidence of modern intrusion into earlier contexts.

6.6 Metal Finds

by Rebecca Sillwood

6.6.1 Copper Alloy

A total of twelve objects and fragments of copper alloy were recovered from nine contexts, all unstratified.

Five of the objects were coins of Roman date, and came from the soil upcast from several of the trenches (Appendix 5).

A very worn 1st- to 2nd century Dupondius came from Trench 2 ([74]); an As of ?Hadrian (119-121) came from Trench 8; a Sestertius possibly of Marcus Aurelius, Lucius Verus or Commodus (160-186?) came from Trench 9 ([80]); two coins came from Trench 10 ([81]), a Sestertius (140-161) of Antoninus Pius and a nummus (313-315) of Constantine.

An unusual object was recovered from the spoil from Trench 8 ([79]), it is similar to a brooch, but has no apparent means of attaching it to clothing (Plate 3). The piece is sub-annular, with a curving projection at one end and two stubby projections at the opposite end. It is unclear, even on the x-ray, whether these are complete, or have suffered breakage. In the centre of the piece is a central curving, serpentine bar, which has a raised central moulding, which seems to only show on the reverse. There are two collets at opposing ends of the piece, with the remnants of paste inside them. The length of the entire object is 38mm, with a width of 22mm. No exact parallel has been found for this object, and it does seem to have many unusual points, such as the apparently decorative raised moulding in the centre, which can only be seen from the reverse, and the apparent lack of any pin or catchplate. The piece has similarities with medieval annular brooches of

late 13th- to mid 14th-century date (Egan and Pritchard 2008, 254, fig. 164, no. 1335).



Plate 3. Medieval sub-annular brooch

Three undiagnostic sheet fragments were recovered from Trench 1 ([73]) and Trench 10 ([81]).

A curved sub-rectangular sectioned rod was found in Trench 8 (79). The piece is undiagnostic.

Two buttons were found on the site; a post-medieval one, from the site in general ([82]) and a modern one from Trench 6 ([77]). The post-medieval example is a die-formed three-piece sheet object, with a mushroom-shaped head and a separate soldered wire loop. This piece dates to the late 18th or early 19th century. The modern button is small (9mm diameter), manufactured in one piece, with a squarish loop on the reverse. The face has traces of gilding and illegible lettering around a central motif.

6.6.2 Iron

A total of sixteen fragments and objects of iron were recovered from four contexts.

An unidentified object was recovered from the spoil of Trench 1 ([73]). The piece is anchor-shaped, that is, a central shaft with a bifurcate end. The two prongs of the 'anchor' have been deliberately shaped to an angled point, as can be seen on the x-ray. Between these two prongs, on the central shaft is a hole, which contains an oval loop. The central shaft is likely to be broken at its end, and so would have originally been longer. The piece measures at least 100mm in length, and is 71mm from point to point. The purpose of this object remains a mystery, as no parallel can be found for it. The loop would have been able to move freely around the

points, as it is larger than them, and so the whole could have operated as some kind of suspension mechanism, although this does not explain the purpose of the sharpened 'prongs'. Given its provenance, it seems likely that the piece is Roman, however, the use to which it was put is unknown.

A possible punch of perhaps Roman date was recovered from the spoil of Trench 2 ([74]). The object is similar in form to a nail, but has a blunt point and the rectangular head is all in one with the body of the piece. This measures 52mm in length, although it is slightly curved, and the head measures 20 x 15mm. Given that this piece is unstratified its dating is problematic. The location of the object, on a site producing Roman material, does infer that it could well be of the Roman period. Manning (1981, Plate 5, A23) illustrates several examples of these, although he calls them 'chisels or punches', as it difficult to define the exact use to which they were put, as the attributes of both would have been similar. This example from Wenhaston has a blunt point, more suitable to punching, rather than a chiselled edge.

A fragment of iron recovered from the spoil of Trench 1 ([73]) is likely to be a piece from a scale-tang knife. The x-ray shows one complete hole and part of another along the length of the fragment, although these were not visible to the naked eye, due to the amount of corrosion present. These holes would have been to facilitate the placing of a bone/wood/ivory handle either side of the metal and the securing of it by rivets. The date of this piece is problematic, especially as it is unstratified, but stylistically it is more likely to be of medieval or early post-medieval date than earlier.

Nine of the objects were nails, with one small example from dark earth layer [13], one larger example from pit fill [15] and seven from the spoil of Trench 1 ([73]).

Four undiagnostic fragments were also recovered from the spoil of Trench 1 ([73]), although it is possible that these pieces may be iron concretion or iron pan.

6.6.3 Lead

A total of five fragments of lead were recovered unstratified from the site.

Trench 1 ([73]) produced a roughly spherical degraded 'blob' of lead, Trench 3 ([75]) produced a folded sheet fragment, Trench 4 ([76]) produced a sheet fragment with a raised moulded pattern and Trench 8 ([79]) produced two undiagnostic sheet fragments.

6.6.4 Silver

Two coins of debased silver were recovered from the site.

The two coins were unstratified and came from the soil upcast from Trenches 3 and 4 (Appendix 5). They are both denarii - the fragment from Trench 3 ([75]) dates from the 1st half of the 3rd century and the ?2nd century denarius from Trench 4 ([76]) is of ?Hadrian.

6.7 Flint

by Andrew Peachey

A single struck flint core (61g) was recovered as unstratified [79] in an unpatinated condition.

It comprises a single-platform blade core with flakes removed part of the way around (Healy 1988, 48: Type A2), manufactured from high quality very dark grey raw flint with a chalky white cortex. The core has been maintained with the extant striking platform formed by a tablet removal; however the core appears to have been exhausted prior to being discarded. Such cores are typical of later Mesolithic to earlier Neolithic blade production in East Anglia.

6.8 Animal Bone

by Rebecca Sillwood

Sixteen fragments of animal bone weighing 111g were recovered from three contexts, two pit fills and unstratified.

Pit [14] (fill [15]) and pit [43] (fill [44]) recovered several fragments of chopped and butchered pieces, many of which appear to be from sheep/goat, and include waste pieces of skull and teeth. Chopped pieces of long bones were also present.

A small burnt fragment of bone was recovered unstratified from Trench 1 ([73]).

6.9 Finds Conclusions

The overwhelming majority of the finds recovered from Wenhaston are of Roman date, with the pottery and coins providing strong evidence for 2nd century settlement activity here. Previous work in the area (Stirk and Benfield 2009) revealed a pottery assemblage mainly geared towards the 2nd to 3rd centuries, with a minimal amount of earlier and later material. Almost all of the evidence from the current work shows a concentration of activity in the 2nd century, and no evidence was found of any Iron Age precursor settlement or of later Anglo-Saxon activity, at least from the material remains.

7.0 ENVIRONMENTAL EVIDENCE

7.1 Plant Macrofossils

by Val Fryer

7.1.1 Introduction and method statement

Samples for the evaluation of the content and preservation of the plant macrofossil assemblages were taken from pit and ditch fills and from two possible 'dark earth' deposits, and a total of twelve were submitted for assessment.

The samples were processed by manual water flotation/washover and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 6 and the plant macrofossils and other remains noted are listed in Appendix 6. Nomenclature within the table follows Stace (1997). All plant remains were charred. Modern roots and seeds were also recorded.

The non-floating residues were collected in a 1mm mesh sieve and sorted when dry.

7.1.2 Results

The recovered flots were all small (<0.1 litres in volume) and very limited in composition. In addition, many of the macrofossils were heavily concreted with fine silt particles, although this did not preclude the identification of the remains.

Although charcoal/charred wood fragments were present throughout, other plant macrofossils were scarce, comprising a possible barley (*Hordeum* sp.) grain, fragments of hazel (*Corylus avellana*) nutshell, a possible fragmentary goose grass (*Galium* sp.) seed, a fragment of indeterminate fruit stone or nutshell and pieces of charred root or stem. Other remains were also generally scarce. Fragments of black porous and tarry material, many of which were probable residues of the combustion of organic remains at very high temperatures, were recorded along with fragments of bone (some of which were burnt/calced) and small pellets of burnt or fired clay. At the time of writing, it was unclear whether the coal fragments were contemporary with the features from which the samples were taken, or later contaminants.

7.1.3 Plant Macrofossil Conclusions

In summary, although the assemblages are sparse, their uniformity of composition is striking, possibly suggesting that they have a common source. As most are primarily composed of charcoal, along with various residues of high temperature combustion, it would appear most likely that the remains are largely derived from midden or hearth waste. However, as the assemblages are small, primary deposition is probably not indicated, and is more likely that the remains are derived from scattered or wind-dispersed refuse, which was accidentally incorporated within the feature fills.

Although the current assemblages are limited in composition, they clearly illustrate that plant remains are preserved within the archaeological horizon at Wenhaston.

8.0 CONCLUSIONS

The results of the evaluation trial trenching have demonstrated that a rural Roman settlement of predominately 2nd-century AD date was identified within the proposed development area. The site's topographical location on the fringe of marginal land bordering the river Blyth must have offered access to uplands as well good access to coastal zones.

The majority of features encountered were ditches, although it has proven difficult to link them, inhibiting meaningful interpretation of continuation of such features over any distance. Two pits located in Trenches 1 and 7 may offer good environmental evidence as they appear to be deep and may contain possible water-logged deposits.

The presence of buried soils and dark earth in Trench 1 and Trench 10 may provide the opportunity to study the formation of such deposits and the impact of human intervention, whether through deliberate dumping episodes or evidence of settlement abandonment. At present it is difficult to state with certainty but if further archaeological works are undertaken at the site, then soil morphology may go some way in answering these questions.

There was very little evidence of continuity of settlement beyond the 2nd century AD and hence the remains here have the potential to produce good evidence of rural Roman settlement during use and after abandonment, promoting a greater understanding of the mid Roman period.

Recommendations for further mitigation work (if required based on the evidence presented in this report) will be made by Suffolk County Council Archaeological Services Conservation Team.

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The finds were processed, recorded and reported on by Rebecca Sillwood other than the Roman pottery, ceramic building material, fired clay and flint which were analysed by Andrew Peachey and the coins which were identified by Andrew Barnett. Val and Rob Fryer processed the environmental samples and produced the report

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Appendix 1a: Context Summary

Context	Category	Cut Type	Fill Of	Description	Period	TRENCH
1	Deposit			Topsoil	Modern	1-10
2	Deposit			Subsoil	Uncertain	1-4,6,8,9
3	Cut	Ditch			Roman	10
4	Deposit		3	Ditch fill	Roman	10
5	Cut	Ditch			Roman	10
6	Deposit		5	Ditch fill	Roman	10
7	Deposit	Spread		Dark earth	Roman	10
8	Deposit		7	Spread fill	Roman	10
9	Cut	Ditch			Roman	10
10	Deposit		9	Ditch fill	Roman	10
11	Void			--	--	--
12	Deposit			?buried soil	Roman	1
13	Deposit			Dark earth	Roman	1
14	Cut	Pit			Roman	1
15	Deposit		14	Pit fill	Roman	1
16	Cut	Ditch			Roman	10
17	Deposit		16	Ditch fill	Roman	10
18	Cut	Pit			Roman	10
19	Deposit		18	Pit fill	Roman	10
20	Cut	Ditch			Roman	8
21	Deposit		20	Ditch fill	Roman	8
22	Cut	Ditch			Roman	8
23	Deposit		22	Ditch fill	Roman	8
24	Cut	Ditch			Roman	8
25	Deposit		24	Ditch fill	Roman	8
26	U/S			Unstratified find	Roman	10
27	Cut	Ditch			Roman	7
28	Deposit		27	Ditch fill	Roman	7
29	Cut	Ditch			Roman	8
30	Deposit		29	Ditch fill	Roman	8
31	Cut	Ditch			Roman	8
32	Deposit		31	Ditch fill	Roman	8
33	Cut	Ditch			Roman	4
34	Deposit		33	Ditch fill	Roman	4
35	Cut	Pit			Roman	4
36	Deposit		35	Pit fill	Roman	4
37	Cut	Ditch			Roman	4
38	Deposit		37	Ditch fill	Roman	4
39	Cut	Pit			Roman	7
40	Deposit		39	Pit fill	Roman	7

Context	Category	Cut Type	Fill Of	Description	Period	TRENCH
41	Cut	Pit			Roman	1
42	Deposit		41	Pit fill	Roman	1
43	Cut	Pit			Roman	1
44	Deposit		43	Pit fill	Roman	1
45	Cut	Ditch			Roman	2
46	Deposit		45	Ditch fill	Roman	2
47	Cut	Ditch			Roman	6
48	Deposit		47	Ditch fill	Roman	6
49	Cut	Ditch			Roman	6
50	Deposit		49	Ditch fill	Roman	6
51	Cut	Ditch			Roman	9
52	Deposit		51	Ditch fill	Roman	9
53	Cut	Ditch			Roman	9
54	Deposit		53	Ditch fill	Roman	9
55	Deposit			Topsoil	Roman	7
56	Deposit			Sandy layer	Roman	7
57	Deposit			Subsoil	Roman	7
58	Deposit			Earlier subsoil layer	Roman	7
59	Deposit			Pale sand	Roman	7
60	Deposit			Yellowish sand	Roman	7
61	Deposit			Whitish sand	Roman	7
62	Deposit			Grey yellow sand	Roman	7
63	U/S			Cleaning back find	Roman	10
64	Deposit			Topsoil	Roman	10
65	Deposit			Yellow grey sand	Roman	10
66	Deposit			Grey brown sand	Roman	10
67	Deposit			Dark grey mid brown layer	Roman	10
68	Deposit			Pale grey yellow sand	Roman	10
69	Deposit			Pale grey white sand	Roman	10
70	Deposit			Primary fill of [3]	Roman	10
71	Deposit			Whitish sand	Roman	10
72	Deposit			Fill of [9]	Roman	10
73	U/S Finds			Spoil	--	1
74	U/S Finds			Spoil	--	2
75	U/S Finds			Spoil	--	3
76	U/S Finds			Spoil	--	4
77	U/S Finds			Spoil	--	6
78	U/S Finds			Spoil	--	7
79	U/S Finds			Spoil	--	8
80	U/S Finds			Spoil	--	9
81	U/S Finds			Spoil	--	10
82	U/S Finds			Unstratified finds from the site	--	1-10

Appendix 1b: Oasis Feature Summary

Period	Feature	Number
Roman	Pit	6
	Ditch	17

Appendix 2a: Finds by Context

Context	Material	Qty	Wt	Period	Notes
4	Ceramic Building Material	2	926g	Roman	Tegula fragments
4	Pottery	4	50g	Roman	
6	Ceramic Building Material	1	7g	Roman	Tegula fragment
6	Fired Clay	4	13g	Roman	
6	Pottery	3	19g	Roman	2nd century
10	Pottery	10	99g	Roman	
12	Pottery	12	231g	Roman	2nd-early 3rd century
12	Synthetic	2	2g	Modern	Marley floor tile fragments, 1960s?; DISCARDED
13	Iron	1	2g	Unknown	Nail
13	Pottery	13	145g	Roman	Mid 2nd century
15	Animal Bone	11	94g	Unknown	
15	Ceramic Building Material	4	78g	Roman	Tegula fragments
15	Iron	1	45g	Unknown	Nail
15	Pottery	50	1,150g	Roman	2nd century
21	Pottery	7	89g	Roman	2nd-3rd century
26	Pottery	2	160g	Roman	Mid/Late 4th-early 5th century
28	Ceramic Building Material	1	53g	Roman	Tegula fragment
28	Fired Clay	2	63g	Roman	
28	Pottery	65	598g	Roman	Mid 2nd century
38	Pottery	1	6g	Roman	
40	Ceramic Building Material	2	167g	Roman	Tegula fragments
44	Animal Bone	4	16g	Unknown	
44	Ceramic Building Material	5	149g	Roman	Tegula fragments
44	Fired Clay	3	67g	Roman	
44	Pottery	10	85g	Roman	Mid 2nd century
46	Pottery	1	6g	Roman	
50	Ceramic Building Material	1	50g	Roman	Tegula fragment
50	Pottery	6	43g	Roman	2nd century
52	Pottery	28	377g	Roman	2nd century
73	Animal Bone	1	1g	Unknown	Burnt

Context	Material	Qty	Wt	Period	Notes
73	Ceramic Building Material	1	164g	Roman	Tegula fragment
73	Copper-Alloy	1	1g	Unknown	Sheet fragment
73	Copper-Alloy	1	2g	Unknown	Sheet fragment
73	Glass	1	1g	Roman	
73	Iron	7	36g	Unknown	Nails
73	Iron	4	60g	Unknown	Undiagnostic fragments
73	Iron	1	11g	Unknown	?Knife fragment; SF9
73	Iron	1	145g	Unknown	Unidentified object; bifurcated, anchor-shaped, hole through centre containing oval loop; SF10
73	Lead	1	6g	Unknown	Degraded roughly spherical blob
73	Pottery	50	664g	Roman	Mid-Late 2nd century
74	Copper-Alloy	1	9g	Roman	Coin; illegible; dupondius; SF1; D26.5 x 24.5; 1st-2nd century
74	Iron	1	35g	Roman	Punch
74	Pottery	6	63g	Roman	2nd century
75	Lead	1	9g	Unknown	Folded sheet fragment
75	Silver	1	1g	Roman	Coin; in half; SF2; D17.5; denarius fragment; illegible; 3rd century
76	Lead	1	1g	Unknown	Decorated sheet fragment
76	Pottery	1	10g	Roman	
76	Pottery	1	5g	Post-medieval	Stoneware
76	Silver	1	2g	Roman	Coin; SF3; denarius; D17 x 18; ?Hadrian, AD 117-138
77	Ceramic Building Material	3	197g	Roman	Tegula fragments
77	Copper-Alloy	1	1g	Modern	Button
77	Pottery	10	60g	Roman	?2nd century
79	Ceramic Building Material	4	391g	Roman	Tegula fragments
79	Copper-Alloy	1	8g	Medieval	?brooch; paste settings; SF4
79	Copper-Alloy	1	5g	Roman	Coin; SF5; D26.5; Hadrian, AD 117-138
79	Copper-Alloy	1	3g	Unknown	Curved fragment
79	Fired Clay	2	51g	Roman	
79	Flint – Struck	1	61g	Late Mesolithic/Early Neolithic	
79	Lead	1	5g	Unknown	Fragment
79	Lead	1	3g	Unknown	Fragment
79	Pottery	11	89g	Roman	2nd century
80	Copper-Alloy	1	15g	Roman	Coin; SF6; D30; sestertius; AD 160-186
80	Pottery	9	80g	Roman	

Context	Material	Qty	Wt	Period	Notes
81	Ceramic Building Material	1	54g	Roman	Tegula fragment
81	Copper-Alloy	1	3g	Roman	Coin; SF8; D20; Constantine I; nummus; AD 306-337
81	Copper-Alloy	1	13g	Roman	Coin; SF7; D27.5 x 26; Antoninus Pius; denarius; AD 140-161
81	Copper-Alloy	1	2g	Unknown	Sheet fragment
81	Pottery	6	142g	Roman	?2nd century
82	Copper-Alloy	1	2g	Post-medieval	Button; D12 H14

Appendix 2b: OASIS Finds Summary

Period	Material	Total
Late Mesolithic/Early Neolithic	Flint – Struck	1
Roman	Ceramic Building Material	25
	Copper-Alloy	5
	Fired Clay	11
	Glass	1
	Iron	1
	Pottery	305
	Silver	2
Medieval	Copper-Alloy	1
Post-medieval	Copper-Alloy	1
	Pottery	1
Modern	Copper-Alloy	1
	Synthetic	2
Unknown	Animal Bone	16
	Copper-Alloy	4
	Iron	15
	Lead	5

Appendix 3: Roman Pottery Catalogue

Context	Total		GRS1		GRS2		GRS3		BSW1		BSW2		WAT RE		UNS WH1		UNS WH2		UNS WH3		M1		LEZ SA2	
	No.	Wt	No.	Wt	No.	Wt	No.	Wt	No.	Wt	No.	Wt	No.	Wt	No.	Wt	No.	Wt	No.	Wt	No.	Wt	No.	Wt
4	4	50			2	33			1	15					1	2								
6	3	19							2	15					1	4								
10	10	99									1	3	9	96										
12	12	231	7	94	2	10	2	123			1	4												
13	13	145	4	35	6	39							1	4						1	31	1	36	
15	50	1150	38	957	9	142									3	51								
21	7	89	2	20							5	69												
26	2	160	2	160																				
28	65	598	17	153	9	107			7	80	24	153	6	54	1	6							1	45
38	1	6											1	6										
44	10	85			2	15					3	8			2	25							3	37
46	1	6	1	6																				
50	6	43	1	5	3	31												1	5				1	2
52	28	377			5	69			1	15	15	147	6	98				1	48					
73	50	664	33	317	4	62	1	70							3	39	3	31			3	126	3	19
74	6	63			4	40																	2	23
76	1	10	1	10																				
77	10	60	3	34	3	10			4	16														
79	11	89	2	5	6	27			1	4					1	29							1	24
80	9	80			7	29	2	51																
81	6	142	2	22	2	12			2	108														
	305	4166	113	1818	64	626	5	244	18	253	50	390	22	252	12	156	3	31	2	53	4	157	12	186

Appendix 4: CBM/Fired Clay Catalogue

Context	Description	Total CBM (g)		CBM		Fired Clay		Comment
		No.	Wt.	No.	Wt.	No.	Wt.	
4	Ditch	2	926	2	926			\
6	Ditch	5	20	1	7	4	13	\
15	Pit	4	78	4	78			\
28	Ditch	3	116	1	53	2	63	\
40	Pit	2	167	2	167			\
44	Pit	8	216	5	149	3	67	\
50	Ditch	1	50	1	50			\
73	Spoil	1	164	1	164			\
77	Spoil	3	197	3	197			2 fragments, including the flange of a tegula are over-fired mid grey
79	Spoil	6	442	4	391	2	51	one fragment of fired clay has an impression of a 10mm wide, straight rod passing through it
81	Spoil	1	54	1	54			\
		36	2430	25	2236	11	194	

Appendix 5: Coin Catalogue

Ctxt	Denom	Date	Metal	State	Ruler	Obverse Description	Obverse Legend	Reverse Description	Reverse	Mint	Mint mark	Wt (g)	Diameter	Description
74	Dupondius	1st-2nd Century	Copper Alloy	Rome	Not Known	Head right	Illegible	Worn smooth	Illegible			8.44g	26.5mm x 24.5mm	Very worn, almost smooth. Only head discernible. No recognisable features.
75	Denarius, Fragment	3rd Century (1st half)	Debased Silver	Rome	Not known	Illegible	Illegible	Illegible	illegible			1.20g	17.5mm	Debased silver denarius. Broken in half. Green patina on both faces.
76	Denarius	2nd Century?	Debased Silver	Rome	Hadrian? 117-138	Radiate? Head right	Illegible	Illegible	[...]II PP			2.01g	17mm x 18mm	Debased silver denarius. Copper patina on both surfaces.
79	As	119-121	Copper Alloy	Rome	Hadrian 117-138	Laureate Head Right	[...]N HADRIANVS [...]	Pietas standing left	[P]ONT MA[X] TR POT COS III PIE-AVGand SC in fields	Rome		4.63g	26.5mm	Rather light, large coin with accretions around edge. Quite worn.
80	Sestertius	160-186?	Copper Alloy	Rome	Marcus Aurelius 161-180, Lucius Verus-161-169, Commodus 177-192	Bearded head right	Illegible	Victory standing left with shield on palm tree	Illegible	Rome		14.05g	30mm	Rather worn and corroded with accretions. Later 2nd century, Emperor not definitively identified.

Ctxt	Denom	Date	Metal	State	Ruler	Obverse Description	Obverse Legend	Reverse Description	Reverse	Mint	Mint mark	Wt (g)	Diameter	Description
81	Sestertius	140-161	Copper Alloy	Rome	Antoninus Pious	Radiate head right	ANTONINVS AVG PIVS PP T[....]	Standing figure	Illegible	Rome		13.26g	27.5mm x 26mm	Obverse still legible. Reverse almost smooth. Rounded, square flan. Corroded and worn.
81	Nummus	313-315	Copper Alloy	Rome	Constantine I 306-337	Bust right, laureate, draped and cuirassed.	IMP CONSTANTINVS PF AVG	Mars advancing right holding spear with trophy over left shoulder.	MARTI CO-NS- ERVATORI	Arles	PARL	2.79g	20mm	Good condition with some wear.

Appendix 6: Environmental Evidence – Plant Macrofossils

Sample No.	1	2	3	4	5	6	7	8	9	10	11	12
Context No.	51	28	13	46	40	12	15	3	21	34	30	44
Feature No.	50	27		45	39		14	2	20	33	29	43
Feature type	Ditch	Ditch	Layer	Ditch	Pit	Layer	Pit	Ditch	Ditch	Ditch	Ditch	Pit
Date	?RB		?RB				?RB		?RB		?RB	?RB
Plant macrofossils												
<i>Hordeum</i> sp. (grain)							xcf					
<i>Corylus avellana</i> L.			xcf				x					
<i>Galium</i> sp.					xcffg							
Charcoal <2mm	xx	xx	xxx	x	xxxx	xxx	xxxx	xxxx	xxx	xx	xxx	xxx
Charcoal >2mm	xx	xx	xxx	x	xxxx	xxx	xxxx	xxxx	x	x	xx	xx
Charcoal >5mm	x		x	x	xxx	x	xx	x				x
Charcoal >10mm	x				xx	x	x	x				
Charred root/stem	x			x		x		x	x			x
Indet. fruit stone/nutshell frag.										x		
Other remains												
Black porous 'cokey' material	x	x	x	x	x	x	x	xx	x	x	x	x
Black tarry material	x		x		x	x	x	x	x	x	x	x
Bone				xx	xb	xb	xx xb	x xb	x			x
Burnt/fired clay		x	x		xxx	x	x	xx	x		xx	x
Burnt stone	x											
Fish bone							xb					
Small coal frags.	x	x	x	x			x			x	x	
Small mammal/amphibian bones												x
Vitreous material							x					
Sample volume (litres)	10	10	10	10	10	10	10	10	10	10	10	10

Volume of flot (litres)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
% flot sorted	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Key to Table

x = 1–10 specimens xx = 11–50 specimens xxx = 51–100 specimens xxxx = 100+ specimens
 cf = compare fg = fragment b = burnt RB = Romano-British

Appendix 7: OASIS Report Summary

OASIS DATA COLLECTION FORM: England

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OASIS ID: norfolka1-151869

Project details

Project name	Land off St Michael's Way, Wenhaston
Short description of the project	Archaeological trial trench evaluation was conducted by NPS Archaeology on behalf of Hopkins Homes in January and February 2013 ahead of an application for planning permission to develop the site for residential housing. A desk-based assessment was undertaken in May 2012 which concluded that the site appears to lie within an area of high archaeological potential. A geophysical (magnetometer) survey of the site was conducted in November 2012 and revealed numerous anomalies across the site, interpreted as buried archaeological remains. Based on results obtained from the desk-based assessment and the geophysical results, ten trial trenches were excavated which targeted areas of geophysical features along with areas of unknown archaeological potential. Of those trenches that were excavated, eight produced evidence of archaeological features and deposits. Over twenty archaeological features were excavated mainly comprising of ditches and pits, also recorded was a formation of deposits known as 'buried soil' or 'dark earth'. The earliest find recovered during the evaluation was a flint blade core from an unstratified deposit. This type of artefact is characteristic of later Mesolithic to earlier Neolithic blade production in East Anglia. The majority of archaeological features and deposits have been attributed to the Romano-British period with a number of artefacts indicating predominately 2nd-century AD Roman occupation. With the exception of a few unstratified finds there was little evidence to suggest that occupation of the site continued beyond the 2nd or 3rd centuries AD. The presence of buried soils or dark earth may be evidence for deliberate dumping episodes and prolonged periods of settlement abandonment or may be a result of the sites marginal location in relation to more preferable
Project dates	Start: 29-01-2013 End: 08-02-2013
Previous/future work	Yes / Not known
Any associated project reference codes	WMH 038 - HER event no.
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 3 - Operations to a depth more than 0.25m
Monument type	DITCH Roman
Monument type	PIT Roman
Significant Finds	FLINT CORE Early Neolithic

Significant Finds	POT Roman
Significant Finds	FIRED CLAY Roman
Significant Finds	BROOCH Roman
Significant Finds	COIN Roman
Significant Finds	GLASS Roman
Significant Finds	TILE Roman
Significant Finds	IRON KNIFE Post Medieval
Significant Finds	ANIMAL BONE Uncertain
Methods & techniques	"Sample Trenches"
Development type	Rural residential
Prompt	National Planning Policy Framework - NPPF
Position in the planning process	Pre-application

Project location

Country	England
Site location	SUFFOLK SUFFOLK COASTAL WENHASTON WITH MELLS HAMLET Land off St Michael's Way
Study area	1.50 Hectares
Site coordinates	TM 4284 7533 52 1 52 19 17 N 001 33 49 E Point

Project creators

Name of Organisation	NPS Archaeology
Project brief originator	Suffolk County Council Archaeological Services
Project design originator	NPS Archaeology
Project director/manager	Nigel Page
Project supervisor	John Ames
Type of sponsor/funding body	Developer
Name of sponsor/funding body	Hopkins Homes Ltd

Project archives

Physical Archive recipient	Suffolk County Council
Physical Contents	"Animal Bones", "Ceramics", "Environmental", "Glass", "Metal", "Worked stone/lithics"
Digital Archive recipient	NPS Archaeology

Digital Contents	"Animal Bones","Ceramics","Environmental","Glass","Metal","Worked stone/lithics"
Digital Media available	"Images raster / digital photography","Images vector","Spreadsheets","Survey","Text"
Paper Archive recipient	Suffolk County Council
Paper Contents	"Animal Bones","Ceramics","Environmental","Glass","Metal","Worked stone/lithics"
Paper Media available	"Context sheet","Photograph","Plan","Report","Section"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Trial Trench Evaluation of Land off St Michael's Way, Wenhaston with Mells, Suffolk
Author(s)/Editor (s)	Ames, J.
Other bibliographic details	Report 2013/1266
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Appendix 8: Archaeological Specification

NPS ARCHAEOLOGY

**LAND OFF ST MICHAEL'S WAY
WENHASTON
SUFFOLK**

**SPECIFICATION
FOR
ARCHAEOLOGICAL EVALUATION**

Prepared for

**Hopkins Homes Ltd
Melton Park House
Melton
Woodbridge
Suffolk
IP12 1TJ**

by

**NPS Archaeology
Scandic House
85 Mountergate
Norwich
NR1 1PY**

December 2012

Reference No: 01-04-13-2-1232

1. Introduction

- 1.1 Proposals for a new residential development on land of St. Michael's Way, Wenhaston, Suffolk (NGR TM 4284 7533) require a programme of archaeological evaluation to assess the potential archaeological resource of the site and the likely impacts of development on that resource.
- 1.2 The site currently consists of the corner of an open field.
- 1.3 A desk-based assessment¹ identified that the site has the potential to contain archaeological remains dating from the Roman period onwards and a geophysics survey² of the site identified anomalies across the site that may be buried archaeological remains. Therefore, the Archaeological Service Conservation Team of Suffolk County Council have recommended that an archaeological evaluation is required to determine the archaeological potential of the site and the likely impacts of the scheme on that potential. The scope of the evaluation was set out in the Brief for a Trenched Archaeological Evaluation issued by the Archaeological Service Conservation Team of Suffolk County Council (Jess Tipper December 2012).
- 1.4 In order to comply with that requirement Hopkins Homes Ltd have requested that NPS Archaeology prepare costs and this project design for undertaking a programme of archaeological works to fulfil the requirements of the Archaeological Brief.

2. Aims

- 2.1 The Programme of Archaeological Work stipulated by The Archaeological Service Conservation Team of Suffolk County Council is required to recover, by archaeological evaluation, information relating to the extent, date, phasing, character, function, status and significance of the site. A determination of the state of preservation of any features, deposits and structures is also required.
- 2.2 Period resource assessments set out in the document Research and Archaeology Revisited: A Revised Framework for the Eastern Counties (Medlycott 2011) pose specific research questions for periods ranging from the palaeolithic to the modern period. Existing information indicates that the proposed development site sits within an area of potential archaeological remains dating from the Roman and later periods and has the potential to contain significant buried archaeological remains. The aims of the archaeological work may therefore be summarised as follows:
 - i. *To establish the presence or absence of archaeological remains within the proposed area.*
 - ii. *To determine the extent, condition, nature, quality and date of any archaeological remains occurring within the site and the possible impacts of the proposed development on them.*
 - iii. *Ensure that any archaeological features discovered during trial trenching are identified, sampled and recorded and, where it is desirable, recommendations for their preservation in situ are made.*
 - iv. *To establish, as far as possible, the extent, character, stratigraphic sequence and date of archaeological features and deposits, and the nature of the activities which occurred at the site during the various periods or phases of its occupation*
 - v. *To establish the palaeoenvironmental potential of subsurface deposits by ensuring that any deposits with the potential to yield palaeoenvironmental data are sampled and submitted for assessment to the appropriate specialists.*
 - vi. *To explore evidence for social, economic and industrial activity.*
 - vii. *To disseminate the archaeological data recovered by the evaluation in*

¹ Sillwood R. 2012. Archaeological Desk-Based Assessment of Land off St Michael's Way, Wenhaston, Suffolk. Unpublished NPS Archaeology report 2012/1232.

² WYAS, 2012, *Land south-east of Wenhaston, Suffolk*. Unpublished WYAS report 2414.

the form of a formal report which will provide the basis for decisions regarding further archaeological intervention and mitigation proposals.

3. Method Statement

3.1 Introduction

3.1.1 A three-stage evaluation strategy will be undertaken to assess the archaeological potential of the proposed development site. The stages of this strategy may be summarised as follows.

- i. Trial Trenching.* Machine and manual excavation will be employed to investigate the presence, condition, character and date of any subsurface archaeological deposits and features occurring within the site. Any archaeological features identified will be cleaned and sample excavated to determine function, form and relative date.
- ii Post-fieldwork Processes.* The drawn and written stratigraphic/structural record will be cross-referenced and analysed to provide a synthesis of the results of the work. The cleaning and cataloguing of any artefactual and ecofactual materials recovered will be carried out throughout the duration of the fieldwork. The finds will be cleaned, marked and packaged in accordance with the archive requirements of the Norfolk Museums and Archaeology Service.
- iii. Report and Archive.* The report will describe the results of the window sampling and trial trenching with data presented in tabular, graphic and appendix form. Copies of the reports will be submitted to the client and to The Archaeological Service Conservation Team of Suffolk County Council.

3.1.2 The procedures and methodology for each of the stages outlined above are described in detail below.

3.2 Trial Trenching

3.2.1 Trial trenching will be concerned with establishing the condition, character and date of any subsurface archaeological features and deposits present. Guidelines set out in the documents *Standard and Guidance for an Archaeological Field Evaluation* (Institute for Archaeologists 2008) and *Standards for Field Archaeology in the East of England* (Gurney 2003) will be followed.

3.2.2 Ten trenches, 30m x 1.8m, will be excavated giving a c.3.5% evaluation sample of the site.

3.2.3 The trenches will be set out by NPS Archaeology and CAT-scanned prior to excavation. The trenches will be positioned to provide an appropriate coverage of the site and to target and test the geophysical anomalies (Fig 1). The final location of the trenches may be determined on the basis of surface or below ground obstructions and all Health and Safety considerations. Other considerations such as public access may also be a factor.

3.2.4 Excavation will be by mechanical excavator fitted with a toothless bucket in 100mm spits until natural ground or archaeological deposits are identified.

3.2.5 Excavation will, in the first instance, be undertaken to a maximum depth of 1.2m below the present ground surface in line with Health and Safety legislation for trenches with unsupported sides. If excavation below this depth is required to fully evaluate the site, the trench sides may need to be stepped or shored and this will result in additional costs and time on site. The requirement for excavation below 1.2m will be determined following a site review with the Archaeological Service

Conservation Team of Suffolk County Council. This will then be agreed and costed separately.

- 3.2.6 If the deposits within each trench are thought to extend too deep to evaluate safely or below the likely level of any development impacts a hand auger may be used to retrieve information about the nature of the lower deposits.
- 3.2.7 The trenches will be fenced using Netlon high-visibility fencing throughout the excavation and appropriate warning signage will be displayed.
- 3.2.8 Spoil from the trenches will not be removed from site. The trench will not be backfilled by NPS Archaeology until agreement to do so is given by the Archaeological Service Conservation Team of Suffolk County Council. This backfilling will not attempt consolidation or compaction over and above that possible with a mechanical excavator. Full surface reinstatement will not be attempted, but all trenches will be left in a safe condition.
- 3.2.9 Exposed surfaces and all archaeological features and deposits will be excavated by hand and screened by metal detector. A Tesoro Laser B3 or a Fisher 1265X metal detector will be utilised to scan excavated spoil and *in situ* horizons with the operator ensuring that it is used in a correct fashion. All artefactual and ecofactual materials will be collected and bagged by context.
- 3.2.10 Detailed strategies for levels of sampling of buried soils, structures, pits, post-holes and ditches will be determined on site. Allowance will be made for total recovery where appropriate; percentage sampling will apply in areas where complex stratified deposits are encountered. Buried soils will be sampled by sieving to determine artefact densities. In general, the feature/deposit sampling strategy will be employed throughout the evaluation in accordance with the document *Standards for Field Archaeology in the East of England* (Gurney 2003).
- 3.2.11 All archaeological deposits, features and layers will be assigned individual context numbers and recorded on standardised forms employing the NPS Archaeology's pro forma recording system. The records will include full written, graphic and photographic elements with site and context numbering compatible with the Suffolk Historic Environment Record numbering system. Plans will be made at a scale of 1:50, with provision for 1:20 and 1:10 drawings. Sections will be recorded at scales of 1:10 and 1:20 depending on the detail considered necessary. A photographic record in black and white and colour (35mm film/digital) will be maintained of all archaeological deposits, layers and features to record their characteristic and relationships. Photographs will also be taken to record the progress of the evaluation.
- 3.2.12 Human remains will be left *in situ* unless otherwise instructed by The Archaeological Service Conservation Team of Suffolk County Council. If any human remains or burials are encountered which must be removed an application for a Licence For the Removal of Human Remains will be made in compliance with the 1857 and 1981 Burial Acts and within all relevant Ministry of Justice guidelines. Backfilling of features containing human remains will be done manually to ensure that the remains are appropriately protected from any damage or disturbance.
- 3.2.13 Soil samples for palaeoenvironmental materials will be collected if suitable sealed and well-dated deposits are encountered. Standard 30 litre bulk soil samples, column or monolith samples and Kubiena tins will be collected from such deposits as appropriate, in consultation with the English Heritage Regional Advisor for Archaeological Science and other consultant environmentalists. In all instances, sampling procedures will follow the guidelines set out in the document *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage 2002). Full written, graphic and photographic sample records will be made using NPS Archaeology's pro forma recording system.

3.3 Post-Fieldwork Processes

- 3.3.1 The drawn and written stratigraphic/structural record will be cross-referenced and analysed to provide a synthesis of the results of the work.
- 3.3.2 The cleaning and cataloguing of any artefactual materials recovered will be undertaken on completion of the trial trenching. All retained materials will be cleaned, marked and packaged in accordance with the requirements of the Norfolk Museums and Archaeology Service.
- 3.3.3 Post-fieldwork analyses will start upon completion of the finds processing and will involve the identification and description of the artefactual materials recovered by the relevant specialists. In general, the following strategies will be employed in the analysis of the artefactual materials recovered:
- *Pottery*. Analysed to determine date and tabulated by context unit.
 - *Worked flint*. Sorted and tabulated by context unit.
 - *Metal artefacts*. Assessed for dating and significance, catalogued by context unit and where necessary conserved within four weeks of completion of fieldwork, in accordance with *UK Institute of Conservators Guidelines*.
 - *Faunal Remains*. Sorted and tabulated by context unit. Assessed for the potential for further analysis and for sieving for the recovery of smaller bird and fish bones.
 - *Environmental Samples*. Processed and assessed for content and significance.
 - Other categories of artefactual materials will be analysed in a similar fashion.
- 3.3.4 All finds work will follow the procedures set out in the document *Standards and Guidelines for the collection, documentation, conservation and research of archaeological materials* (Institute for Archaeologists 2001). Finds data will be stored on a database to aid analysis and report preparation.

3.4 Report and Archive

- 3.4.1 In line with the Archaeological Brief for the site issued by the Archaeological Service Conservation Team of Suffolk County Council, an evaluation report will be prepared. This report will present the results of the desk-based assessment alongside the stratigraphic, structural, artefactual and environmental evidence and analyses of the results of the trial trenching.
- 3.4.2 The report will present data in tabular, graphic and appendix form. A list of archive components generated by the work will also be included in the report. Copyright of the reports will be retained by NPS Archaeology.
- 3.4.3 Multiple copies of the report will be produced as appropriate and presented to Hopkins Homes Ltd and one copy to the Archaeological Service Conservation Team of Suffolk County Council. An HER form will accompany the evaluation report and will include a reference to the archive and the intended place of archive deposition. The report will be submitted within eight weeks of the completion of the fieldwork.
- 3.4.4 NPS Archaeology supports the OASIS project. An online record will be initiated immediately prior to the start of fieldwork and completed when the final report is submitted to the Archaeological Service Conservation Team of Suffolk County Council. This will include a pdf version of the final report.
- 3.4.5 A single integrated archive for all elements of the work will be prepared according to the recommendations set out in *Environmental standards for the permanent storage of excavated material from archaeological sites* (UKIC, Conservation Guidelines 3, 1984) and *Guidelines for the preparation of excavation archives for long-term storage* (Walker 1990), and in accordance with the Norfolk Museums and Archaeology Service's own requirements for archive preparation, storage and conservation.

- 3.4.6 The archive will be fully indexed and cross-referenced and prepared in such a form that it can be microfilmed on behalf of the National Monuments Record. It will also be integrated with the Norfolk Museums and Archaeology Service's Project accession number and the Suffolk Historic Environment Record numbering system. The silver master will be deposited with National Monuments Record and a diazo copy with the Suffolk Historic Environment Record. Deposition of the archive and finds (by prior agreement with the landowners) will take place within six months of the completion of the final report and confirmed in writing to the Suffolk Museums and Archaeology Service. A full listing of archive contents and finds boxes will accompany the deposition of the archive and finds.
- 3.4.7 All archaeological materials, excepting those covered by the *Treasure Act, 1996*, will remain the property of the landowners. NPS Archaeology will seek to reach a formal agreement with the landowners for the donation of the finds to the Norfolk Museums and Archaeology Service.

4. Timetable

- 4.1 The timetable for fieldwork assumes that there are no major delays to the work programme caused by vandalism, repeated plant breakdown, restricted access, programme changes by the Client or major periods of adverse weather conditions.

5. Staffing

- 5.1 The project will be co-ordinated by a Project Officer who will be dedicated to the project throughout its duration. The Project Officer will act under the direction of Project Manager. The Project Manager will assume responsibility for all aspects of the project including finance, logistics, standards, health and safety, and liaison with the client and curators. The Project Officer will have substantial experience in archaeological evaluation and post-excavation analysis.
- 5.2 Other members of staff involved in the project will be the Experienced Excavators and Finds Co-ordinator staff. Experienced Excavator staff will have experience in excavation and experience with NPS Archaeology's *pro forma* recording system or similar systems. The Project Officer and/or Experienced Excavator staff will be experienced metal detector users.
- 5.3 NPS Archaeology staff associated with the project will be as follows:

Management	
Archaeology Manager	Jayne Bown BA, MIFA
Archaeology Manager	David Whitmore BA, MIFA
Project Manager	Nigel Page BA AIFA

Project Staff	
Project Officer	Pete Crawley
Finds Co-ordinator	Becky Sillwood
Experienced Excavators	To be nominated

- 5.4 NPS Archaeology reserves the right, because of its developing work programme, to change its nominated personnel at any time. This will be in consultation with the client and the Archaeological Service Conservation Team of Suffolk County Council.
- 5.5 The analysis of artefactual and ecofactual materials will be undertaken by NPS Archaeology staff or nominated external specialists. Nominated NPS Archaeology and external specialists and their areas of expertise are as follows:

5.5.1 Specialists used by NPS Archaeology

Specialist	Research Field
Andy Barnett	Metal-detectorist, Numismatic Items
Andy Peachey	Roman Pottery, Fired Clay, worked flint
Becky Sillwood AIFA	Metal finds
David King	Window Glass
Debbie Forkes	Conservation
Fran Green BSc, PhD	Palaeoenvironmental
Jo Mills	Worked Stone Artefacts
John Shepherd	Vessel Glass
Julie Curl	Faunal Remains
Richard Macphail	Micromorphology
Roger Doonan	Non-Ferrous Metalworking
Sarah Bates	Worked Flint
Sarah Percival BA, MIFA	Prehistoric ceramics, general finds
Stephen Heywood	Architectural Stonework
Sue Anderson	Post-Roman Pottery, CBM, human remains
Val Fryer	Macrofossil analysis

6. General Conditions

- 6.1 NPS Archaeology will not commence work until a written order or signed agreement is received from the Client. Where the commission is received through an Agent, the Agent is deemed to be authorised to act on behalf of the Client. NPS Archaeology reserve the right to recover unpaid fees for the service provided from the Agent where it is found that this authority is contested by said Client.
- 6.2 NPS Archaeology would expect information on any services crossing the site to be provided by the client.
- 6.3 A 7.4 hour working day is normally operated by NPS Archaeology, although their agents may work outside these hours.
- 6.4 NPS Archaeology would expect the client to arrange suitable access to the site for its staff, plant and welfare facilities on the agreed start date.
- 6.5 NPS Archaeology would expect any information concerning the presence of TPOs and/or, protected flora and fauna on the site to be provided by the client prior to the commencement of works and accept no liability if this information is not disclosed. No excavation will take place within 8m or canopy width (whichever is the greater) of any trees within or bordering the site.
- 6.6 NPS Archaeology shall not be held responsible for any delay or failure in meeting agreed deadlines resulting from circumstances beyond its reasonable control. Such circumstances would include without limitation; long periods of adverse weather conditions, flooding, repeated vandalism, ground contamination, delays in the development programme, unsafe buildings, conflicts between the archaeological excavation method and the protection of flora and fauna on the site, disease restrictions, and unexploded ordnance.
- 6.7 Whether or not CDM regulations apply to this work, NPS Archaeology would expect the client to provide information on the nature, extent and level of any soil contamination present. Should unanticipated contaminated ground be encountered during the trial trenching, excavation will cease until an assessment of risks to health has been undertaken and on-site control measures implemented. NPS Archaeology will not be liable for any costs related to the collection and analysis of soils or other assessment methods, on-site control measures, and the removal of contaminated soil or other materials from site.
- 6.8 Should any disease restrictions be implemented for the area during the evaluation, fieldwork will cease and staff redeployed until they are lifted. NPS Archaeology will not be liable for any costs related to on-site disease control measures and for any

additional costs incurred to complete the fieldwork after the restrictions have been removed.

- 6.9 NPS Archaeology will not accept responsibility for any tree surgery, removal of undergrowth, shrubbery or hedges or reinstatement of gardens. NPS Archaeology will endeavour to restrict the levels of disturbance of to a minimum but wishes to bring to the attention of the client that the works will necessarily alter the appearance of any landscaped gardens.

7. Quality Standards

- 7.1 NPS Archaeology is an Institute for Archaeologists Registered Archaeological Organisation and fully endorses the *Code of Practice* and the *Code of Practice for the Regulation of Contractual Arrangements in Field Archaeology*. All staff employed or subcontracted by NPS Archaeology will be employed in line with The Institute for Archaeologists *Code of Practice*.
- 7.2 The guidelines set out in the document *Standards for Field Archaeology in the East of England* (Gurney 2003) will be adhered to. Provision will be made for monitoring the work by The Archaeological Service Conservation Team of Suffolk County Council in accordance with the procedures outlined in the document *Management of Archaeological Projects* (English Heritage 1991). Monitoring opportunities for each phase of the project are suggested as follows:
- during Trial Trenching
 - during Post-Fieldwork Analysis
 - upon completion of the archive
 - upon receipt of the Evaluation Report
- 7.3 A further monitoring opportunity will be provided at the end of the project upon deposition of the integrated archive and finds with the Suffolk Museums and Archaeology Service.
- 7.4 NPS Archaeology operates a Project Management System. Most aspects of this project will be co-ordinated by a Project Officer who is responsible for the successful completion of the project. The Project Officer's performance is monitored by the Project Manager. The Archaeology Managers have the responsibility for all of NPS Archaeology's work and ensures the maintenance of quality standards within the organisation.

8. Health and Safety

- 8.1 NPS Archaeology will ensure that all work is carried out in accordance with NPS Property Consultants Limited's Health and Safety Policy, to standards defined in *the Health and Safety at Work, etc Act, 1974* and *The Management of Health and Safety Regulations, 1992*, and in accordance with the health and safety manual *Health and Safety in Field Archaeology* (SCAUM 2007).
- 8.2 A risk assessment will be prepared for the fieldwork. All staff will be briefed on the contents of the risk assessment and required to read it. Protective clothing and equipment will be issued and used as required.
- 8.3 NPS Archaeology will provide copies of NPS Property Consultants Limited's Health and Safety policy on request.

9. Insurance

- 9.1 NPS Archaeology's Insurance Cover is:

Employers Liability	£ 5,000,000
Public Liability	£50,000,000

9.2 Full details of NPS Archaeology's Insurance cover will be supplied on request.



Figure 1: Suggested trench location plan.

Appendix 9: Geophysical survey report



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**Land south-east of Wenhaston
Suffolk**

Geophysical Survey

Report no. 2414

December 2012

Client: NPS Archaeology



Land south-east of Wenhaston Suffolk

Geophysical Survey

Summary

A geophysical (magnetometer) survey covering 1.2 hectares was carried out on the south-eastern edge of the village of Wenhaston. Several discrete anomalies have been identified in the survey that are thought to be geological in origin. There are also a number of discrete anomalies, that are significantly stronger in magnetic response being interpreted as possibly archaeological, although a geological or modern cause cannot be discounted. Based on the geophysical survey the archaeological potential of the site is considered to be low to moderate.



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WYAS

Report Information

Client: NPS Archaeology
Address: Scandic House, 85 Mountergate, Norwich, NR1 1PY
Report Type: Geophysical Survey
Location: Land south-east of Wenhaston
County: Suffolk
Grid Reference: TM 4285 7535
Period(s) of activity represented: Modern
Report Number: 2414
Project Number: 3998
Site Code: WSU12
Planning Application No.: Pre-planning
Museum Accession No.: n/a
OASIS ID:
Date of fieldwork: November 2012
Date of report: December 2012
Project Management: Sam Harrison BSc MSc AIfA
Fieldwork: Chris Sykes BA MSc
Orlando Prestidge BA MA PIfA
James Lawton BSc MSc PIfA
Report: David Williams BA PIfA
Illustrations: David Williams
Photography: Chris Sykes
Research: n/a

Authorisation for
distribution: -----



Cert. No. 125

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- 2 Site location showing greyscale magnetometer data (1:2000 @ A3)
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- 1 General view of survey area, looking north-west

1 Introduction

Archaeological Services WYAS was commissioned by Nigel Page of NPS Archaeology, to carry out a geophysical (magnetometer) upon a small area of land on the south-eastern edge of Wenhaston, Suffolk (see Fig. 1). The scheme of work was undertaken in accordance with the guidance contained in the National Planning Policy Framework (NPPF) and was carried out on November 16th 2012.

Site location, topography and land-use

The proposed development area (PDA) comprises a flat (approximately 10m above Ordnance Datum), triangular block of land located on the south-eastern edge of the village of Wenhaston. The PDA is defined by housing to the north and west, with a cemetery to the east and an unmarked public footpath to the south-east and covers an area of approximately 1.2 hectares, centred on TM 4285 7535, which is currently agricultural land that had recently been harvested (see Plate 1).

Soils and geology

The underlying bedrock comprises Crag Group – sand, sedimentary bedrock overlain with superficial deposits of Lowestoft Formation - sand and gravels (British Geological Survey 2012). The soils in this area are classified in the Newport 3 association, characterised as deep, well-drained sands with slowly permeable subsoils and slight seasonally waterlogging (Soil Survey of England and Wales 1983).

2 Archaeological and Historical Background

The PDA lies within an area of known archaeological potential with several known heritage assets recorded on the Suffolk Historic Environment Record in the vicinity of the site. These include an area of undated enclosures and field systems, recorded as cropmarks, 150m to the north of the PDA, and further cropmarks of a large Roman settlement 220m to the south-west. Iron Age, Roman, Anglo-Saxon and medieval find scatters have also been recovered from in and around Wenhaston.

3 Aims, Methodology and Presentation

The aim of the geophysical survey was to gather sufficient information to establish the presence/absence, character and extent of any archaeological remains within the specific areas to be impacted by the proposed development, and to inform further strategies should they be necessary.

The specific objectives were to:

- to provide information about the nature and possible interpretation of any magnetic anomalies identified;
- to therefore determine the presence/absence and extent of any buried archaeological features; and
- to produce a comprehensive site archive and report.

Magnetometer survey

Bartington Grad601 instruments were used to take readings at 0.25m intervals on zig-zag traverses 1m apart within 30m by 30m grids so that 3600 readings were recorded in each grid. These readings were stored in the memory of the instrument and later downloaded to computer for processing and interpretation. Geoplot 3 (Geoscan Research) software was used to process and present the data. Further technical information on the equipment used, data processing and survey methodologies are given in Appendix 1 and Appendix 2.

The survey methodology, reporting standards and any recommendations comply with guidelines outlined by English Heritage (David *et al.* 2008) and by the Institute for Archaeologists (IfA 2010). All figures reproduced from Ordnance Survey mapping are with the permission of the controller of Her Majesty's Stationery Office (© Crown copyright).

The figures in this report have been produced following analysis of the data in 'raw' and processed formats and over a range of different display levels. All figures are presented to most suitably display and interpret the data from this site based on the experience and knowledge of Archaeological Services staff.

Reporting

A general site location plan, incorporating the 1:50000 Ordnance Survey mapping is shown in Figure 1. Figure 2 is a more detailed location plan showing the greyscale magnetometer data at a scale of 1:2000. The data are presented in greyscale, X-Y trace plot and interpretation formats at a scale of 1:1000 in Figures 3, 4 and 5.

4 Results and Discussion

Ferrous anomalies

Ferrous anomalies, either as individual 'spikes' or more extensive areas of magnetic disturbance, are typically caused by ferrous (magnetic) debris, either on the ground surface or mixed in with the plough-soil. Little importance is normally given to such anomalies, unless

there is any supporting evidence for an archaeological interpretation, as ferrous debris is common on rural sites, often being present as a consequence of manuring or tipping/infilling. Areas of magnetic disturbance have been identified along the northern and western edges of the survey area. These responses are thought to be caused by the proximity of fences.

Geological anomalies

The magnetic background across the whole of the survey area is variable with numerous localised areas of enhanced magnetic response, which manifest as discrete anomalies and which give the data a speckled appearance. These types of anomaly are interpreted as being due to variations within the soils and may particularly be due to the presence of localised patches of gravel within the upper soil horizons. The likely presence of patches of magnetic gravels makes the confident interpretation of the cause of these anomalies difficult as it is impossible to discriminate between anomalies which have an underlying geological cause and those which may be due to non-linear archaeological features (see below).

?Archaeological anomalies

Within the data set there are a number of discrete anomalies (area of magnetic enhancement) that are significantly more magnetic than the geological anomalies described above. On this basis an archaeological origin is considered possible, although a geological or even a modern cause is considered equally possible for any or all of these anomalies.

5 Conclusions

The geophysical survey has identified a number of anomalies that can more than likely be ascribed a geological origin due to the probable pockets of magnetic gravels contained within the superficial geology. A number of anomalies with an enhanced magnetic response may have an archaeological origin. However, a geological or modern origin cannot be dismissed.

Based on the geophysical survey the site is considered to have a low to moderate archaeological potential.

Disclaimer

The results and subsequent interpretation of data from geophysical surveys should not be treated as an absolute representation of the underlying archaeological and non-archaeological remains. Confirmation of the presence or absence of archaeological remains can only be achieved by direct investigation of sub-surface deposits.

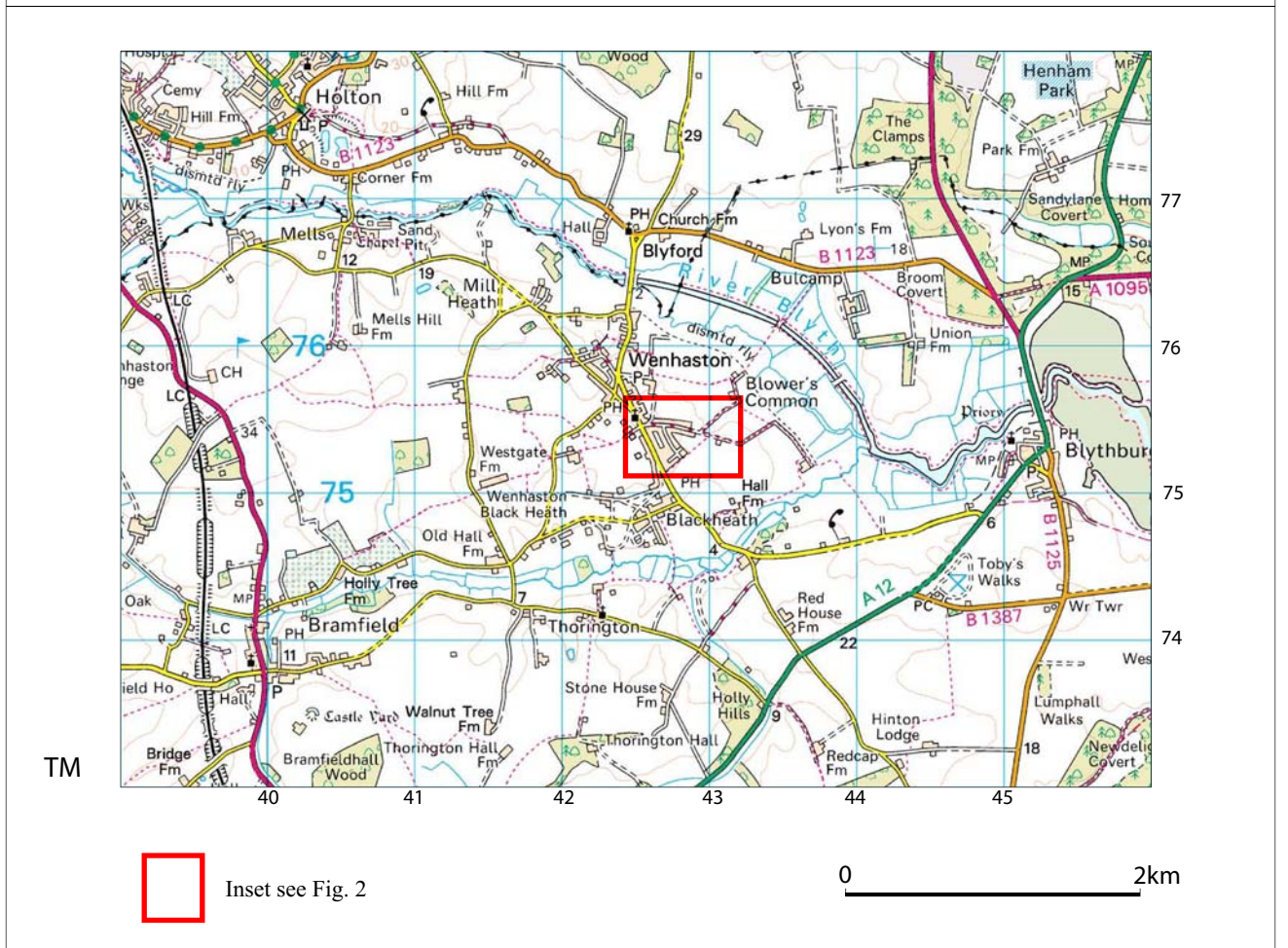
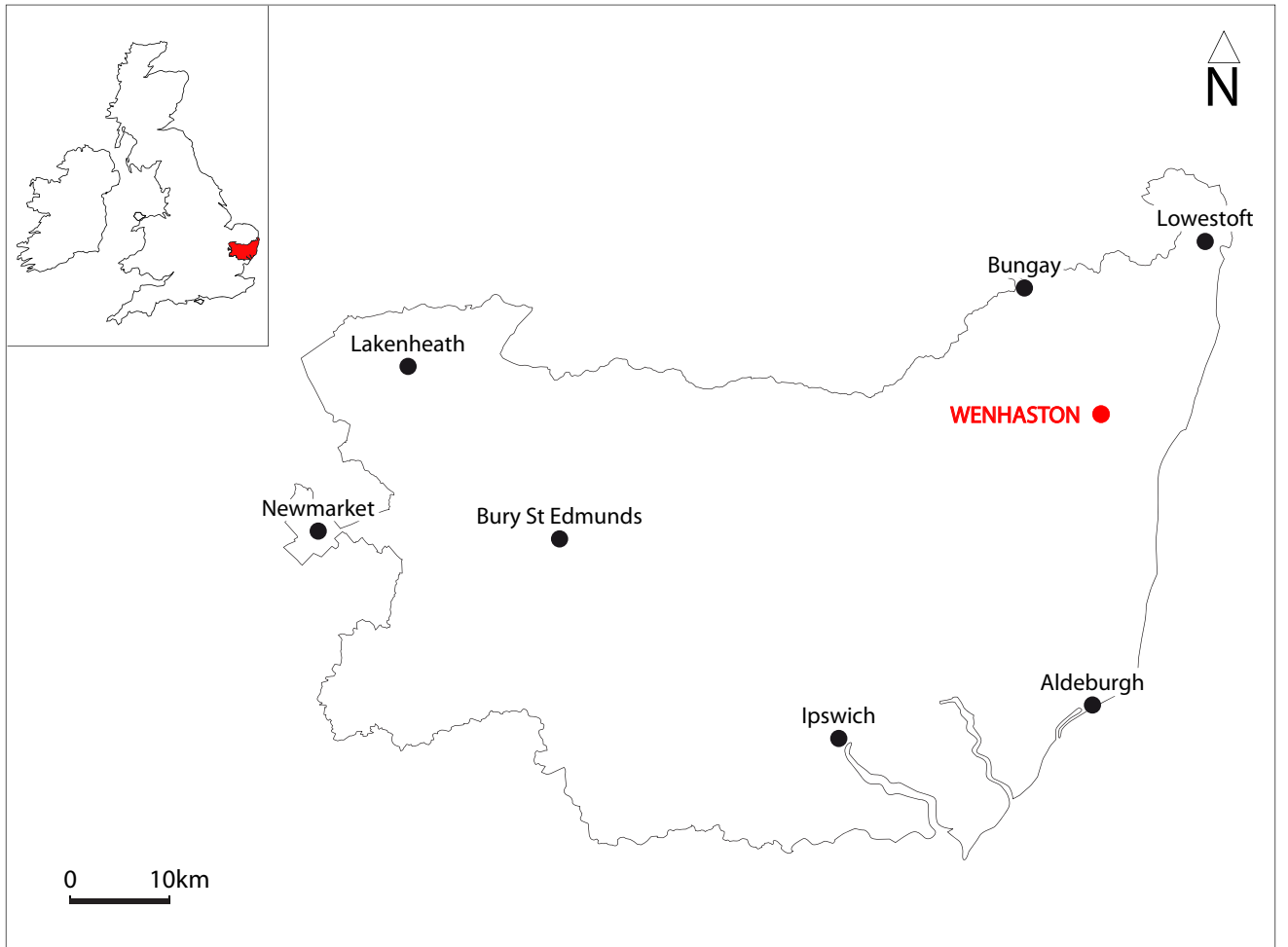


Fig. 1. Site location



Fig. 3. Processed greyscale magnetometer data (1:1000 @ A4)

0 25m



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 Archaeological Services W Y A S
 PO Box 30, Nepshaw Lane South, Morley, LS27 0UG
 Tel: 0113 383 7500 Fax: 0113 383 7501

Fig. 4. XY trace plot of minimally processed magnetometer data (1:1000 @ A4)

0 25m

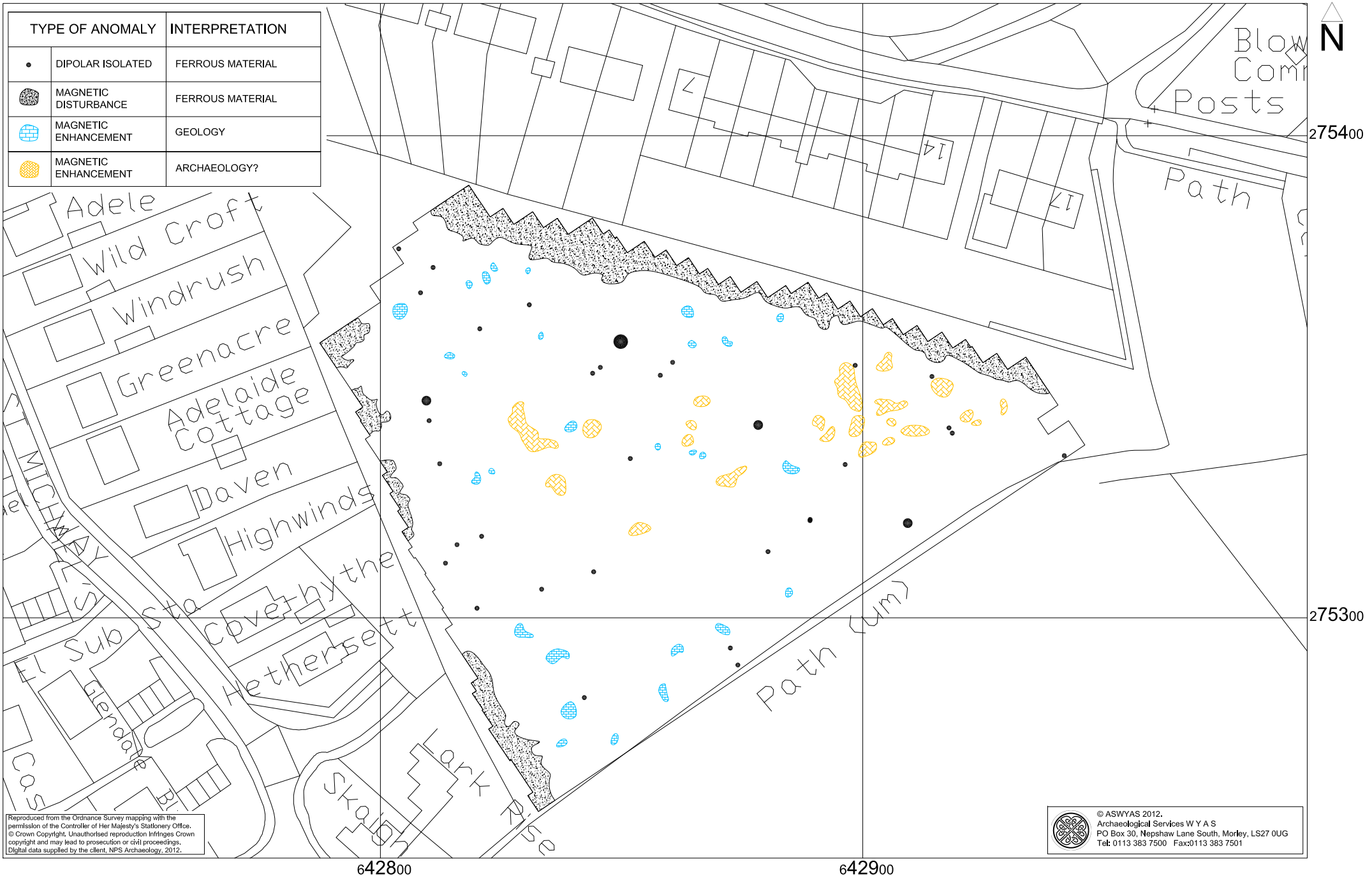


Fig. 5. Interpretation of magnetometer data (1:1000 @ A4)

0 25m



Plate 1. General view of survey area, looking north-west

Appendix 1: Magnetic survey - technical information

Magnetic Susceptibility and Soil Magnetism

Iron makes up about 6% of the Earth's crust and is mostly present in soils and rocks as minerals such as maghaemite and haemetite. These minerals have a weak, measurable magnetic property termed magnetic susceptibility. Human activities can redistribute these minerals and change (enhance) others into more magnetic forms so that by measuring the magnetic susceptibility of the topsoil, areas where human occupation or settlement has occurred can be identified by virtue of the attendant increase (enhancement) in magnetic susceptibility. If the enhanced material subsequently comes to fill features, such as ditches or pits, localised isolated and linear magnetic anomalies can result whose presence can be detected by a magnetometer (fluxgate gradiometer).

In general, it is the contrast between the magnetic susceptibility of deposits filling cut features, such as ditches or pits, and the magnetic susceptibility of topsoils, subsoils and rocks into which these features have been cut, which causes the most recognisable responses. This is primarily because there is a tendency for magnetic ferrous compounds to become concentrated in the topsoil, thereby making it more magnetic than the subsoil or the bedrock. Linear features cut into the subsoil or geology, such as ditches, that have been silted up or have been backfilled with topsoil will therefore usually produce a positive magnetic response relative to the background soil levels. Discrete feature, such as pits, can also be detected. The magnetic susceptibility of a soil can also be enhanced by the application of heat and the fermentation and bacterial effects associated with rubbish decomposition. The area of enhancement is usually quite large, mainly due to the tendency of discard areas to extend beyond the limit of the occupation site itself, and spreading by the plough. An advantage of magnetic susceptibility over magnetometry is that a certain amount of occupational activity will cause the same proportional change in susceptibility, however weakly magnetic is the soil, and so does not depend on the magnetic contrast between the topsoil and deeper layers. Susceptibility survey is therefore able to detect areas of occupation even in the absence of cut features. On the other hand susceptibility survey is more vulnerable to the masking effects of layers of colluvium and alluvium as the technique, using the Bartington system, can generally only measure variation in the first 0.15m of ploughsoil.

Types of Magnetic Anomaly

In the majority of instances anomalies are termed 'positive'. This means that they have a positive magnetic value relative to the magnetic background on any given site. However some features can manifest themselves as 'negative' anomalies that, conversely, means that the response is negative relative to the mean magnetic background.

Where it is not possible to give a probable cause of an observed anomaly a '?' is appended.

It should be noted that anomalies interpreted as modern in origin might be caused by features that are present in the topsoil or upper layers of the subsoil. Removal of soil to an archaeological or natural layer can therefore remove the feature causing the anomaly.

The types of response mentioned above can be divided into five main categories that are used in the graphical interpretation of the magnetic data:

Isolated dipolar anomalies (iron spikes)

These responses are typically caused by ferrous material either on the surface or in the topsoil. They cause a rapid variation in the magnetic response giving a characteristic 'spiky' trace. Although ferrous archaeological artefacts could produce this type of response, unless there is supporting evidence for an archaeological interpretation, little emphasis is normally given to such anomalies, as modern ferrous objects are common on rural sites, often being present as a consequence of manuring.

Areas of magnetic disturbance

These responses can have several causes often being associated with burnt material, such as slag waste or brick rubble or other strongly magnetised/fired material. Ferrous structures such as pylons, mesh or barbed wire fencing and buried pipes can also cause the same disturbed response. A modern origin is usually assumed unless there is other supporting information.

Linear trend

This is usually a weak or broad linear anomaly of unknown cause or date. These anomalies are often caused by agricultural activity, either ploughing or land drains being a common cause.

Areas of magnetic enhancement/positive isolated anomalies

Areas of enhanced response are characterised by a general increase in the magnetic background over a localised area whilst discrete anomalies are manifest by an increased response (sometimes only visible on an XY trace plot) on two or three successive traverses. In neither instance is there the intense dipolar response characteristic exhibited by an area of magnetic disturbance or of an 'iron spike' anomaly (see above). These anomalies can be caused by infilled discrete archaeological features such as pits or post-holes or by kilns. They can also be caused by pedological variations or by natural infilled features on certain geologies. Ferrous material in the subsoil can also give a similar response. It can often therefore be very difficult to establish an anthropogenic origin without intrusive investigation or other supporting information.

Linear and curvilinear anomalies

Such anomalies have a variety of origins. They may be caused by agricultural practice (recent ploughing trends, earlier ridge and furrow regimes or land drains), natural geomorphological features such as palaeochannels or by infilled archaeological ditches.

Methodology: Magnetic Susceptibility Survey

There are two methods of measuring the magnetic susceptibility of a soil sample. The first involves the measurement of a given volume of soil, which will include any air and moisture that lies within the sample, and is termed volume specific susceptibility. This method results in a bulk value that is not necessarily fully representative of the constituent components of the sample. For field surveys a Bartington MS2 meter with MS2D field loop is used due to its speed and simplicity. The second technique overcomes this potential problem by taking into account both the volume and mass of a sample and is termed mass specific susceptibility. However, mass specific readings cannot be taken in the field where the bulk properties of a soil are usually unknown and so volume specific readings must be taken. Whilst these values are not fully representative they do allow general comparisons across a site and give a broad indication of susceptibility changes. This is usually enough to assess the susceptibility of a site and evaluate whether enhancement has occurred.

Methodology: Gradiometer Survey

There are two main methods of using the fluxgate gradiometer for commercial evaluations. The first of these is referred to as *magnetic scanning* and requires the operator to visually identify anomalous responses on the instrument display panel whilst covering the site in widely spaced traverses, typically 10m apart. The instrument logger is not used and there is therefore no data collection. Once anomalous responses are identified they are marked in the field with bamboo canes and approximately located on a base plan. This method is usually employed as a means of selecting areas for detailed survey when only a percentage sample of the whole site is to be subject to detailed survey.

The disadvantages of magnetic scanning are that features that produce weak anomalies (less than 2nT) are unlikely to stand out from the magnetic background and so will be difficult to detect. The coarse sampling interval means that discrete features or linear features that are parallel or broadly oblique to the direction of traverse may not be detected. If linear features are suspected in a site then the traverse direction should be perpendicular (or as close as is possible within the physical constraints of the site) to the orientation of the suspected features. The possible drawbacks mentioned above mean that a 'negative' scanning result should be validated by sample detailed magnetic survey (see below).

The second method is referred to as *detailed survey* and employs the use of a sample trigger to automatically take readings at predetermined points, typically at 0.25m intervals, on zig-zag traverses 1m apart. These readings are stored in the memory of the instrument and are later dumped to computer for processing and interpretation. Detailed survey allows the visualisation of weaker anomalies that may not have been detected by magnetic scanning.

During this survey a Bartington Grad601 magnetic gradiometer was used taking readings on the 0.1nT range, at 0.25m intervals on zig-zag traverses 1m apart within 30m by 30m square

grids. The instrument was checked for electronic and mechanical drift at a common point and calibrated as necessary. The drift from zero was not logged.

Data Processing and Presentation

The detailed gradiometer data has been presented in this report in XY trace and greyscale formats. In the former format the data shown is 'raw' with no processing other than grid biasing having been done. The data in the greyscale images has been interpolated and selectively filtered to remove the effects of drift in instrument calibration and other artificial data constructs and to maximise the clarity and interpretability of the archaeological anomalies.

An XY plot presents the data logged on each traverse as a single line with each successive traverse incremented on the Y-axis to produce a 'stacked' plot. A hidden line algorithm has been employed to block out lines behind major 'spikes' and the data has been clipped. The main advantage of this display option is that the full range of data can be viewed, dependent on the clip, so that the 'shape' of individual anomalies can be discerned and potentially archaeological anomalies differentiated from 'iron spikes'. Geoplot 3 software was used to create the XY trace plots.

Geoplot 3 software was used to interpolate the data so that 3600 readings were obtained for each 30m by 30m grid. The same program was used to produce the greyscale images. All greyscale plots are displayed using a linear incremental scale.

Appendix 2: Survey location information

The site grid was laid out using a Trimble VRS differential Global Positioning System (Trimble 5800 model). The accuracy of this equipment is better than 0.01m. The survey grids were then super-imposed onto a base map provided by the client to produce the displayed block locations. However, it should be noted that Ordnance Survey positional accuracy for digital map data has an error of 0.5m for urban and floodplain areas, 1.0m for rural areas and 2.5m for mountain and moorland areas. This potential error must be considered if co-ordinates are measured off hard copies of the mapping rather than using the digital co-ordinates.

Archaeological Services WYAS cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party or for the removal of any of the survey reference points.

Appendix 3: Geophysical archive

The geophysical archive comprises:-

- an archive disk containing compressed (WinZip 8) files of the raw data, report text (Microsoft Word 2000), and graphics files (Adobe Illustrator CS2 and AutoCAD 2008) files; and
- a full copy of the report.

At present the archive is held by Archaeological Services WYAS although it is anticipated that it may eventually be lodged with the Archaeology Data Service (ADS). Brief details may also be forwarded for inclusion on the English Heritage Geophysical Survey Database after the contents of the report are deemed to be in the public domain (i.e. available for consultation in the Suffolk Historic Environment Record).

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