

Harp Close Meadow, Sudbury, Suffolk

SUY 117

Archaeological Evaluation Report

SCCAS Report No. 2012/126

Client: West Suffolk NHS Foundation Trust

Author: Kieron Heard

September 2012

Harp Close Meadow, Sudbury, Suffolk

SUY 117

Archaeological Evaluation Report

SCCAS Report No. 2012/126

Author: Kieron Heard

Contributions by:

Crane Begg (graphics)

Andy Fawcett (finds)

Anna West (plant macrofossils)

Editor: Richenda Goffin

Report Date: September 2012

HER Information

Site Code: SUY 117
Site Name: Harp Close Meadow, Sudbury, Suffolk
Report Number 2012/126
Planning Application No: n/a
Date of Fieldwork: 20–24 August 2012
Grid Reference: TL 8789 4208
Oasis Reference: suffolkc1-132948
Curatorial Officer: Sarah Poppy
Project Officer: Kieron Heard
Client: West Suffolk NHS Foundation Trust
Client Reference: n/a

Digital report submitted to Archaeological Data Service:
<http://ads.ahds.ac.uk/catalogue/library/greylit>

Disclaimer

Any opinions expressed in this report about the need for further archaeological work are those of the Field Projects Team alone. Ultimately the need for further work will be determined by the Local Planning Authority and its Archaeological Advisors when a planning application is registered. Suffolk County Council's archaeological contracting services cannot accept responsibility for inconvenience caused to the clients should the Planning Authority take a different view to that expressed in the report.

Prepared By: Kieron Heard
Date: September 2012

Approved By: Joanna Caruth
Position: Acting Contracts Manager
Date: September 2012
Signed:

Contents

Summary

Drawing Conventions

1. Introduction	1
2. Geology and topography	1
3. Archaeological and historical background	2
4. Methodology	5
5. Results	8
5.1 Introduction	8
5.2 Trench descriptions	9
6. Finds and environmental evidence	28
6.1 Introduction	28
6.2 The pottery	28
6.3 Ceramic building material (CBM)	30
6.4 Fired clay	30
6.5 Worked flint	31
6.6 Burnt flint	31
6.7 Small finds	31
6.8 Faunal remains	32
6.9 Plant macrofossils and other remains	32
6.10 Discussion of the material evidence	34
7. Discussion	35
8. Conclusions and recommendations for further work	38
9. Archive deposition	39
10. Acknowledgements	39
11. Bibliography	40

List of Figures

Figure 1. Site location showing evaluation trenches (black) and HER entries mentioned in the text (green)	4
Figure 2. Trench locations, with archaeological features (black)	7
Figure 3. Detailed plan and sections, Trench 4	23
Figure 4. Detailed plan and sections, Trenches 5 and 9	24
Figure 5. Detailed plan and sections, Trenches 22 and 29	25
Figure 6. Interpretive plan of the ditch	37

List of Tables

Table 1. Summary of deposits in Trench 1	9
Table 2. Summary of deposits in Trench 2	9
Table 3. Summary of deposits in Trench 3	9
Table 4. Summary of deposits in Trench 4	10
Table 5. Summary of deposits in Trench 5	11
Table 6. Summary of deposits in Trench 6	12
Table 7. Summary of deposits in Trench 7	12
Table 8. Summary of deposits in Trench 8	13
Table 9. Summary of deposits in Trench 9	13
Table 10. Summary of deposits in Trench 10	14
Table 11. Summary of deposits in Trench 11	14
Table 12. Summary of deposits in Trench 12	14
Table 13. Summary of deposits in Trench 13	15
Table 14. Summary of deposits in Trench 14	16
Table 15. Summary of deposits in Trench 15	16
Table 16. Summary of deposits in Trench 16	16
Table 17. Summary of deposits in Trench 17	16
Table 18. Summary of deposits in Trench 18	17
Table 19. Summary of deposits in Trench 19	17
Table 20. Summary of deposits in Trench 20	17
Table 21. Summary of deposits in Trench 21	18
Table 22. Summary of deposits in Trench 22	18
Table 23. Summary of deposits in Trench 23	19
Table 24. Summary of deposits in Trench 24	20

Table 25. Summary of deposits in Trench 25	20
Table 26. Summary of deposits in Trench 26	20
Table 27. Summary of deposits in Trench 27	21
Table 28. Summary of deposits in Trench 28	21
Table 29. Summary of deposits in Trench 29	22
Table 30. Finds quantities	28
Table 31. Quantification of plant macrofossils and associated remains	33

List of Plates

Plate 1. SE facing section at the NE end of Trench 4 (1m scale)	26
Plate 2. Ditch 0007 in Trench 4, looking NE (1m scale)	26
Plate 3. Ditch 0007 in section, looking SE (1m scale)	26
Plate 4. Ditch 0015 (Trench 5) in section, looking S (0.5m scale)	27
Plate 5. Ditch 0009 (Trench 9) in section, looking SE (0.5m scale)	27
Plate 6. Feature 0017 in Trench 22, looking SW (0.5m scale)	27

List of Appendices

Appendix 1. Brief and specification	
Appendix 2. Digital index catalogue	
Appendix 3. Pottery catalogue	
Appendix 4. Worked flint catalogue	
Appendix 5. Geophysical survey report	

Summary

SUY 117, Harp Close Meadow, Sudbury: An evaluation by trial trenching was carried out in relation to a planning proposal for development of the site. Twenty-nine trenches (total area 2222 m²) were excavated, representing approximately 4.9% of the proposed development area.

The site was located in a dry valley overlooking the River Stour valley to the west. Natural strata consisted of glacial outwash sands and gravels with localised areas of chalky till, overlaid on the lower slopes by head deposits.

A north–south ditch close to the eastern boundary of the site produced small amounts of abraded prehistoric and Roman pottery and some worked flints, and a rich plant macrofossil assemblage that included frequent charred cereal remains.

The ditch was sealed by a soil horizon containing small amounts of worked flint and Roman pottery, which in turn was buried by a layer of colluvial soil that produced some fragments of Roman tile. The colluvium was overlaid by the current topsoil.











The only other archaeological feature was part of a pit (or ditch terminus) in the western half of the site; this produced some undiagnostic fired clay fragments but no datable material.

Should any future development on the site involve ground disturbance in areas where archaeological features have been found it is recommended that further archaeological fieldwork will need to be undertaken.












This evaluation report will be disseminated *via* the OASIS online archaeological database and a summary of the results will be published in the Proceedings of the Suffolk Institute of Archaeology and History.

Drawing Conventions

Plans

- Limit of Excavation 
- Features 
- Break of Slope 
- Features - Conjectured 
- Natural Features 
- Sondages/Machine Strip 
- Intrusion/Truncation 
- Illustrated Section  S.14
- Cut Number 
- Archaeological Features 

Sections

- Limit of Excavation 
- Cut 
- Modern Cut 
- Cut - Conjectured 
- Deposit Horizon 
- Deposit Horizon - Conjectured 
- Intrusion/Truncation 
- Top of Natural 
- Top Surface 
- Break in Section 
- Cut Number 
- Deposit Number 0007
- Ordnance Datum $\frac{18.45\text{m OD}}{\times}$

1. Introduction

An evaluation by trial trenching was carried out in relation to a proposal for development at Harp Close Meadow, Sudbury. KLH Architects Ltd commissioned the archaeological project on behalf of West Suffolk NHS Foundation Trust. Suffolk County Council Archaeological Service (SCCAS), Field Team, conducted the fieldwork.

The proposed development site is roughly triangular in plan and has an area of approximately 4.5ha. It is bounded to the west by Acton Lane, to the east by the Springlands housing estate and to the south by Waldingfield Road and Alder Way (Fig. 1).

2. Geology and topography

Generally the chalk bedrock is overlaid by superficial deposits of chalky till with outwash sands and gravels (Lowestoft Formation). Along the southern and eastern boundaries of the site superficial head deposits have been mapped. These are poorly sorted and poorly stratified deposits formed mostly by solifluction and/or hillwash and soil creep, and consist mainly of gravels and sands with localised lenses of silt, clay, peat or organic material (www.mapapps.bgs.ac.uk/geologyofbritain/home.html). These superficial deposits support deep loam to clay soils of the Melford Series.

The site is on the side of a dry valley overlooking the River Stour valley to the west; ground level falls from northwest to southeast, from a maximum height of c. 46m OD along the western boundary to c. 40m OD in the south-eastern corner of the site.

The site is in an urban setting but before it was engulfed by the expansion of Sudbury it was within an area of Ancient Rolling Farmlands, as defined in the Suffolk Landscape Character Assessment (www.suffolklandscape.org.uk). The key characteristics of this landscape type are:

- Rolling arable landscape of chalky clays and loams
- Dissected widely, and sometimes deeply, by river valleys
- Field pattern of ancient random enclosure. Regular fields associated with areas of heathland enclosure
- Hedges of hawthorn and elm with oak, ash and field maple as hedgerow trees
- Substantial open areas created for airfields and by post WWII agricultural improvement
- Scattered with ancient woodland parcels containing a mix of oak, lime, cherry, hazel, hornbeam, ash and holly
- Network of winding lanes and paths, often associated with hedges, create visual intimacy
- Dispersed settlement pattern of loosely clustered villages, hamlets and isolated farmsteads of medieval origin
- Farmstead buildings are predominantly timber-framed, the houses colour-washed and the barns blackened with tar. Roofs are frequently tiled, though thatched houses can be locally significant
- Villages often associated with village greens or the remains of greens

3. Archaeological and historical background

The archaeological and historical background to the site has been described in detail in a desk-based assessment (Rolfe, 2010). The archaeological background was summarised subsequently in the Brief and Specification (Poppy, 2012), as follows:

The proposed development site is located in an area of archaeological interest, identified in the County Historic Environment Record. Two cropmark ring ditches (HER refs SUY 041 and 042) are recorded immediately to the NW of the proposed development area. A desk-based assessment in 2010 identified moderate potential for remains of prehistoric and 20th century date to be encountered (SCCAS 2010/203). Moreover, the landscape setting of the proposed development site, in a dry valley overlooking the River Stour, is topographically favourable for early occupation of all periods. However, the site has not been subject to systematic archaeological survey.

Historic Environment Record entries mentioned above are shown on Figure 1.

The known history of Harp Close Meadow, taken largely from the desk-based assessment (*ibid*) can be summarised as follows:

The earliest cartographic evidence is the tithe map of the parishes of Sudbury St Gregory and Sudbury St Peter, dated 1841. This shows that the field boundaries have remained largely unaltered since then. At that time the field was known as 'Pig Tail Piece', and that name appeared also on a plan of the Wood Hall Estate made in 1860. The field name was fairly common in East Anglia in the 19th century and was often rendered in a dialect form as 'pightle'. It was usually applied to a small enclosure, often triangular in plan, which was left over when the boundaries of larger fields were straightened.

Until 1876 the Freeman of Sudbury had the right of 'shackage' over Pig Tail Piece. This meant that although they did not own the land they could use it at certain times of the year for pasturing their livestock. In 1876 they acquired the freehold to the field; the site was important to them because unlike their ancient riverside meadows it was on high ground and was not liable to flooding (Nurser 2008, 2).

The field appeared on the First Edition Ordnance Survey map of c. 1880 (and all subsequent maps) with its alternative name of People's Park. 'People' was presumably a corruption of 'pightle'. The early Ordnance Survey maps show several large quarries (for chalk and clay) in the area immediately surrounding the site, together with brick works and lime kilns. During the latter part of the Second World War a searchlight and anti-aircraft guns were set up on the People's Park and an army camp was built along the western (Acton Lane) boundary of the site.

After the Second World War the usefulness of the site for grazing decreased as land to the east was developed for housing, the nearby industrial estate expanded and the eastern bypass (A134) was built. The field was given over to recreational use – for example, the Suffolk Show was held there on at least one occasion in the early 1950s. In 1984 the land was bought by the East Anglian Regional Health Authority and since then the southern part of the field has been developed for housing.

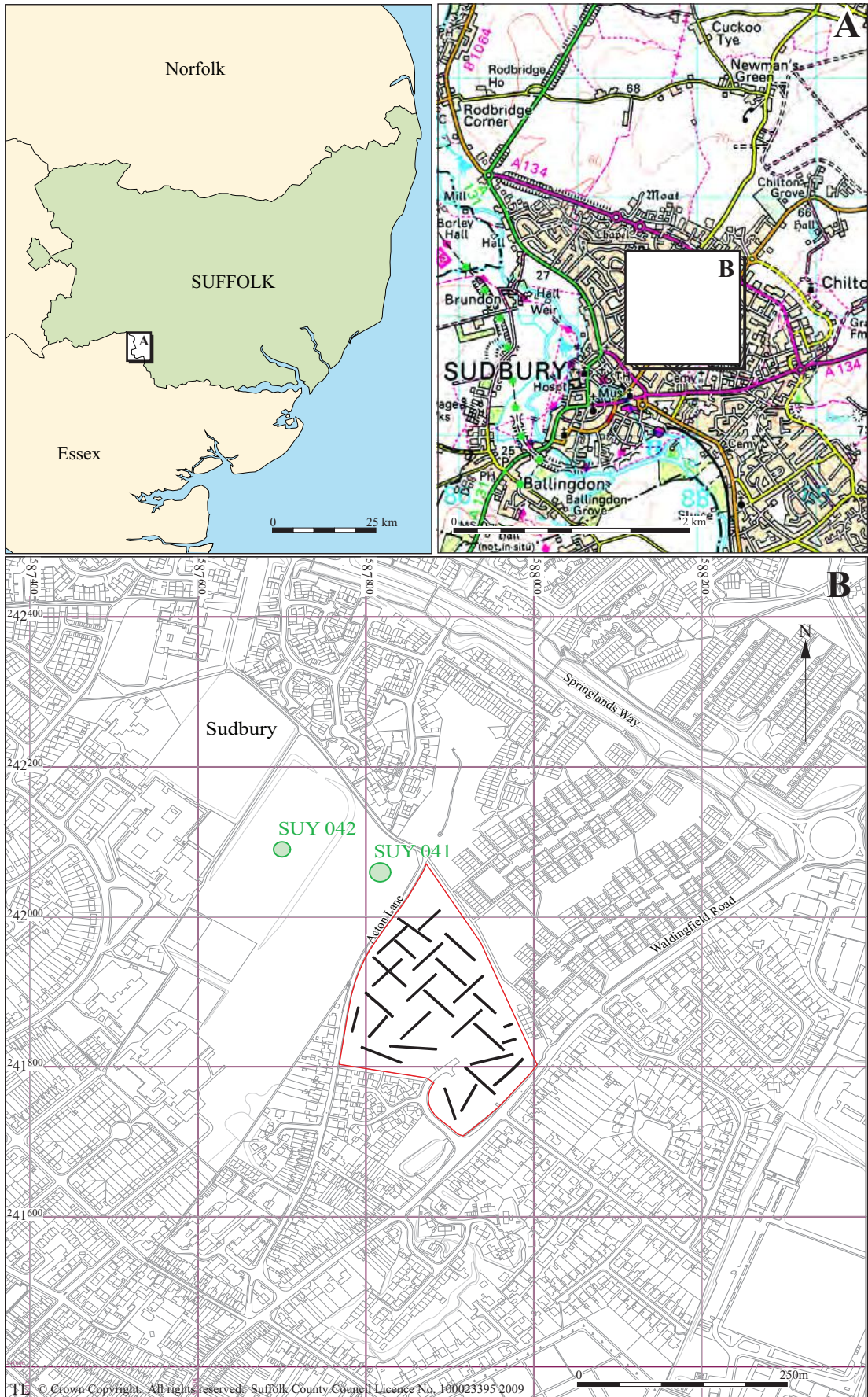


Figure 1. Site location showing evaluation trenches (black) and HER entries mentioned in the text (green)

4. Methodology

The archaeological evaluation had two stages – a geophysical survey followed by linear trial trenching – and both phases of fieldwork were carried out in accordance with a Brief and Specification issued by Sarah Poppy of SCCAS, Conservation Team (Poppy, 2012; Appendix 1) and a Written Scheme of Investigation (WSI) by Andrew Tester of SCCAS, Field Team (Tester, 2012).

The geophysical survey was carried out by Britannia Archaeology Ltd on 9–10 August 2012, and their report is included here as Appendix 5. The most significant conclusion was the identification of five ‘discrete positive anomalies’, representing possible archaeological features. These results were used to inform the positions of some of the subsequent trial trenches.

The trial trenching took place on 20–24 August 2012 and was conducted by SCCAS, Field Team. Twenty-nine trenches of between 10m and 56m in length were excavated, sampling all available areas of the site (Fig. 2). Trenches 28 and 29 were additional to those shown in the WSI and were excavated (after consultation with the Curatorial Officer, Sarah Poppy) to provide further evidence for a linear feature recorded in other trenches. The trenches were excavated under direct archaeological supervision using a tracked, 360° mechanical excavator. They had a combined area of approximately 2222m², and represented 4.9% of the area of the site.

The trenches varied in depth from 0.25m to 1.50m. Generally mechanical excavation continued to the surface of the natural stratum.

Deposits and features were recorded using a unique sequence of context numbers in the range 0001–0023 under the HER code SUY 117. Written descriptions were made on *pro forma* context sheets and a ‘trench recording sheet’ was completed for each trench. Representative sections of archaeological features and horizontal strata were drawn at a scale of 1:20 and archaeological features in Trenches 4, 5, 9 and 22 were planned at the same scale; these drawings were made on four sheets of gridded

drawing film. One archaeological feature (in Trench 29) was planned using a Leica RTK global positioning system (GPS).

A photographic record was made, consisting of high-resolution digital images (archived as HPX 070–099 and HPY 001–022); a catalogue of digital images is included in this report as Appendix 2.

A metal detector was employed on most of the mechanically-excavated topsoil and on all hand-excavated deposits. All artefacts from hand-excavated deposits were retained, and soil samples for environmental analysis were taken from selected deposits.

The trench locations and levels were recorded by GPS.

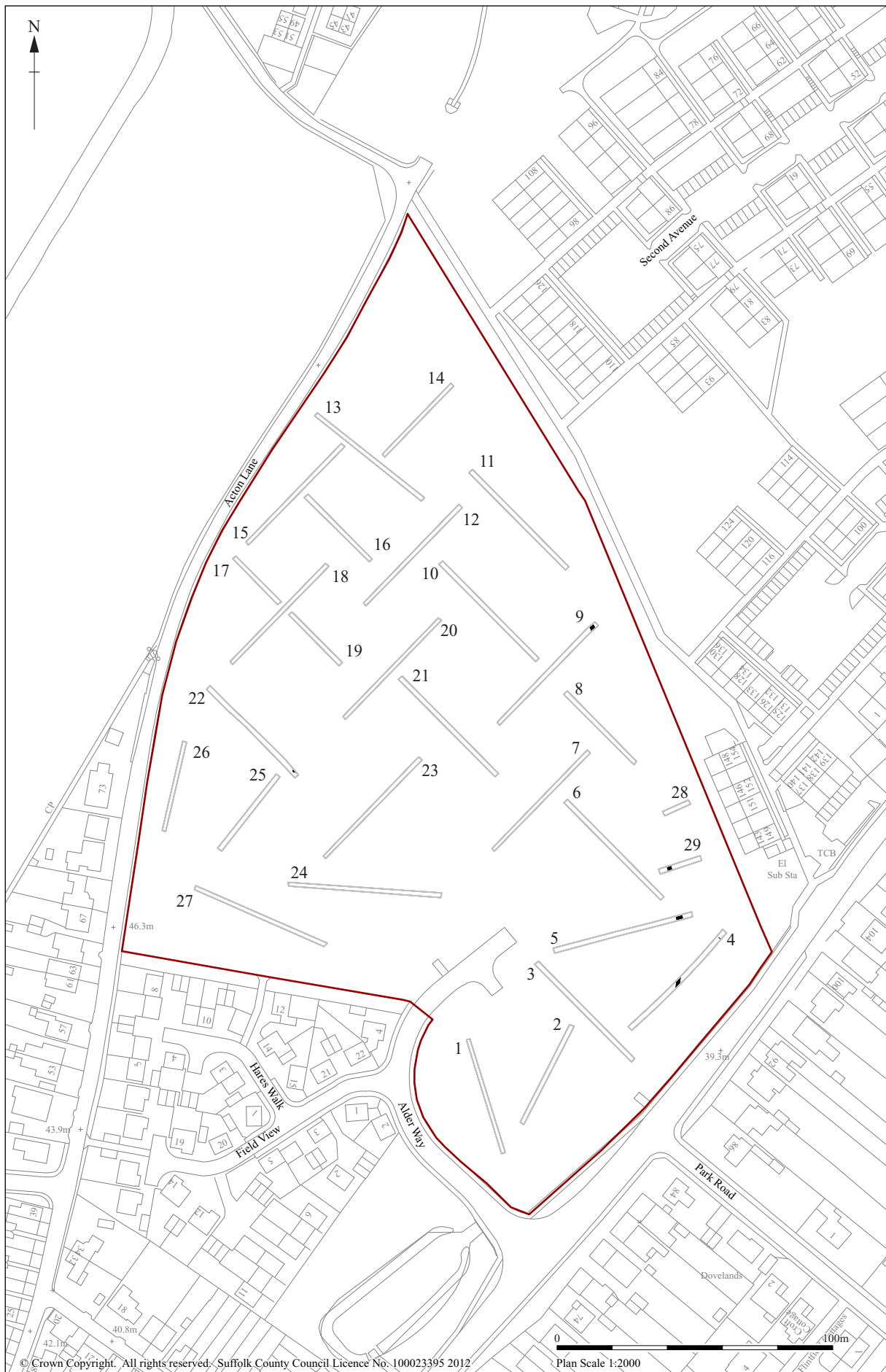


Figure 2. Trench locations with archaeological features (black)

5. Results

5.1 Introduction

Generally the trenches revealed straightforward vertical sequences comprising a natural stratum sealed by subsoil and topsoil deposits.

The natural stratum (0002) varied considerably between trenches. Generally it was a soft, mid reddish brown clayey sand with occasional to frequent, rounded to angular flint pebbles and fragments. There were localised areas of light yellowish brown sand with only occasional flint inclusions and some pockets or more extensive areas of light greyish brown chalky clay with flints (till). In Trenches 4, 5, 28 and 29, in the south-eastern part of the site, the natural deposits were noticeably different; these are described below (5.2).

In most of the trenches the natural stratum was sealed by a layer of subsoil (0003/0008/0018). This was soft, mid greyish brown sandy silt with moderate quantities of fine to medium pebbles. It had a variable thickness up to 0.50m and had an indistinct interface with the underlying natural stratum. The subsoil was most evident in areas where the natural stratum was sandier; in more stony areas or where chalky till predominated the subsoil was thin or non-existent.

Generally the subsoil had an indistinct interface with the overlying topsoil, with obvious root (and presumably animal) disturbance. Small amounts of modern material (brick, transfer-printed pottery, etc) were noted but not retrieved from the upper few centimetres of the subsoil. In Trench 13 and Trench 22 the subsoil produced fragments of earlier pottery, which were retained.

Topsoil 0001 extended site-wide. It was friable, mid brownish grey loam with moderate pebbles, generally about 0.25m thick and supporting rough grass and other vegetation. It contained some obviously modern material as well as a post-medieval token (SF 1001).

Archaeological deposits and features were recorded in five of the evaluation trenches, and these are described below (5.2). Several modern features were recorded also.

5.2 Trench descriptions

Trench 1

Dimensions: 43m long (NNW–SSE) x 1.80m wide x up to 0.50m deep

Ground level (G.L): 41.37m OD (NNW), 39.10m OD (SSE)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0002	Natural stratum	0.25m	Trench-wide

Table 1. Summary of deposits in Trench 1

Trench 2

Dimensions: 40m long (NNE–SSW) x 1.80m wide x 0.40m deep

Ground level (G.L): 40.18m OD (NNE), 39.52m OD (SSW)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0002	Natural stratum	0.25m	Trench-wide

Table 2. Summary of deposits in Trench 2

Trench 3

Dimensions: 50m long (NW–SE) x 1.80m wide x up to 0.80m deep

Ground level (G.L): 41.04m OD (NW), 39.23m OD (SE)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m	Centre and S end
0002	Natural stratum	0.25m–0.75m	Trench-wide

Table 3. Summary of deposits in Trench 3

Deposit descriptions

Subsoil 0003 was up to 0.50m thick at the southeast end of the trench, became thinner towards the northwest and petered out at about 15m from the northwest end of the trench.

Trench 4

Dimensions: 49.20m long (NE–SW) x 1.80m wide x up to 1.40m deep

Ground level (G.L): 39.91m OD (NE), 39.60m OD (SW)

Figure: 3

Plates: 1, 2, 3

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0019	External soil layer	0.25m	Centre and NE end
0004	External soil layer	0.25m–0.70m	Trench-wide
0007	Ditch (fills 0005 & 0006)	0.80m–1.50m	Centre of trench
0020	Natural stratum	0.60m–1.20m	Trench-wide

Table 4. Summary of deposits in Trench 4

Deposit descriptions

Natural stratum 0020 was compact, mid brownish grey sandy clayey silt with moderate to frequent rounded flint pebbles and angular flint fragments. This deposit was noticeably different to the natural strata of clayey sand or chalky till encountered across most of the site.

The natural stratum was cut by ditch 0007, which was oriented approximately north–south. It was >2.9m long x up to 1.28m wide x 0.68m deep, with moderately steep sides and a narrow, rounded base. It contained two distinct fills. Lower fill 0006 (up to 0.24m thick) was hard, mid greyish brown silty clay with abundant small to medium, round and sub-angular flints, and occasional large flints. It produced a small and abraded sherd of early Iron Age pottery. Upper fill 0005 (0.44m thick) was compact, dark brownish grey silty clay with occasional small rounded and angular pebbles. It contained frequent charcoal flecks, occasional small fragments of animal bone, a fragment of heat-altered flint and one struck flint. Environmental samples from these fills were dense with charred cereal grains, chaff and common weed seeds.

The ditch was sealed by external soil layer 0004, which extended trench-wide. This was a deposit of firm, mid brownish grey clayey silt with occasional medium to large sub-rounded and sub-angular pebbles. It was 0.35m thick at the southwest end, increasing to 0.58m thick at the northeast end of the trench. 0004 was excavated mostly by machine, but an area of approximately two cubic metres at the northeast end of the

trench was excavated by hand – it produced occasional small fragments of Roman pottery and several struck/worked flints.

Layer 0004 was sealed by another external soil deposit 0019. This was friable, light yellowish brown sandy silt with moderate fine to medium pebbles and occasional small fragments of abraded Roman tile (all found in Trench 29), coal and charcoal. Layer 0019 was up to 0.50m thick at the northeast end of Trench 4, becoming thinner to the southwest and petering out about 10m from the southwest end of the trench. It was sealed by the current topsoil 0001.

Trench 5

Dimensions: 51.70m long (ENE–WSW) x 1.80m wide x up to 0.50m deep

Ground level (G.L): 39.94m OD (ENE), 40.99m OD (WSW)

Figure: 4

Plate: 4

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0019	External soil layer	0.25m	Centre and E end
0004	External soil layer	0.55m	E end of trench
0015	Ditch (fills 0012–0014)	0.70m–1.30m	E end of trench
0020	Natural stratum	0.60m–0.80m	E end of trench
0002	Natural stratum	0.25m–0.60m	Centre and W end

Table 5. Summary of deposits in Trench 5

Deposit descriptions

Natural stratum 0020 (see Trench 4 for description) was confined to about 10m at the east end of the trench. Otherwise natural stratum 0002 was recorded, principally as reddish brown clayey sand with flints but with chalky till predominating at the west end of the trench; the till occurred immediately below the topsoil at a depth of only 0.25m.

Ditch 0015, near the east end of the trench, was oriented approximately north–south. It was >1.8m long x 2.46m wide x 0.64m deep, with gently sloping, slightly irregular sides becoming steeper near the base. The base was narrow and flat. The ditch contained three distinct fills. Basal fill 0014 (up to 0.10m thick) was compact, mid greyish brown silty clay containing occasional to moderate small rounded pebbles but no cultural material. Middle fill 0013 was hard (almost concreted), mid brownish grey silty clay, up

to 0.20m thick. It contained frequent small to medium, round and sub-angular flint pebbles, a small and abraded sherd of later Bronze Age to earlier Iron Age pottery and a worked flint blade. Upper fill 0012 was compact, very dark brownish grey silty clay containing occasional small, rounded and sub-angular pebbles, some charcoal flecks and a sherd of Roman pottery, probably part of a *mortarium* rim.

Ditch 0015 was sealed by external soil deposit 0004 (see Trench 4 for description), which was confined to the east end of the trench. This was overlaid by external soil deposit 0019 (see Trench 4 for description), which was more extensive but petered out about 14m from the west end of the trench.

Trench 6

Dimensions: 50m long (NW–SE) x 1.80m wide x 0.60m deep

Ground level (G.L): 40.95m OD (NW), 409.11m OD (SE)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.30m	Trench-wide
0002	Natural stratum	0.60m	Trench-wide

Table 6. Summary of deposits in Trench 6

Trench 7

Dimensions: 50m long (NE–SW) x 1.80m wide x up to 0.60m deep

Ground level (G.L): 40.97m OD (NE), 41.73m OD (SW)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m	Trench-wide
0002	Natural stratum	0.50m–0.60m	Trench-wide

Table 7. Summary of deposits in Trench 7

Deposit descriptions

Subsoil 0003 increased in thickness from 0.20m at the northeast end to 0.30m at the southwest end of the trench.

Trench 8

Dimensions: 36m long (NW–SE) x 1.80m wide x 0.65m deep

Ground level (G.L): 41.32m OD (NW), 40.69m OD (SE)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m	Trench-wide
0002	Natural stratum	0.65m	Trench-wide

Table 8. Summary of deposits in Trench 8

Trench 9

Dimensions: 50m long (NE–SW) x 1.80m wide x up to 0.50m deep

Ground level (G.L): 41.45m OD (NE), 41.55m OD (SW)

Figure: 4

Plate: 5

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0019	External soil layer	0.25m	NE end of trench
0003	Subsoil	0.25m	Centre and SW end
0009	Ditch (fills 0010 & 0011)	0.40m–1.00m	NE end of trench
0002	Natural stratum	0.50m	Trench-wide

Table 9. Summary of deposits in Trench 9

Deposit descriptions

Ditch 0009, cutting natural stratum 0002 at the northeast end of the trench, was oriented approximately north northwest–south southeast. It was >2m long x 2.04m wide x 0.60m deep, with moderately steep but irregular sides and a concave base. It contained two distinct fills. Lower fill 0010 (up to 0.22m thick) was compact, light to mid grey clayey silt with frequent small to large, sub-angular and angular flints and occasional small, un-diagnostic fragments of ceramic building material. Upper fill 0011 (up to 0.38m thick) was loose/friable, dark grey silty sand (with an ‘ashy’ texture) containing occasional large, sub-angular flints but no cultural material.

Ditch 0009 and the natural stratum 0002 were sealed by external soil deposit 0019; the extent of this deposit was not recorded. Within the central and southwestern part of the trench the natural stratum was overlaid by subsoil 0003; unfortunately the relationship between deposits 0003 and 0019 was not noted.

Trench 10

Dimensions: 50m long (NW–SE) x 1.80m wide x up to 0.70m deep

Ground level (G.L): 42.90m OD (NW), 41.61m OD (SE)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m	Trench-wide
0002	Natural stratum	0.50m–0.70m	Trench-wide

Table 10. Summary of deposits in Trench 10

Deposit descriptions

Subsoil 0003 increased in thickness from 0.25m at the southeast end to 0.45m at the northwest end of the trench.

Trench 11

Dimensions: 50m long (NW–SE) x 1.80m wide x up to 0.80m deep

Ground level (G.L): 43.38m OD (NW), 41.84m OD (SE)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.30m	Trench-wide
0002	Natural stratum	0.50m–0.80m	Trench-wide

Table 11. Summary of deposits in Trench 11

Deposit descriptions

Subsoil 0003 increased from 0.20m thick at the southeast end to 0.50m thick at the northwest end of the trench.

Trench 12

Dimensions: 50m long (NE–SW) x 1.80m wide x up to 0.80m deep

Ground level (G.L): 42.95m OD (NE), 43.40m OD (SW)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m–0.40m	Trench-wide
0002	Natural stratum	0.50m–0.80m	Trench-wide

Table 12. Summary of deposits in Trench 12

Deposit descriptions

Topsoil 0001 increased in thickness from 0.25m at the southwest end to 0.40m at the northeast end of the trench. Likewise, subsoil 0003 increased in thickness from 0.25m at the southwest end to 0.40m at the northeast end of the trench.

Trench 13

Dimensions: 49.50m long (NW–SE) x 1.80m wide x up to 0.75m deep

Ground level (G.L): 46.01m OD (NW), 43.36m OD (SE)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0008	Subsoil	0.20m–0.25m	Trench-wide
0002	Natural stratum	0.30m–0.75m	Trench-wide

Table 13. Summary of deposits in Trench 13

Deposit descriptions

Topsoil 0001 increased in thickness from 0.20m at the northwest end to 0.25m at the southeast end of the trench. Likewise, subsoil 0008 increased in thickness from 0.10m at the northwest end to 0.50m at the southeast end of the trench. The subsoil produced a medium-sized sherd of Middle Bronze Age pottery, located about 10m from the southeast end of the trench at a depth of 0.10m below the surface of the deposit.

A small pit was seen in the southwest-facing section approximately 15m from the southeast end of the trench. It was sealed by topsoil 0001 and cut subsoil 0003, and contained rusty tin cans and part of a large mammal pelvis with an articulated ball joint. The pit was clearly modern and was not recorded in detail. It was presumably the 'discrete positive anomaly' identified in this part of the site by the geophysical survey.

Trench 14

Dimensions: 36m long (NE–SW) x 1.80m wide x 0.50m deep

Ground level (G.L): 43.64m OD (NE), 44.37m OD (SW)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m	Trench-wide
0002	Natural stratum	0.50m	Trench-wide

Table 14. Summary of deposits in Trench 14

Trench 15

Dimensions: 50m long (NE–SW) x 1.80m wide x 0.60m deep

Ground level (G.L): 45.12m OD (NE), 44.84m OD (SW)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m	Trench-wide
0002	Natural stratum	0.60m	Trench-wide

Table 15. Summary of deposits in Trench 15

Trench 16

Dimensions: 33m long (NW–SE) x 1.80m wide x 0.50m deep

Ground level (G.L): 44.94m OD (NW), 43.59m OD (SE)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m	Trench-wide
0002	Natural stratum	0.50m	Trench-wide

Table 16. Summary of deposits in Trench 16

Trench 17

Dimensions: 23.30m long (NW–SE) x 1.80m wide x up to 0.60m deep

Ground level (G.L): 44.88m OD (NW), 44.23m OD (SE)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m	Trench-wide
0002	Natural stratum	0.40m–0.60m	Trench-wide

Table 17. Summary of deposits in Trench 17

Deposit descriptions

Subsoil 0003 increased in thickness from 0.15m at the northwest end to 0.35m at the southeast end of the trench.

Trench 18

Dimensions: 50m long (NE–SW) x 1.80m wide x 0.50m deep

Ground level (G.L): 44.06m OD (NE), 44.70m OD (SW)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m	Trench-wide
0002	Natural stratum	0.50m	Trench-wide

Table 18. Summary of deposits in Trench 18

Trench 19

Dimensions: 25.70m long (NW–SE) x 1.80m wide x 0.50m deep

Ground level (G.L): 43.97m OD (NW), 43.29m OD (SE)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m	Trench-wide
0002	Natural stratum	0.50m	Trench-wide

Table 19. Summary of deposits in Trench 19

Trench 20

Dimensions: 50m long (NE–SW) x 1.80m wide x up to 0.60m deep

Ground level (G.L): 42.62m OD (NE), 43.44m OD (SW)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m–0.30m	Trench-wide
0002	Natural stratum	0.50m–0.60m	Trench-wide

Table 20. Summary of deposits in Trench 20

Deposit descriptions

Topsoil 0001 increased in thickness from 0.25m at the NE end to 0.30m at the SW end of the trench. Likewise, subsoil 0003 increased in thickness from 0.25m at the NE end to 0.30m at the SW end of the trench.

Trench 21

Dimensions: 50m long (NW–SE) x 1.80m wide x up to 0.70m deep

Ground level (G.L): 42.68m OD (NW), 41.54m OD (SE)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m–0.30m	Trench-wide
0002	Natural stratum	0.50m–0.60m	Trench-wide

Table 21. Summary of deposits in Trench 21

Deposit descriptions

Topsoil 0001 increased in thickness from 0.25m at the northwest end to 0.30m at the southeast end of the trench. Likewise, subsoil 0003 increased in thickness from 0.25m at the northwest end to 0.30m at the southeast end of the trench.

Trench 22

Dimensions: 45.40m long (NW–SE) x 1.80m wide x 0.60m deep

Ground level (G.L): 45.03m OD (NW), 44.09m OD (SE)

Figure: 5

Plate: 6

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0017	Cut feature (fill 0016)	0.30m–0.90m	SE end of trench
0018	Subsoil	0.30m	Trench-wide
0002	Natural stratum	0.60m	Trench-wide

Table 22. Summary of deposits in Trench 22

Deposit descriptions

Subsoil 0018 was identical to subsoil 0003 (as recorded over most of the site) but was given a different context number because it produced a sherd of early Roman pottery; this was recovered from the section, near the southeast end of the trench.

An unspecified cut feature 0017 was found near the southeast end of the trench, cutting the subsoil. It measured >1.10m long x 1.70m wide x 0.64m deep and its shape was uncertain, since it extended beyond the edge of the trench to the southwest. It had an irregular profile, being steep sided to the northwest and stepped to the southeast, and had a narrow, concave base. 0017 might have been a pit or the terminus of a ditch. Its fill 0016 was firm, dark brownish grey clayey silt with occasional small to medium pebbles and moderate small to medium-sized fragments of undiagnostic fired clay,

concentrated against the northwest edge of the feature. There were also occasional charcoal flecks.

Feature 0017 was probably the ‘discrete positive anomaly’ detected at this location by the geophysical survey. Three other anomalies in the western part of the site (in areas covered by Trenches 22, 25 and 27) were not seen.

Trench 23

Dimensions: 50m long (NE–SW) x 1.80m wide x up to 0.60m deep

Ground level (G.L): 42.54m OD (NE), 43.97m OD (SW)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m–0.30m	Trench-wide
0002	Natural stratum	0.45m–0.60m	Trench-wide

Table 23. Summary of deposits in Trench 23

Deposit descriptions

Topsoil 0001 increased in thickness from 0.25m at the southwest end to 0.30m at the northeast end of the trench. Likewise, subsoil 0003 increased in thickness from 0.20m at the southwest end to 0.30m at the northeast end of the trench.

A linear cut feature oriented northwest–southeast was noted at approximately 30m from the southwest end of the trench, cutting subsoil 0003. It was 0.80m wide and filled with redeposited chalky clay till. It was clearly a modern feature relating to the ‘weak dipolar linear response’ recorded here by the geophysical survey. A local resident (employed by Anglian Water) confirmed that this was the trench for a water main.

Another ‘weak dipolar linear response’ was recorded by the geophysical survey in this area of the site (approximately 12m to the NE) but this was not seen in Trench 23.

Trench 24

Dimensions: 55.60m long (W–E) x 1.80m wide x up to 0.60m deep

Ground level (G.L): 44.37m OD (W), 42.50m OD (E)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m	Trench-wide
0002	Natural stratum	0.50m	Trench-wide

Table 24. Summary of deposits in Trench 24

Deposit descriptions

The trench for a water main (seen previously in Trench 23) ran diagonally across Trench 24 near its east end.

Trench 25

Dimensions: 34.20m long (NE–SW) x 1.80m wide x up to 0.60m deep

Ground level (G.L): 45.27m OD (NE), 45.32m OD (SW)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.30m	Central and NE end
0002	Natural stratum	0.30m–0.60m	Trench-wide

Table 25. Summary of deposits in Trench 25

Deposit descriptions

Subsoil 0003 was 0.30m thick at the northeast end of the trench, becoming thinner to the southwest and petering out about 10m from the southwest end of the trench.

Trench 26

Dimensions: 33.40m long (NNE–SSW) x 1.80m wide x up to 0.40m deep

Ground level (G.L): 45.42m OD (NNE), 45.99m OD (SSW)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m	N half only
0002	Natural stratum	0.25m–0.40m	Trench-wide

Table 26. Summary of deposits in Trench 26

Deposit descriptions

Subsoil 0003 was up to 0.15m thick at the north-northeast end of the trench. It became progressively thinner to the south-southwest, petering out about half way along the trench.

An extensive cut feature filled with redeposited chalky clay till and containing modern house brick fragments was seen in the south-southwest half of the trench. Only the eastern edge of the feature was seen, running approximately north–south. It is assumed to have been part of a service trench.

Trench 27

Dimensions: 52m long (WNW–ESE) x 1.80m wide x up to 0.45m deep

Ground level (G.L): 45.53m OD (WNW), 43.57m OD (ESE)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0003	Subsoil	0.25m	Central and ESE end
0002	Natural stratum	0.25m–0.45m	Trench-wide

Table 27. Summary of deposits in Trench 27

Deposit descriptions

Subsoil 0003 was up to 0.20m thick at the east-southeast end of the trench. It became progressively thinner to the west-northwest, petering out about 20m from the west-northwest end of the trench.

Trench 28

Dimensions: 10.20m long (NE–SW) x 1.80m wide x up to 1.50m deep

Ground level (G.L): 40.93m OD (NE), 40.41m OD (SW)

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0019	External soil deposit	0.20m	Trench-wide
n/a	Natural stratum	0.75m	Trench-wide
0002	Natural stratum	0.95m–1.50m	Trench-wide

Table 28. Summary of deposits in Trench 28

Deposit descriptions

Natural stratum 0002 had a pronounced slope downwards from southwest to northeast. It was sealed by various natural deposits (not numbered) of brownish grey or greyish brown silty clay with poorly sorted, angular flint inclusions; these were 0.20m thick at the

southwest end of the trench, increasing to 0.75m at the northeast end of the trench. They were similar to natural stratum 0020, as recorded in Trench 4, etc.

The natural strata were sealed by external soil deposit 0019 (see Trench 4 for description) and overlying topsoil 0001.

Trench 29

Dimensions: 15.80m long (ENE–WSW) x 1.80m wide x up to 1.50m deep

Ground level (G.L): 40.38m OD (ENE), 40.18m OD (WSW)

Figure: 5

Context	Feature/deposit type	Depth below G.L	Location
0001	Topsoil	0.00m	Trench-wide
0019	External soil deposit	0.25m	Trench-wide
0023	Ditch (fill 0022)	0.60m+	WSW end of trench
0020	Natural stratum	0.60m	Trench-wide
0021	Natural stratum	0.85m	Trench-wide

Table 29. Summary of deposits in Trench 29

Deposit descriptions

Natural stratum 0021 was a deposit of clayey sand with rounded and angular flints, broadly equivalent to 0002. It was sealed by natural stratum 0020 (see Trench 4 for description), which in Trench 29 was 0.25m thick.

Ditch 0023, near the west-southwest end of the trench, cut natural stratum 0020. The ditch was oriented approximately north-northwest–south-southeast and was 1.40m wide and at least 0.50m deep; it was not excavated fully and its full depth and profile are not known. Its fill 0022 was soft, mid to dark grey sandy silt with a slightly fibrous texture, containing a small fragment of late Iron Age / early Roman pottery, occasional bird bones and some charcoal flecks.

The ditch was sealed by external soil deposit 0019 (see Trench 4 for description), which was 0.35m thick in Trench 29. Note that the Roman tile fragments from 0019 were all recovered from Trench 29.

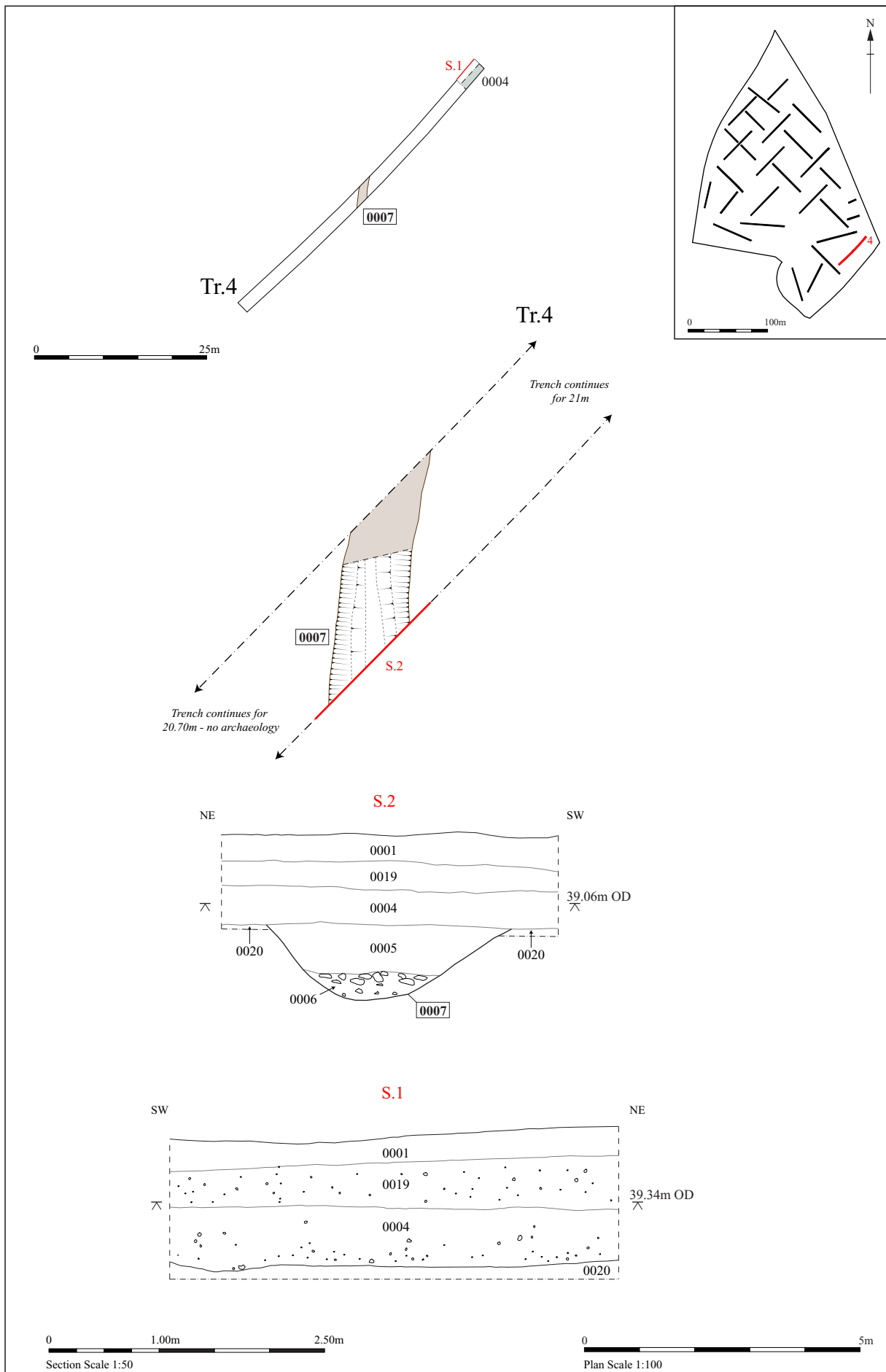


Figure 3. Detailed plans and sections, Trench 4

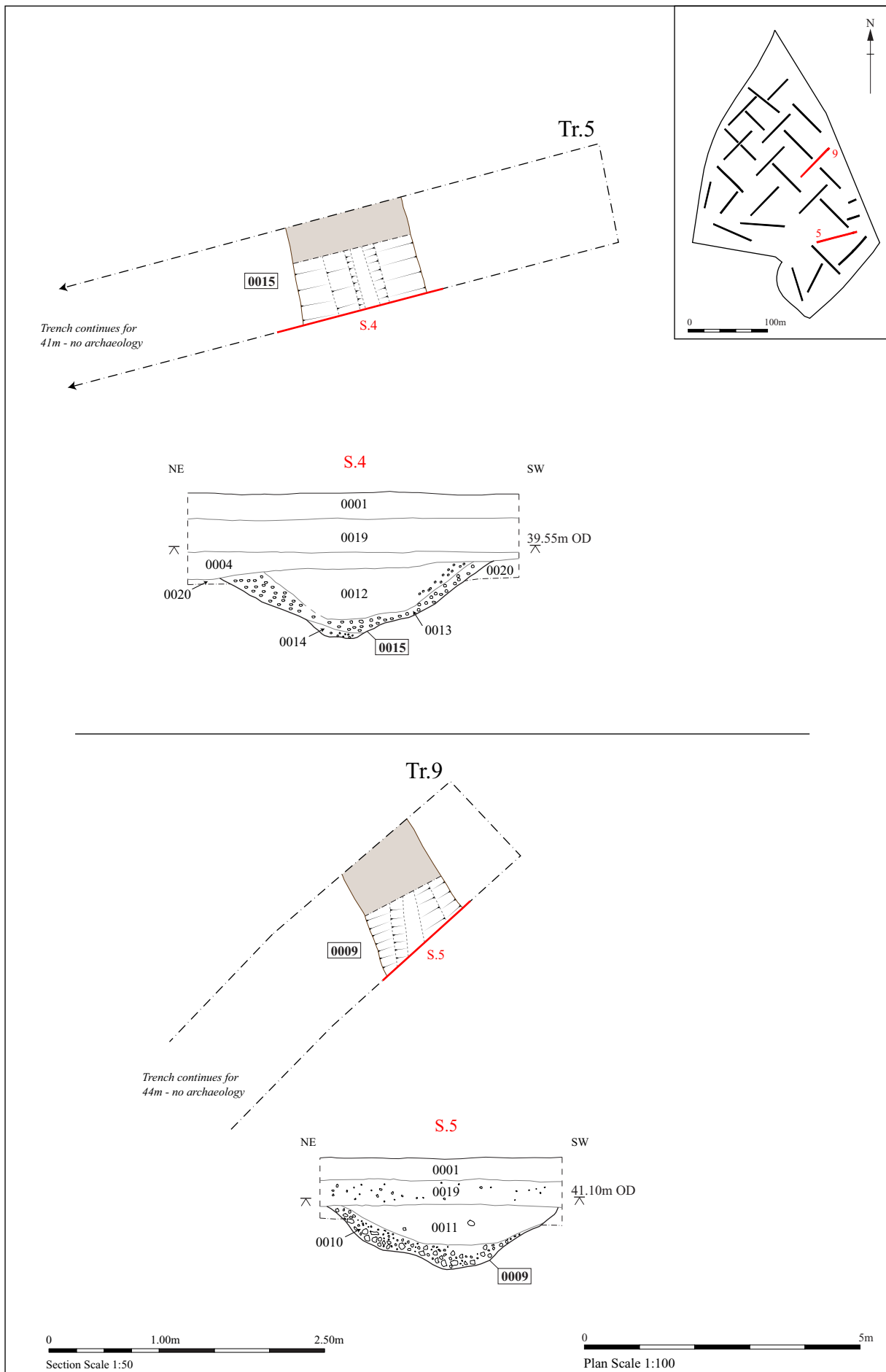


Figure 4. Detailed plans and sections, Trenches 5 and 9

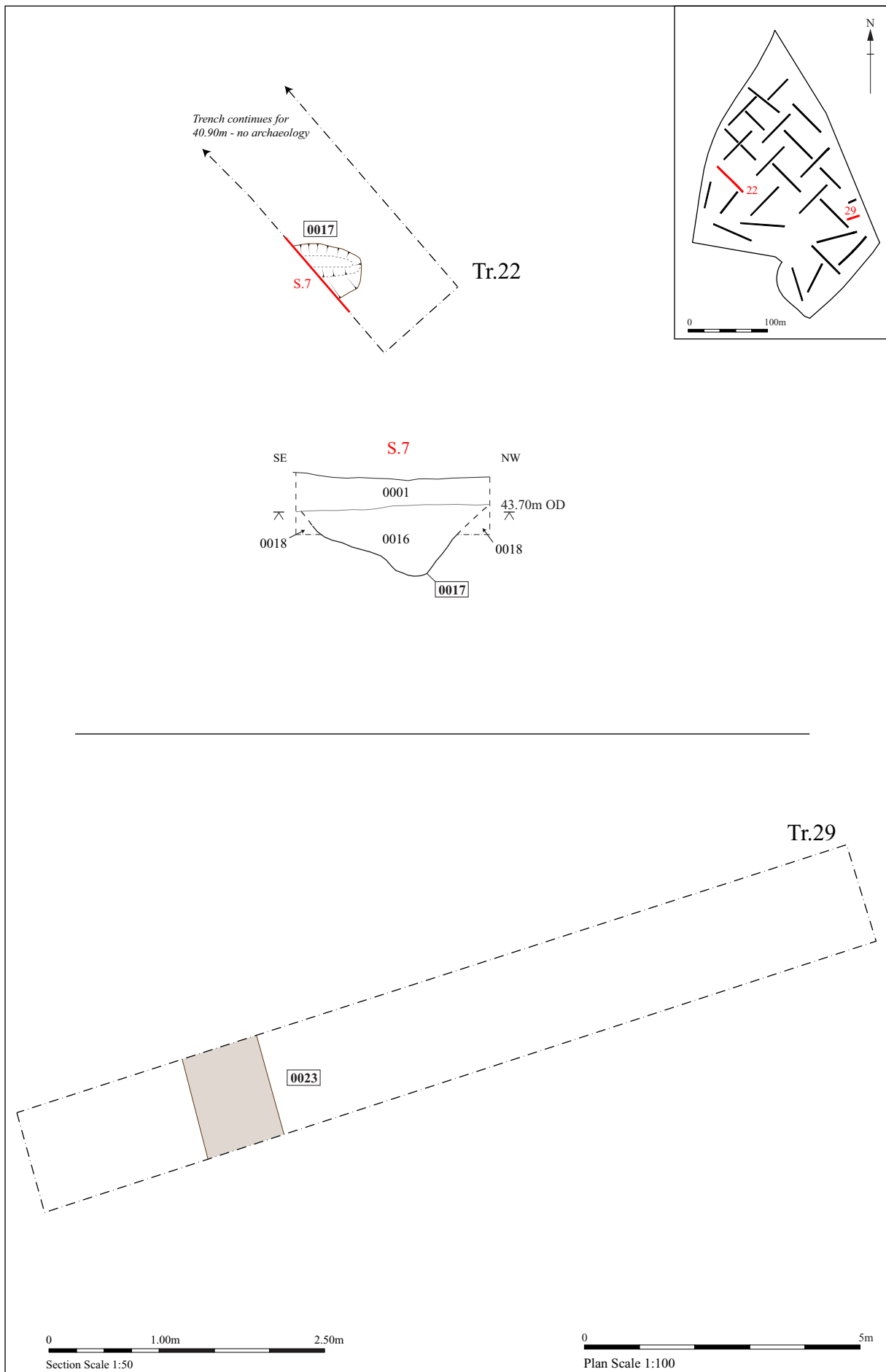


Figure 5. Detailed plan and sections, Trenches 22 and 29



Plate 1. SE facing section at the NE end of Trench 4 (1m scale)



Plate 2. Ditch 0007 in Trench 4, looking NE (1m scale)



Plate 3. Ditch 0007 in section, looking SE (1m scale)



Plate 4. Ditch 0015 (Trench 5) in section, looking S (0.5m scale)



Plate 5. Ditch 0009 (Trench 9) in section, looking SE (0.5m scale)



Plate 6. Feature 0017 in Trench 22, looking SW (0.5m scale)

6. Finds and environmental evidence

Andy Fawcett

6.1 Introduction

Table 30 shows the quantities of finds collected from the evaluation. Finds were retrieved from five layers, six ditch fills and the fill of one unspecified cut feature, in six different trenches. A full breakdown of the bulk finds by context is included in the site database. Also present is a single small find that has been recorded separately.

Find type	No	Wgt/g
Pottery	27	92
CBM	7	88
Fired clay	57	408
Worked flint	12	109
Burnt flint	1	7
Animal bone	9	53
Totals	113	757

Table 30. Finds quantities

6.2 The Pottery

Introduction

A total of twenty-seven sherds of pottery with a weight of 92g was recorded from the evaluation. Two broad periods are represented: prehistoric and Roman. No post-medieval pottery is present within the assemblage. A complete catalogue of the pottery assemblage can be seen in Appendix 3.

Methodology

All of the pottery has been examined at 20x vision and allocated to fabric groups. Codes have been assigned to these groups using the Suffolk fabric series (SCCAS). Form types (where possible) have been recorded using the Suffolk form type series (unpublished) that has been supplemented by Going's catalogue (1987). The pottery has been recorded by sherd count, weight and where appropriate E.V.E (estimated vessel equivalent).

Prehistoric pottery

Three contexts in three different trenches contained sherds of prehistoric pottery: ditch fill 0006, ditch fill 0013 and subsoil 0008.

Subsoil 0008 (Trench 13) contained sherds that form part of a base belonging to a rusticated bucket urn. The sherds are oxidised with a grey core and in a very coarse fabric which contain abundant ill sorted (mostly large) grog, although the sherds still retain a sandy feel. The vessel is probably dated to the Middle Bronze Age. However, the presence of large amounts of sand, alongside the grog, suggests that the sherds may also be coarse rusticated Beaker pottery, and therefore are dated from the Late Neolithic to Early Bronze Age (E. Martin, *pers comm*).

A single abraded body sherd of flint-tempered pottery (HMFT) was noted in ditch fill 0013 (Trench 5). The sherd contains abundant ill sorted flint and is dated from the Late Bronze to Early Iron Age.

Ditch fill 0006 (Trench 4) contains a single very abraded sherd (<1g) that was retrieved as part of the sampling process (Sample 2). The sherd is sparsely flint-tempered (HMFT) and is dated from the Late Bronze to Early Iron Age. Although the sherd is small, the amount of quartz sand within the fabric suggests it is more likely dated to the Early Iron Age.

Late Iron Age / Roman

Four contexts in four different trenches contained Roman pottery: soil horizon 0004, subsoil 0018, ditch fill 0012 and ditch fill 0022.

The earliest pottery is a single abraded body sherd of wheel-thrown grog-tempered pottery in ditch fill 0022 (Trench 29). This is a fabric that straddles the Roman conquest period, dated from the Late Iron Age to c. AD60/70.

Soil horizon 0004 (Trench 4) contains the largest number of Roman sherds (8 body sherds @ 12g) which are small and slightly abraded. A single abraded fragment of La Graufesenque samian ware (SASG) alongside seven sherds of Black surfaced ware

(BSW) make up the assemblage. The group is dated from the mid/late 1st to early 2nd century.

Ditch fill 0012 (Trench 5) contains a single sherd of Roman pottery. It is an extremely abraded fragment of Colchester buff ware (COLB). The sherd is probably part of a *mortarium* and is dated from the 2nd to early 3rd century.

The sherd in subsoil 0018 (Trench 22) is a Roman greyware (GX) in the form of a bowl rim (6.3 style). The rim which is quite flattish and slightly out-turned, is dated from the mid/late 1st to 2nd century.

6.3 Ceramic building material (CBM)

Ditch fill 0010 and soil horizon 0019 both contain a small number of CBM fragments (12g). The pieces in 0010 (Trench 9) are small, abraded and unidentifiable in terms of form. They are all oxidised and in a medium sandy fabric (ms) and could be either Roman or post-medieval in date. No other finds were noted in this context.

Three fragments of roof tile were recorded in context 0019, all from Trench 29. The pieces are abraded to slightly abraded and all three are oxidised. The fabrics are medium sandy; two of them contain clay pellets (mscp) and the other red iron ore (msfe). Two tile depths are measurable and these are 11mm and 12mm. The fabric styles and colouring all indicate that these fragments are dated to the Roman period. No other finds were retrieved from this context.

6.4 Fired clay

All of the fired clay fragments were recorded in fill 0016 of an unspecified cut feature. The fragments are variable in size and are all abraded. None of the pieces exhibit a surface area and only two pieces have vague, partial rod-like impressions. The fragments are all oxidised although some pieces display areas that are buff too. The fabric is fine and sandy with occasional calcitic like voids, and some pieces also contain a quantity of iron rich clay pellets. Due to the absence of surfaces and clear impressions, as well as the fragmented and abraded state of the assemblage, it is not

possible to ascertain whether the fired clay represents the remnants of walling or a hearth/oven. No other finds were noted in this context.

6.5 Worked flint

Identifications by Colin Pendleton

Four contexts contained worked flint: soil horizon 0004 and ditch fills 0005, 0006 and 0013. A full catalogue of the worked flint can be seen in Appendix 4. All of the flint is unpatinated and the collection is made up principally of flakes.

The largest number of flakes (eight) were recovered from context 0004, in Trench 4, and most of them display limited edge retouch and/or parallel scars. The flakes within this group are mostly thin and well worked and dated to the Bronze Age (probably to the earlier part of the period). The remaining flint fragments in ditch fills 0005 and 0006 (Trench 4) are dated to the later prehistoric period.

A blade recorded in ditch fill 0013 (Trench 5) has limited edge retouch, and parallel blade scars on the dorsal face as well as a prepared platform. It is dated from the Neolithic to the Early Bronze Age.

6.6 Burnt flint

A single small, red fragment of burnt flint was recorded in ditch fill 0005 (Trench 4). Worked flint dated to the later prehistoric period is also present within the fill.

6.7 Small finds

A round lead token (SF1001) was recovered from topsoil 0001 (6g). The token is slightly bent and displays some damage to its edge. Despite this, on one side a six petal decorative design can still be observed. The token is dated from AD1550 to 1700. Although the actual function of these types of token is not completely understood, they are often associated with trading or gaming.

6.8 Faunal Remains

Two contexts contain animal bone: ditch fill 0005 (Trench 4) and ditch fill 0022 (Trench 29). All pieces are small and unidentifiable to a particular species. Context 0005 has three large mammal bone fragments and 0022 holds six very small avian bone pieces.

6.9 Plant macrofossils and other remains

Anna West

Introduction and methods

Two samples were taken from the fills of ditch 0007, in Trench 4. Both samples were processed in order to assess the quality of preservation of plant remains and their potential to provide useful data as part of further archaeological investigations.

The samples were processed using manual water flotation/washover and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned using a binocular microscope at x16 magnification and the presence of any plant remains or artefacts are noted on Table 31. Identification of plant remains is with reference to Stace (2010).

The non-floating residues were collected in a 1mm mesh and sorted when dry. All artefacts/ecofacts were retained for inclusion in the finds total.

Quantification

For the purpose of this initial assessment, items such as seeds, cereal grains and small animal bones have been scanned and recorded qualitatively according to the following categories:

= 1–10, ## = 11–50, ### = 51+ specimens

Items that cannot be easily quantified such as charcoal, magnetic residues and fragmented bone have been scored for abundance, as follows:

+ = rare, ++ = moderate, +++ = abundant

Results

Sample	Context	Feature	Feature type	Flot Contents
1	0005	0007	Ditch	Charred cereal ###, Charred seeds ###, charcoal +++, modern rootlets +
2	0006	0007	Ditch	Charred cereal ####, charred seeds ###, Nutshell #, charcoal +++, modern roots +

Table 31. Quantification of plant macrofossils and associated remains

Although both flots were small in size (0005 being 75 ml and 0006 being 100ml), they were both dense with cereal grains, chaff and common weed seeds. Due to the density of this material only 20% of each sample was scanned for identifiable remains at this stage. The preservation is through charring and is generally good although many of the cereal grains are puffed and distorted with the honeycomb structure characteristic of combustion at high temperatures. The plant remains in Sample 2 (upper fill 0006) were generally more fragmented and abraded than the remains in Sample 1 (lower fill 0005). Both samples contained moderate amounts of charcoal, amongst which were quantities of glume base, awn and caryopsis fragments too small to quantify.

Wheat caryopsis (*Triticum sp.*) was recorded in both samples. The majority of the grains were from a glume wheat and appeared to be hulled wheat Spelt (*T. spelta*) although there may be some grains of Emmer (*T. dicoccum*) present. A small number of possible bread wheat grains (*T. durum/aestivum*) and Barley (*hordeum*) grains were tentatively identified but no accompanying chaff elements were identified in the portion of flot scanned to confirm this identification. There was also a large number of caryopsis that were too fragmented or abraded to identify at this stage. A small number of grains in each sample appear to show signs of germination.

Wheat *T. spelta* glume bases were present in large numbers in both samples along with a small number of spikelet forks and rachis fragments, some of which were identified as wheat type but others that remain unidentified at this stage. A large number of the glume bases were too fragmented, being broken below the beginning of the keel, or abraded to identify at this stage but are likely to represent *T. spelta* as the more complete glume bases do; however, it has not been ruled out that glume wheat Emmer (*T. dicoccum*) may also be present among the unidentifiable material.

Both samples contained a number of charred seeds of segetal weeds, such as large numbers of Brome type (*bromus sp.*) caryopsis, small numbers of Knotweed/docks

(*Polygonum/rumex sp.*) and a single Vetch type (*Vicia sp.*) legume. Two pea (*Pisium sativum*) cotyledons were recorded in sample 1 (context 0005) but these could obviously represent a single specimen. Sample 2 (context 0006) contained two fragments of Hazel (*Corylus avellana*) nutshell and may represent foraged food.

Conclusions and recommendations for further work

In general the samples were rich in terms of identifiable material. Charcoal is common in both the samples in small quantities, the majority of which is made up of fragmented chaff and fragmented cereal grains.

The high level of glume waste and the low number of awn and rachis fragments suggests that the material represents a secondary stage of grain processing such as parching or pounding. The germinated caryopsis could possibly represent either the presence of small-scale brewing or more likely spoiled grain from storage.

It may be possible in the future to obtain radiocarbon dates from charcoal for those deposits that remain undated. The weed seeds recovered were all reasonably well preserved and would be identifiable to an archaeobotanist.

It is not recommended that any further work is carried out on the flots material at this stage as that would provide little extra information of value to the evaluation. However, if further fieldwork is planned on this site it is recommended that additional sampling should be carried out with a view to investigating the nature of the possible cereal waste. The accompanying weed assemblage is likely to provide an insight into the use of local plant resources, agricultural activity and economic evidence for this site. It is recommended that any further samples taken are combined with the flots from the samples taken during this evaluation and submitted to an archaeobotanist for full species identification and interpretation.

6.10 Discussion of the material evidence

The principle components of the finds assemblage are pottery, CBM, fired clay and worked flint, and two broad periods are represented: prehistoric and Roman. The finds are chiefly concentrated around Trenches 4, 5 and 29, in the south-eastern area of the

site. Thereafter smaller amounts were present in Trench 13, at the north end of the site and Trench 22, to the west.

Worked flint in Trenches 4 and 5 is mainly dated from the Neolithic to Bronze/Iron Age and the two sherds of prehistoric pottery found in these trenches are dated from the Late Bronze to Early Iron Age. The earliest (and best preserved) prehistoric pottery is present in Trench 13, dated to around the Middle Bronze Age or perhaps earlier.

The Roman pottery and tile is generally in a poor state of preservation, being both small and abraded. The main concentration of Roman material is within Trenches 4, 5 and 29. Although the earliest sherd is dated from the Late Iron Age to c. AD60/70, this may well be contemporary with the other sherds, which are broadly dated from the mid 1st to 2nd century AD. Roman pottery of a similar date range is present also in Trench 22, close to a feature that produced a collection of fired clay.

The condition of the majority of finds from all periods suggests they have been subjected to several cycles of deposition. Nevertheless, they clearly indicate some form of prehistoric and Roman rural/settlement activity, on or in the vicinity of the current site. In particular, some of the Roman pottery associated with the ditch feature running through Trenches 4, 5, 29 and 9, displayed only slight abrasion. This might indicate that the Roman activity in this area is quite close or indeed associated with this feature in some way.

7. Discussion

The superficial geology across most of the site is assumed to have been glacial outwash sand/gravel with localised pockets of chalky till (0002), characteristic of the Lowestoft Formation. In the lower lying south-eastern part of the site the glacial material was overlaid by probable head deposits of sandy silt with unsorted, angular flint inclusions (0020).

Extensive deposits of sandy silt (0003, 0008 and 0018) overlaid the glacial sand and gravel, representing naturally-developed subsoil. A few artefacts (including one

fragment each of prehistoric and Roman pottery) were found at depth in the subsoil, having presumably been introduced through bioturbation or agricultural activity.

Apart from the undated pit or ditch terminus 0017 in Trench 22, archaeological activity was confined to the eastern edge of the site. Ditch segments were recorded in Trench 4 (0007), Trench 5 (0015), Trench 29 (0023) and Trench 9 (0009); these had similar profiles, dimensions and fills and are thought to have been parts of the same feature – a slightly curving ditch more than 130m long, oriented approximately north–south and running parallel to the eastern boundary of the site (Fig. 6).

There is insufficient artefactual evidence to provide an accurate date for the ditch. Its fills produced four small and abraded sherds of pottery ranging in date from the later Bronze Age/earlier Iron Age to the mid Roman period, and a small assemblage of prehistoric worked flint; all of this material *might* have been residual. Its orientation and location, parallel and close to the present field boundary, might indicate that the ditch was of relatively recent (perhaps post-medieval) date. However, the fact that it was buried below a sequence of soil deposits up to 0.80m thick (in Trench 4) suggests that it was probably of greater antiquity. Soil samples from the fills of ditch 0007 (Trench 4) were rich in charred cereal grains, chaff and common weed seeds, and the nature of the plant macrofossil assemblage is typical of Iron Age to Romano-British sites.

It is worth noting that the presence of this fairly substantial ditch was not deduced from the results of the geophysical survey.

In Trench 4 and Trench 5 the ditch was sealed by a thick layer of clayey silt (0004) that produced a small amount of highly abraded Roman pottery and some prehistoric worked flints. Again, the assemblage is insufficient to provide an accurate date for the deposit, which is interpreted as buried topsoil. It has survived only in the lower lying part of the site, having been ploughed away or eroded from the upper slopes.

Layer 0019 (in Trenches 4, 5, 9, 28 and 29) sealed layer 0004 or (where 0004 was not present) overlaid the ditch. It was a deposit of brownish grey sandy silt (similar to subsoil 0003) and is interpreted as colluvial material that has been transported downhill and accumulated on the lower slopes. A small amount of Roman tile and some modern material was found in this deposit.

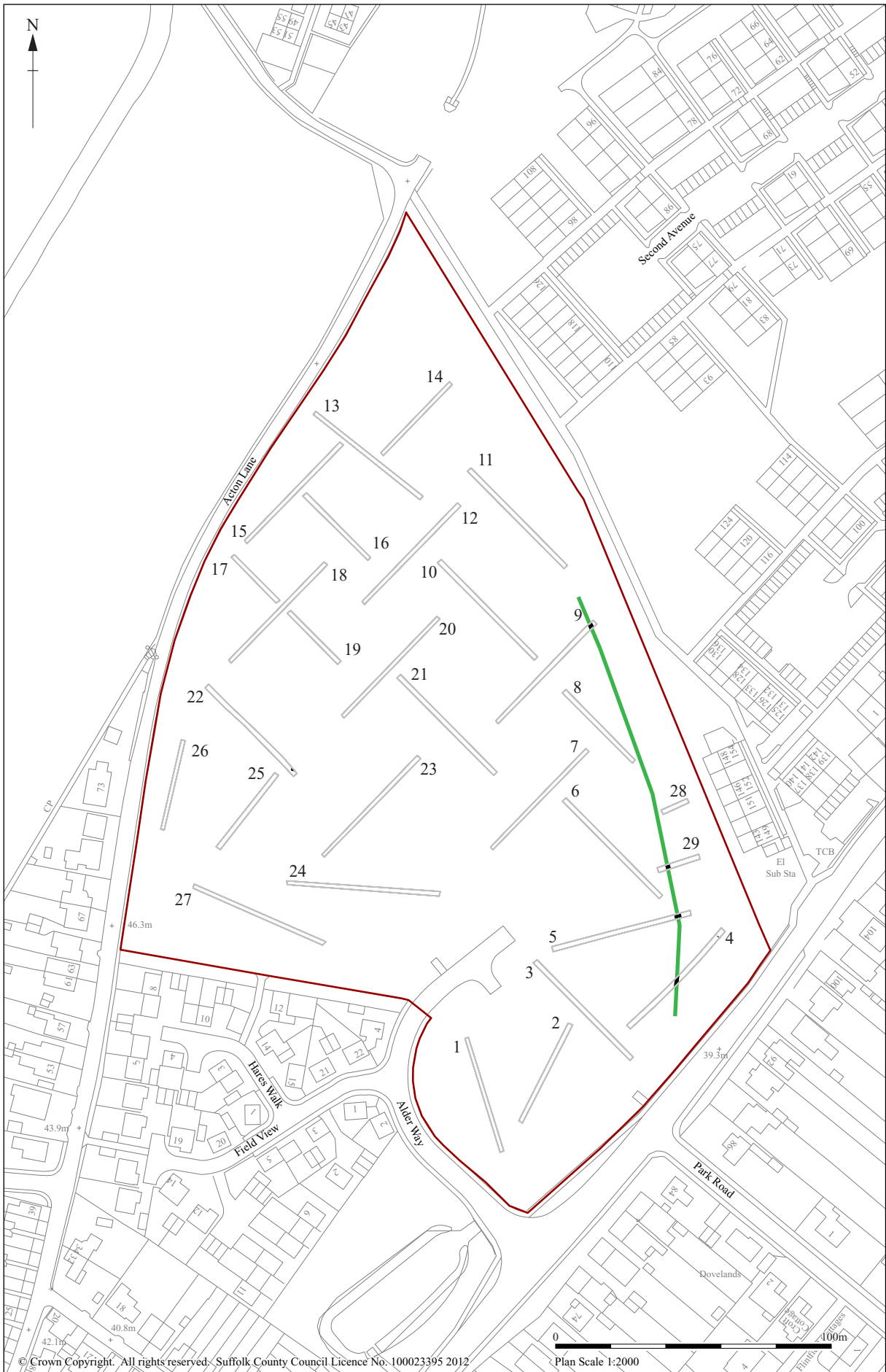


Figure 6. Interpretive plan of the ditch

8. Conclusions and recommendations for further work

The evaluation has had positive results, notably the ditch running along the eastern edge of the site. Although the ditch could not be dated accurately it was potentially of Roman date (based on finds and environmental evidence), and the nature of the plant macrofossil assemblage from the ditch fills suggests that processing of cereals was carried out nearby. Small amounts of Roman material were recovered also from soil layers overlying the ditch, as well as from Trench 22, at the other end of the site. There has been little evidence previously for Roman activity in this part of Sudbury; the nearest Roman find recorded in the HER is a pit about 500m northwest of Harp Close Meadow.

Details of the proposed development of the site are not available at present. Should any future development involve ground disturbance in the area of the ditch it would be appropriate to undertake further archaeological fieldwork with the purpose of clarifying the date, function and extent of the ditch and locating contemporary features in the immediate vicinity.

The requirement for further fieldwork would be determined by the Local Planning Authority and its Archaeological Advisors, and the nature of any such work would be dependent on the scale and extent of ground disturbance associated with the development of the site.

This evaluation report will be disseminated *via* the OASIS online archaeological database and a summary of the results will be published in the Proceedings of the Suffolk Institute of Archaeology and History.

9. Archive deposition

Paper archive: SCCAS office, Ford House, Bury St Edmunds

Digital archive: R:\Environmental Protection\Conservation\Archaeology\
Archive\Sudbury\SUY 117 Harp Close Meadow

Digital photographic archive: R:\Environmental Protection\Conservation\
Archaeology\Catalogues\Photos\ HPX 070–099 & HPY 001–022)

Finds storage location: parish box H/81/3.

10. Acknowledgements

Matt Kennington of KLH Architects Ltd commissioned the archaeological project on behalf of West Suffolk NHS Foundation Trust.

Sarah Poppy (SCCAS, Conservation Team) produced the Brief and Specification and monitored the project.

Andrew Tester managed the project and Kieron Heard carried out the fieldwork with the assistance of Preston Boyles, Simon Picard and John Sims. Andy Beverton managed the survey data and Jonathan van Jennians processed the finds (all SCCAS, Field Team). Andy Fawcett (SCCAS, Finds Team) wrote the finds report. Anna West (SCCAS, Environmental Archaeologist) processed and reported on the plant macrofossils. Graphics are by Crane Begg (SCCAS, Graphics manager). Richenda Goffin (SCCAS, Post-excavation manager) edited the report.

11. Bibliography

Going, C. J., 1987, *The mansio and other sites in the south-eastern sector of Caesaromagus: the Roman pottery*, Chelmsford Archaeological Trust Report 3.2, Counc, Brit, Archaeology, Rep 62

Jacomet, S., 2006, *Identification of cereal remains from archaeological sites*, 2nd Ed Archaeobotany Lab IPAS, Basel University

Monckton, A., ?2000, *Charred plant remains from the late Iron Age and Roman Settlement at Elms Farm, Heybridge, Essex*, Ancient Monument Laboratory Report 77

Nurser, E., 2008, *People's Park Preservation Association: Background*, The Sudbury Society Newsletter, Summer 2008

Poppy, S., 2012, *Brief for a geophysical survey and a trenched archaeological evaluation at Harp Close Meadow, Sudbury, Suffolk*, SCCAS (unpubl)

Rolfe, J., 2010, *Archaeological desk-based assessment: Harps Close Meadow, Sudbury, Suffolk*, SCCAS report 2010/203 (unpubl)

Stace, C., 2010, *New Flora of the British Isles*, 3rd Ed

Tester, A., 2012, *Written scheme of investigation and risk assessment for an archaeological evaluation: Harps Close, Sudbury*, SCCAS (unpubl)

Appendix 1. Brief and specification

Brief for a Geophysical Survey and a Trenched Archaeological Evaluation

AT

Harp Close Meadow, Sudbury, Suffolk

PLANNING AUTHORITY: Babergh District Council

PLANNING APPLICATION NUMBER: pre-application

HER NO. FOR THIS PROJECT: To be arranged

GRID REFERENCE: TM 006 370

DEVELOPMENT PROPOSAL: Residential

AREA: 4.5ha

CURRENT LAND USE: Meadow

THIS BRIEF ISSUED BY: Sarah Poppy
Archaeological Officer
Conservation Team
Tel. : 01284 741226
E-mail: sarah.poppy@suffolk.gov.uk

Date: 3 July 2012

Summary

- 1.1 The applicant has been advised that the location of the proposed development could affect important below-ground heritage assets of archaeological importance.
- 1.2 The applicant is required to undertake an archaeological field evaluation prior to consideration of the proposal, in accordance with a Written Scheme of Investigation. This information should be incorporated in the design and access statement, in accordance with paragraphs 128 and 129 of the National Planning Policy Framework, in order for the LPA to be able to take into account the particular nature and the significance of any below-ground heritage assets at this location.
- 1.3 The archaeological contractor must submit a copy of their Written Scheme of Investigation (WSI) or Method Statement, based upon this brief of minimum requirements (and in conjunction with our standard Requirements for a Trenched Archaeological Evaluation 2011 Ver 1.3 and Requirements for a Geophysical Survey 2011 Ver 1.1), to the Conservation Team of Suffolk County Council's Archaeological

Service (SCCAS/CT) for scrutiny; SCCAS/CT is the advisory body to the LPA on archaeological issues.

- 1.5 The WSI should be approved before costs are agreed with the commissioning client, in line with Institute for Archaeologists' guidance. Failure to do so could result in additional and unanticipated costs.
- 1.6 Following acceptance, SCCAS/CT will advise the LPA that an appropriate scheme of work is in place.
- 1.7 The WSI will *provide the basis for measurable standards* and will be used to establish whether the requirements of the planning condition will be adequately met. If the approved WSI is not carried through in its entirety (particularly in the instance of trenching being incomplete) the evaluation report may be rejected.

Archaeological Background

- 2.1 The proposed development site is located in an area of archaeological interest, identified in the County Historic Environment Record. Two cropmark ring ditches (HER refs SUY 041 and 042) are recorded immediately to the NW of the proposed development area. A desk-based assessment in 2010 identified moderate potential for remains of prehistoric and 20th century date to be encountered (SCCAS 2010/203). Moreover, the landscape setting of the proposed development site, in a dry valley overlooking the River Stour, is topographically favourable for early occupation of all periods. However, the site has not been subject to systematic archaeological survey.

Fieldwork Requirements for Archaeological Investigation

- 3.1 A geophysical survey and linear trenched evaluation is required of the development area to enable the archaeological resource, both in quality and extent, to be accurately quantified.
- 3.2 A systematic fluxgate gradiometer survey is to be undertaken across the site of the proposed development, 4.5 ha. In extent.
- 3.2 Trial Trenching is required to:
 - Identify the date, approximate form and purpose of any archaeological deposit, together with its likely extent, localised depth and quality of preservation.
 - Evaluate the likely impact of past land uses, and the possible presence of masking colluvial/alluvial deposits.
 - Establish the potential for the survival of environmental evidence.
 - Establish the suitability of the area for development.
 - Provide sufficient information to construct an archaeological conservation strategy, dealing with preservation, the recording of archaeological deposits, working practices, timetables and orders of cost.
- 3.3 Trial trenches are to be excavated to cover 5% by area of the site, which is c.2250.00m². These shall be positioned to sample all parts of the site, although the trench layout (and quantity of trenching) should be reviewed once the results of the geophysical survey are reported; the layout may need to be adjusted to test geophysical anomalies. Linear trenches are thought to be the most appropriate sampling method, in a systematic grid

array. Trenches are to be a minimum of 1.80m wide unless special circumstances can be demonstrated; this will result in c.1250.00m of trenching at 1.80m in width.

- 3.4 A scale plan showing the proposed location of the trial trenches should be included in the WSI and the detailed trench design must be approved by SCCAS/CT before fieldwork begins.

Arrangements for Archaeological Investigation

- 4.1 The composition of the archaeological contractor's staff must be detailed and agreed by SCCAS/CT, including any subcontractors/specialists. Ceramic specialists, in particular, must have relevant experience from this region, including knowledge of local ceramic sequences.
- 4.2 All arrangements for the evaluation of the site, the timing of the work and access to the site, are to be defined and negotiated by the archaeological contractor with the commissioning body.
- 4.3 The project manager must also carry out a risk assessment and ensure that all potential risks are minimised, before commencing the fieldwork. The responsibility for identifying any constraints on fieldwork (e.g. designated status, public utilities or other services, tree preservation orders, SSSIs, wildlife sites and other ecological considerations rests with the commissioning body and its archaeological contractor.

Reporting and Archival Requirements

- 5.1 The project manager must consult the Suffolk HER Officer to obtain an event number for the work. This number will be unique for each project or site and must be clearly marked on all documentation relating to the work.
- 5.2 An archive of all records and finds is to be prepared and must be adequate to perform the function of a final archive for deposition in the Archaeological Service's Store or in a suitable museum in Suffolk.
- 5.3 It is expected that the landowner will deposit the full site archive, and transfer title to, the Archaeological Service or the designated Suffolk museum, and this should be agreed before the fieldwork commences. The intended depository should be stated in the WSI, for approval.
- 5.4 The project manager should consult the intended archive depository before the archive is prepared regarding the specific requirements for the archive deposition and curation (including the digital archive), and regarding any specific cost implications of deposition.
- 5.5 A report on the fieldwork and archive must be provided. Its conclusions must include a clear statement of the archaeological value of the results, and their significance. The results should be related to the relevant known archaeological information held in the Suffolk HER.
- 5.6 An opinion as to the necessity for further evaluation and its scope may be given, although the final decision lies with SCCAS/CT. No further site work should be embarked upon until the evaluation results are assessed and the need for further work is established.

- 5.7 Following approval of the report by SCCAS/CT, a single copy of the report should be presented to the Suffolk HER as well as a digital copy of the approved report.
- 5.8 All parts of the OASIS online form <http://ads.ahds.ac.uk/project/oasis/> must be completed and a copy must be included in the final report and also with the site archive. A digital copy of the report should be uploaded to the OASIS website.
- 5.9 Where positive results are drawn from a project, a summary report must be prepared for the *Proceedings of the Suffolk Institute of Archaeology and History*.
- 5.10 This brief remains valid for 12 months. If work is not carried out in full within that time this document will lapse; the brief may need to be revised and re-issued to take account of new discoveries, changes in policy and techniques.

Standards and Guidance

Detailed requirements are to be found in our Requirements for a Trenched Archaeological Evaluation 2011 ver 1.3, Requirements for a Geophysical Survey 2011 ver 1.1 and in SCCAS Archive Guidelines 2010

Standards, information and advice to supplement this brief are to be found in *Standards for Field Archaeology in the East of England*, East Anglian Archaeology Occasional Papers 14, 2003.

The Institute for Archaeologists' *Standard and Guidance for archaeological field evaluation* (revised 2001) should be used for additional guidance in the execution of the project and in drawing up the report.

Notes

The Institute for Archaeologists maintains a list of registered archaeological contractors (www.archaeologists.net or 0118 378 6446). There are a number of archaeological contractors that regularly undertake work in the County and SCCAS will provide advice on request. SCCAS/CT does not give advice on the costs of archaeological projects.

Appendix 2. Digital index catalogue

Film code	Frame	Description
HPX	070	General view of Trench 1, looking S
HPX	071	General view of Trench 2, looking NE
HPX	072	NE-facing section, approx 9m from SE end of Trench 3 (0.5m scale)
HPX	073	NE-facing section, approx 9m from SE end of Trench 3 (0.5m scale)
HPX	074	General view of Trench 3, looking SE
HPX	075	Working shot - machining SW end of Trench 4
HPX	076	General view of Trench 6, looking SE
HPX	077	Working shot - machining Trench 7, looking SW
HPX	078	General view of Trench 8, looking NW
HPX	079	SE-facing section (S.1) at NE end of Trench 4 (1m scale)
HPX	080	SE-facing section (S.1) at NE end of Trench 4 (1m scale)
HPX	081	SE-facing section (S.1) at NE end of Trench 4 (1m scale)
HPX	082	Ditch 0007 in section (S.2) (1m scale)
HPX	083	Ditch 0007 in section (S.2) (1m scale)
HPX	084	Ditch 0007, looking NE (1m scale)
HPX	085	Ditch 0007, looking NE (1m scale)
HPX	086	General view of Trench 10, looking NW
HPX	087	General view of Trench 11, looking SE
HPX	088	General view of Trench 12, looking SW
HPX	089	SE-facing section at NE end of Trench 12 (0.5m scale)
HPX	090	General view of Trench 14, looking SW
HPX	091	General view of Trench 13, looking SE
HPX	092	Quick snap of modern pit (not numbered) in Trench 13 (no scale)
HPX	093	Ditch 0009 in section (S.5) in Trench 9 (0.5m scale)
HPX	094	Ditch 0009 in section (S.5) in Trench 9 (0.5m scale)
HPX	095	Ditch 0009 in section (S.5) in Trench 9 (0.5m scale)
HPX	096	Ditch 0009, looking NE (0.5m scale)
HPX	097	Ditch 0009, looking NE, wider view (0.5m scale)
HPX	098	Ditch 0015 in section (S.4) in Trench 5 (0.5m scale)
HPX	099	Ditch 0015 in section (S.4) in Trench 5 (0.5m scale)
HPY	001	Ditch 0015 in section (S.4) in Trench 5 (0.5m scale)
HPY	002	Ditch 0015 in section (S.4) in Trench 5 (0.5m scale)
HPY	003	Ditch 0015, looking E (0.5m scale)
HPY	004	Ditch 0015, looking E (0.5m scale)
HPY	005	Working shot - metal detecting in Trench 20
HPY	006	SE-facing section in centre of Trench 28 (1m scale)
HPY	007	Cut 0017 in Trench 22, looking SW (0.5m scale)
HPY	008	Cut 0017 in Trench 22, looking SW (0.5m scale)
HPY	009	General view of Trench 25, looking SW
HPY	010	Ditch 0023 in Trench 29, unexcavated, looking W (1m scale)
HPY	011	Ditch 0023 in Trench 29, unexcavated, looking W (1m scale)
HPY	012	Ditch 0023 in Trench 29, unexcavated, looking E (1m scale)
HPY	013	SE-facing section (S.1) at NE end of Trench 4 (1m scale)
HPY	014	Ditch 0007 in section (S.2) in Trench 4 (1m scale)
HPY	015	Ditch 0007 in section (S.2) in Trench 4 (1m scale)
HPY	016	Ditch 0007 looking NE (1m scale)
HPY	017	Ditch 0007 looking NE (1m scale)
HPY	018	Ditch 0015 in section (S.4) in Trench 5 (0.5m scale)
HPY	019	Ditch 0015 in section (S.4) in Trench 5 (0.5m scale)
HPY	020	Ditch 0015 in section (S.4) in Trench 5 (0.5m scale)
HPY	021	Ditch 0015 in section (S.4) in Trench 5 (0.5m scale)
HPY	022	Ditch 0015, looking E (0.5m scale)

Appendix 3. Pottery catalogue

Context	Fabric	Form	No	EVE	Wgt/g	State	Comments	Context date
0004	SASG	Body	1	0	1	Abr	Less than one gram	
0004	BSW	Body	6	0	6	Sli	All join. Thin walled with common ill sorted grog	
0004	BSW	Body	1	0	5	Sli	Oxidised body, reduced surface. Thin walled, close to GMG but with common ill sorted grog.	M/L1st-E2nd C
0006	HMFT	Body	1	0	1	Very	With sparse to common flint in quartz sand	c EIA
0008	HMG	Base	7	0	42	Sli	0.07. Contains ill sorted common grog (quite large), sparse flint, but over all fabric has sandy feel. Base is rusticated, all join. Oxidised with grey core.	c MBA
0012	COLB	Body	1	0	13	Very	Part of mortaria rim? Exceptionally abraded and calcite leached out. Red iron ore and rare gold mica with sparse silver	2nd-E3rd C
0013	HMFT	Body	1	0	6	Abr	Abundant ill sorted flint	LBA-EIA
0018	GX	Bowl 6.3 style	1	0.05	14	Sli	Ill sorted quartz with some mica, vague lines on top of rim in the reed rim style	M/L1st-L2nd C
0022	GT	Body	1	0	4	Abr	Abundant ill sorted black grog	LIA/c AD60/70

Appendix 4. Worked flint catalogue

Context	Type	No	Patinated	Notes
0004	Flake	1	Unpat	With limited edge retouch/use wear and parallel flake scars on the dorsal face.
0004	Flake	1	Unpat	With limited edge retouch/use wear and parallel flake scars on the dorsal face
0004	Flake	1	Unpat	Flake scars on the dorsal face
0004	Flake	1	Unpat	With limited edge retouch and a natural striking platform
0004	Flake	1	Unpat	Irregular
0004	Flake	1	Unpat	Squat with limited edge retouch.
0004	Flake	1	Unpat	Squat with limited edge retouch. Ninety-five percent cortex.
0004	Flake	1	Unpat	Squat with hinge fracture and parallel flake scars on the dorsal face
0005	Shatter piece	1	Unpat	With ten percent cortex, one large and a few smaller flakes removed
0013	Blade	1	Unpat	With limited edge retouch, parallel blade scars on the dorsal face and a prepared platform.
0006	Flake	1	Unpat	Incomplete with limited edge retouch
0006	Flake	1	Unpat	Snapped long flake/blade with limited edge retouch

Appendix 5. Geophysical survey report



HARP CLOSE MEADOW, SUDBURY, SUFFOLK

DETAILED MAGNETOMETER SURVEY



Site Code: SUY 117

August 2012



HARP CLOSE MEADOW, SUDBURY, SUFFOLK

Detailed Magnetometer Survey

Prepared for:
Andrew Tester
Suffolk County Council Archaeological Service
Economy, Skills and Environment
Ford House
Shire Hall
Bury St Edmunds
Suffolk
IP33 1RX

By:
Timothy Schofield HND BSc PIfA

Britannia Archaeology Ltd
**4 The Mill, Clovers Court,
Stowmarket, Suffolk,
IP14 1RB**

T: 01449 763034

info@britannia-archaeology.com

www.britannia-archaeology.com

Registered in England and Wales: 7874460

August 2012

Site Code	SUY 117	NGR	NGR 587900 242100
Report Number	1009	OASIS	TBC
Approved By	Matthew Adams	DATE	
			August 2012



DISCLAIMER

The material contained within this report was prepared for an individual client and solely for the benefit of that client and the contents should not be relied upon by any third party. Britannia Archaeology Ltd will not be held liable for any loss or damage, direct, indirect or consequential, through misuse of, or actions based on the material contained within by any third party.

The results and interpretation of the report cannot be considered an absolute representation of the archaeological or any other remains. In the case of geophysical surveys the data collected, and subsequent interpretation is a representation of anomalies recorded by the survey instrument. Britannia Archaeology Ltd will not be held liable for any errors of fact supplied by a third party, or guarantee the proper maintenance of the survey stations.



CONTENTS

	Abstract	Page 3
1.0	Introduction	Page 3
2.0	Site Description	Page 3
3.0	Planning Policies	Page 3
4.0	Archaeological Background	Page 4
5.0	Project Aims	Page 5
6.0	Methodology	Page 5
7.0	Results	Page 6
8.0	Discussion and Conclusion	Page 8
9.0	Acknowledgements	Page 8
10.0	Project Archive and Deposition	Page 8
	Bibliography	Page 8
	Appendix 1	Technical Details
		Page 9
Figure 1	Site Location	1:2000
Figure 2	Site Grid Plan and Referencing	1:2000
Figure 3	Corrected Magnetometer Greyscale Plot	1:1250
Figure 4	Corrected Magnetometer XY Trace Plot	1:1250
Figure 5	Processed Magnetometer Greyscale Plot	1:1250
Figure 6	Processed Magnetometer XY Trace Plot	1:1250
Figure 7	Interpretation of Magnetometer Anomalies	1:1250



ABSTRACT

Detailed fluxgate gradiometer survey on land at Harp Close Meadow, Sudbury, Suffolk, recorded five discrete anomalies of potential archaeological origin. One broad weak positive linear anomaly of probable natural origin, large areas of magnetic disturbance, a plethora of dipolar 'iron-spike' anomalies and six weak linear dipolar responses indicative of service pipe trenches were also prospected.

1.0 INTRODUCTION

On the 9th and 10th of August 2012, Britannia Archaeology Ltd (BA) undertook detailed magnetometer survey on land at Harp Close Meadow, Sudbury, Suffolk (NGR 587900 242100) in advance of the construction of a residential development. The survey was undertaken on behalf of Andrew Tester of Suffolk County Council Archaeological Services, in response to a brief (dated 3rd July 2012) prepared by Sarah Poppy of Suffolk County Council Archaeology Service/Conservation Team (SCCAS/CT) on 4.5 hectares of land previously used as meadows. On both days the weather was sunny. This geophysical survey was undertaken as part of a programme of archaeological investigation with the subsequent phase being a trial trench evaluation.

2.0 SITE DESCRIPTION

Located to the north-east of the town centre of Sudbury on a dry valley overlooking the River Stour and bounded by Waldingfield Road to the south-east, housing estates to the south, west and north-east, and by Acton Lane to the north-west. Situated at 40-45m AOD on land currently used as meadows on the edge of the floodplain. The total area is 4.5 hectares on land sloping from the north-west to the south-east.

The bedrock comprises Lewes Nodular Chalk, Seaford Chalk, Newhaven Chalk, and Culver Chalk Formation when the local environment was dominated by warm chalk seas formed 71-94 million years ago in the Cretaceous Period (British Geological Society (BGS, 2012).

Superficial deposits are described as Lowestoft Formation till, deep draining fine silty clay and outwash sand and gravel. These deposits were formed during the Ice Age when glaciers scoured the landscape depositing moraines of till with the sand and gravel deposited by seasonal and post-glacial meltwaters (BGS, 2012).

3.0 PLANNING POLICIES

The archaeological investigation is to be carried out on the recommendation of the local planning authority, following guidance laid down by the National Planning and Policy Framework (NPPF, DCLD 2012) which replaces Planning Policy Statement 5: Planning for the Historic Environment (PPS5, DCLG 2010). The relevant local planning policies also include the Babergh Development Framework Core Strategy (2011-2031) Submission Draft.



3.1 *National Planning Policy Framework (NPPF, DCLG March 2012)*

The NPPF recognises that 'heritage assets' are an irreplaceable resource and planning authorities should conserve them in a manner appropriate to their significance when considering development. It requires developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible. The key areas for consideration are:

- The significance of the heritage asset and its setting in relation to the proposed development;
- The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance;
- Significance (of the heritage asset) can be harmed or lost through alteration or destruction, or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification;
- Local planning authorities should not permit loss of the whole or part of a heritage asset without taking all reasonable steps to ensure the new development will proceed after the loss has occurred;
- Non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets.

3.2 *Babergh Development Framework Core Strategy (2011-2031) Submission Draft.*

The local development framework for Babergh states the following:

- Provide support and guidance to ensure that development which may affect historic assets and ensure new development makes a positive contribution to local character and distinctiveness (section 3.3.6).

4.0 ARCHAEOLOGICAL BACKGROUND

The proposed residential development is located in an area of archaeological interest identified in the County Historic Environment Record. Located immediately to the north-east are two cropmark ring ditches (HER SUY041 and SUT042). A desk-based assessment undertaken by SCCAS (2010/203) identified moderate potential for the location of remains of prehistoric and 20th century date. The topographic setting (on a dry valley overlooking the River Stour) is favourable for occupation relating to all periods. This will be the first systematic investigation to have been undertaken on the site.



5.0 PROJECT AIMS

This specific aim of the geophysical survey and subsequent targeted trial trench evaluation is to enable the archaeological resource, both in quality and extent, to be accurately quantified.

6.0 METHODOLOGY

6.1 *Instrument Type Justification*

Britannia Archaeology Ltd employed a Bartington Dual Grad 601-2 fluxgate gradiometer to undertake the survey, chosen for its high sensitivity and rapid ground coverage. The soils and underlying geology were relatively receptive to magnetometer survey, with adequate contrast between the anomalies and the relatively low magnetic susceptibility of the silt, sand and gravel natural drift geology.

6.2 *Instrument Calibration*

The Magnetometer was left on for a minimum of 20 minutes in the morning for the sensors to settle before the start of the first grid. The instrument was zeroed after every three grids to minimise the effect of sensor drift. A set-up station with low magnetic susceptibility was fairly easy to locate, this same station was used exclusively throughout the survey to align the sensors providing a common zero point. The geophysical surveyors noted that instrument drift was relatively minor throughout the survey.

6.3 *Sampling Interval and Grid Size*

The sampling interval was 0.25m along 1m traverse intervals providing 4 readings a metre, the magnetometer survey was undertaken on 20 x 20m grids.

6.4 *Survey Grid Location*

The survey grid was set out to the Ordnance Survey OSGB36 datum to an accuracy of $\pm 0.1\text{m}$ employing a Leica Viva Glonass Smart Rover differential global positioning system (DGPS). Data were then converted to the National Grid Transformation OSTN02 and the instrument was regularly tested using stations with known ETRS89 coordinates. The grid was positioned parallel to the long axis of the field for ease of survey progression.

6.5 *Data Capture*

Instrument readings were recorded on an internal data logger which were downloaded to a laptop at midday and at the end of the survey. The grid order was recorded on a BA pro-forma to aid in the creation of the composites. Data were filed in job specific folders and broken up into individual field composite datasets. These data composites were checked for quality on site by BA, allowing grids to be re-surveyed if necessary. The data were backed up onto an external storage device in the office and finally a remote



server at the end of the day. A five metre exclusion zone was left between the boundaries and the survey area to reduce the amount of disturbance caused by metal boundary fences etc. Topographic details were recorded using the DGPS, they included earthworks and hollows, the remains of the temporary salesroom (no longer extant) that were mapped to aid the dataset interpretation (see Figures 1-7).

6.6 Data Presentation and Processing

Only minimal processing of the data set was undertaken:

De-spike: X diameter = 3, Y diameter = 3, Threshold = 1, centre value=mean, replace with = mean;
Data Clipping: 1 standard deviation;
De-stripe: Traverse, Median, X (Horizontal).
Data Display: Clip to -2/+2.

Raw and processed greyscale/XY trace plots were produced for comparison, ensuring that no anomalies were processed out of the original dataset. An interpretation plan characterising the anomalies then followed drawing together the evidence collated from the greyscale and XY trace plots. All figures were tied into the National Grid and printed to an appropriate scale.

6.7 Software

Raw data was downloaded using Bartington software Grad601 and will be stored in this format as raw data. The software used to process the data and produce the composites was DW Consulting's Archeosurveyor v2.0. Datasets were exported into AutoCAD and placed onto the local survey grid. An interpretation plot was then produced using AutoCAD.

6.8 Grid Restoration

Britannia Archaeology positioned three reference stations (orange wooden stakes) in the field (Figure 2) that should be used to relocate the grid or the geophysical anomalies.

7.0 RESULTS

The results reveal five discrete positive anomalies, one broad weak positive linear anomaly, six weak dipolar linear responses, large areas of magnetic disturbance and multiple dipolar isolated responses (Figure 7).

Five discrete positive anomalies were present, four of which were on the higher ground to the west and one towards the northern corner of the site. These positive discrete anomalies could be of archaeological origin and are commonly indicative of rubbish pits. However, they could be of modern derivation or naturally occurring patches of higher magnetically susceptible soil.



The broad weakly positive linear anomaly located close to the south-eastern corner is likely to be of natural derivation and may relate to a localised change in the superficial geology, it could also be bank material of archaeological origin.

Six weak dipolar linear responses were recorded within the dataset, that are probable service pipe trench runs. Inspection chambers present across the site appear to demarcate the routes. The three located to the west probably served the salesroom that was once present to the north of the tarmac road.

The most numerous anomalies were the dipolar isolated responses ('iron-spike') that are present throughout the dataset. This ferrous material is likely to have been introduced into the topsoil over the years, the site is still used regularly by dog walkers and fetes were once held here.

Areas of magnetic disturbance are also abundant throughout the dataset, predictably many are located nearby the site boundaries. One of these areas is located over an extant earthwork that is probably of modern origin, possibly relating to a fly tipping episode. The other smaller areas of magnetic disturbance may also have been caused by the dumping of rubbish, or equally could demarcate previous fire events.

8.0 DISCUSSION & CONCLUSION

The magnetic susceptibility background level of the superficial geology was relatively low allowing the Bartington DualGrad 601-2 fluxgate gradiometer to perform fairly well. However some of the areas of magnetic disturbance could have potentially masked weaker archaeological anomalies that may exist below.

The site does have some archaeological potential with the five discrete anomalies worthy of further investigation. It may also be prudent to investigate the broad linear anomaly, target trenches on areas of low magnetic susceptibility (blank areas) and also the smaller areas of magnetic disturbance to discover whether they are of archaeological origin.

9.0 ACKNOWLEDGEMENTS

Britannia Archaeology would like to thank Jo Caruth and Andrew Tester of SCCAS for funding the project and for their help and support throughout.

We are also grateful for the advice of Sarah Poppy of SCCAS/CT.

10.0 PROJECT ARCHIVE AND DEPOSITION

A full archive will be prepared for all work undertaken in accordance with guidance from the *Selection, Retention and Dispersion of Archaeological Collections*, Archaeological Society for Museum Archaeologists, 1993. Arrangements will be made for the archive to be deposited with the relevant museum/HER Office.



Bibliography

- Ayala. G. *et al.* 2004. *Geoarchaeology; Using Earth Sciences to Understand the Archaeological Record*. English Heritage.
- Clark. A. J. 1996. *Seeing Beneath the Soil, Prospecting Methods in Archaeology*. BT Batsford Ltd, London.
- Clover, K. 2012. *Site to the rear of the High Street, Newmarket, Suffolk; Desk Based Assessment*. Oxford Archaeology East. Report 1320.
- David. A. 1995. *Geophysical Survey in Archaeological Field Evaluation: Research and Professional Services Guidelines*. No.1. English Heritage.
- David. A. *et al.* 2008. *Geophysical Survey In Archaeological Field Evaluation, Second Edition*. English Heritage.
- Gaffney. C, Gater. J. and Ovenden. S. 2002. *The Use of Geophysical Techniques in Archaeological Evaluations*. IFA Technical Paper No. 6.
- Gaffney. C. and Gater. J. 2003. *Revealing the Buried Past, Geophysics for Archaeologists*. Tempus Publishing Ltd.
- Google Earth. 2012, Google Incorporated.
- Gurney, D. 2003. *Standards for Archaeology in the East of England*, East Anglian Archaeology Occasional Paper 14.
- Institute for Archaeologists. 2011. *Standard and Guidance for Archaeological Geophysical Survey*.
- Linford. N. 2006. Notes from an English Heritage Seminar.
- Schmidt. A. 2001. *Geophysical Data in Archaeology: A Guide to Good Practice*. Archaeology Data Service. Oxbow Books.
- Whitten. D.G.A. 1978. *The Penguin Dictionary of Geology*. Penguin Books Ltd. London.
- Witten. A.J. 2006. *Handbook of Geophysics and Archaeology*. Equinox Publishing Ltd. London.

Websites

The British Geological Survey, 2012, (Natural Environment Research Council) – Geology of Britain Viewer - www.bgs.ac.uk/opengeoscience/home.html?Accordion2=1#map



APPENDIX 1 – TECHNICAL DETAILS

Magnetometer Survey

The magnetometer differs from the 'active' magnetic susceptibility meter by being a 'passive' instrument. Rather than injecting a signal into the ground it detects slight variations in the Earth's magnetic field caused by cultural and natural disturbance (Clark).

Thermoremanent magnetism is produced when a material containing iron oxides is strongly heated. Clay for example has a high iron oxide content that in a natural state is weakly magnetic, when heated these weakly magnetic compounds become highly magnetic oxides that a magnetometer can detect.

The demagnetisation of iron oxides occurs above a temperature known as the Curie point; for example haematite has a Curie point of 675 Celsius and magnetite 565C. At the time of cooling the iron oxides become permanently re-magnetised with their magnetic properties re-aligned in the direction of the Earth's magnetic field (Gaffney and Gater). Kilns, hearths, baked clay and ovens can reach temperatures of the Curie point, and are the strongest responses apart from large iron objects that can be detected. Cultural anomalies that can be detected by the magnetometers include occupation areas, pits, ditches, furnaces, sunken feature buildings, ridge and furrow field systems and ritual sites (David, 2011). Modern ferrous service pipes, field drainage pipes, removed field boundaries, perimeter fences and field boundaries can also be recorded.

Fluxgate Gradiometers

Fluxgate gradiometers are sensitive instruments that utilise two sensors placed in a vertical plane, spaced 1 metre apart. The sensor above reads the Earth's magnetic (background) response while the sensor below reads the local magnetic field. Both of the sensors are carefully adjusted to read zero before survey commences at a 'zeroing' point, selected for its relatively 'quiet' magnetic background reading. When differences in the magnetic field strength occur between the two sensors a positive or negative reading is logged. Positive anomalies have a positive magnetic value and negative anomalies have a negative magnetic value relative to the site's magnetic background. Examples of positive magnetic anomalies include hearths, kilns, baked clay, areas of burning, ferrous material, ditches, sunken feature buildings, furrows, ferrous service pipes, perimeter fences and field boundaries. Negative magnetic anomalies include earthwork embankments, plastic water pipes and geological features.

The instruments are usually held approximately 0.30m to 0.50m above the ground surface and can detect to a depth of between 1-2metres. Best practice dictates that the direction of traverse should be east to west, optimising the instruments data quality.



Magnetic Anomalies

Linear trends

Linear trends can be both positive and negative magnetic responses. If they are broad, relatively weak or negative in nature they may be of agricultural or geological origin, for example periglacial channels, land drains or ploughing furrows. If the responses are strong positive magnetic linear trends they are more likely to be of archaeological origin. Archaeological settlement ditches tend to be rich in highly magnetic iron oxides that accumulate in them via anthropogenic activity and humic backfills. Curvilinear trends can also be recorded and are indicative of archaeological structures such as drip-gullies.

Discrete anomalies

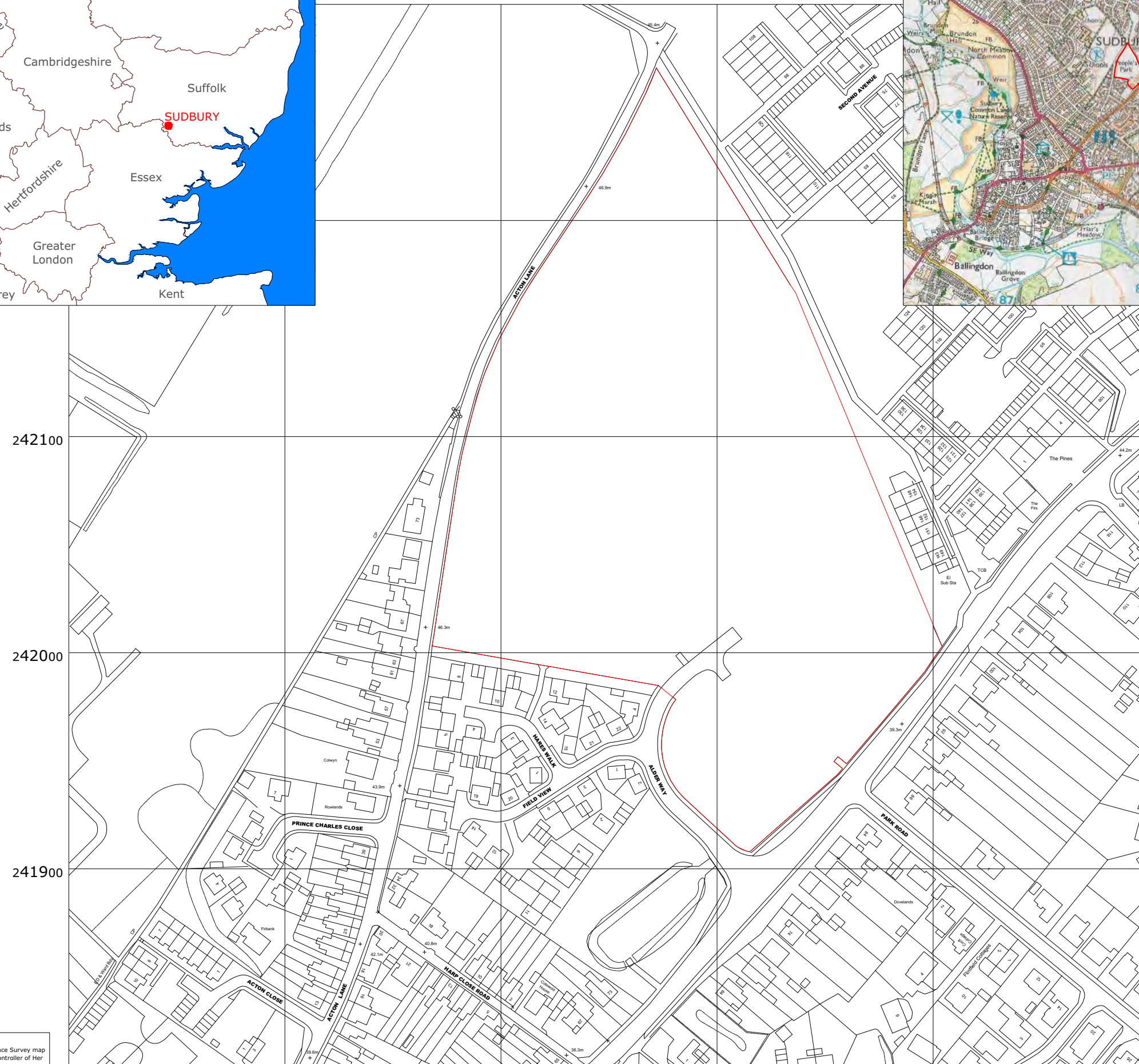
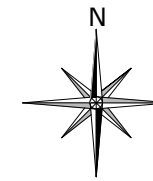
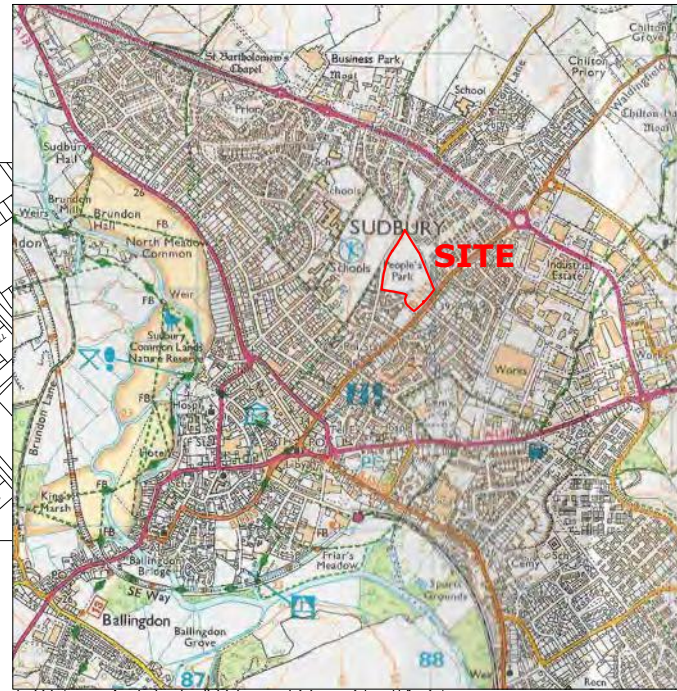
Discrete anomalies appear as increased positive responses present within a localised area. They are caused by a general increase in the amount of magnetic iron oxides present within the humic back-fill of for example a rubbish pit.

'Iron spike' anomalies

These strong isolated dipolar responses are usually caused by ferrous material present in the topsoil horizon. They can have an archaeological origin but are usually introduced into the topsoil during manuring.

Areas of magnetic disturbance

An area of magnetic disturbance is usually associated with material that has been fired. For example areas of burning, demolition (brick) rubble or slag waste spreads. They can also be caused by ferrous material, e.g. close proximity to barbwire or metal fences and field boundaries, buried services, pylons and modern rubbish deposits.

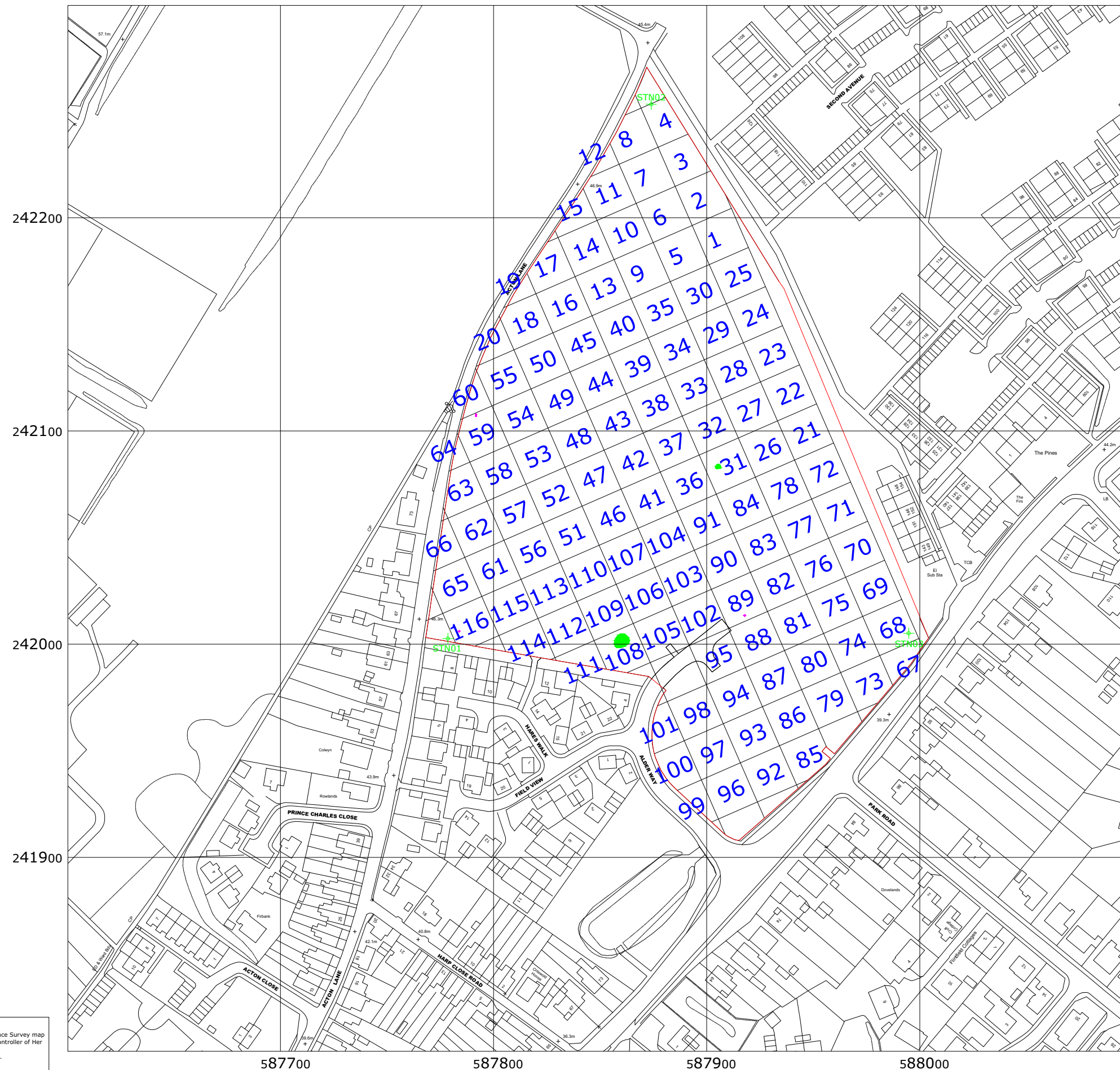
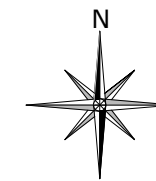


242100
242000
241900




587700 587800 587900 588000

Reproduced from the Ordnance Survey map with the permission of the controller of Her Majesty's Stationery Office.
Licence number: 100052663.
© CROWN COPYRIGHT.

		Site Boundary
NGR:	587900 242100	REPORT NUMBER: 1009
PROJECT:	HARP CLOSE MEADOW, SUDBURY, SUFFOLK	
CLIENT:	ANDREW TESTER	
DESCRIPTION:	SITE LOCATION PLAN	
BRITANNIA ARCHAEOLOGY LTD		
4 THE MILL, CLOVERS COURT, SUFFOLK IP14 1RB		
T: 01449 763034 E: info@britannia-archaeology.com W: www.britannia-archaeology.com		
SCALE:	1:2000	
PLOT:	A3	APPROVED: MCA
DATE:	AUG 2012	VERSION: 01
AUTHOR:	TPS	FIGURE: 01



STATION	EASTING	NORTHING	ZENITH
01	587778.557	242002.678	45.881
02	587873.959	242253.191	44.837
03	587994.844	242005.107	40.348

	Extant Earthwork
	Inspection Chamber
	Site Boundary

NGR: 587900 242100	REPORT NUMBER: 1009
-----------------------	------------------------

PROJECT:
HARP CLOSE MEADOW, SUDBURY,
SUFFOLK

CLIENT:
ANDREW TESTER

DESCRIPTION:
SITE GRID & REFERENCING

BRITANNIA ARCHAEOLOGY LTD



4 THE MILL, CLOVERS COURT, SUFFOLK
IP14 1RB

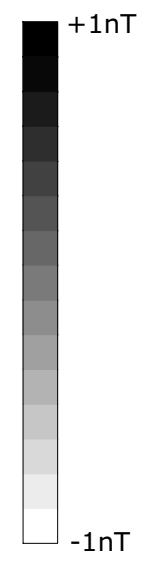
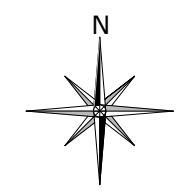
T: 01449 763034
E: info@britannia-archaeology.com
W: www.britannia-archaeology.com

SCALE: 1:2000	
------------------	---------------------------------------------------------------------------------------

PLOT: A3	APPROVED: MCA	VERSION: 01
-------------	------------------	----------------

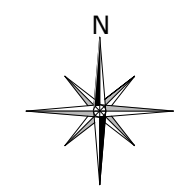
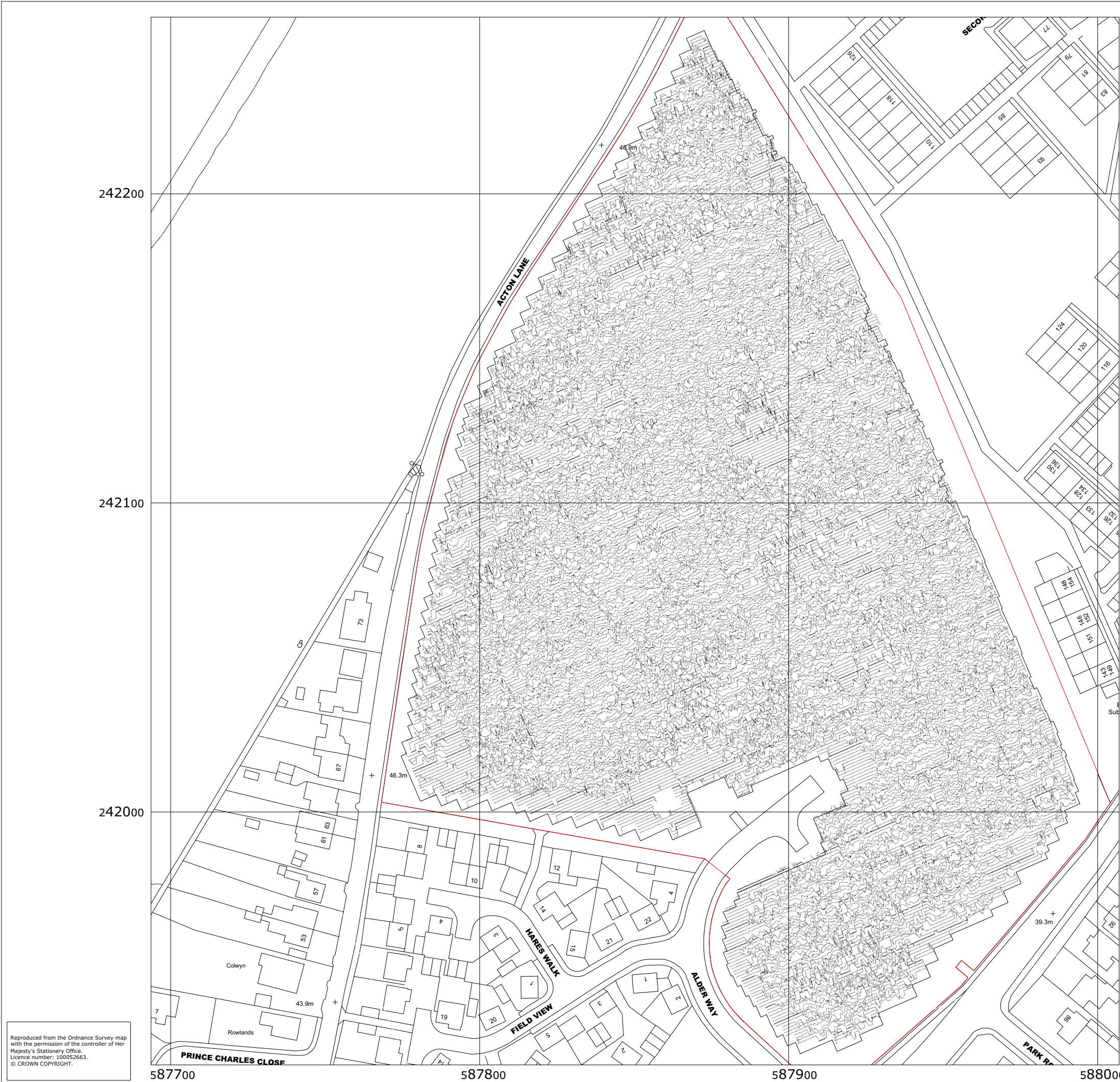
DATE: AUG 2012	AUTHOR: TPS	FIGURE: 02
-------------------	----------------	---------------

Reproduced from the Ordnance Survey map with the permission of the controller of Her Majesty's Stationery Office. Licence number: 100052663. © CROWN COPYRIGHT.






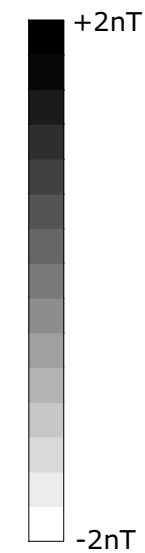
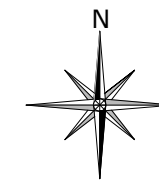
Reproduced from the Ordnance Survey map with the permission of the controller of Her Majesty's Stationery Office.
Licence number: 100052663.
© CROWN COPYRIGHT.

 Site Boundary	
NGR: 587900 242100	REPORT NUMBER: 1009
PROJECT: HARP CLOSE MEADOW, SUDBURY, SUFFOLK	
CLIENT: ANDREW TESTER	
DESCRIPTION: RAW CORRECTED GREYSCALE PLOT	
BRITANNIA ARCHAEOLOGY LTD	
 4 THE MILL, CLOVERS COURT, SUFFOLK IP14 1RB T: 01449 763034 E: info@britannia-archaeology.com W: www.britannia-archaeology.com	
SCALE: 1:1250	
PLOT: A3	APPROVED: MCA
DATE: AUG 2012	AUTHOR: TPS
	VERSION: 01
	FIGURE: 03



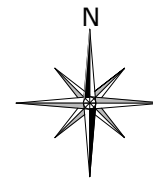
Reproduced from the Ordnance Survey map with the permission of the controller of Her Majesty's Stationery Office.
 Licence number: 100052663.
 © CROWN COPYRIGHT.

12 nT/cm	Scale Interval	
	Site Boundary	
NGR: 587900 242100	REPORT NUMBER: 1009	
PROJECT: HARP CLOSE MEADOW, SUDBURY, SUFFOLK		
CLIENT: ANDREW TESTER		
DESCRIPTION: RAW CORRECTED XY TRACE PLOT		
BRITANNIA ARCHAEOLOGY LTD		
		
4 THE MILL, CLOVERS COURT, SUFFOLK IP14 1RB		
T: 01449 763034 E: info@britannia-archaeology.com W: www.britannia-archaeology.com		
SCALE: 1:1250		
PLOT: A3	APPROVED: MCA	VERSION: 01
DATE: AUG 2012	AUTHOR: TPS	FIGURE: 04





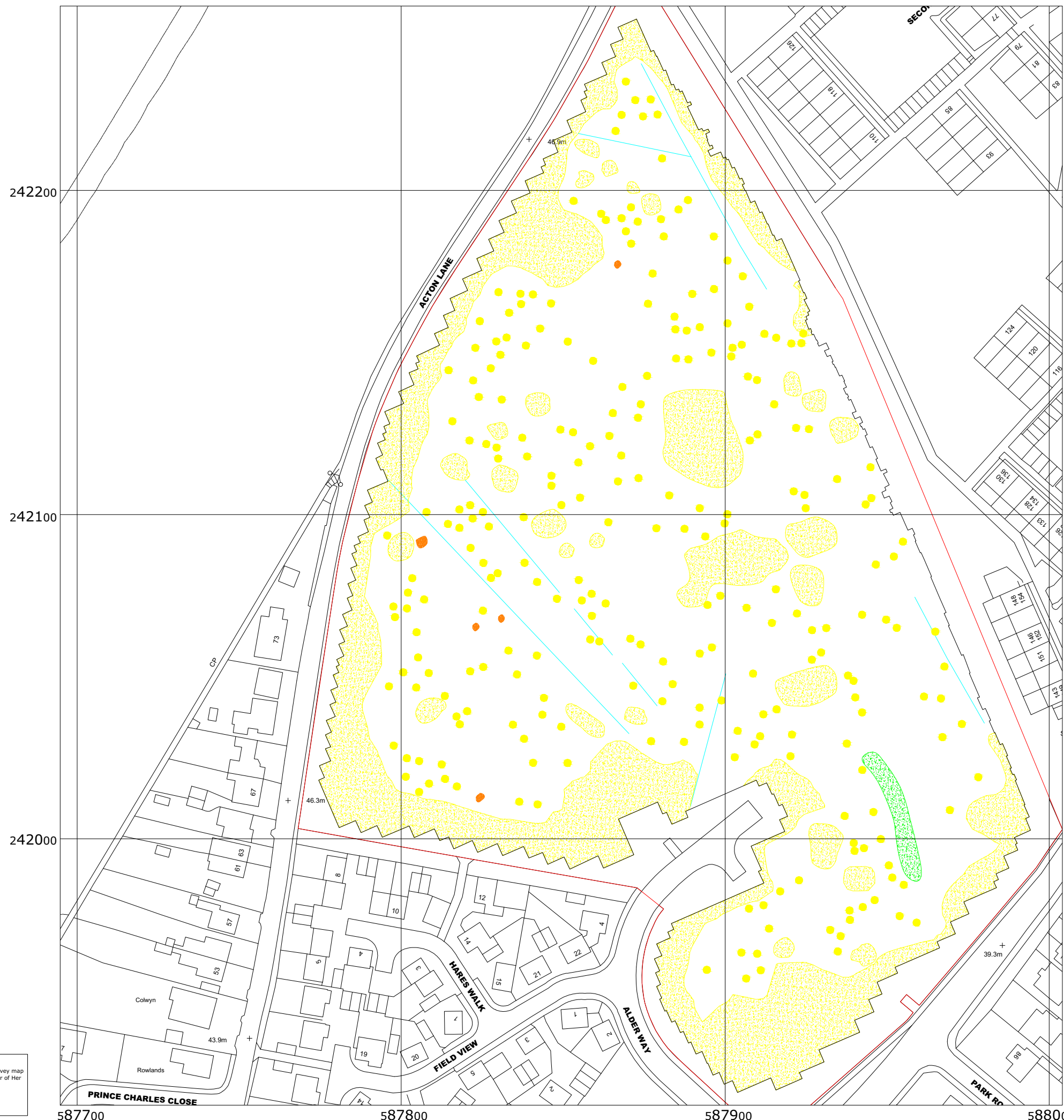
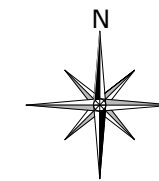
 Site Boundary	
NGR: 587900 242100	REPORT NUMBER: 1009
PROJECT: HARP CLOSE MEADOW, SUDBURY, SUFFOLK	
CLIENT: ANDREW TESTER	
DESCRIPTION: PROCESSED GREYSCALE PLOT	
BRITANNIA ARCHAEOLOGY LTD	
	
4 THE MILL, CLOVERS COURT, SUFFOLK IP14 1RB	
T: 01449 763034 E: info@britannia-archaeology.com W: www.britannia-archaeology.com	
SCALE: 1:1250	
PLOT: A3	APPROVED: MCA
DATE: AUG 2012	AUTHOR: TPS
VERSION: 01	FIGURE: 05







Reproduced from the Ordnance Survey map with the permission of the controller of Her Majesty's Stationery Office.
Licence number: 100052663.
© CROWN COPYRIGHT.



Reproduced from the Ordnance Survey map with the permission of the controller of Her Majesty's Stationery Office.
Licence number: 100052663.
© CROWN COPYRIGHT.

12 nT/cm	Scale Interval	
	Site Boundary	
NGR: 587900 242100	REPORT NUMBER: 1009	
PROJECT: HARP CLOSE MEADOW, SUDBURY, SUFFOLK		
CLIENT: ANDREW TESTER		
DESCRIPTION: PROCESSED XY TRACE PLOT		
BRITANNIA ARCHAEOLOGY LTD		
		
4 THE MILL, CLOVERS COURT, SUFFOLK IP14 1RB		
T: 01449 763034 E: info@britannia-archaeology.com W: www.britannia-archaeology.com		
SCALE: 1:1250		
PLOT: A3	APPROVED: MCA	VERSION: 01
DATE: AUG 2012	AUTHOR: TPS	FIGURE: 06



	Positive Discrete Anomaly, Archaeology?
	Very Weak Dipolar Linear Anomaly, Service Run
	Area of Magnetic Disturbance, Ferrous Material
	Dipolar Anomaly, Ferrous Material
	Broad Weak Positive Linear Anomaly, Natural?
	Site Boundary

NGR: 587900 242100 REPORT NUMBER: 1009

PROJECT:
HARP CLOSE MEADOW, SUDBURY, SUFFOLK

CLIENT:
ANDREW TESTER

DESCRIPTION:
INTERPRETATION OF
MAGNETOMETER ANOMALIES

BRITANNIA ARCHAEOLOGY LTD



4 THE MILL, CLOVERS COURT, SUFFOLK
IP14 1RB

T: 01449 763034
E: info@britannia-archaeology.com
W: www.britannia-archaeology.com

SCALE: 1:1250 

PLOT: A3	APPROVED: MCA	VERSION: 01
-------------	------------------	----------------

DATE: AUG 2012	AUTHOR: TPS	FIGURE: 07
-------------------	----------------	---------------

Reproduced from the Ordnance Survey map with the permission of the controller of Her Majesty's Stationery Office.
Licence number: 10002663.
© CROWN COPYRIGHT.



Archaeological Service Field Projects Team

Delivering a full range of archaeological services

- Desk-based assessments and advice
- Site investigation
- Outreach and educational resources
- Historic Building Recording
- Environmental processing
- Finds analysis and photography
- Graphics design and illustration

Contact:

Rhodri Gardner

Tel: 01473 265879 Fax: 01473 216864

rhodri.gardner@suffolk.gov.uk

www.suffolk.gov.uk/Environment/Archaeology/