Archaeology South-East

RESULTS FROM A DETAILED MAGNETOMETER SURVEY (STAGE 2) AND ARCHAEOLOGICAL WATCHING BRIEF ON LAND AT MILLFIELD, SOUTHWATER, WEST SUSSEX.

NGR: 516256 125440

Planning Ref: DC/11/0657

ASE Project No: 5045

ASE Report No. 2011196
OASIS ID: archaeol6-108005

By Chris Russel BA (Hons)

August 2011

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Abstract

Archaeology South-East was commissioned by Bovis Homes Ltd to carry out a detailed fluxgate gradiometer survey on land at Millfield, Southwater, Horsham, West Sussex, in advance of the development of the site. The survey covered approximately 4.5ha and took place between the 3rd of August and the 8th of August 2011. The survey area consisted of short grass pasture bounded by hedges. Several anomalies were identified, most of which were linear and positive in response. Two of these anomalies were consistent with field boundaries recorded on 19th Century Ordnance Survey maps.

An archaeological watching brief was also carried out during the excavation of four geotechnical test pits. No archaeological features, deposits or artefacts were identified during this work.

CONTENTS

Figures

1.0 INTRODUCTION

1.1 Site Background

1.1.1 Archaeology South-East was commissioned by Bovis Homes Ltd to conduct a magnetometer survey on land at Millfield, Southwater, West Sussex, hitherto referred to as 'the site' (NGR 516256 125440 , Fig. 1).

1.2 Geology and Topography

1.2.1 The British Geological survey records the site geology as Weald Clay formation-Mudstone with superficial alluvial deposits immediately to the north. (BGS 2011).

1.2.2 The site is situated on the southern edge of Southwater and is bounded to the north by Strakers Lane and to the east by the A24. The southern portion of the survey area was relatively flat but the northern portion sloped noticeably from south to north with a more moderate fall off in contours from west to east.

1.3 Planning Background

1.3.1 A planning application (Planning Ref: DC/11/0657) for residential development of the site has been submitted to Horsham District Council by Omega Partnership on 5th April 2011. The proposed development comprises 130 houses with associated parking, infrastructure and open spaces (Figure 3). It is anticipated that planning permission for residential development will be granted, subject to conditions.

1.3.2 The West Sussex County Council (WSCC) Archaeologist has been consulted by ASE and advised that a programme of archaeological works condition will be attached to the planning permission. Stage 1 work (the production of a Desk Based Assessment (James, 2010)) is complete. The WSCC Archaeologist has advised that the required further scope of works will comprise an initial (Stage 2) magnetometry (fluxgate gradiometer) survey of the site followed by a (Stage 3) targeted 3% sample trial trench evaluation. Stage 4 works may be required should significant archaeological remains worthy of preservation by record be identified by the preceding Stage 1 and 2 works. Such Stage 4 works may be in the form of targeted or open area archaeological excavation in advance of development or by means of an archaeological watching brief during development.

1.3.3 The Stage 2 works are designed to identify potential archaeological remains within the location of the proposed development. Stage 2 and 3 works (if required) will be subject to a separate written scheme/s of investigation (WSI).

1.3.4 A written scheme of investigation (WSI) was prepared by ASE (Griffin 2011) and submitted to the WSCC Archaeologist for approval in advance of the commencement of fieldwork.

1.4 Aims of Geophysical Investigation

1.4.1 The purpose of the geophysical survey was to detect any buried archaeological anomalies that might provide a measurable magnetic response. This survey forms part of an overall archaeological programme designed to better understand the archaeological potential of the site.

1.4.2 As part of the Stage 2 works Site Investigation test pits were monitored and reported upon within this document.

1.5 Scope of Report

1.5.1 This report details the results of the geophysical survey. The survey was conducted by Chris Russel, Cat Douglas and John Cook. It was project managed by Darryl Palmer (fieldwork) and by Jim Stevenson (post fieldwork).

2.0 ARCHAEOLOGICAL BACKGROUND

2.1 Summary of the Desk Based Assessment

2.1.1 A Desk Based Assessment (DBA) for the study site was prepared by ASE (James 2010) and is summarised below.

2.1.2 The DBA suggests that the site has a generally low potential for containing archaeological deposits. Recent intensive farming is likely to have truncated archaeological deposits across much of the site to an unknown extent. Two hedgerows bounding the site are classified as Historic Hedgerows under the Hedgerows Regulations of 1997.

2.1.3 The earliest site recorded on the WSCC Historic Environment Record (HER) identified in the DBA within 1km of the site is Stakers Farm, a Grade II Listed Building of 15th century origin.

2.1.4 The agricultural landscape around Southwater is largely a fossilised late medieval landscape, comprising small irregular fields carved from the surrounding woodland, much of which has been left as shaws, often managed for woodland products through coppicing (Hudson 1986, 131). The farming regime was largely pastoral, including some sheep farming, although arable land increased to form half the parish by 1844. This trend reversed in the second half of the 19th century, as the land reverted to dairy pasture to provide London with milk. Poultry farming and market gardening was also important from the mid-19th century, with Southwater becoming known for its geese.

2.1.5 Scattered across the landscape are a number of large farms, often comprising buildings of early post-medieval date, but occupying much older sites. Smaller building plots along the roadsides often represent illegal encroachments (squatter settlements) onto former wasteland. Some modification of the field pattern, including the grubbing out of shaws and hedgerows, took place during the 19th century when advances in technology allowed arable farming to be carried out on a much greater scale than before.

2.1.6 A settlement grew up at Southwater Street along the main road from Horsham to Arundel – this process became more marked following the turnpiking of the road in 1764. Mill Straight itself dates from this time, as a link road between two older stretches of road. The population increased during the 19th century, resulting in the creation of a new church (Holy Innocents) in 1850. The railway station was built in 1861 along the Shoreham to Horsham railway, closing in 1965. A further catalyst for population growth was the development of the brickmaking industry on the southern edge of Southwater from the 1890s, finally closing in 1982. A windmill was constructed in 1806 at Cripplegate, immediately outside the south-western edge of the site.

2.1.7 Seven post-medieval sites are recorded within or close to the site including a 19th century brickworks; the former Cripplegate Mill (a large smock mill that stood just beyond the site boundary dating from 1806);

Copsale Mill, a former watermill; an original surviving milestone erected by the Horsham and Steyning Turnpike Trust in 1764; and two post-medieval Listed Buildings situated towards the edge of the DBA Study Area.

3.0 SURVEY METHODOLOGY

3.1 Summary of Methodology

3.1.1 A Bartington Grad 601-2 fluxgate gradiometer was used to undertake the magnetometry survey of an area of 4.5ha. The survey grid was set out using a differential GPS (Global Positioning Systems). A 30 metre grid was set out across the survey area and transects were walked every metre across these grids. Samples for the magnetometry survey were taken at 0.25m intervals along each transect.

3.2 Geophysical Survey Methods Used

3.2.1 The magnetometry survey was undertaken in the areas depicted in Figures 1 and 2.

3.2.2 Clay type geologies will normally provide a poor-average result for magnetic survey techniques however sand geologies generally respond well to magnetic prospection techniques (David 1995, 10; Gaffney & Gater 2003, 79). A 100% detailed area survey is the desirable strategy for any given area of land and has the potential to provide the best possible information on all types of feature including those where no significant occupation may have occurred. The fluxgate gradiometer method of magnetic detail survey was chosen as this instrumentation perfectly balances speed with quality of data collection. The survey grid consisted of 30 x 30 metre grids. Each grid was surveyed with 1 metre traverses; samples were taken every 0.25m .

3.3 Applied Geophysical Instrumentation

3.3.1 The Fluxgate Gradiometer employed was the Bartington Instrumentation Grad 601-2. This consists of two separate Fluxgate Gradiometers joined to work as a pair. The Fluxgate Gradiometer is based around a pair of highly magnetic permeable cores made out of an alloy called ‘Mu-metal’. They are driven in and out of magnetic saturation by the solenoid effect of an alternating ‘drive current’ in the coils wrapped around them. Every time the coils come out of saturation external fields can enter them; this will cause an electrical pulse in the detector coil proportional to the field strength. Two cores are used, with the cores in opposite direction, so that the drive current has no net magnetic effect arising on the sensor coil (Clark 1996, 69). A single sensor is very sensitive to tilt which causes the amount of ambient field flux along its axis to change, which will then alter the reading. The problem is solved by using two sensors arranged as a gradiometer with one sensor subtracting the output of the other (Clark 1996, 70). Before use the instrument is required to be ‘balanced’. That is the fine tuning of the detector alignment that reduces direction sensitivity to a minimum. The Grad 601-2 has an internal memory and a data logger that store the survey data. This data is downloaded into a PC and is then processed in a suitable software package.

3.3.2 The Fluxgate Gradiometer is an efficient technique of archaeological prospecting (Gaffney et al 1991, 6). It is suitable for detecting ditches, walls, kilns, hearths and ovens. The Fluxgate Gradiometer will pick up areas of a magnetic field that differ from the 'background' magnetic field of the local geology. A zero point is set over a magnetically stable area of the site to be surveyed. This is termed as balancing. A cut feature such as a ditch will have a different magnetic field to the local geology therefore will elicit a greater response from the sensors. The response will be positive if the fill has a higher magnetic gradient than the surrounding soil. Areas of burning or a ceramic dump (e.g. collapsed tile roof) will have a drastically different magnetic field. Modern rubbish, concrete and other modern activity can have an adverse effect upon the sensors during magnetic survey. Buildings may not be readily detected unless there was a high proportion of brick/tile used in their construction.

3.3.3 The Fluxgate Gradiometer uses a NanoTesla (nT) as a unit of measurement. A Tesla is a unit of magnetic measurement. NanoTeslas must be used as the deviation of the magnetic field due to buried archaeology can be very small. The Earths background magnetic field is in the region of 48000 nT.

3.3.4 The Fluxgate Gradiometer, in common with almost all geophysical techniques, is better at detecting archaeological sites from the Late Prehistoric period onwards. It should always be borne in mind that earlier periods of prehistory that have had less impact upon the landscape (e.g. in the form of significant boundaries, structures etc.) may not be detected by most geophysical techniques.

3.4 Instrumentation Used for Setting out the Survey Grid

3.4.1 It is vitally important for the survey grid to be accurately set out. The English Heritage guidelines (David 1995) state that no one corner of any given survey grid square should have more than a few centimetres of error. The survey grid for the site was set out using a Leica TCRA 1205 total station. The grid points were then geo-referenced using a Leica System 1200 Differential Global Positioning System (DGPS). The GPS base station collects satellite position to determine its position. This data is processed in survey specific software to provide a sub centimetre Ordnance Survey position and height for the base station. The survey grid is then tied in to this known accurate position by using a roving satellite receiver that has its position corrected by the static base station. Each surveyed grid point has an Ordnance Survey position; therefore the geophysical survey can be directly referenced to the Ordnance Survey National Grid.

3.5 Data Processing

3.5.1 All of the geophysical data processing was carried out using Geoplot V3 published by Geoscan Research. Data processing must be done to the raw survey data to produce a meaningful representation of the results so that they can then be further interpreted. However it is important that the data is not processed too much. Data processing should not replace poor field work. The Fluxgate Gradiometer data has had four stages of processing applied to it. Due to the very high positive readings of some of the magnetic disturbance the values were replaced with a dummy value so as to avoid detrimentally affecting the dataset when further processed. The first process carried out upon the data was to CLIP it. CLIP can be used to limit data to specified maximum and minimum values for improving graphical presentation. It also has the effect of removing some of the 'iron spikes' that occur with fluxgate gradiometer survey data. ZERO MEAN TRAVERSE was then applied to survey data. This removes stripe effects within grids and ensures that the survey grid edges match. Next DESPIKE was applied to the data set which removes the remaining random 'iron spikes' that occur within fluxgate gradiometer survey data. LOW PASS FILTER was then applied to the data. LOW PASS FILTER removes high frequency minor scale spatial detail. This is particularly useful for smoothing data or for enhancing larger weak features. INTERPOLATE smoothes the data and enhances its presentation by creating extra data points based upon collected values. INTERPOLATE was carried out upon the survey data in the Y axis only. This was all the processing that was applied to the survey data. Figures 3 and 4 display the processed survey data.

3.6 Watching brief on geotechnical test pits

3.6.1 An archaeological watching brief was also carried out on the excavation of geotechnical test pits (see Section 5.0 and Fig. 2).

4.0 GEOPHYSICAL SURVEY RESULTS (Figs 2-6)

4.1 Introduction to Results

4.1.1 The results should be read in conjunction with the figures at the end of this report. The types of features likely to be identified are discussed below (4.4 - 4.9).

4.2 Description of Site

4.2.1 The survey area consisted of approximately 4.5ha of short grass pasture bounded by hedgerows. The southern portion was generally flat and the northern portion sloped both south to north and west to east.

4.3 Survey Limitations

4.3.1 There were few barriers to the magnetometry survey but those that existed are listed below and were omitted from the survey.

4.3.2 The extreme north-east of the survey area was under plantation and contained immature trees and low scrub vegetation. This area was unsuitable for survey and was omitted.

4.3.3 A small area in the southern part of the survey contained excavations that appeared to be related to drainage. This area could not be surveyed and was omitted.

4.4 Positive Magnetic Anomalies

4.4.1 Positive anomalies generally represent cut features that have been in-filled with magnetically enhanced material.

4.5 Negative Magnetic Anomalies

4.5.1 Negative anomalies generally represent buried features such as banks that have a lower magnetic signature in comparison to the background geology

4.6 Magnetic Disturbance

4.6.1 Magnetic disturbance is generally associated with interference caused by modern ferrous features such as fences and service pipes or cables.

4.7 Dipolar Anomalies

4.7.1 Dipolar anomalies are positive anomalies with an associated negative response. These anomalies are usually associated with discrete ferrous objects or may represent buried kilns or ovens.

4.8 Bipolar Anomalies

4.8.1 Bipolar anomalies consist of alternating responses of positive and negative magnetic signatures. Interpretation will depend on the strength of these responses; modern pipelines and cables typically produce strong bipolar responses.

4.9 Thermoremanence

4.9.1 Thermoremanence is most commonly encountered through the magnetizing of clay through the firing process although stones and soils can also acquire thermoremnance.

4.10 Interpretation of Magnetometry Results (Figs 5 and 6)

4.10.1 Summary

There were several anomalies visible in the results, most of which are linear and positive in nature. Several discrete positive anomalies were also noted along with a dipolar magnetic signature. Anomalies consistent with agricultural activity were also seen, along with areas of magnetic disturbance which were located around the edges of the survey area.

4.10.2 Positive Linear Anomalies

Positive linear anomalies can be seen at M1, M4, M8, M10, M12, M13 and M14 on the interpretation (Fig. 5). M1 runs on a northeast to south west alignment and appears to respect the current field boundary. M13 comprises two parallel positive linear anomalies whose response appears to become weaker towards their south–eastern extent. This pair of anomalies appears to correspond to a field boundary or track-way noted on early Ordnance Survey maps (Fig. 6) and the more moderate anomaly M4 may be a similar feature. M12 runs on a similar alignment to M13 but curves to run north-east at its northern most extent. M10 can be seen running a short way northwards away from the eastern field boundary. Two roughly parallel linear anomalies are noted at M8A and M8B and appear to run south west to north east. The northern-most of these is in close association with M12. M14 runs on a south-east to north-west course in the south of the survey area and appears disturbed and indistinct in nature.

4.10.3 Discrete Positive and Dipolar Anomalies

Discrete positive anomalies are noted at M2, M3, M5, M6 and M11 and these may be discrete cut features. The dipolar anomalies shown at M7, M9 and M15 may relate to near surface metal objects although the potential remains that these anomalies represent features with thermoremnant properties (hearths, kilns etc). It should be noted that a geotechnical survey had taken place on site prior to the survey and that these strong signals may be related to this activity.

4.10.4 Probable Modern Agricultural Features

Three groups of linear anomalies are shown at M16, M17and M18 and these are consistent with agricultural activity such as ploughing and/or field drains.

4.10.5 Magnetic Disturbance

Areas of magnetic disturbance around the edges of the survey are also shown. These are caused by metal structures on the surface such as wire fences and cattle troughs.

5.0 WATCHING BRIEF RESULTS

5.1 Test Pit 1

5.1.1 Test Pit 1 revealed the following stratigraphic sequence. Stiff, light orangey brown clay geology [003] with light grey mottling was encountered at 0.26m below ground level. Above this was a friable, mid-grey brown, clay silt subsoil [002] which was seen to a depth of 0.21m. Above this subsoil was a friable, mid grey brown silty topsoil [001] which was 0.50m deep.

5.2 Test Pit 2

5.2.1 Test Pit 2 revealed the following stratigraphic sequence. Clay geology [003] was encountered at 0.26m below ground level. This was overlain by 0.16m of clay silt subsoil [002]. Above this subsoil was 0.10m of silty topsoil [001]. These contexts were identical to those described in Test Pit 1.

5.3 Test Pit 3

5.3.1 Test Pit 3 revealed the following stratigraphic sequence. Clay geology [003] was encountered at 0. 24m below ground level. This was overlain by subsoil [002] which was 0.17m deep and above this was a topsoil [001] which was noted to a depth of 0.70m. These contexts were identical to those described in Test Pit 1.

5.4 Test Pit 4

5.4.1 Test Pit 4 revealed the following stratigraphic sequence. Clay geology [001] was encountered at 0.58m below ground level. This was overlain by 0.50m of subsoil [002] which was in turn overlain by 0.80m of topsoil [001]. These contexts were identical to those described in Test Pit 1

6.0 CONCLUSIONS

6.1 The Magenetometer Survey

6.1.1 The magnetometer survey at Millfield, Southwater successfully detected several anomalies, most of which were linear and positive in response although there were some anomalies that potentially relate to discrete cut features and others that may relate to areas of thermoremnance. The origin for the majority of these anomalies is unclear although anomalies M4 and M13 potentially relate to field boundaries shown on the 1807 25" Ordnance Survey Map. Features that appear to relate to recent agricultural activity were also visible and there were areas of magnetic disturbance caused by surface metal objects around the periphery of the survey area.

6.2 Statement of Indemnity

6.2.1 Geophysical survey is the collection of data that relate to subtle variations in the form and nature of soil and which relies on there being a measurable difference between buried archaeological features and the natural geology. Geophysical techniques do not specifically target archaeological features and anomalies noted in the interpretation do not necessarily relate to buried archaeological features. As a result magnetic detail survey may not always detect sub-surface archaeological features. This is particularly true when considering earlier periods of human activity, for example those periods that are not characterised by sedentary social activity.

6.3 The Watching Brief

6.3.1 No archaeological deposits, finds or features were encountered during the monitoring of Test Pits 1-4.

6.4 Provisional Layout for Archaeological Evaluation b y Trial Trench (Figs. 7-9)

6.4.1 Figure 7 shows a provisional recommended layout for the archaeological evaluation of the site by trial trench in relation to the geophysical anomalies. These trial trenches represent a 3% sample of the total site area (21 trenches of 1.8 x 30m and two trenches of 1.8 x 45m).

6.4.2 The trenches are located so as to further investigate anomalies identified during the magnetometry survey and also to provide an even sample across the remainder of the development area.

6.4.3 Three trenches have been located in the far north of the site in the area that was not subject to geophysical survey because of a young tree plantation. It is possible that this area may remain inaccessible during future investigations on ecological grounds as this area is currently designated as High Value Reptile Habitat (Fig. 8). Additionally should it be demonstrated that this area, which is to currently designed to be retained as open space, will not be impacted during development then it may not be necessary to carry out intrusive investigations in this area, subject to agreement with the WSCC Archaeologist.

6.4.3 In addition to the ecological constraint noted above much of the perimeter of the development site is designated as Medium Value Reptile Habit (Fig. 8). Ecological constraints will need to be considered before implementing the programme of trial trench evaluation and trenches may need to be moved or their excavation postponed until the ecological constraints have been resolved. A small number of geophysical anomalies lie either totally or partially within this ecological zone.

6.4.4 The proposed trench layout is shown in relation to the proposed development in Figure 9.

Bibliography

Clark, A. 1996. *Seeing Beneath the Soil.* (2nd edition). London: Routledge.

David, A. 1995. *Geophysical Survey in Archaeological Field Evaluation.* English Heritage: Research and Professional Services Guideline no.1

Gaffney, C. Gater, J and Ovendon, S. 1991. *The Use of Geophysical Techniques in Archaeological Evaluations*. Institute of Field Archaeologists Technical Paper no.9

Gaffney, C. & Gater, J. 2003. *Revealing the Buried Past; Geophysics for Archaeologists*. Stroud: Tempus

Griffin, N. 2011. *Land at Millfield, Southwater, Horsham, West Sussex. Method Statement for a Detailed Stage 2 Magnetometer Survey*. Unpub. ASE document. Project no. 5045

Hudson, T.P., 1986. Victoria County History, vol. 6/2. Oxford: OUP.

James, R. 2010. *An Archaeological Desk Based Assessment of Land at Mill Straight, Southwater, West Sussex.* ASE Unpublished Report.

BGS 2011 British Geological Survey, *Geology of Britain Viewer*, accessed 09.08.2011. http://maps.bgs.ac.uk/geologyviewer_google/googleviewer.html

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OASIS ID: archaeol6-108005

Project details

Project name	Magnetometer survey at Millfield, Southwater, West Sussex
Short description of the project	The survey area consisted of short grass pasture bounded by hedges. Several anomalies were identified, most of which were linear and positive in response. Two of these anomalies were consistent with field boundaries recorded on 19th Century Ordnance Survey maps. An archaeological watching brief was also carried out during the excavation of four geotechnical test pits. No archaeological features, deposits or artefacts were identified during this work.
Project dates	Start: 03-08-2011 End: 08-08-2011
Previous/future work	No / Yes
Any associated project reference codes	5045 - Contracting Unit No.
Type of project	Recording project
Site status	None
Current Land use	Grassland Heathland 2 - Undisturbed Grassland
Monument type	NONE None
Significant Finds	NONE None
Investigation type	'Geophysical Survey'
Prompt	Direction from Local Planning Authority - PPS
Solid geology	WEALD CLAY
Drift geology	Unknown
Techniques	Magnetometry

Project location

Country	England
Site location	WEST SUSSEX HORSHAM SOUTHWATER Millfield
Postcode	RH13 9HT
Study area	4.50 Hectares
Site coordinates	TQ 516256 125440 50.8918715962 0.156149898010 50 53 30 N 000 09 22 E Point

Project creators

Name of Organisation	Archaeology South East

Project brief originator	Archaeology South East
Project design originator	Archaeology South-East
Project director/manager	Darryl Palmer
Project supervisor	Chris Russel
Type of sponsor/funding body	Bovis Homes Ltd
Project archives	
Digital Media available	'Geophysics'
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Results from a detailed Magnetometer Survey on Land at Millfield, Southwater, Horsham, West Sussex
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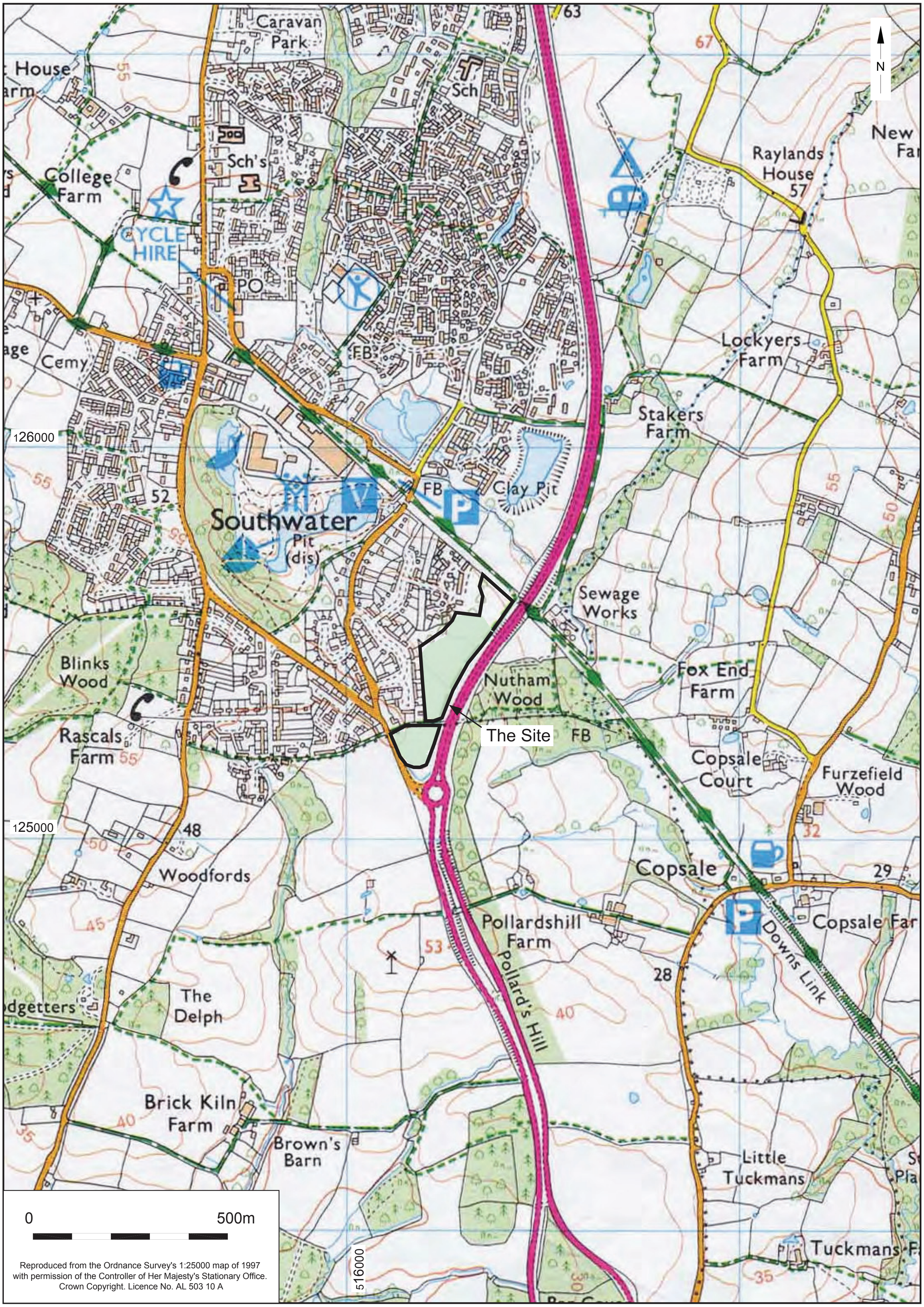
Issuer or publisher	Archaeology South East
Place of issue or publication	Portslade
Entered by	Chris Russel (chris.russel@ucl.ac.uk)
Entered on	18 August 2011

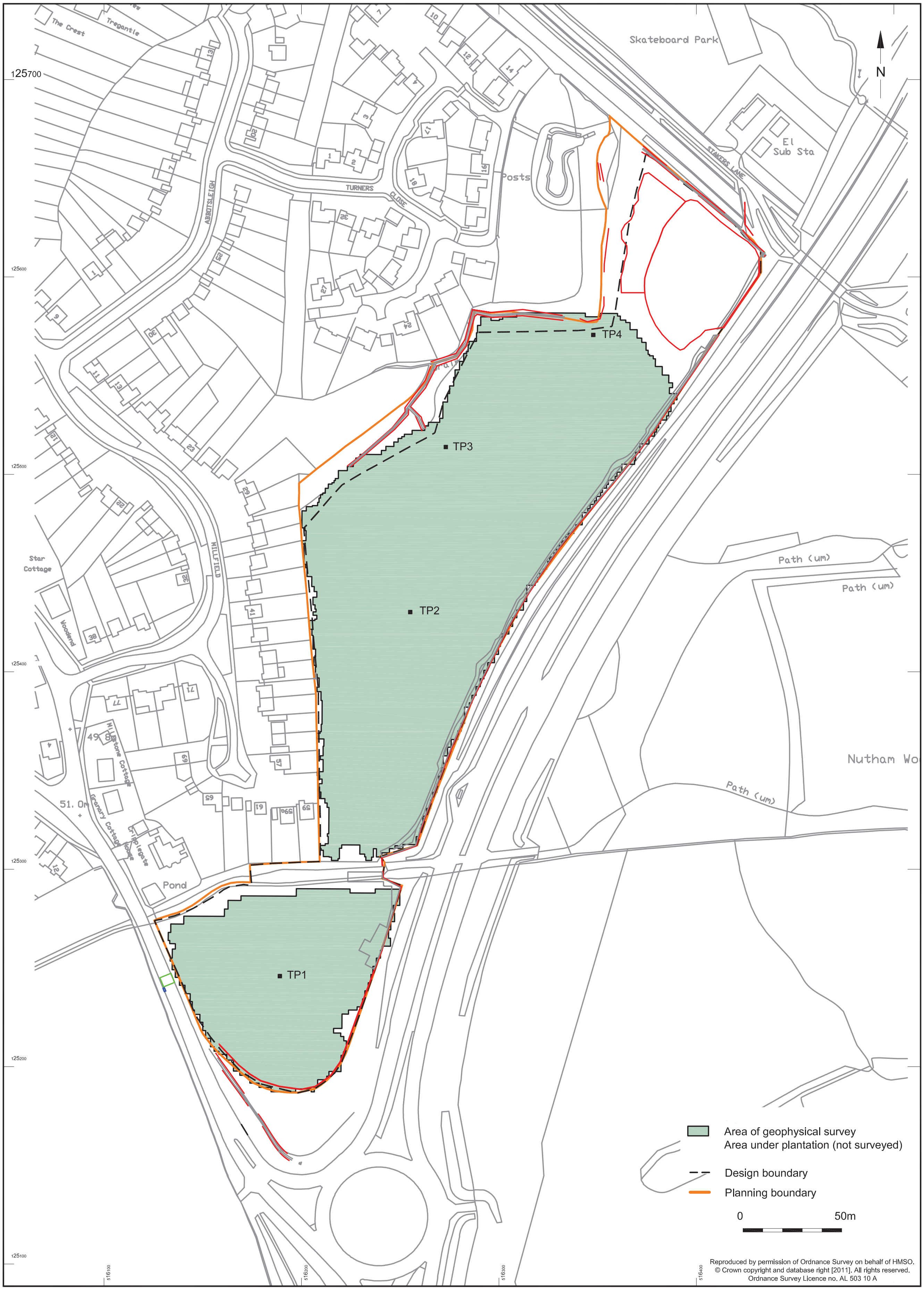
Appendix

Included on C.D

1. Raw Magnetometry Data

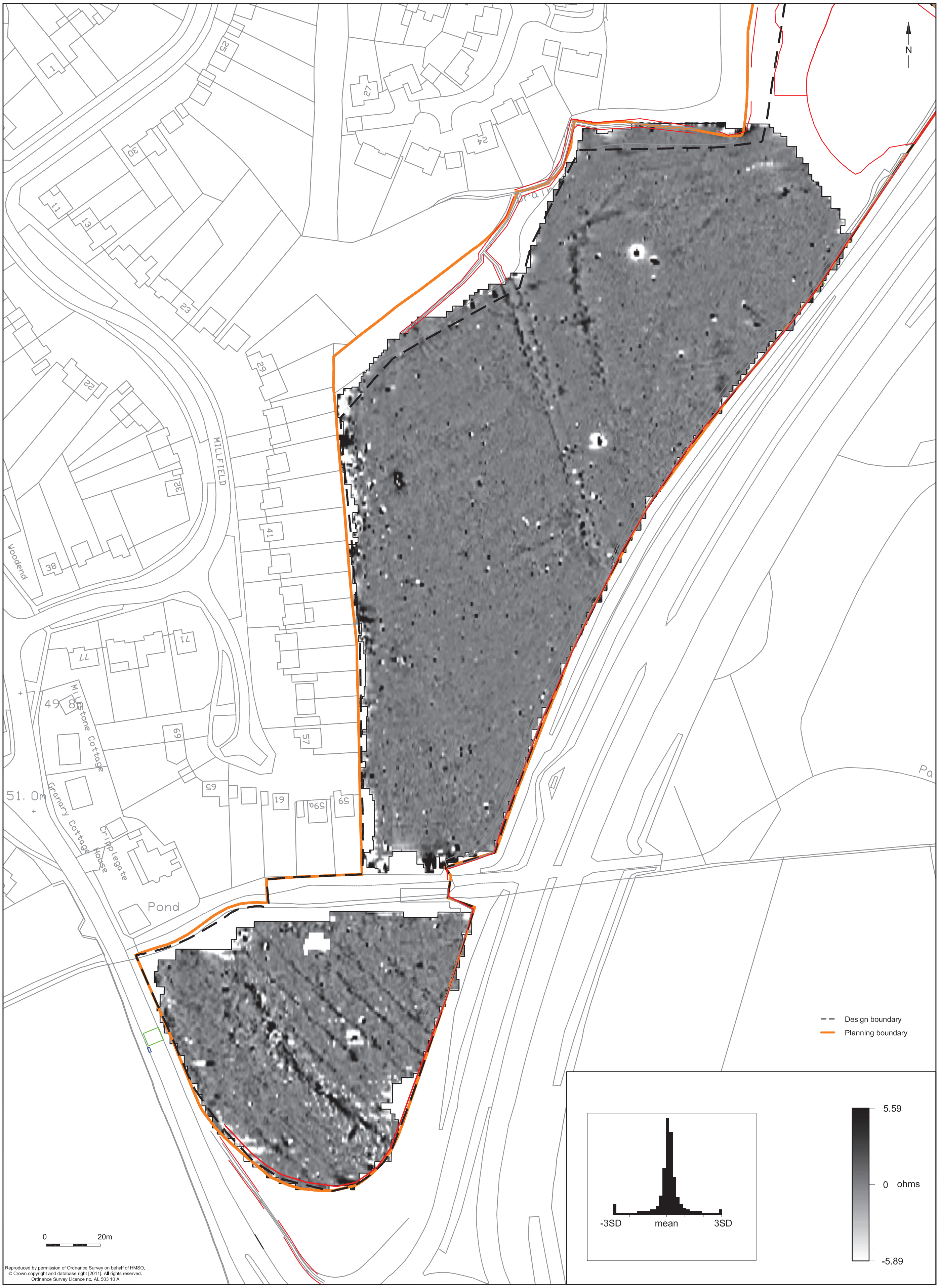


© **Archaeology South-East**		Millfield, Southwater, Horsham	Fig. 1
Project Ref: 5045	Aug 2010	Site location	
Report Ref: 2011196	Drawn by: JLR		

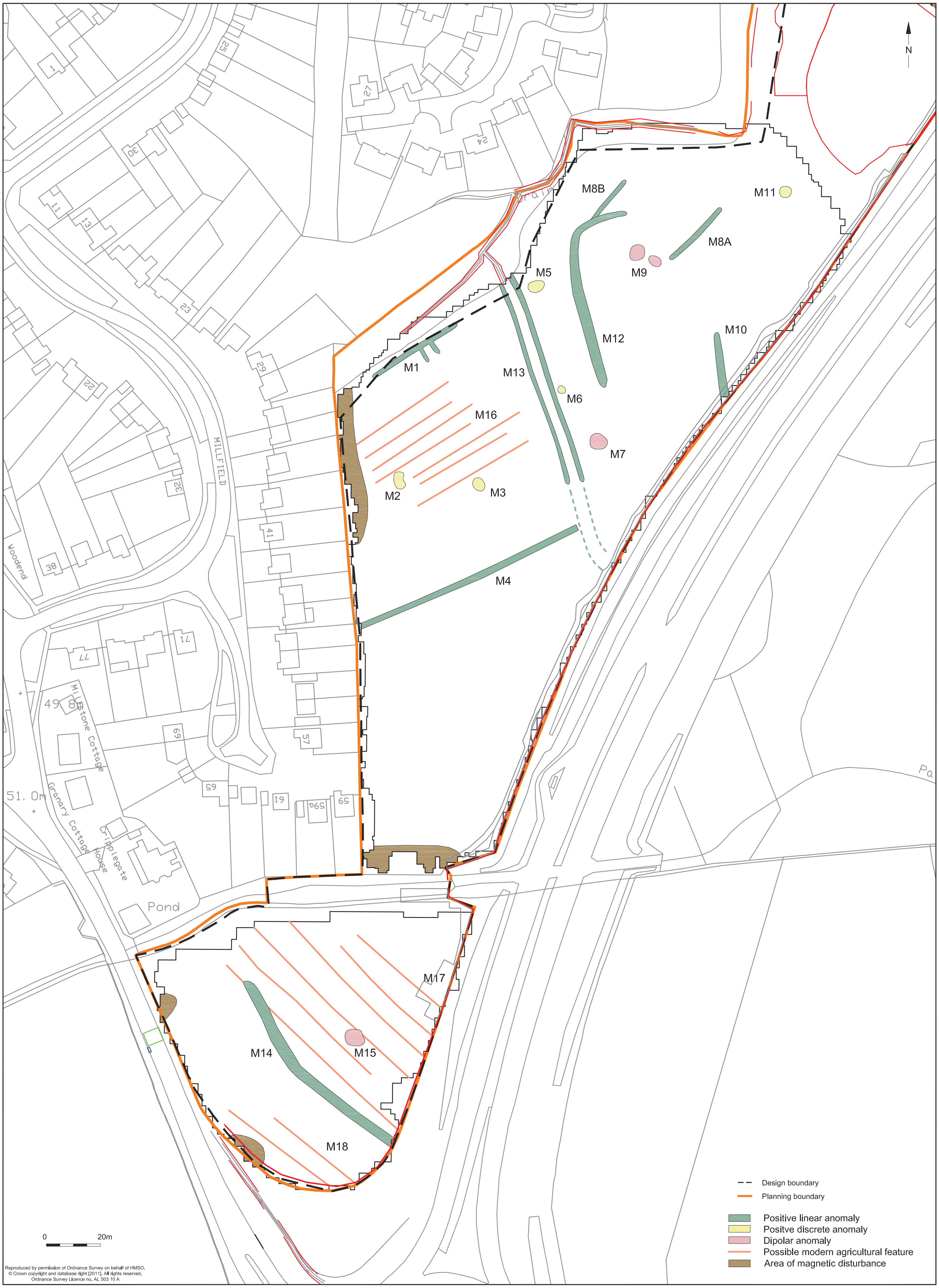


© Archaeology South-East		Millfield, Southwater, Horsham	Fig. 2
Project Ref: 5045	Aug 2011	Extent of geophysical survey and test pit location	
Report Ref: 2011196	Drawn by: JLR		

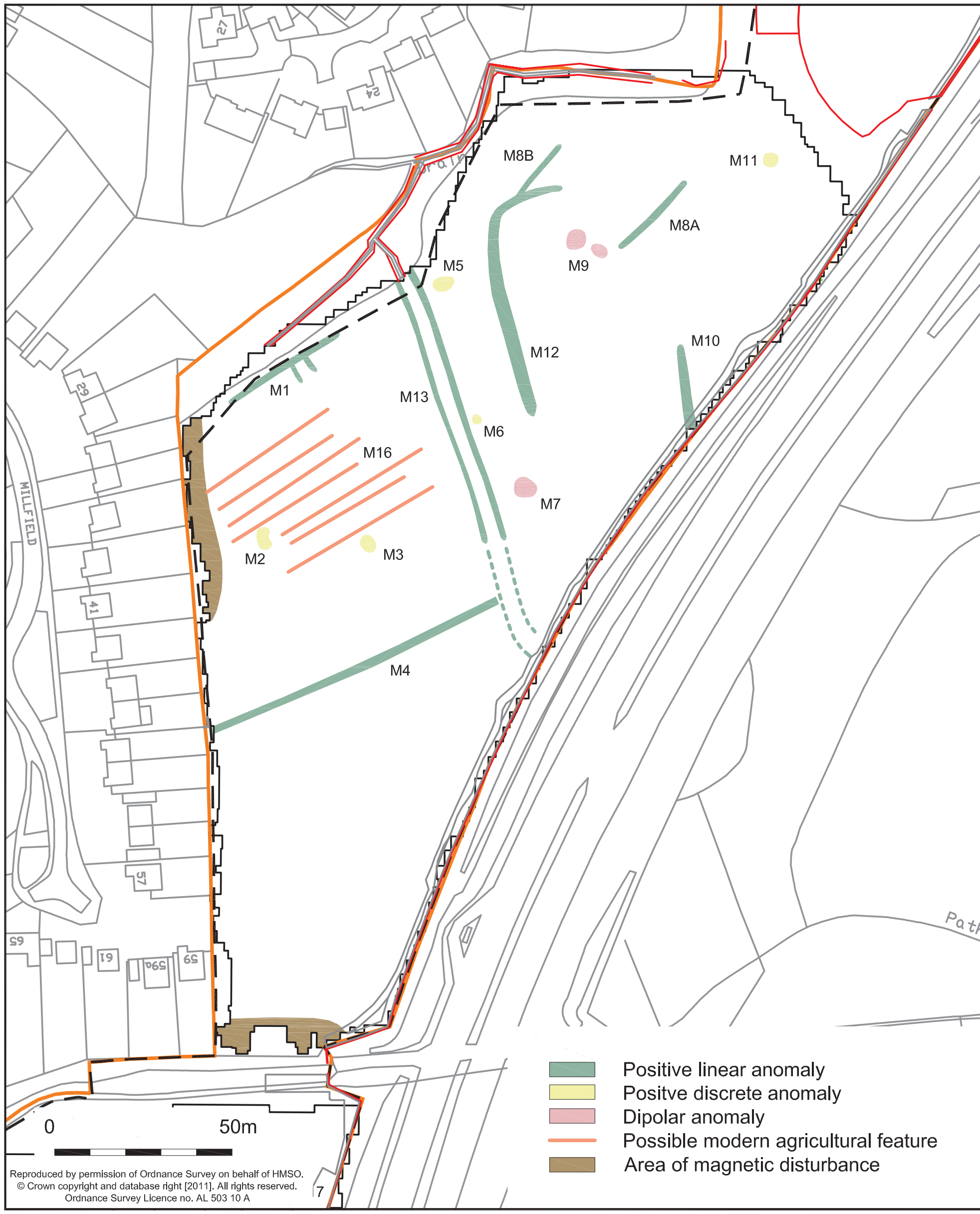
© Archaeology South-East		Millfield, Southwater, Horsham	Fig. 3
Project Ref: 5045	Aug 2011	Processed trace plot	
Report Ref: 2011196	Drawn by: JLR		

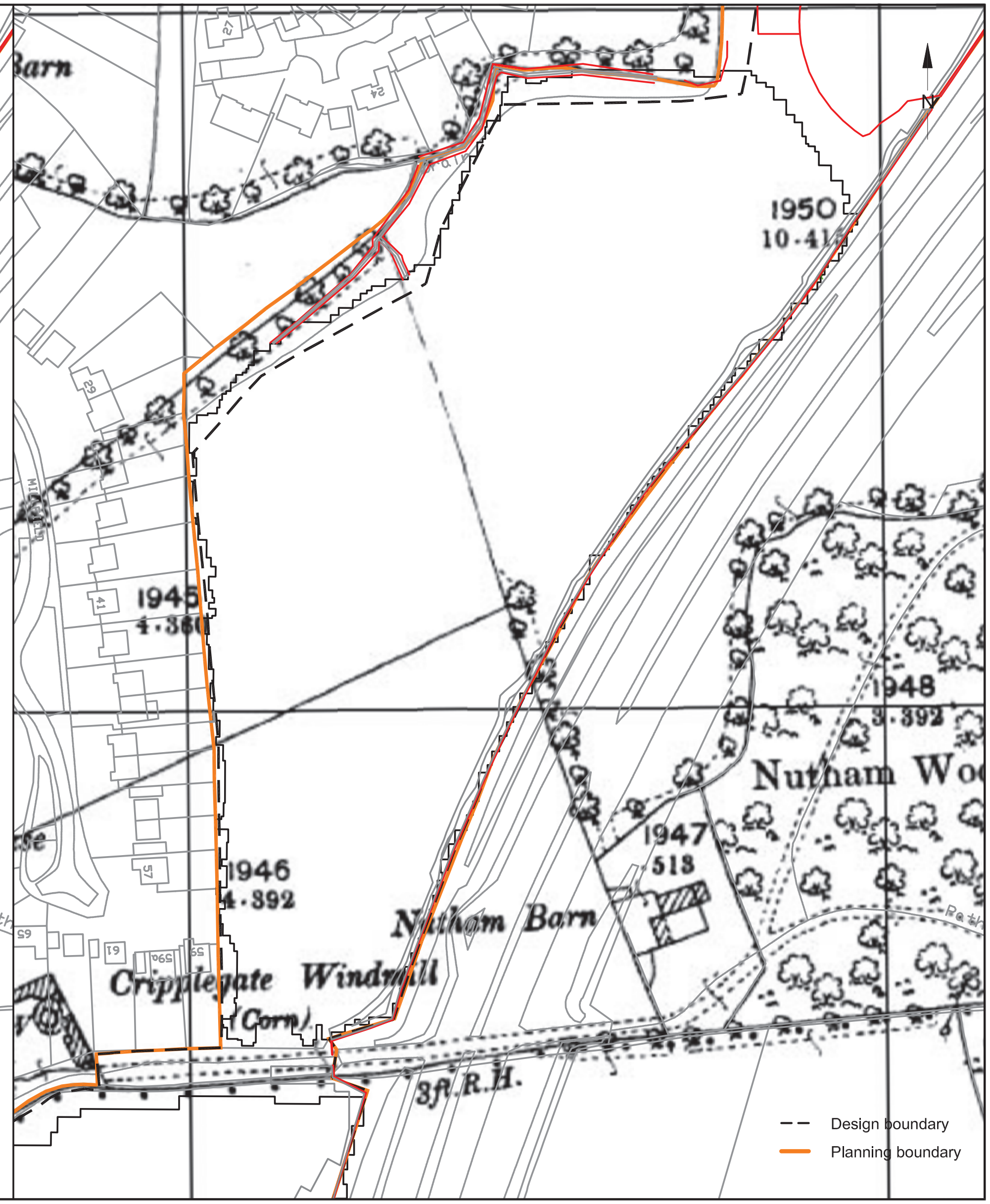


© **Archaeology South-East**		Millfield, Southwater, Horsham	Fig. 4
Project Ref: 5045	Aug 2011	Processed shade plot	
Report Ref: 2011196	Drawn by: JLR		

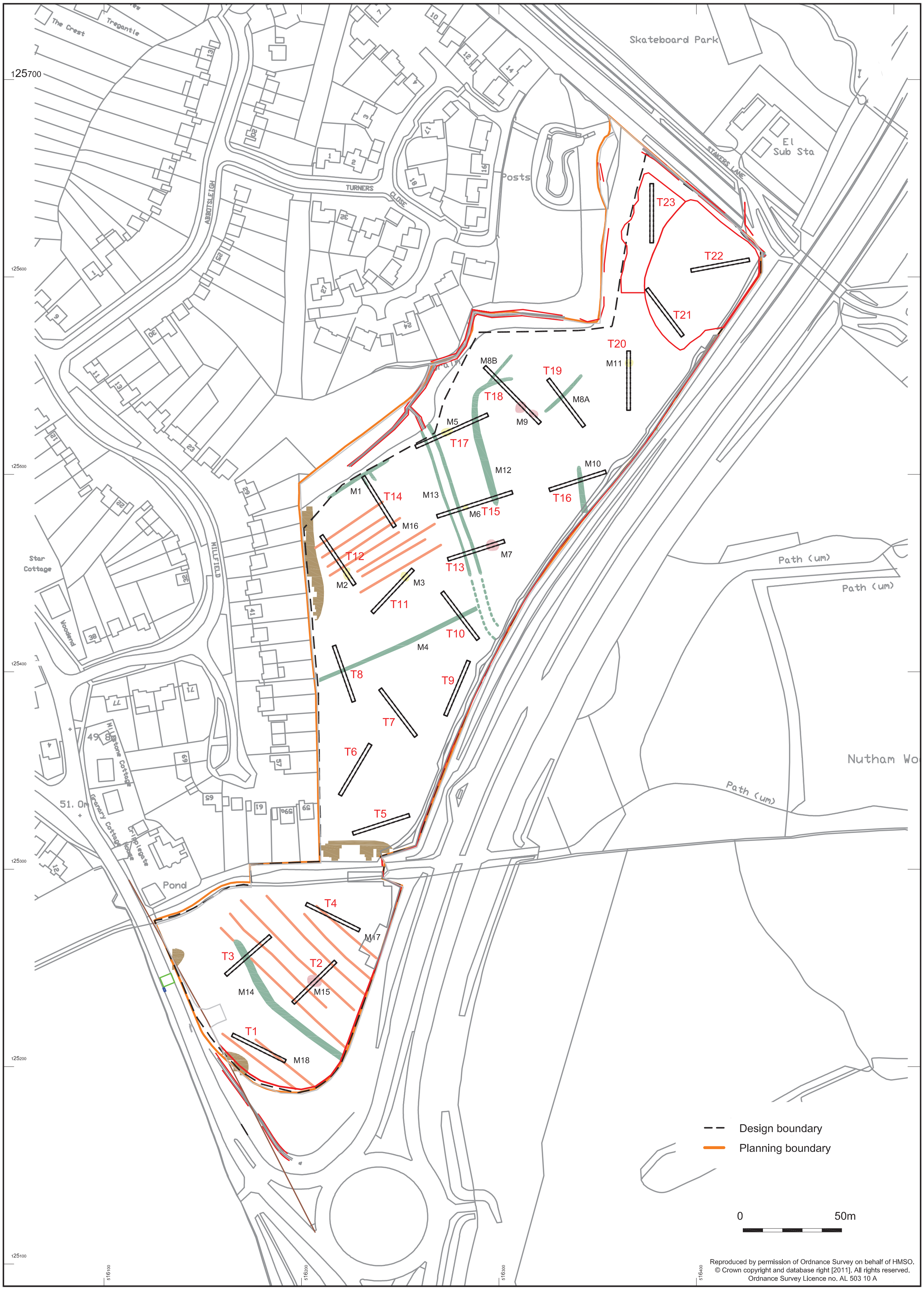


© Archaeology South-East		Millfield, Southwater, Horsham	Fig. 5
Project Ref: 5045	Aug 2011	Interpretation of results	
Report Ref: 2011196	Drawn by: JLR		



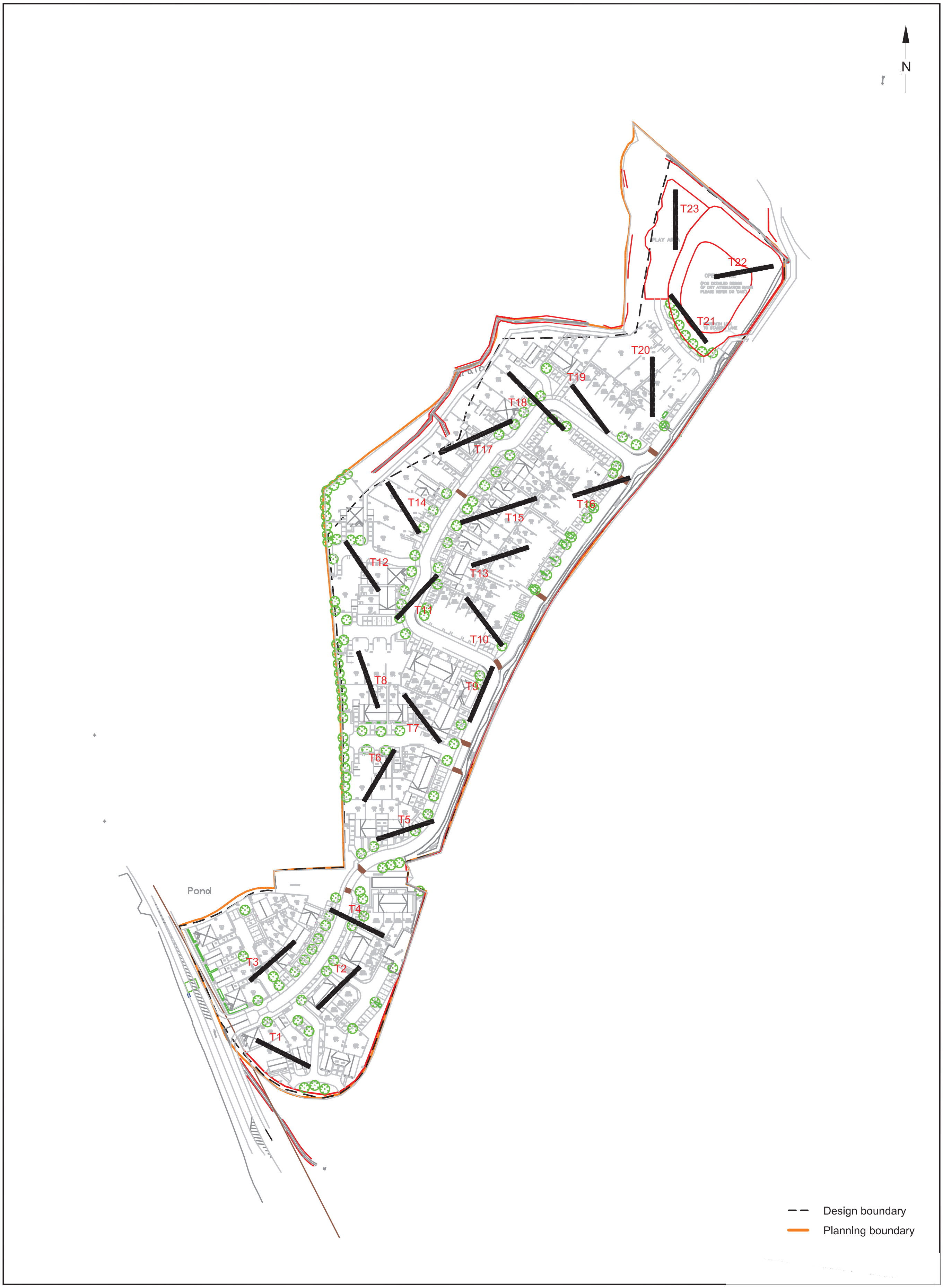


© Archaeology South-East		Millfield, Southwater, Horsham	Fig. 6
Project Ref: 5045	Aug 2011	Interpretation and 1897 25" Ordnance Survey map	
Report Ref: 2011196	Drawn by: JLR		



© Archaeology South-East		Millfield, Southwater, Horsham	Fig. 7
Project Ref: 5045	Aug 2011	Provisional evaluation trench layout	
Report Ref: 2011196	Drawn by: JLR		

© Archaeology South-East		Millfield, Southwater, Horsham	Fig. 8
Project Ref: 5045	Aug 2011	Provisional evaluation trench layout and ecological plan	
Report Ref: 2011196	Drawn by: JLR		



© Archaeology South-East		Millfield, Southwater, Horsham	Fig. 9
Project Ref: 5045	Aug 2011	Provisional evaluation trench layout in relation to proposed development plan	
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