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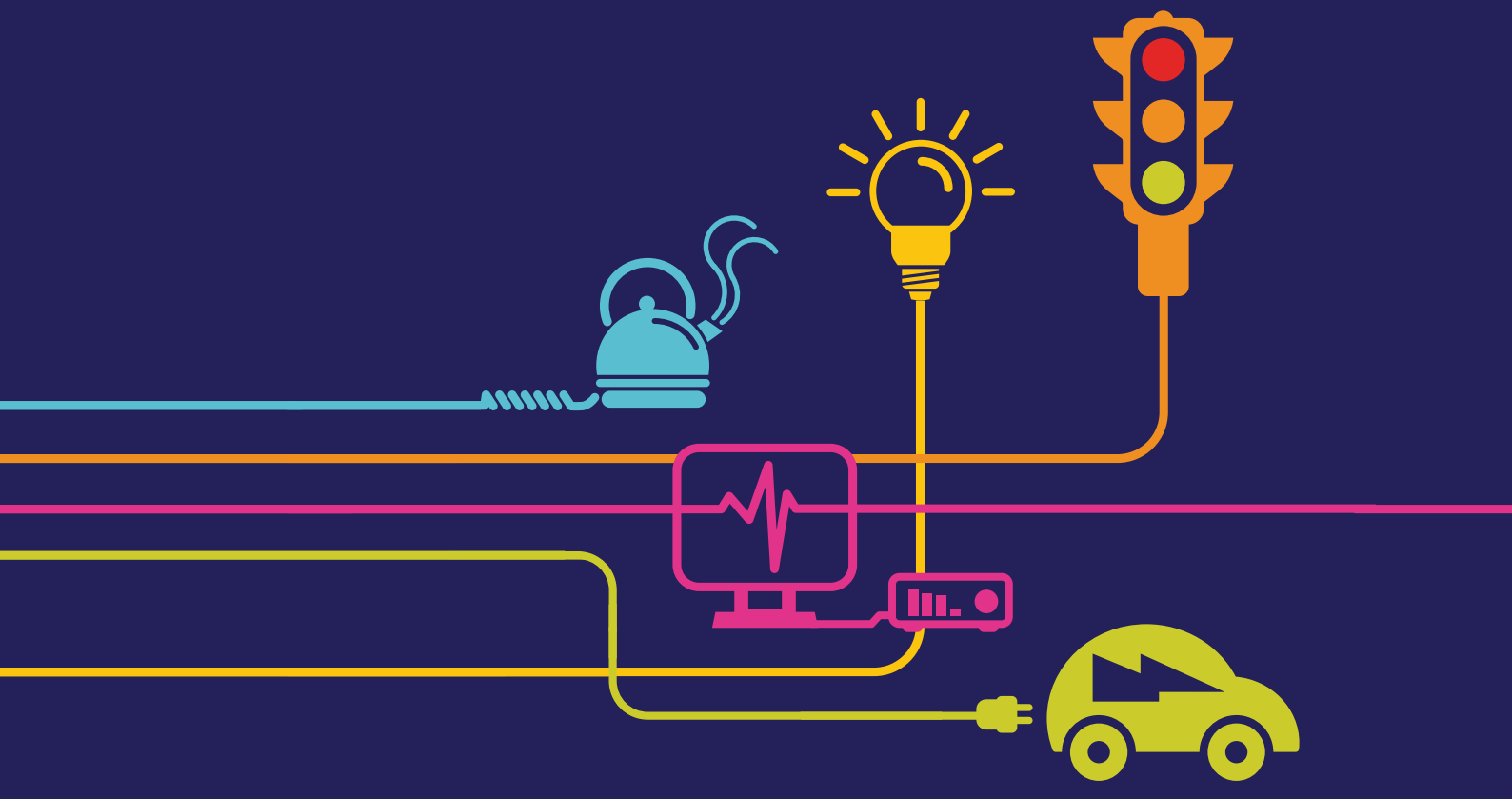
Environmental Statement Historic Environment Appendix 11C Part 1

Hinkley Point C Connection Project

Regulation 5(2)(a) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009



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Environmental Statement

Hinkley Point C Connection Project

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Appendix 11C – Archaeological Geophysical Survey

Hinkley Point C Connection Project (Appendix 11C)

Report on Archaeological Geophysical Surveys Section 1: Text

oxfordarchaeology
southsouthsouth

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Client: TEP

Issue No: 1

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ILLUSTRATIONS

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Plans are arranged in sequence along each section of the route from south to north.

1. INTRODUCTION

1.1 Oxford Archaeology (OA) has been commissioned by TEP on behalf of National Grid to carry out a series of surveys as part of an archaeological field evaluation along the route of a proposed new electricity connection between Bridgwater, Somerset and Seabank, north of Avonmouth. The specification for the works; *Hinkley Point C Connection: Specification for field reconnaissance, geophysical and trial trenching surveys (National Grid, March 2013),* requires geophysical surveys to be undertaken along sections of the route corridor where underground cables are to be used. Geophysical surveying work to meet this requirement was commissioned from Bartlett Clark Consultancy, Specialists in Archaeogeophysics of Oxford, by Oxford Archaeology.

1.2 The work has been undertaken in two main stages. The greater part of the fieldwork was done in June 2013 (May 29 – July 5), together with a pilot study intended to produce comparative data using alternative geophysical techniques. This work was described in our report dated 16 August 2013.

1.3 The present revised report includes the same content as previously, but with an additional section (7.5) describing further work done in September-October 2013 (16 September to 3 October). This work (referred to as Part 4 of the report) includes coverage of additional compounds and pylon locations which were decided upon following the initial surveys.

1.4 Notes on the scope and purpose of the investigation, and the procedures to be employed for the survey, were included in the Written Scheme of Investigation for the project, which was prepared by Oxford Archaeology and Bartlett Clark Consultancy in May 2013 [1]. The WSI also includes background information on the topography and ground conditions along the route, and their potential influence on the magnetometer survey. The following comments are reproduced in part from the WSI.

2. SCOPE OF WORKS

2.1 The location of the proposed initial surveys was described in the Specification (Section 2), and shown on a series of drawings supplied by the client (Drawing Refs: G1979.1443.1-21). The areas to be investigated were listed as the Aust sub-station, the Nailsea to Portishead W–route, the Biddisham to Sandford (Mendips) underground section, and the Bridgwater Tee working area. Work was completed in June on the greater part of the Mendips section, and the W-route.

2.2 The areas surveyed on the Mendips section cover either a 65m strip + 20m each side (as stated in the brief), or the easement (where wider). The extents of the Sandford and South Mendips compounds were scanned and traced from printed maps. The layout areas and a compound to the south of the main route are included in the proposed coverage. Rivers and roads are excluded.

2.3 The Nailsea to Portishead route was surveyed to 30m width along a strip following a line identified as the Green route on digital mapping supplied to us. The Portishead substation compound was excluded from the survey area because it includes the existing substation, and has partly been built on. Roads and the urban section are also excluded. The total proposed coverage was estimated in advance of the survey to amount to c. 151ha, of which a total of 142ha has so far been surveyed.

2.4 The survey coverage during the September – October fieldwork was based on a list of locations selected by TEP following consultations with curators. Work was done at 22 sites (including fields 7-9 on the Mendips section which were previously unsurveyed, and counting the G Route as one). Compounds and linear sections were surveyed as completely as obstructions permitted. Surveys at pylon sites were centred where possible on locations as shown on a plan sent to us on 18 September, but areas were based on a list dated 27 August. We therefore tried to centre a block roughly equivalent to c. 80m square at each location (as indicated by green outlines on the interpreted plans), but this sometimes had to be approximate or incomplete because of obstructions and boundaries. The total area from which survey data was collected in September – October was c. 29.7ha.

3. AIMS

3.1 The aims of the geophysical survey, as set out in the Specification (National Grid, March 2013), are to:

- Establish the presence or absence of buried archaeological remains in areas that would be affected by the proposed development;
- Determine the nature, extent, and significance of any buried archaeological remains;
- Report on the results of the geophysical survey; and
- Inform the design of subsequent field assessment.

4. TOPOGRAPHY AND GEOLOGY

4.1 The proposed survey areas are mainly on a bedrock of Triassic Mercia Mudstone, but with localised areas of Carboniferous limestone (at Nailsea, and for a short

section of the Mendips route) and Jurassic Lias (at the south of the Mendips section). Soils on sandstone bedrock (including Mercia Mudstone) are often not very strongly responsive to magnetometer surveying, although it is noted (in the English Heritage geophysical guidelines document [4]) that results can be very variable.

4.2 Much of the route appears to be free of drift deposits, and conditions in these areas should not present any particular difficulties for a magnetometer survey. It remains probable (as is usual) that magnetically enhanced features associated with ancient settlement or industrial activity will be more reliably detectable than isolated ditches, field systems or earthwork features lacking well-differentiated fill. We supplemented the main survey with background magnetic susceptibility measurements so that the (mainly geologically determined) soil magnetic properties could be taken into account when interpreting the survey.

4.3 Some sections of the route are in lowland or wetland areas where the bedrock is covered by alluvial deposits. This applies particularly to the southernmost 1-2km of the 400kV Mendips underground section (in the Axe and Lox Yeo valleys), and perhaps to about 1km at the northern end of that section. There are also lowland areas of similar extent to the south of Portishead and perhaps to the west of Nailsea on the Nailsea to Portishead 132kV section. It has been suggested that alternative methodologies should be considered as an alternative or supplement to fluxgate magnetometer surveying in these areas, as is discussed further below.

5. ARCHAEOLOGICAL BACKGROUND

5.1 The potential impact of the scheme on known archaeological sites and findings in the vicinity of the route is noted in a document supplied by the client (*Hinkley Point C Connection Project Connection Options Report*). The archaeological potential of the Mendips underground section is here summarised as follows: '*A high-moderate negative magnitude of effect on buried archaeological receptors of moderate - negligible sensitivity would result from the underground cable route. The underground cable route would disturb four known undesignated archaeological receptors of moderate -negligible sensitivity. These are two cropmark sites (possible prehistoric enclosures) and two areas of medieval ridge and furrow earthworks. The potential in this study area to encounter previously unknown buried archaeological remains is high*'. Known and designated archaeological sites and HER entries are also indicated on environmental constraint maps for the project.

5.2 A number of archaeological questions and concerns which have been raised in connection with the areas surveyed in September are noted in section 7.5 below.

6. SURVEY PROCEDURE

6.1 The route was investigated by means of a recorded magnetometer survey. Readings were collected along transects 1m apart using Bartington 1m fluxgate gradiometers, and are plotted at 25cm intervals along each transect. The results of the survey are presented at 1:2000 scale as grey scale plots, and as graphical (x-y trace) plots at 1:1250. An interpretation of the findings is shown alongside each section of the grey

scale plots, and is also superimposed on the graphical plots (which permits the interpreted outlines to be compared with the underlying data).

6.2 The graphical plots are used to display initial data which is effectively unprocessed apart from baseline corrections which are required for intelligibility. The grey scale plots are subject to weak low pass filtering to adjust background noise levels, but no more intrusive processing is applied to the magnetometer data. Comparison of the graphical and grey scale plots allows the detected magnetic anomalies to be examined in profile and plan respectively.

6.3 Colour coding has been used in the interpretation to distinguish different effects. The interpretation is intended to be schematic and illustrative, and not to reproduce the detail of the grey scale plots.

6.4 Features of possible archaeological interest are shown in red, and non-archaeological (mainly geological) disturbances in light brown. Strong individual magnetic anomalies which are likely to represent ferrous objects (as indicated by narrow spikes in the graphical plots) are in blue. More extended (and probably recent) disturbances (which may include brick, concrete or other debris in addition to ferrous objects) are indicated in brown. Possible cultivation effects are shown in green, and pipes and possible land drains are also marked. Various broad weak magnetic anomalies which are indicative of wetland soils are outlined in a light green.

6.5 The magnetometer survey was supplemented by background magnetic susceptibility readings taken along the centre line of each linear section of the route. Susceptibility information provides an indication of the strength of magnetic response to be expected from the site, and can be of help when interpreting the magnetometer survey. The susceptibility values are displayed as graphs superimposed on the interpreted plans.

6.6 The survey grid was set out and tied to the OS grid using a differential GPS system (to c. 10cm accuracy). The plans are therefore geo-referenced, and OS co-ordinates of map locations can be read from the AutoCAD version of the plans, which can be supplied with this report.

7. RESULTS

The locations of the detailed plans for the three main parts of the survey are shown on the key maps for each section (figures 1-2, 41, 74-76). Each part of the route was surveyed from south to north, and the fields along the Mendips and Nailsea routes have been numbered in that order in a single sequence (1-133) for identification. The survey findings are described here in the same order.

Areas surveyed in September 2013 are also listed (in Section 7.5) from south to north. These are identifiable by pylon and compound designations, and so no additional field numbers have been used. We have marked county boundaries on the key location maps to indicate which sections of the survey lie within each local authority area. The boundaries are shown as blue lines on figures 1-2, 41, 74-76.

7.1 PART 1: Mendips Underground Section (Figures 1-40)

Figures 1 in the plan section of the report is an overall location plan for all sections of the report. Figure 2 is a location plan for Part 1 of the survey.

Fields 1-3 (as listed below) form part of the Rooks Bridge compound site, where the survey was extended in September. Results from both surveys are therefore included in section 7.1.1. Results from fields 7-9 (which were inaccessible in June, and were surveyed in September) are also included here (7.1.3).

7.1.1 Fields 1-3 (Rooks Bridge Compound): figures 3, 23, 82-92, 98-99

Plots of the initial survey are shown in figures 3 and 23 (grey scale and xy plots). The extended survey (with June and September data) is shown with other September results in Part 4 of the plan section of the report (figures 82-82 and 98-99).

This compound is located in a low-lying wetland area adjacent to the Old River Axe, and so shows an unusual concentration of broad and irregular magnetic anomalies of a kind commonly seen in wetland environments (as outlined in light green in the interpretation). These may relate to variations in the depth or composition of alluvial deposits, or the presence of silted palaeochannels. It is possible also that they could indicate varying proportions of peat (which would depress the magnetic response) in the subsoil, although similar effects are often seen on wet clay soils at locations where peat is unlikely to be present. It is possible that processes described in a study of magnetic findings from Dutch coastal landscapes [2] might apply inland. This study (referred to in [3]) examines the role of waterlogging (and saline inundation) on the creation of strongly ferrimagnetic natural deposits. (These may account for strong magnetic anomalies we have previously seen in surveys of coastal marshlands.)

The magnetic susceptibility readings taken during the survey further suggest that peat is unlikely to be a dominant component of the topsoil at this location (or must be covered by silt if present). The values (as indicated by the graph on the interpreted plan) are c. 10 (x 10^{-5} SI), which is within a range where productive magnetic surveying is possible. (Values may be zero on peat soils.) It is therefore possible that near-surface archaeological features may be detectable (if present), in addition to the natural wetland features. [The susceptibility readings remain at a similar level even in sections of the route where clearly defined archaeological findings were obtained (as in fields 40-42).]

Actual findings in fields 1-3 include a possible narrow ditch-like feature (red) in field 1. This continues across the widened area surveyed in September, but could possibly be a land drain. Various other land drains are also visible. These are often indicated by sequences of small magnetic anomalies (representing sections of clay pipe), and so are more fragmented in appearance than the possible ditches.

The site is said to be the possible location of an Iron Age settlement, but the survey has not been able to confirm this. Findings along the access route to the east of the site include wetland effects as noted above, and two very strong disturbances towards the south of the route. These could perhaps be pits containing metal debris, or large buried ferrous objects.

7.1.2 Fields 4-6 (South Mendips Compound): figures 4-5, 24-26

This lowland site in the Axe valley shows only a few of the distinctive wetland magnetic anomalies as noted above, but various drains, ditches and enclosures have been detected. Potentially significant findings (marked in red) include a curving ditch-like feature at the west of field 4, and a N-S linear feature suggesting a former boundary near the centre of the site. A strong linear feature suggests a ditch (perhaps infilled with recent debris) defining a former paddock or enclosure in field 6. Various other drains, cultivation effects and recent disturbances were also detected.

7.1.3 Fields 7-9: figures 6, 27

These fields were surveyed in September. Results are shown with other Mendips data in figures 6 and 27. Findings include a dense network of land drains, particularly in field 7, and a pipe in field 9. There are various weak wetland features, as seen also in field 10. Some of these in field 8 form a distinctive rectilinear pattern (as indicated by broken red lines), but similar effects were seen in field 10 (below). Additional tests in field 10 during the pilot study produced no conclusive evidence that comparable findings were archaeological. A short linear feature in field 8 is outlined in red, but could be a drain or other trench containing modern debris.

7.1.4 Field 10: figures 7, 28, 69-73

This field next to the River Axe contains a number of irregular natural wetland magnetic anomalies of the kind seen in fields 1-3, but also two distinct linear features (as indicated by red broken lines in figure 7). These features include magnetic anomalies which could well be natural (and so are outlined in light green), but could also suggest an incompletely detected rectilinear enclosure. This site was therefore used for the pilot study which was carried out to assess alternative survey techniques, as described in Part 3 below (see figures 69-73). No distinctive archaeological findings are visible in the initial survey, other than the linear features as noted.

7.1.5 Fields 11-14: figures 7-10, 28-29

The main findings (in addition to numerous land drains and iron pipes) are curving ditch-like features possibly indicating ditches (red) in fields 12 and 14. The one in field 12 appears isolated, but the features in field 14 could suggest part of an enclosure extending into the M5 to the west. A linear feature (outlined in brown) across the survey towards the north of field 14 could be a (strong) recent disturbance.

7.1.6 Fields 15-28: figures 9-13, 30-32

Weak linear features (red) in field 15 could be former boundaries (or perhaps cultivation effects). There are no very distinctive findings (other than pipes and recent disturbances) in fields 16-26. There is a complex system of land drains in field 27.

7.1.7 Fields 29-39: figures 13-14, 32-34

There is a well-defined rectilinear ditched enclosure (perhaps suggesting a settlement site with internal features) in fields 29-30. Findings in 31-39 are limited to pipes and drains.

7.1.8 Fields 40-51: figures 14-17, 34-36

The survey has detected a complex system of intersecting ditched enclosures with internal features in fields 40-42. The susceptibility readings show a distinct peak over the centre of the site, which is consistent with the presence of settlement remains.

There appears to be a smaller group of similar but less well-defined features in field 43. A strong linear feature in field 47 is perhaps a ditch (or possibly a pipe or drain of unusual construction).

7.1.9 Fields 52-82: figures 17-22, 36-40

There appear to be a pair of (slightly irregular) ditched enclosures in fields 52-53, but with only a few possible internal features. There are few findings in the subsequent small paddocks which occupy the remainder of the route and the Sandford compound site, other than possible cultivation effects.

Parallel markings in field 57 are shown in green, but are perhaps too regular to suggest ridge and furrow. They could perhaps be land drains, but if so may be constructed from plastic (rather than ceramic) pipes. (This is suggested by the continuous negative magnetic anomalies.) The various linear markings in fields 70-73 are perhaps slightly more likely to be cultivation effects than those in 57.

There is a scattering of possible pit-like and other features of uncertain significance in field 76.

7.2 PART 2: Nailsea to Portishead W Route (Figures 41-68)

Figure 41 in the plan section of the report is a location plan for Part 2 of the survey.

7.2.1 Fields 83-109: figures 42-49, 58-63

A few isolated (and probably insignificant) pit-like features are indicated (in red) in field 86. (There was no access to field 87.) There are strong (and probably recent) disturbances near the road in field 89, and several pipes in field 90.

The plots show clearly defined land drains in fields 91-92, and strong disturbances (possibly connected with drainage) in field 94. A linear feature marked (in red) in field 98 could be a ditch containing modern debris. A probable former boundary was also detected in field 101. The pit-like features marked in red in field 101 and elsewhere (including stronger examples in 104) are probably too dispersed and isolated to be of archaeological concern. The susceptibility readings increase substantially near to a disused lime kiln in field 106, but the effect continues to field 109, and so is likely to be mainly geological. (This is probably also the case in fields 113-121, where there are additional raised susceptibility values.)

7.2.2 Fields 110-121: figures 50-53, 63-66

Fields 110 and 111 are immediately to the east of the earthworks of a deserted medieval village site, and may contain a number of features. Medieval settlement remains often do not give rise to strong magnetic anomalies (unlike late prehistoric or Roman sites), but the various linear and other features as marked (in red) in the

interpretation would be consistent with the presence here of traces of earthworks, and associated findings.

Features marked in green in field 114 could be cultivation effects, but do not align with modern boundaries. High susceptibility readings here may mean that minor topographic variations could give rise to strong magnetic anomalies. There may be similar (but less distinctly linear) effects corresponding to the complex field system earthworks in field 118 (where susceptibility readings are also high). There is also a strong linear ditch-like feature (possibly recent) towards the north of field 118

7.2.3 Fields 122-132: figures 54-56, 66-68

The fields north of the M5 are in an area of coastal lowland, and irregular natural magnetic anomalies (as noted previously in the Axe valley) are visible at a few locations (fields 125, 129, 131), but rarely elsewhere.

Findings include a ditch-like feature in field 123, drains and pipes in the compound in field 126, and pipes in 131-2.

7.3 PART 3: Pilot Study (Figures 69-73)

7.3.1 It is mentioned in the project brief that potentially waterlogged areas should be identified, and alternative procedures applied if relevant. These methods could include surveying with an EM31 conductivity meter, which should distinguish areas of peat or alluvium from raised gravel subsoil, and caesium magnetometer surveying (which may offer slightly improved depth penetration). Low magnetic susceptibility readings (which we record as part of the standard survey procedure) could also be indicative of peat soils. It is mentioned in the EH guidelines [4], p17, that geophysical techniques in lowland are best attempted in areas of relative dryness and shallow overburden (‘islands’, or wetland margins). Such areas may be identifiable in part from the magnetometer survey data itself (where there is likely to be a change in background activity, as noted above, between wetland and other areas), and also by reference to susceptibility readings, topography, geological maps, and any available borehole data.

7.3.2 A further issue in areas of alluvial cover is that the magnetic signal fades for features at depths > c. 1m. It is mentioned by EH [4] p16, and has been suggested in connection with this project, that alkali vapour (caesium) magnetometers could be more effective than fluxgate magnetometers in these conditions (although this is stated in [4] as a possibility, rather than as a demonstrated improvement).

7.3.3 We discussed this question further with Dr Neil Linford of EH, who kindly forwarded a paper describing comparative findings from several trial surveys using caesium and fluxgate magnetometers [5]. The theoretical advantage of recording the total magnitude of the magnetic field (with a caesium magnetometer) rather than the vertical gradient (with a fluxgate) should be an approximately 10% increase in the anomaly strength. There do not appear to be any examples in the paper of surveys where features have gone wholly unobserved in a fluxgate survey, and yet are clearly visible in a caesium survey. Other factors, including the sampling density of the

survey, also affect the quality of response when identifying small or weak features, and are discussed in the paper. The paper concludes that caesium magnetometer data could be of benefit for sites with well magnetised archaeological features beneath a weakly magnetic soil, but this advantage would be lost for weakly magnetic anomalies (as might be expected from organic structures or remains in wetland) beneath a more strongly magnetic soil

7.4 Comparative Fieldwork

The alternative methods were compared in a survey done across an area of 2ha next to the River Axe near Webbington (field 10 in the survey numbering system). The site is at an elevation of about 6m. Findings from the various methods were as follows:

7.4.1 Initial fluxgate survey (1m transect separation): figures 69, 72

The plots (as also shown in figures 7 and 28a) are reproduced in figure 69 for comparison with the other pilot study results. The interpretation is shown next to the high resolution fluxgate findings in figure 72. The findings include irregular natural magnetic anomalies, as commonly seen in wetland and previous discussed, and two possible linear features (labelled A and B in figure 72). These are marked by red broken lines, but are likely to be unusually straight natural channels. There are faint traces of possible cultivation effects and drains.

7.4.2 High resolution fluxgate survey (0.5m transect separation): figures 70, 72

The method here was as for the initial survey, but with the magnetometers mounted at a closer separation. There is a noticeable increase in clarity, particularly in the grey scale plot, but the larger features remain recognisably as before. Small magnetic anomalies representing land drains are resolved in greater detail, and there is a fine background linear pattern (probably reflecting current cultivation).

7.4.3 Caesium magnetometer survey: figures 71, 73

The plots are shown in figure 71, and the interpretation in figure 73. The survey was done with two Scintrex G858 detectors mounted horizontally. Background variations in the (absolute field) data were then corrected by processing with a 15m width one-dimensional high pass filter (as described in the EH paper [5]). The background effects which need to be removed from caesium data are stronger and more variable than with fluxgate data, and it is correspondingly more difficult to isolate the signal components which are of a suitable amplitude to represent archaeological features. The larger background magnetic anomalies as seen in the fluxgate surveys remain identifiable in the caesium data plots, and some of the drains have responded rather better than in the 1m initial fluxgate survey. There does not, however, appear (on this evidence, or in the EH paper [5]) to be any gain in quality sufficient to identify archaeological sites or findings which would remain undetectable in a fluxgate survey.

7.4.4 EM31 survey: figure 73

This rapid trial was done with transects recorded at 4m separation across the survey area. The initial graphical plot (figure 73) shows broad variations, as expected.

These presumably indicate variations in the depth of silt deposition, or the presence of underlying palaeochannels, but do not appear (here, or in other trial plots not included in the report) to relate to the magnetometer findings. The method looks at soil properties on a larger scale than is usually of concern in archaeological surveying, and so may provide information about context rather than detail in an investigation of this kind. An alternative source of such information is the magnetometer survey, which in wetland locations will produce characteristic background magnetic anomalies, as seen in the present survey.

7.5. Part 4: Additional surveys (September 2013: Figures 74-106)

Grey scale plots and interpretations are presented together in figures 77-94. Graphical (xy) plots are in a separate sequence (figures 95-106). Location plans for Part 4 of the survey are included as figures 74-76.

7.5.1 Bridgewater Tee CSE Anchor Block: figures 77-78, 95

The survey is located about 200m north of the earthworks of a deserted medieval village, but the survey has produced no distinct findings other than a pipe, and various mainly recent disturbances.

7.5.2 Crandon Bridge Compound: figures 79, 96

Cropmarks recorded here could relate to non-archaeological disturbances visible in the survey. The site is intersected by pipes and a north-south disturbed strip (brown), which could be a former trackway.

7.5.3 Pylon C-ZGA11: figures 79, 96

This site is described as near a small island in the Levels which would have been a favourable location for past activity. The survey detected a pipe, and a distinct enclosure-like feature (red). The magnetic anomalies which define this are broad and weak, as for various possibly natural features seen in the survey. They could alternatively perhaps represent ditches buried beneath shallow alluvium (as might also be a possibility at other locations mentioned below).

7.5.4 Pylons C-LD3 and C-LD12: figures 80, 96

C-LD3 is near an area of salterns, and C-LD12 is slightly elevated. Findings include a pipe in C-LD3 and a line of disturbances parallel to modern boundaries in C-LD12. This could perhaps be a former track on infilled trench or boundary.

7.5.5 Pylons C-LD14, 27, 42, 62: figures 81, 84, 97, 100

C-LD14 is said to be on a deserted farm site (AR61). Some of the strong disturbance to the south of the survey (brown) could perhaps therefore indicate the presence of relatively modern building debris. C-LD27 is on a medieval site (AR72), but there are no distinct findings other than drains, and a doubtful small pit-like feature outlined in red.

C-LD42 and 62 are near a small island (as with C-ZGA11), and again show possible linear features. These are more irregular than at C-ZGA11, and are particularly fragmentary and natural-looking at C-LD62. They are therefore outlined in light green (as possibly natural features).

7.5.6 Pylons C-LD64, 79: figures 85, 100

C-LD64 is in the same field as a Roman site (AR141). There are disturbances to the north of the survey, but they are not of any clear archaeological significance. C-LD79 is on the boundary ditch of a DMV. The survey is densely intersected by pipes, and so is difficult to interpret.

7.5.7 BW Route undergrounding: figures 86, 101

The surveyable area produced no conclusive findings, although there are possible weak linear features (broken red lines) at the west end.

7.5.8 G Route and Pylon C-LD117: figures 87-90, 101-103

Much of the G Route is overgrown or obstructed, and some of the surveyable areas produced only heavy magnetic disturbances. Conditions improve to the east of the motorway, where some possible ditch-like features are marked in red (figure 89). They are indistinct, and could be superficial or recent disturbances.

C-LD117 is near to Mere Bank SAM. Findings include strongly defined drains, but these may be intersected by other ditch-like features (red).

7.5.9 Pylons C-LD121, 122: figures 90-91, 104

These are near to an Iron Age settlement (under the motorway), but have not produced conclusive findings except perhaps for an isolated short ditch-like feature at the south of C-LD122.

7.5.10 Pylons C-LD125, 126 and Seabank substation: figures 91-93, 104-105

The field containing Seabank and C-LD126 has been used for clay extraction, and has produced Roman remains. It is clear from the highly disturbed survey response that the extracted area at all three locations has been used for land fill, and now contains strongly magnetic modern debris across the entire survey area.

7.5.11 Aust substation: figures 94, 106

There are strong recent magnetic disturbances, possibly relating to the construction of the existing substation, across the greater part of the surveyable area.

8. Conclusions

8.1 The survey has identified a number of clearly defined archaeological sites, but also appears to have given a quite detailed picture of subsurface features and disturbances throughout the areas investigated. The findings from the initial surveys include several ditched enclosures, some of which are likely to contain ancient settlement remains, and the most well-defined of which are in a section of the route (fields 40-42 near Banwell hillfort) which was thought likely to be archaeologically productive. Other such findings were seen in fields 29-30 and 52-53.

8.2 Other ditches or enclosures of less conclusive significance were seen in low lying sections of the route in fields 4 and 6, and also (at slightly greater elevation) in fields 12 and 14. There is a group of pit-like and other features towards the north of the

Mendips route in field 76. The findings from the various trial surveys suggest that the linear features in field 10 are unlikely to be associated with archaeological findings, and could well be natural. It may be arguable that none of the alternative methods produce enhanced findings sufficient to outweigh their logistical penalties (although high resolution fluxgate surveying could be an option for clarifying results at sensitive locations).

8.3 Findings from the Nailsea to Portishead section include magnetic anomalies which perhaps indicate remains associated with the adjacent DMV in fields 110-111, and disturbances corresponding to earthworks in field 118.

8.4 Results from the additional (September) surveys include a possible rectilinear group of features in field 8, but on the evidence of test data from field 10 the findings could well be natural. The same may apply to enclosure-like features seen at pylon C-ZGA11, although the magnetic anomalies seen there are particularly ditch-like. Other possible comparable features were seen at pylons C-LD42 and 62, and on the BW Route. Some irregular ditch-like features were seen towards the northern end of the G Route, and some possibly more distinct examples at C-LD117 and C-LD122.

8.5 We suggest in conclusion that the survey has been reasonably effective in meeting its objectives. The results suggest that a fluxgate magnetometer survey, in the conditions encountered here, and within the constraints which apply to any geophysical investigation, is able to give a reasonably comprehensive account of relevant subsurface findings. Magnetic techniques are insensitive to most archaeologically-sized disturbances at depths of more than about 1m, and cannot provide reliable evidence for organic remains or features beneath deep alluvium. They should, however, respond to magnetically differentiated near-surface features, and the varied findings from locations such as the South Mendips compound in the Axe valley suggest this outcome has been achieved.

Report by:

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Bartlett - Clark Consultancy
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Cuckoo Lane
North Leigh
Oxfordshire
OX29 6PW

[redacted] 31 October 2013

The fieldwork for the surveys was done by C. Oatley, N. Dawson, N. Paveley, P. Cottrell, P. Heykoop and A. Bartlett. Data processing was done by P. Cottrell and C. Oatley.

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[1] *Hinkley Point C Connection Geophysical Survey. Written Scheme of Investigation.* Oxford Archaeology South May 2013. OA Job No: 5649.

[2] Kattenberg, A. & Aalbersberg, G, 2004. *Archaeological prospection of the Dutch perimarine landscape by means of magnetic methods.* Archaeological Prospection, **11**, 227-35.

[3] *Archaeological geophysical prospection in peatland environments.* Kayt Armstrong. Dissertation for PhD awarded by Bournemouth University, 2010.

[4] *Geophysical Survey in Archaeological Field Evaluation. English Heritage Publishing: 2008.*

[5] Linford N. et al 2007. *Recent Results from the English Heritage Caesium Magnetometer System in Comparison with Recent Fluxgate Gradiometers*. Archaeological Prospection **14**: 151-166 .

APPENDIX : Inventory of Selected Findings

This list notes the more significant findings from the magnetometer survey of this site. The grading (1-4) given alongside each entry refers in part to the reliability of the geophysical evidence, but the potential archaeological relevance of detected features is also taken into account. Magnetic disturbances which may be mentioned in the text or indicated on plans are not necessarily included if they appear to be of clearly natural or non-archaeological origin.

Grade 1: Distinct magnetic anomalies of probable archaeological origin.

Grade 2: Weaker or more isolated magnetic anomalies which could in part be archaeologically significant.

Grade 3: Distinct magnetic anomalies, but probably recent or natural, or of other non-archaeological origin.

Grade 4: Weaker or more isolated magnetic anomalies of probably non-archaeological origin.

Part 1 (Mendips Section):

Field		Grade
1	Narrow ditch-like linear feature (but could be a drain).	2
4	Distinct curving possible ditch at west of field.	1-2
4	North-south linear feature: possible infilled ditch on former boundary.	1-2
6	Ditch-like features (red) suggest former paddock or enclosure (possibly recent).	1-2
8	Rectilinear group of linear features, but perhaps similar to findings in field 10.	2 -3
10	Two linear features (red broken lines) may be natural silted channels. Findings from high-resolution magnetometer survey (Pilot Study – Part 3) are consistent with this conclusion.	3
12	Curving ditch-like feature (red) at south of field.	2
14	Similar possible ditch (and other features) at west of survey.	1-2
15	Weak linear markings (red) could be former boundaries (or cultivation effects).	2-3
29-30	Rectilinear enclosure: perhaps a settlement site with internal features.	1
40-42	Well defined group of enclosures and probable settlement remains.	1
43	Similar to 42, but less distinct.	1
47	Infilled ditch or trench (perhaps recent ?)	2-3
52-53	Irregular pair of probable enclosures.	1-2
57	Parallel linear markings: may be drains (rather than cultivation effects).	3
70-73	Linear markings: possibly cultivation ?	2-3
76	Sparse group of possible pit-like features.	2

Part 2 (Nailsea to Portishead):

Field		Grade
86	Group of possible pit-like magnetic anomalies (but in area of natural background activity).	2-3
94	Strong linear disturbances (ditches or hollows filled with modern debris ?)	4
98, 101	Individual ditches or former boundaries.	2
101, 104	Isolated pit-like features.	2-3
110-111	Linear and other features near to DMV; possible traces of earthworks ?	1-2
114	Irregular linear markings (green); cultivation or topographic effects ?	3
118	Some of observed magnetic activity relates to field system earthworks.	2
123	Weak N-S ditch like feature.	2-3

Part 4 (Additional surveys; September 2013):

Field		Grade
Pylon C-ZGA11	Ditch-like features form irregular enclosure.	2
Pylon C-LD42+ BW route	Weak irregular linear markings: natural ?	3
Towards north of G Route	Fragments of irregular ditch-like features.	3
Pylon CLD117	Drains possibly intersected by other ditch-like linear features.	2-3
Pylon C-LD122	Short ditch-like feature at south of survey.	3

330000E 340000E 350000E 360000E 370000E

190000N 180000N 170000N 160000N 150000N 140000N

Aust Substation

G Route

South Gloucestershire

Bristol

Figure 76 (part 4)

Nailsea to Portishead W Route

Figure 41 (part 2)

North Somerset

Figure 75 (part 4)

Sandford Substation

400kV Easement Mendips

Somerset

South Mendips CSE Compound

Figure 2 (part 1)

Figure 74 (part 4)

Bridgwater Tee CSE Anchor Block

N

Key

Survey completed to July 2013 (Report parts 1 and 2)

Additional survey areas September 2013 (Report part 4)

County boundaries

0 10km

Scale 1:200000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
A	19/06/2013				

Title

NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PARTS 1-4

Location of geophysical survey areas

Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.		GIS
20897	1	TEP	A3
DRAWING No.			SCALE 1:200000
SHEET 1 of 106			ISSUE A

Key

▭	1:2000 grey scale survey plots (figures 3-22)
▭	1:1250 graphical survey plots (figures 23-40)
▨	Proposed easement and compounds
▭	Completed geophysical survey
▭	Unsurveyed areas

0 1000m
Scale 1:25000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
A	19/06/2013				

Title

NATIONAL GRID
(HINKLEY C PROJECT)
ENVIRONMENTAL STATEMENT

STUDY AREA C
MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL
SURVEY: PART 1

Location of survey with
1:2000 and 1:1250
magnetometer data plots

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.	TEP	GIS
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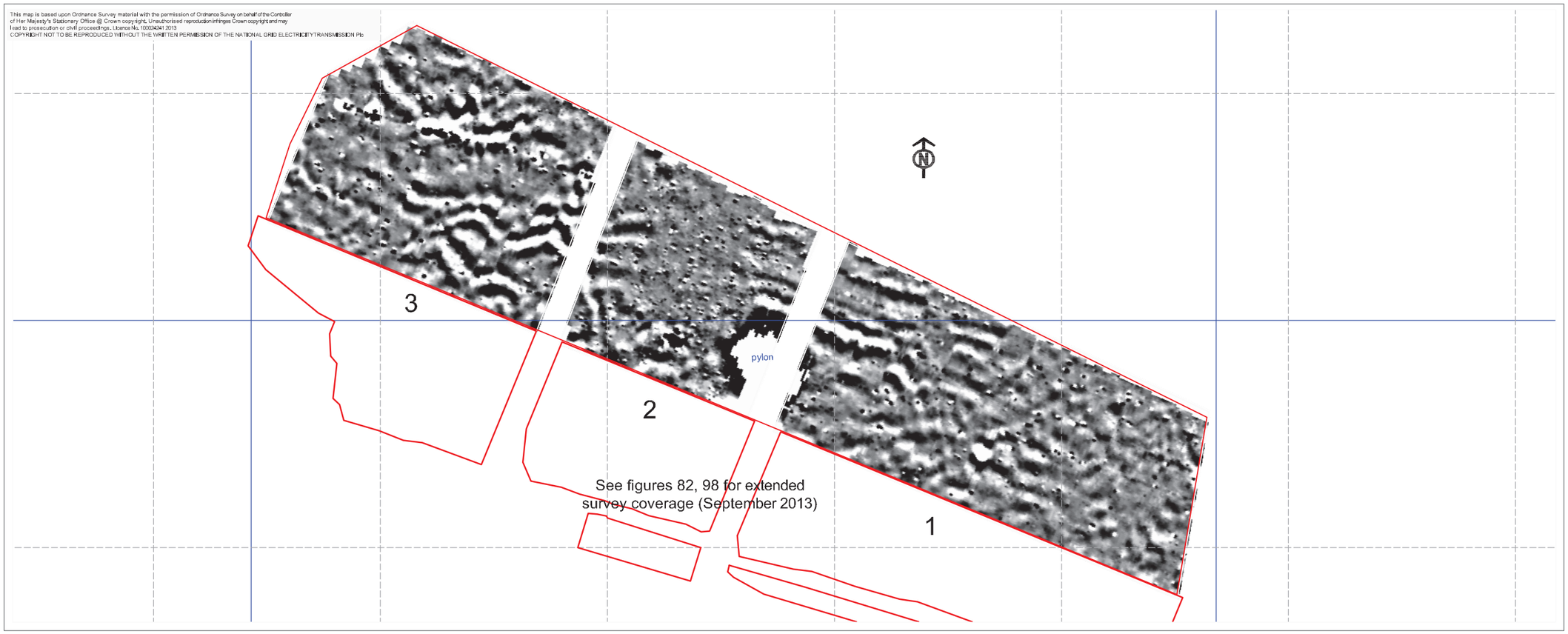
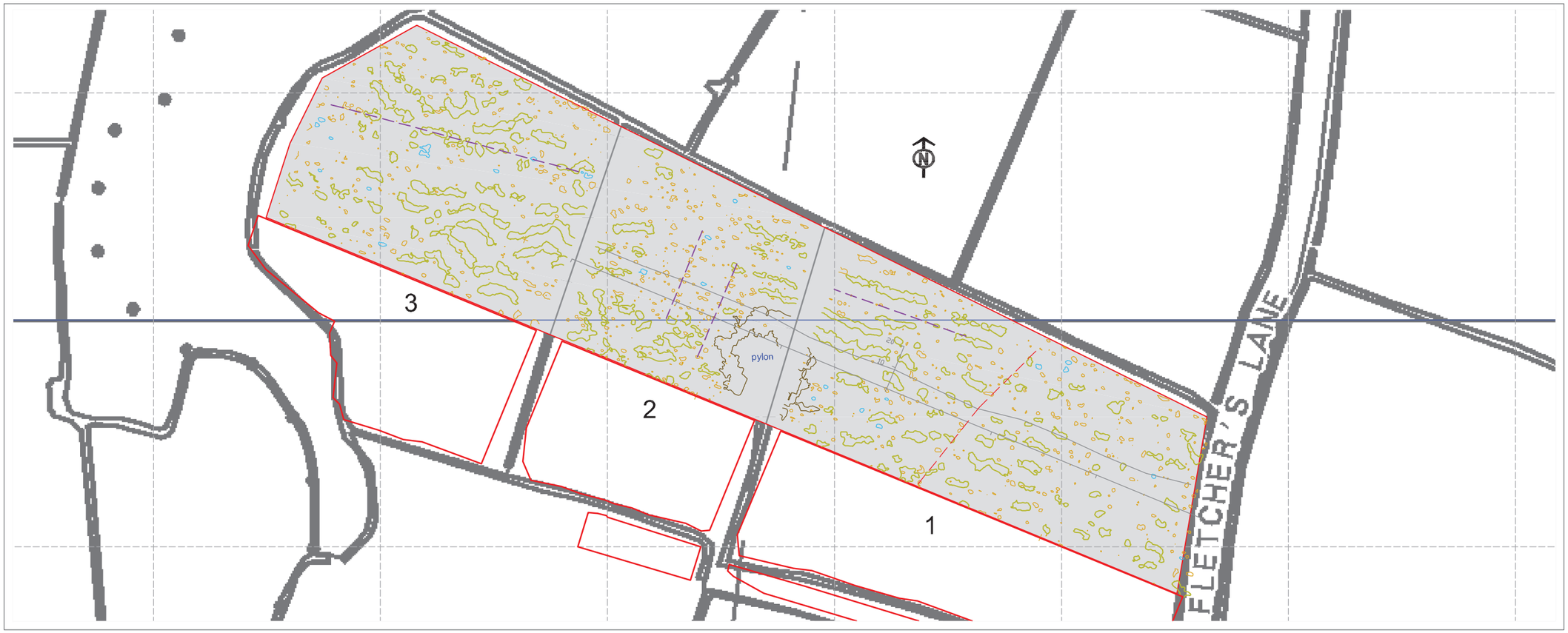
DRAWING No.
SCALE 1:25000
SHEET 2 of 106
ISSUE A





Key

2.2 nT

-2.0

magnetic anomalies (archaeological ?)

recent magnetic disturbances ?

broad / weak natural magnetic anomalies (wetland)

small background magnetic anomalies (natural / non-archaeological ?)

cultivation

pipe

drain ?

strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
A	19/06/2013				

Title

NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey (grey scale plot) and interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.		GIS
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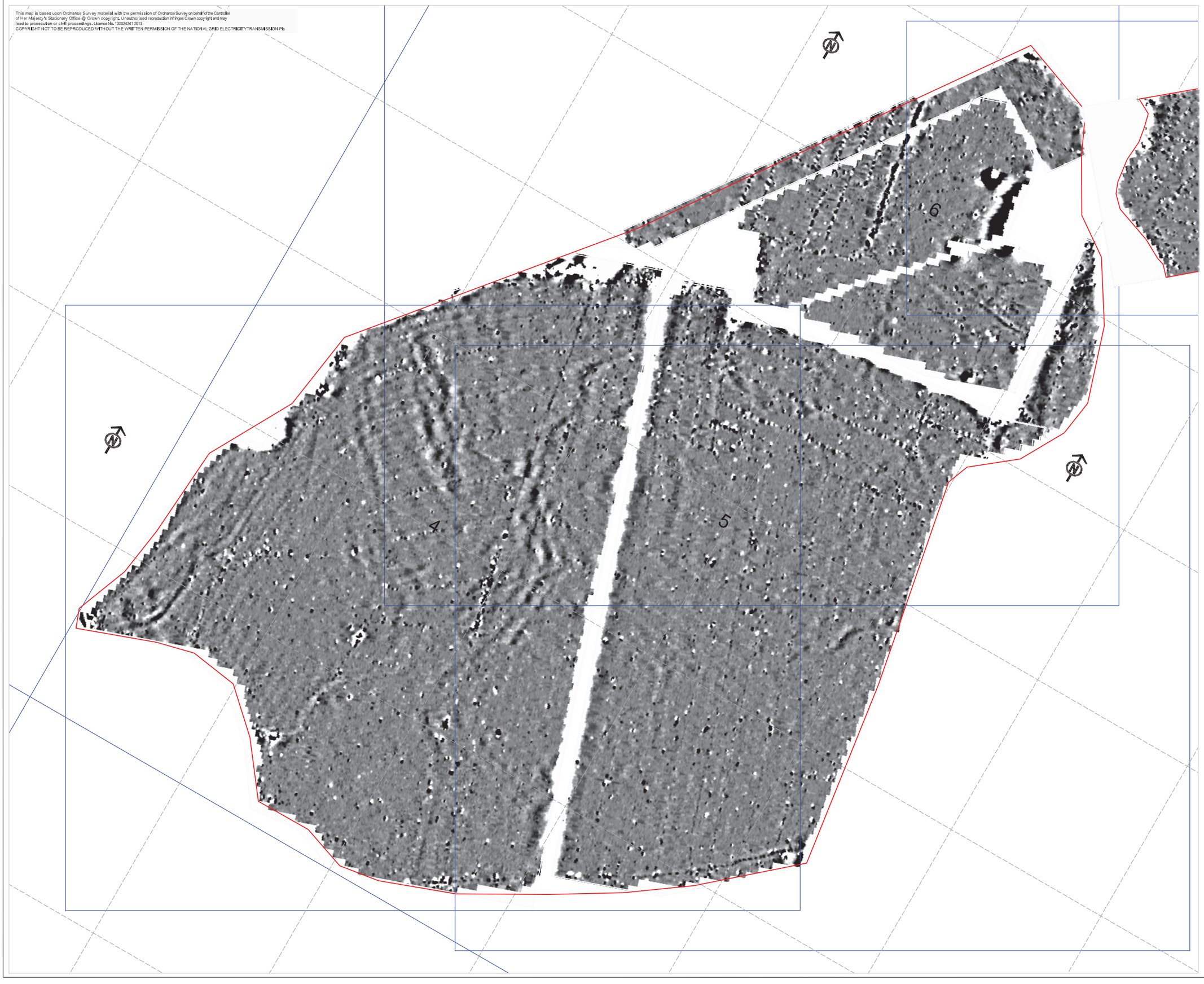
DRAWING No. | SCALE 1:2000

SHEET 3 of 106 | ISSUE A



Key

2.2 nT

-2.0

0 100m

Scale 1:2000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
A	19/06/2013				

Title

NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey: grey scale plot

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.		GIS
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DRAWING No.			SCALE 1:2000
SHEET 4 of 106			ISSUE A

Key

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
A	19/06/2013				

Title

NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey: interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

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DRAWING No.

SCALE 1:2000

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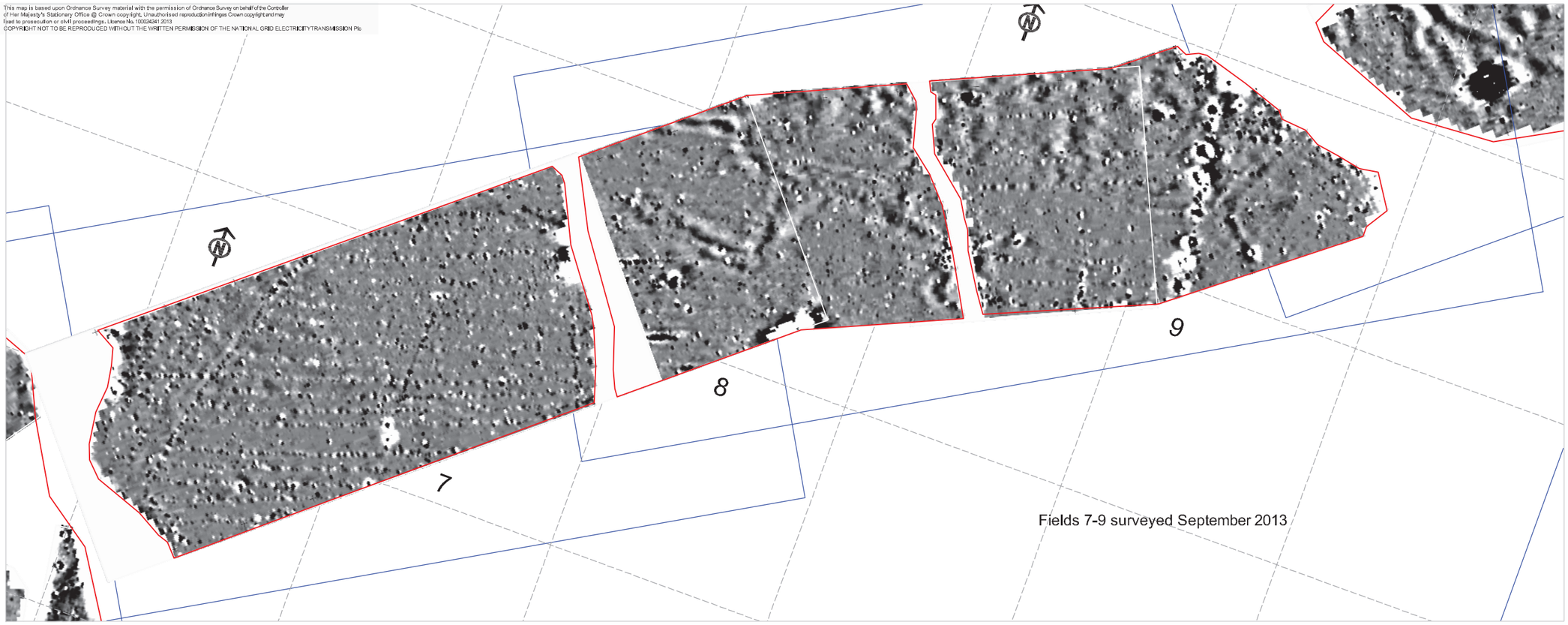
ISSUE A



Key

2.2 nT

-2.0

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
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Title

NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey (grey scale plot) and interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

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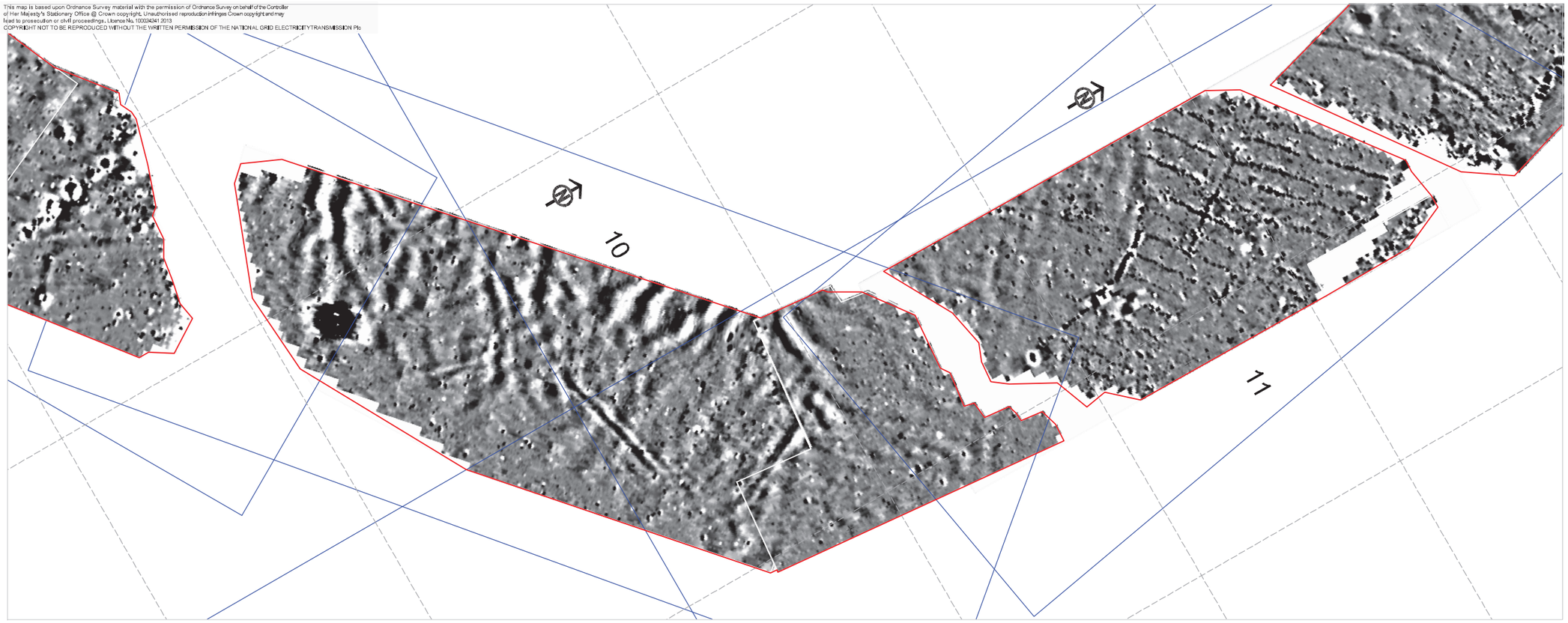

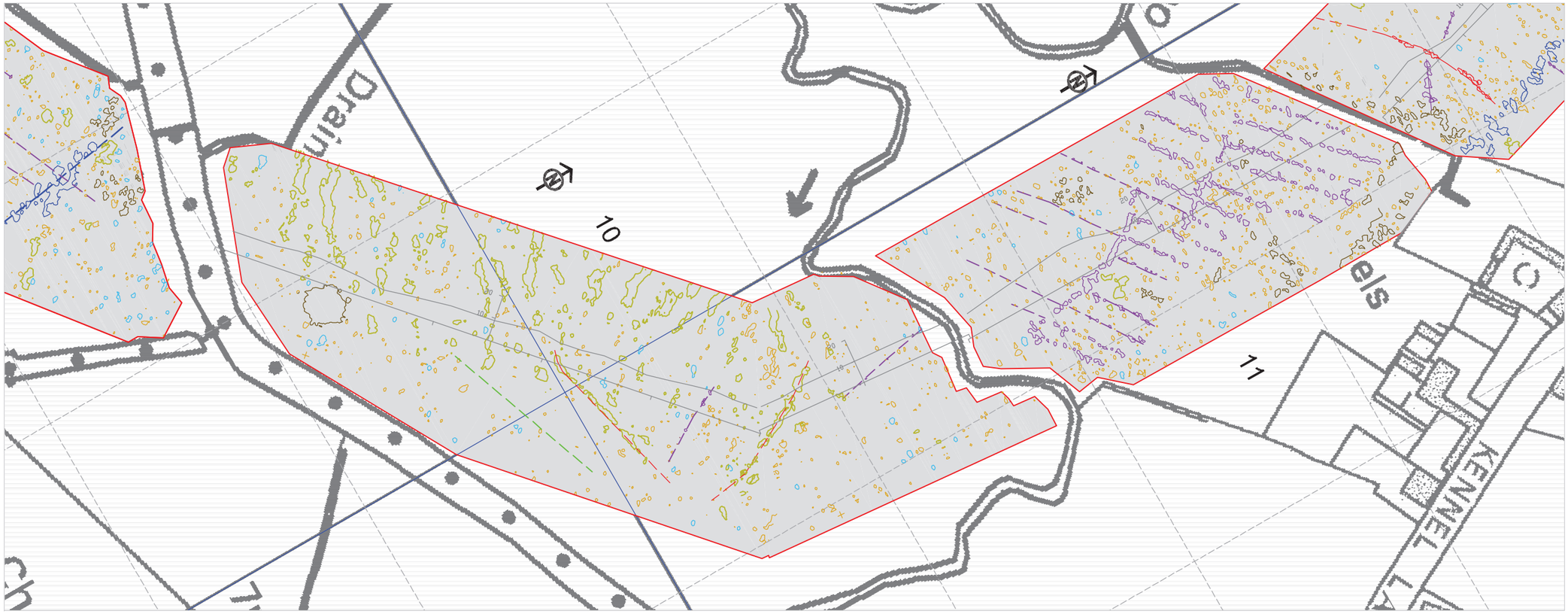

Key

2.2 nT

-2.0

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
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Title

NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey (grey scale plot) and interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

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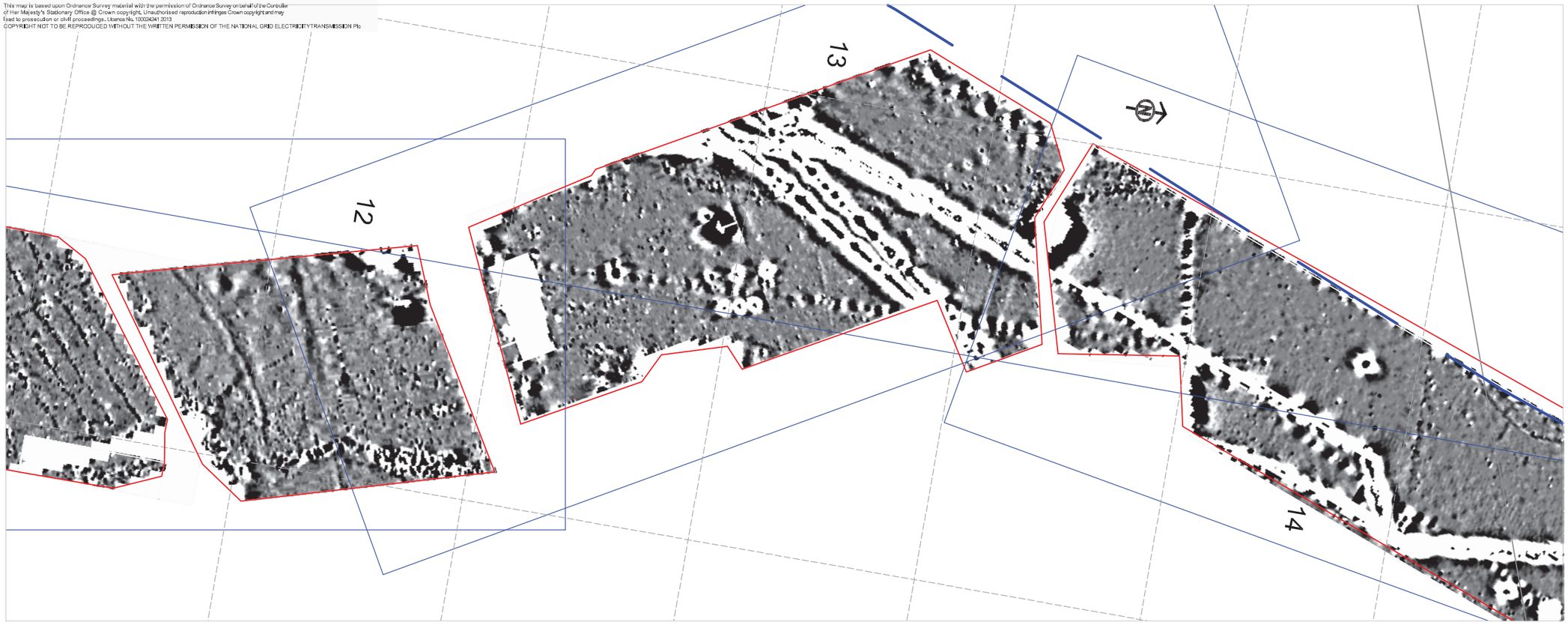

Key

2.2 nT

-2.0

magnetic anomalies (archaeological ?)

recent magnetic disturbances ?

broad / weak natural magnetic anomalies (wetland)

small background magnetic anomalies (natural / non-archaeological ?)

cultivation

pipe

drain ?

strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
A	19/06/2013				

Title

NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey (grey scale plot) and interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

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DRAWING No.

SCALE 1:2000

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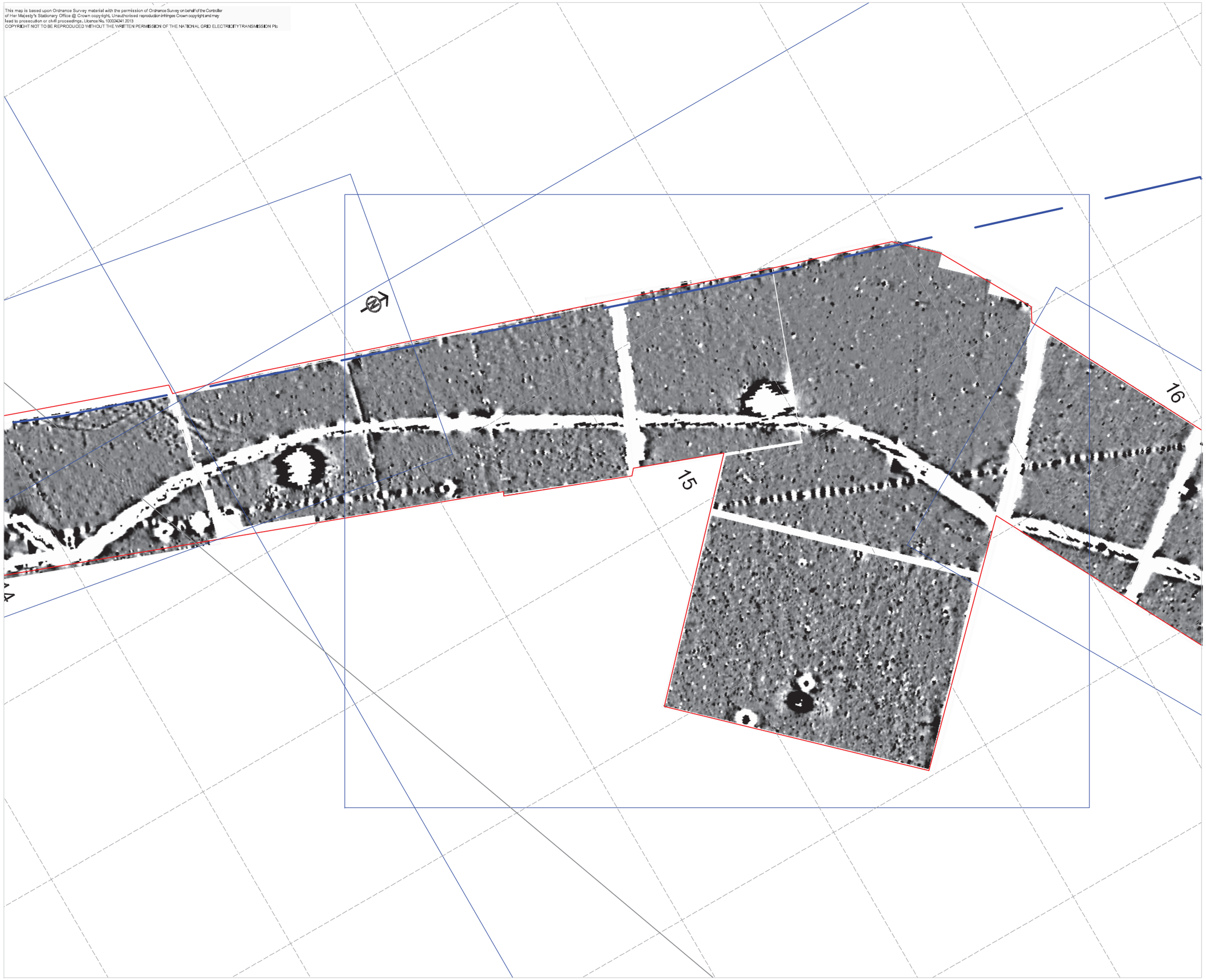
ISSUE A



Key

2.2 nT

-2.0

0 100m

Scale 1:2000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
A	19/06/2013				

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NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey: grey scale plot

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.		GIS
20897	9	TEP	A3

DRAWING No.

SCALE 1:2000

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ISSUE A

Drain

Drain

A4

15

16

14

34m

The Lodge

The Paddock

Key

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
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NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey: interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

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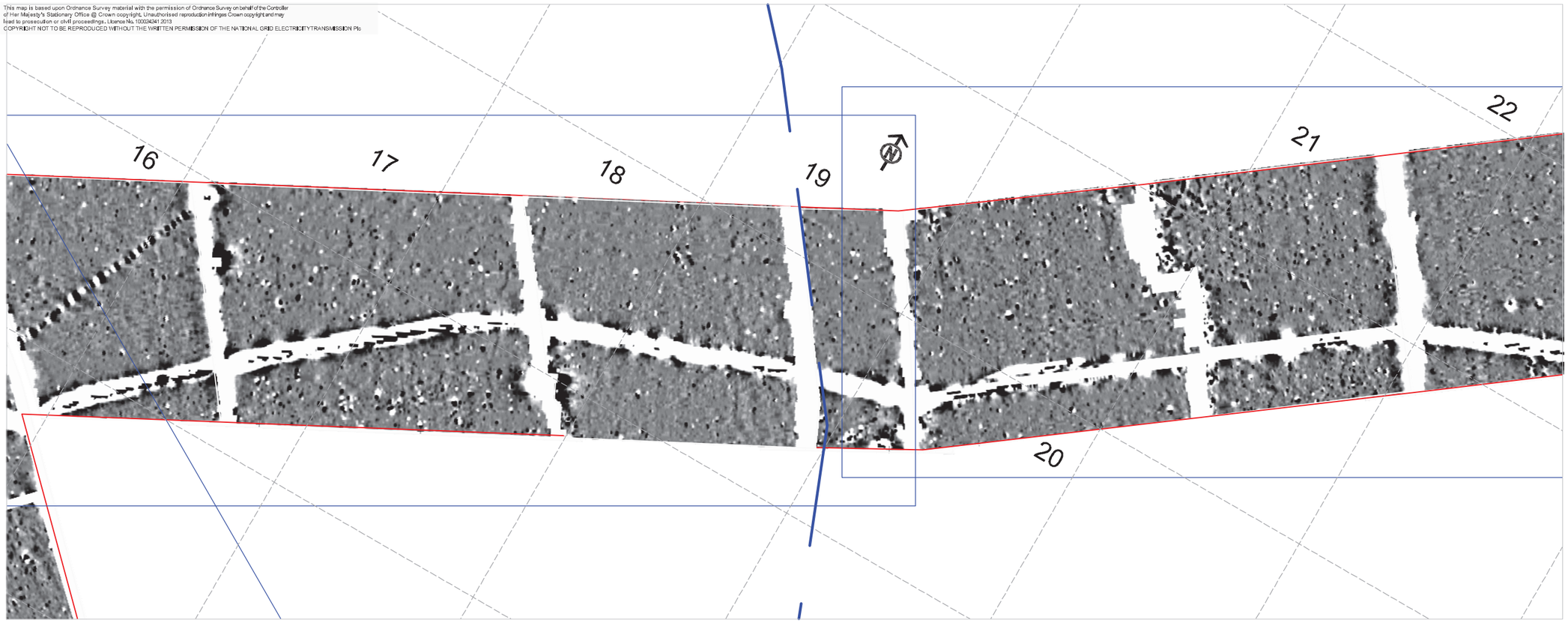

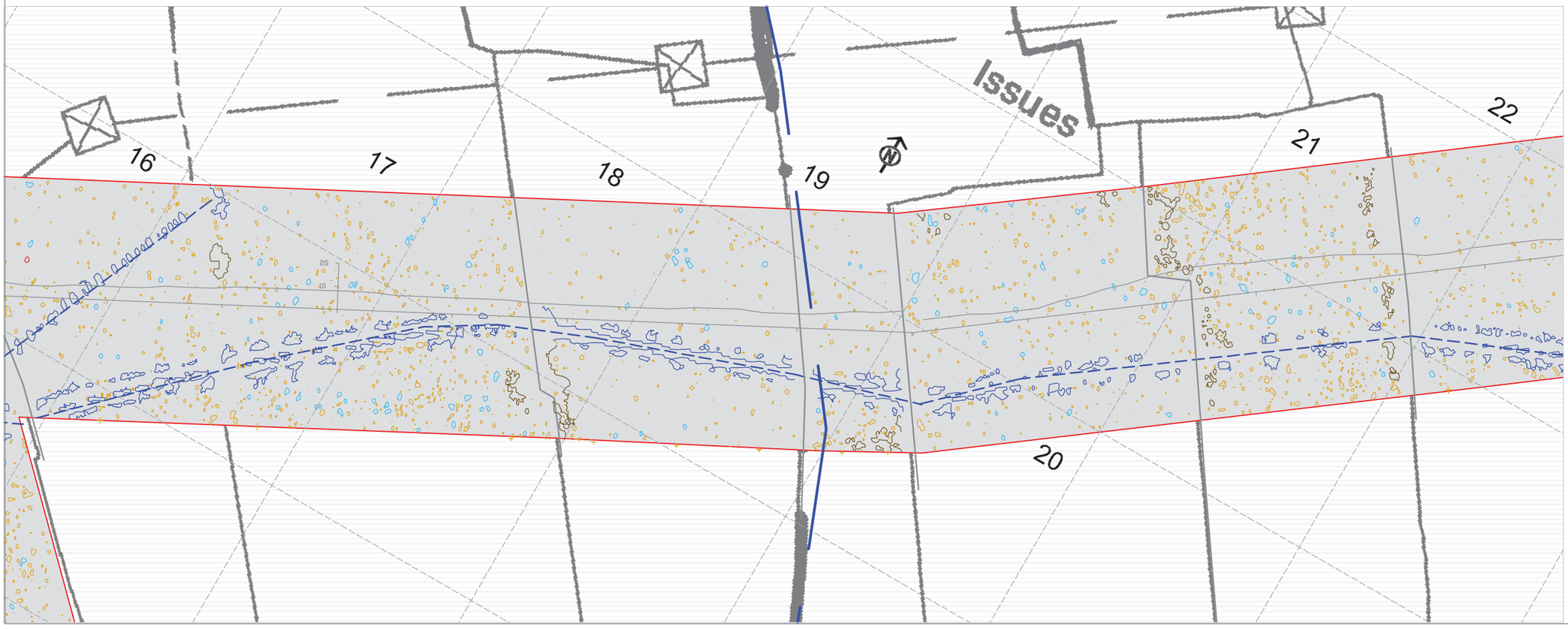

Key

2.2 nT

-2.0

magnetic anomalies (archaeological ?)

recent magnetic disturbances ?

broad / weak natural magnetic anomalies (wetland)

small background magnetic anomalies (natural / non-archaeological ?)

cultivation

pipe

drain ?

strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
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Title

NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey (grey scale plot) and interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

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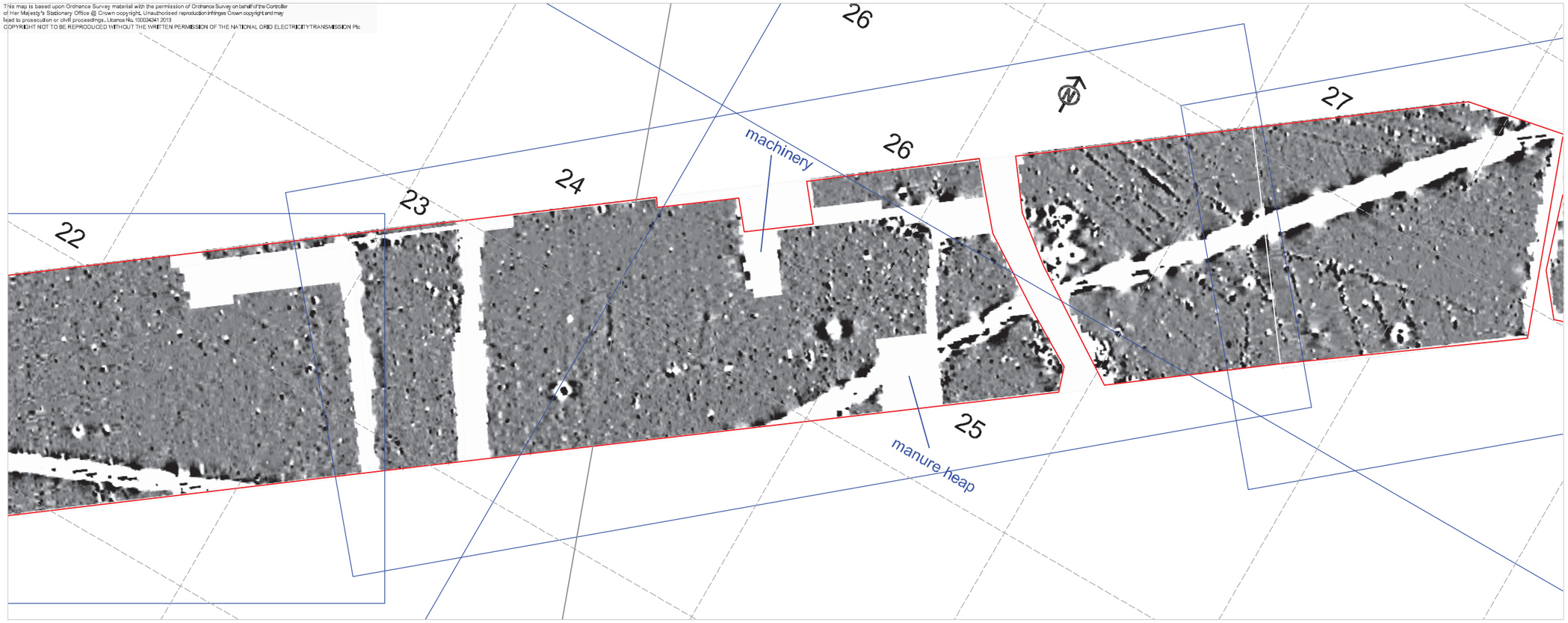

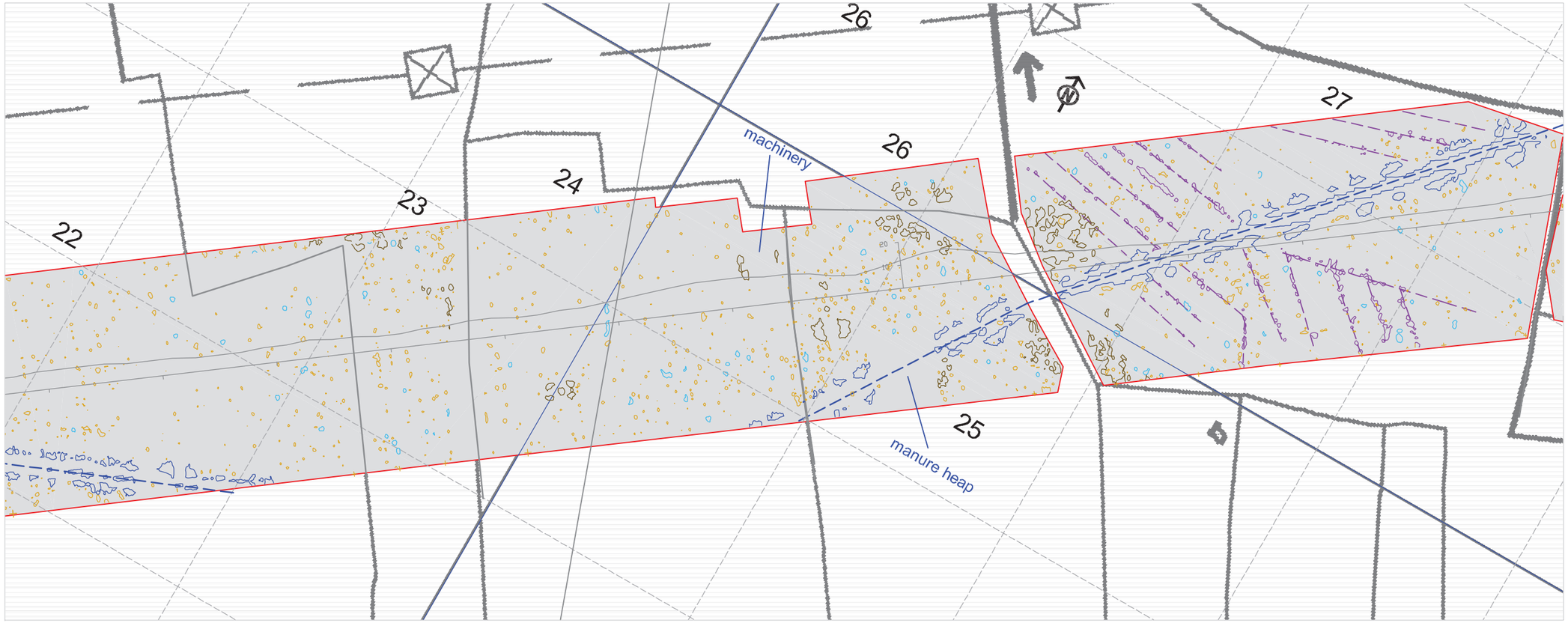

Key

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- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
A	19/06/2013				

Title

NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey (grey scale plot) and interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

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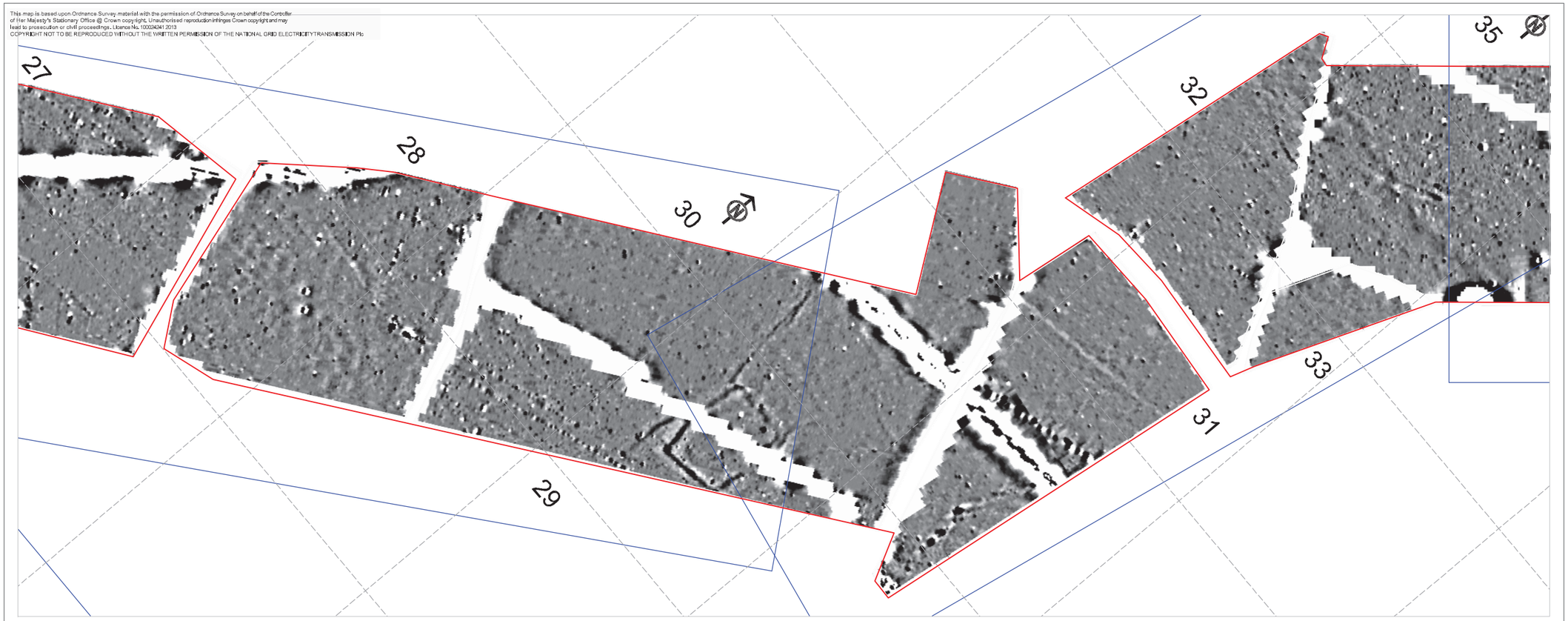
SHEET 12 of 106			ISSUE A



Key

2.2 nT

-2.0

magnetic anomalies (archaeological ?)

recent magnetic disturbances ?

broad / weak natural magnetic anomalies (wetland)

small background magnetic anomalies (natural / non-archaeological ?)

cultivation

pipe

drain ?

strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
A	19/06/2013				

Title

NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey (grey scale plot) and interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

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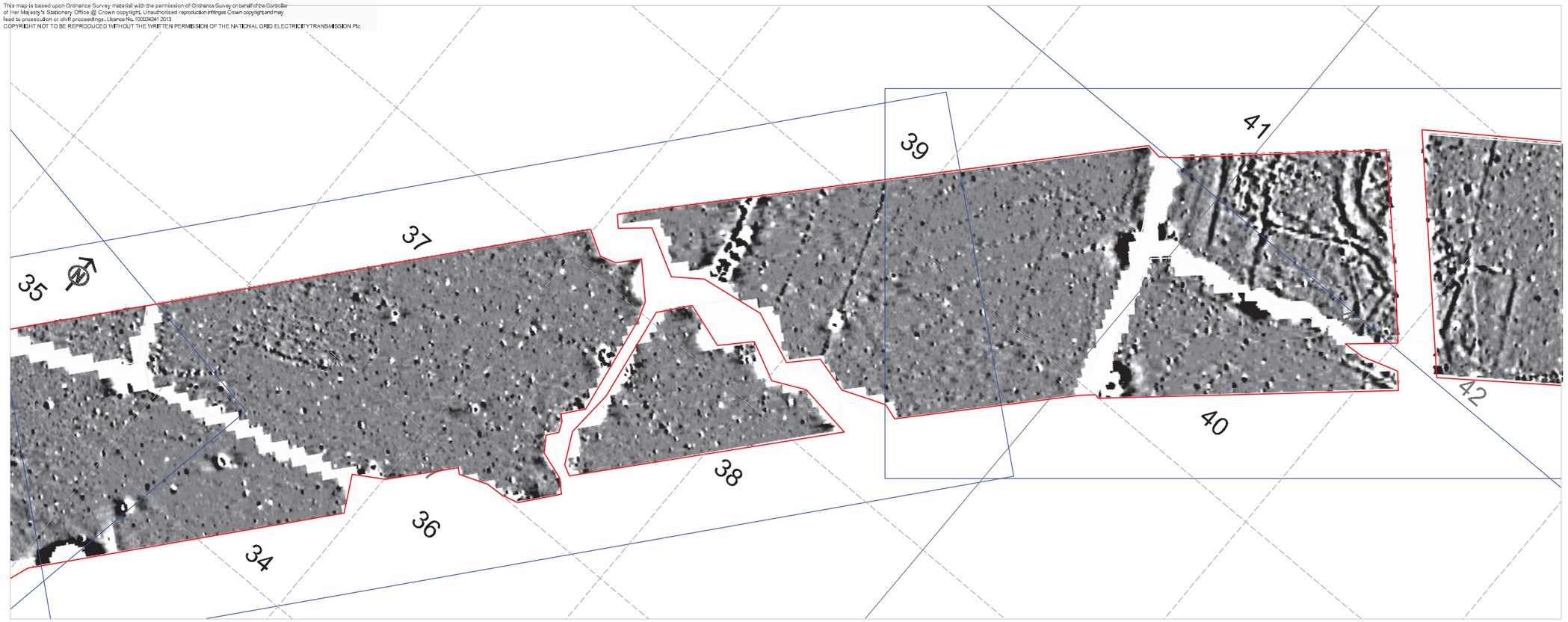
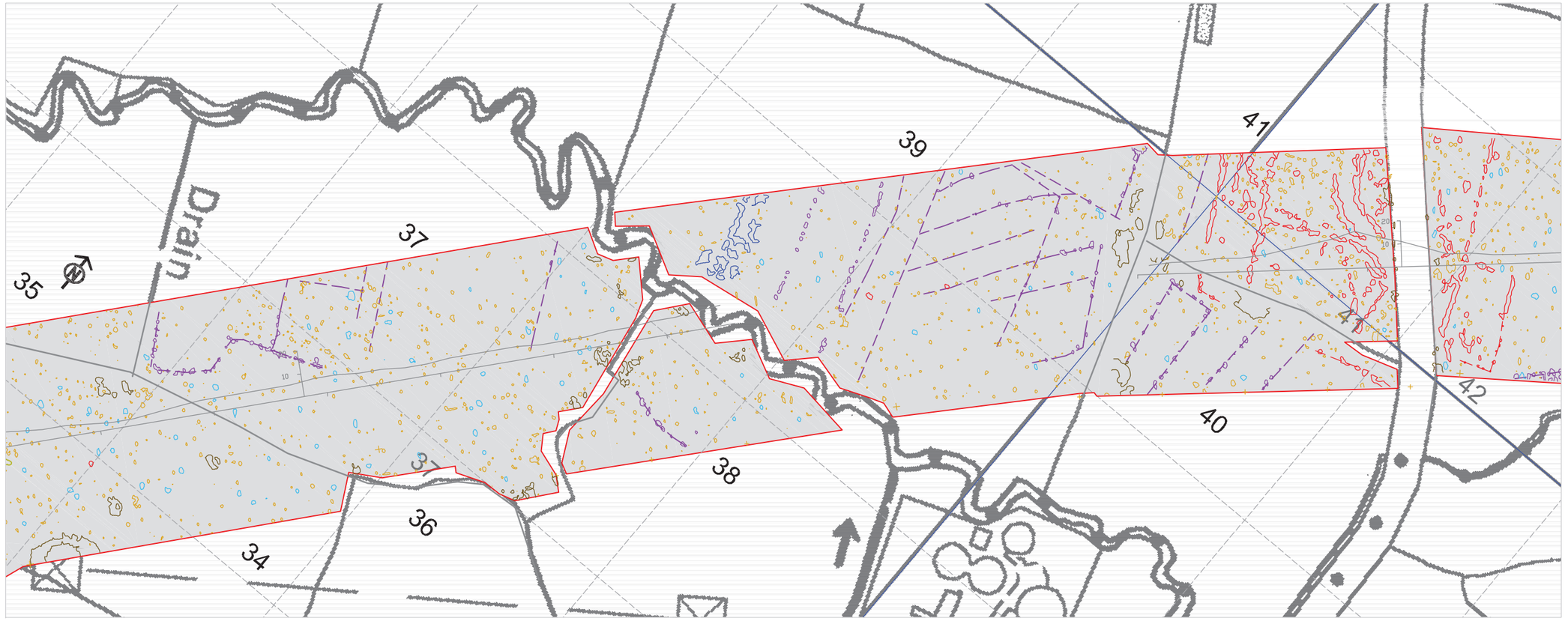
DRAWING No.

SCALE 1:2000

SHEET 13 of 106

ISSUE A





Key

2.2 nT

-2.0

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
A	19/06/2013				

Title

NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey (grey scale plot) and interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

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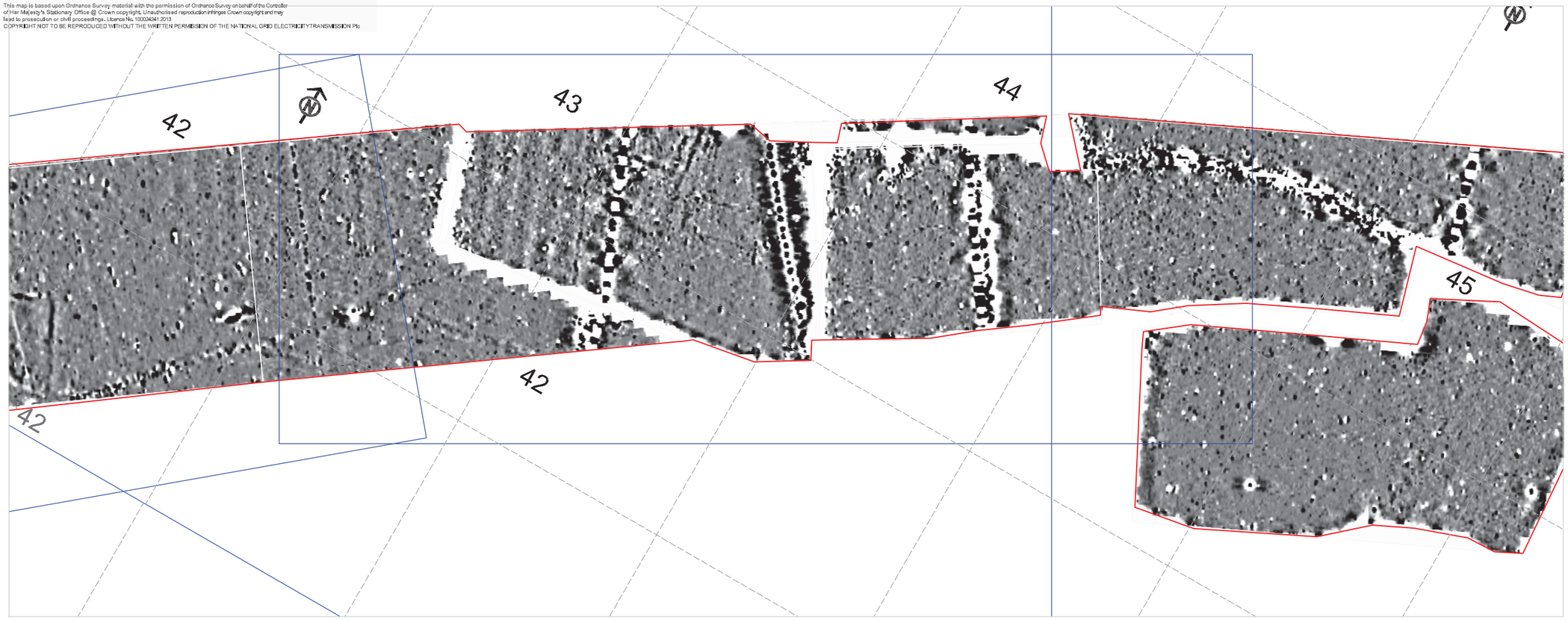
SHEET 14 of 106			ISSUE A



Key

2.2 nT

-2.0

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

ISSUE	DATE	COMMENTS	DRAW	CHK'D	APP'D
A	19/06/2013				

Title

NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey (grey scale plot) and interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

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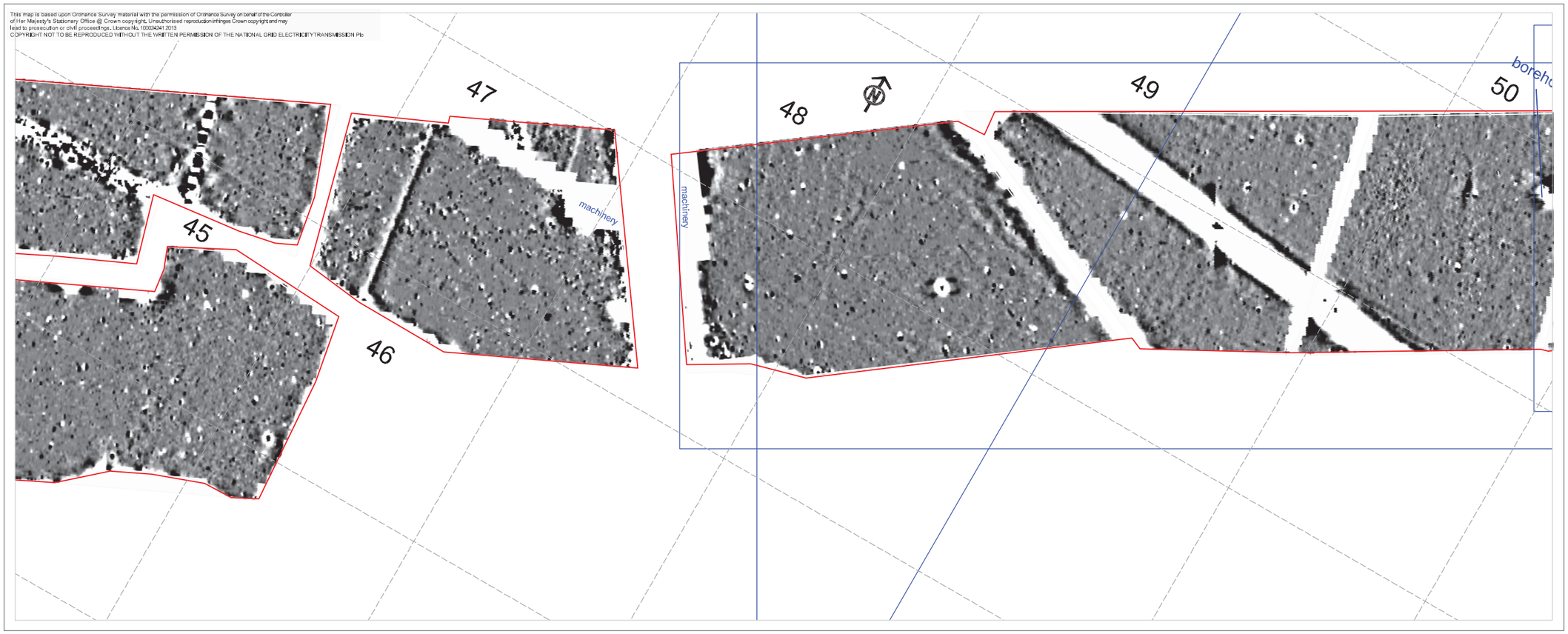
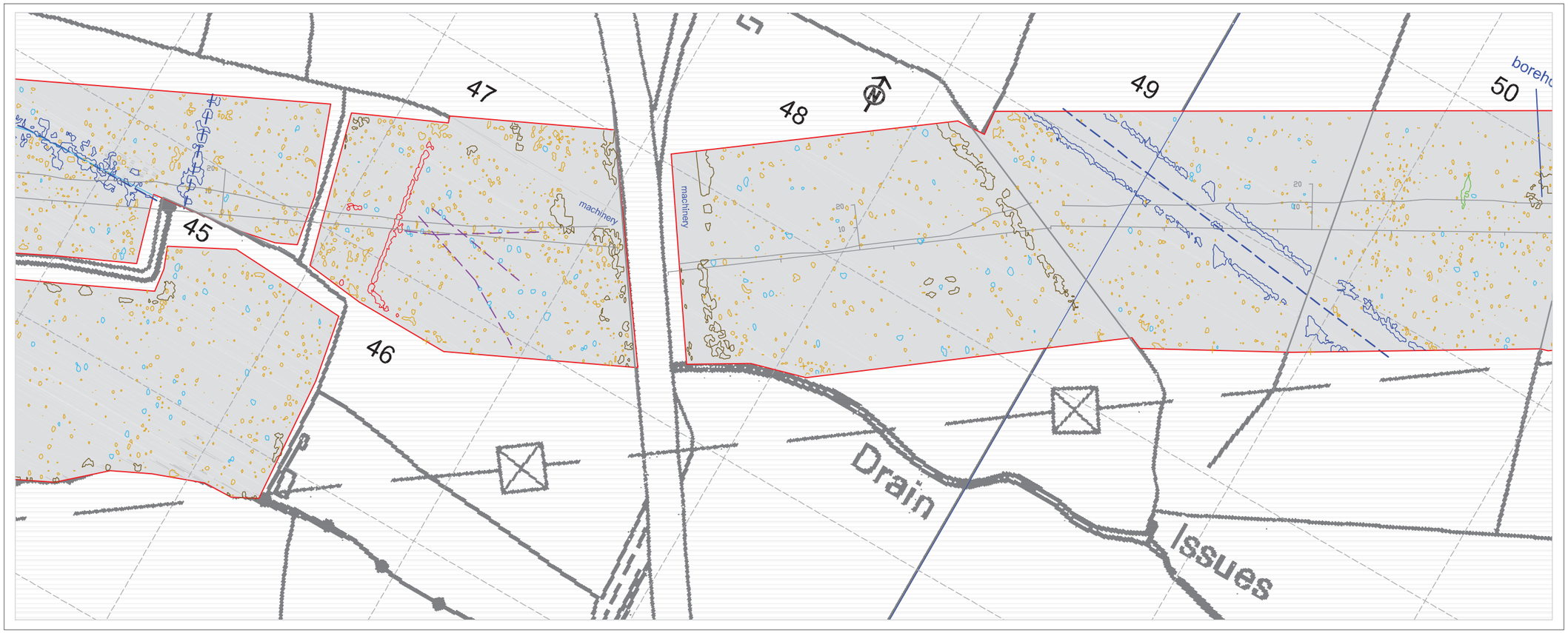
SHEET 15 of 106			ISSUE A





Key

2.2 nT

-2.0

magnetic anomalies (archaeological ?)

recent magnetic disturbances ?

broad / weak natural magnetic anomalies (wetland)

small background magnetic anomalies (natural / non-archaeological ?)

cultivation

pipe

drain ?

strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

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NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey (grey scale plot) and interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.		GIS
20897	16	TEP	A3
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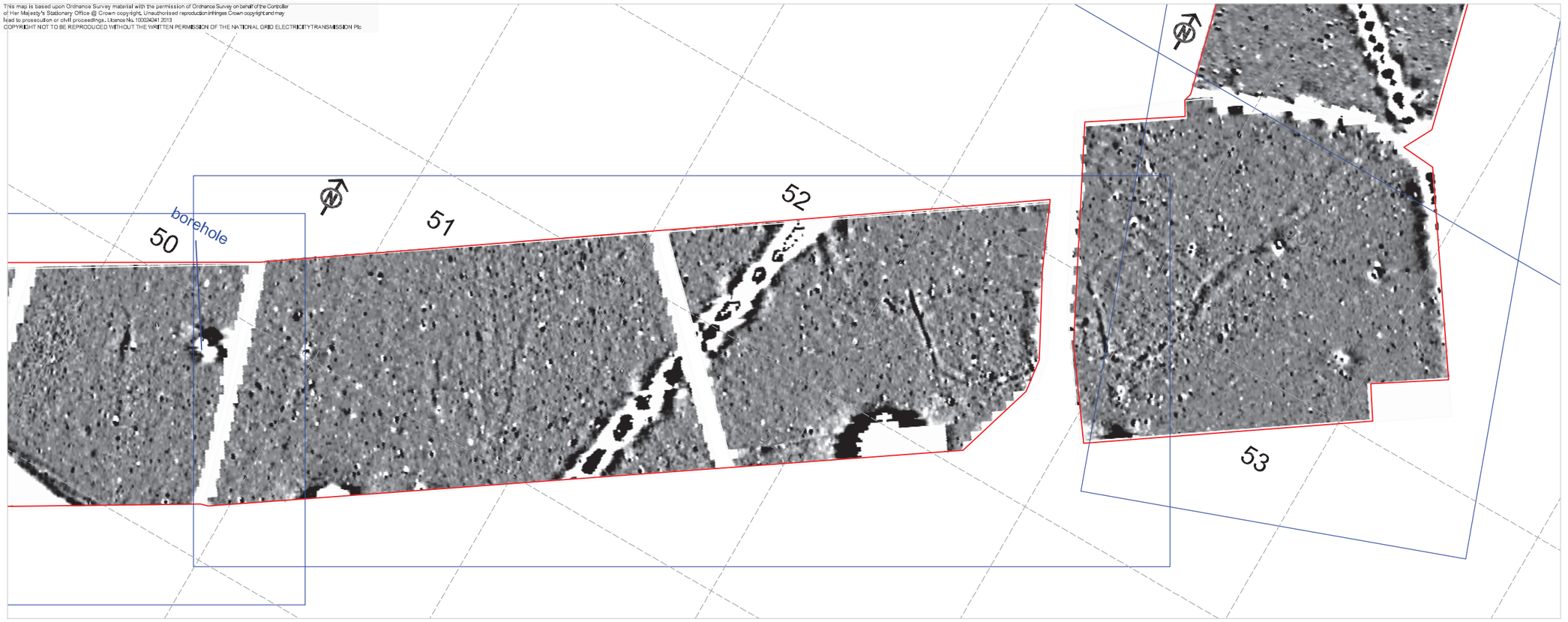

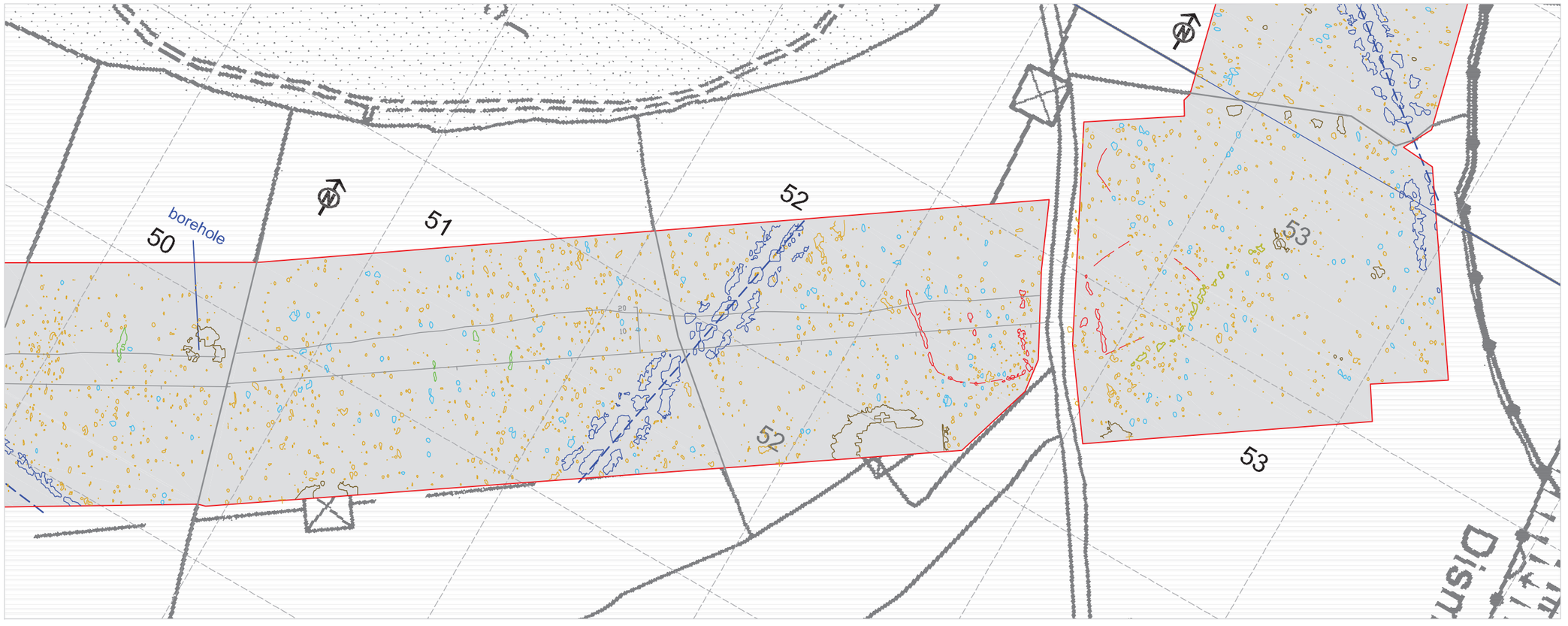

Key

2.2 nT

-2.0

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

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NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey (grey scale plot) and interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.		GIS
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DRAWING No.			SCALE 1:2000
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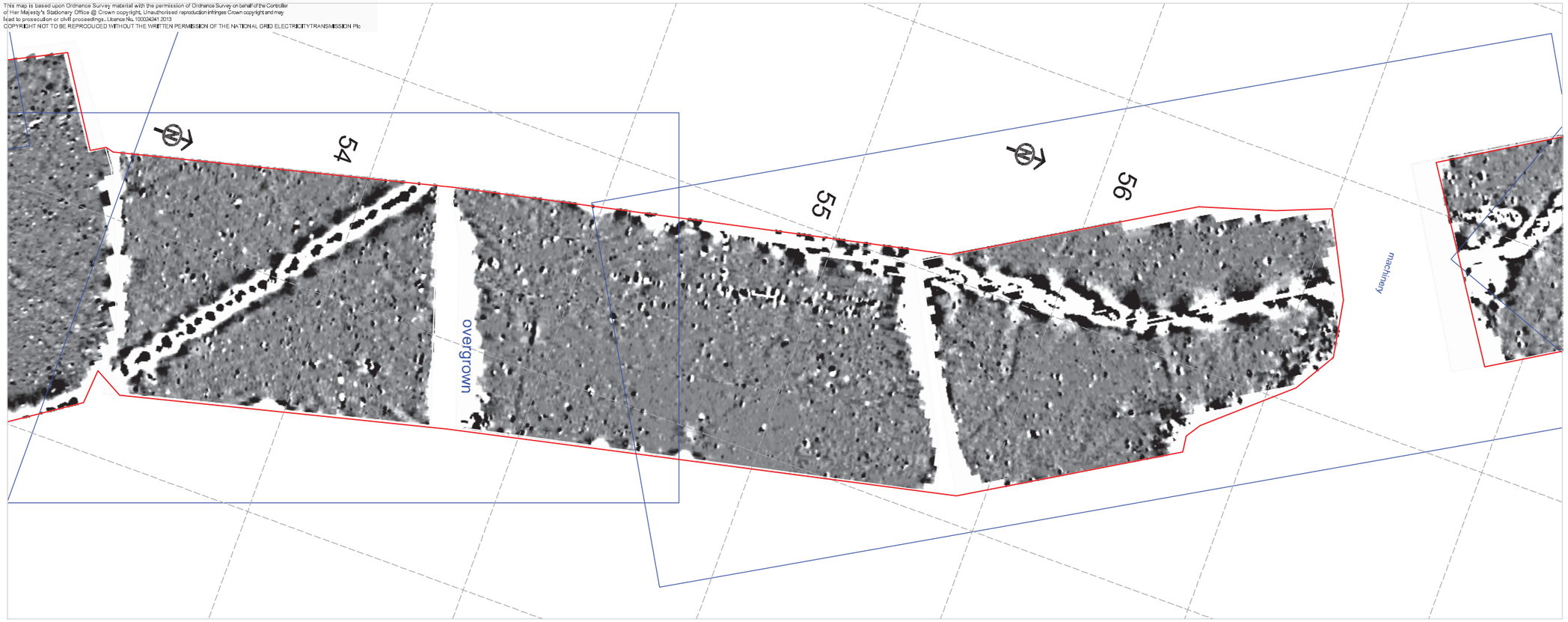

Key

2.2 nT

-2.0

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

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NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey (grey scale plot) and interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.		GIS
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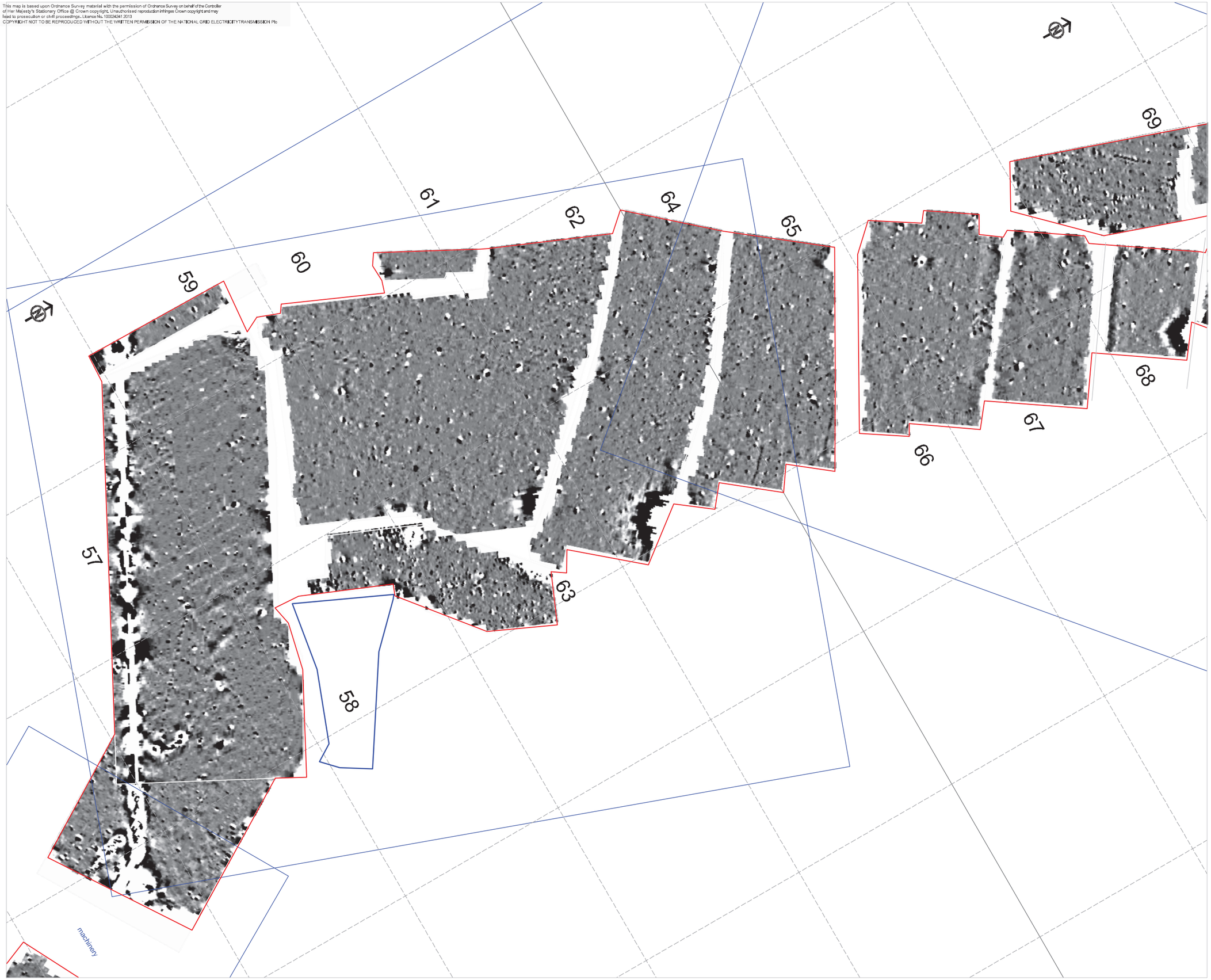

Key

2.2 nT

-2.0

0 100m

Scale 1:2000 @ A3

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NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey: grey scale plot

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.		GIS
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Drain
West Leigh Farm
Tk
Westleigh Farm
Mead Farm
MEAD LA
57
58
59
60
61
62
63
64
65
66
67
68
69
machinery

Key

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 100m

Scale 1:2000 @ A3

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NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey: interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.		GIS
20897	20	TEP	A3

DRAWING No. | SCALE 1:2000

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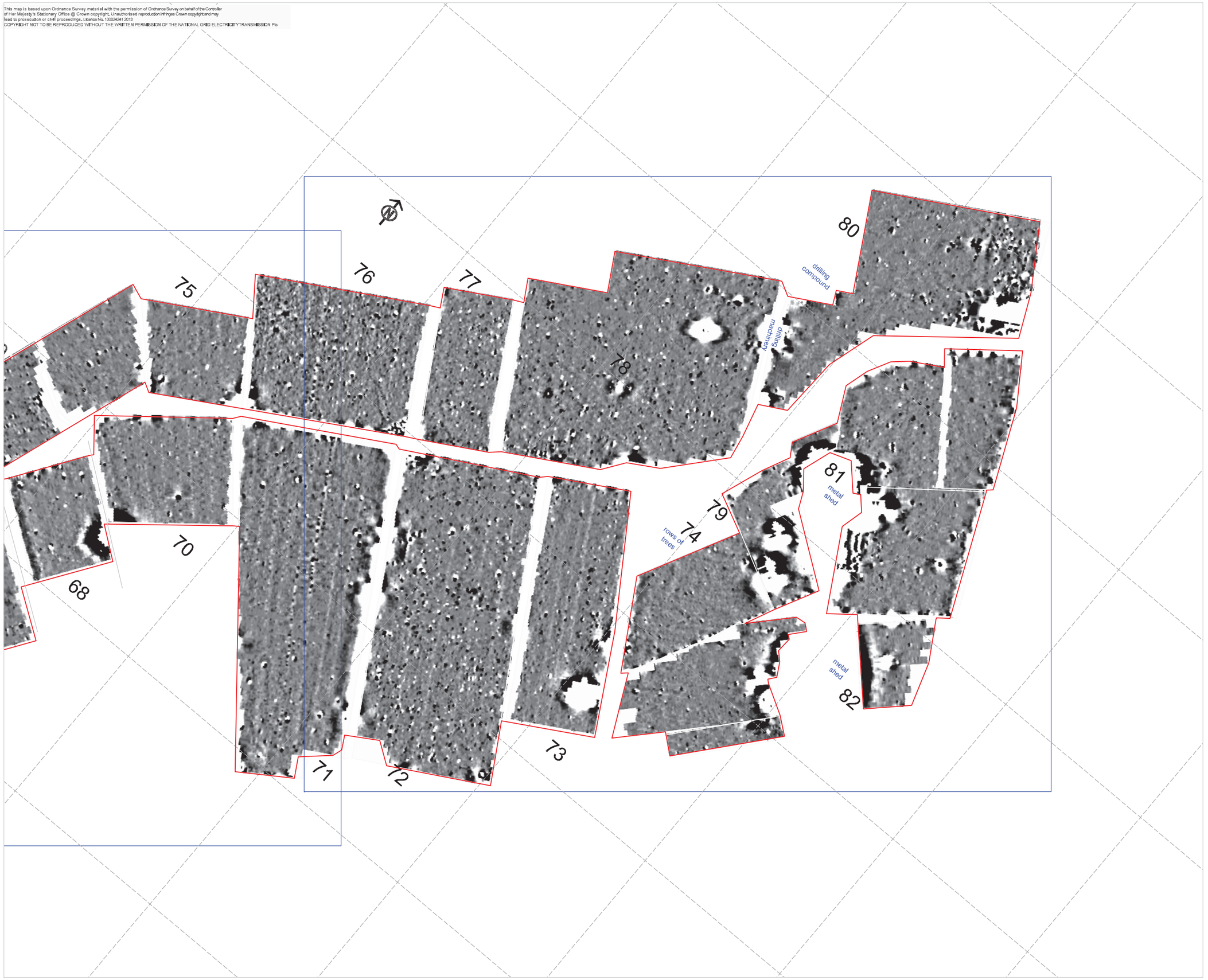

Key

2.2 nT

-2.0

0 100m

Scale 1:2000 @ A3

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NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey: grey scale plot

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.		GIS
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Key

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 100m
Scale 1:2000 @ A3

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NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

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ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey: interpretation

oxford archaeology

NG INVESTMENT No.	FIGURE No.	TEP	GIS
20897	22		A3
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Key

50 nT

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 50m

Scale 1:1250 @ A3

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NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey: graphical plot with interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.		GIS
20897	23	TEP	A3

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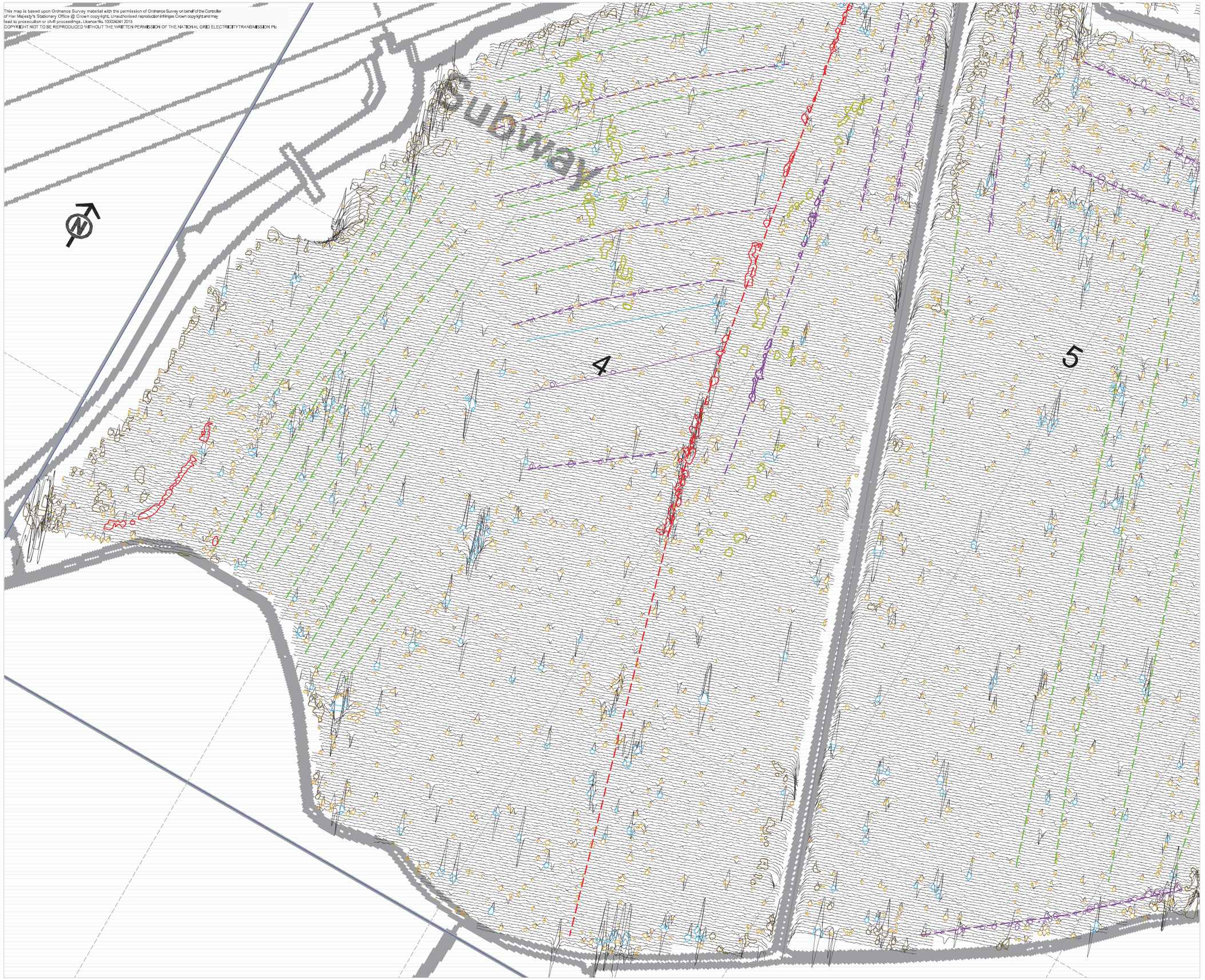

Key

50 nT

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 50m

Scale 1:1250 @ A3

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NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey: graphical plot with interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.		GIS
20897	24	TEP	A3

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Key

50 nT

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 50m

Scale 1:1250 @ A3

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NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey: graphical plot with interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.		GIS
20897	25	TEP	A3
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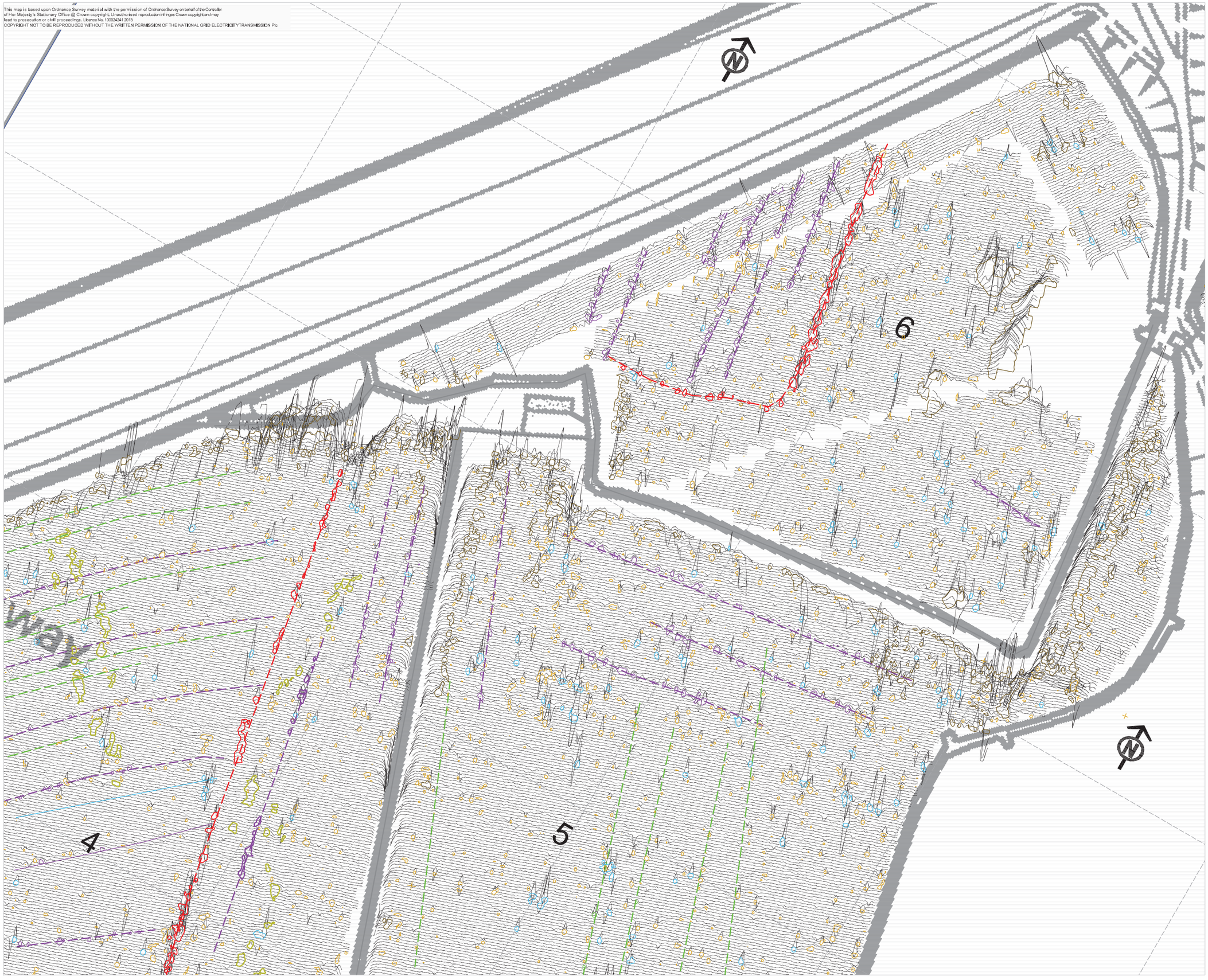

Key

50 nT

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 50m

Scale 1:1250 @ A3

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ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey: graphical plot with interpretation

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NG INVESTMENT No.	FIGURE No.		GIS
20897	26	TEP	A3
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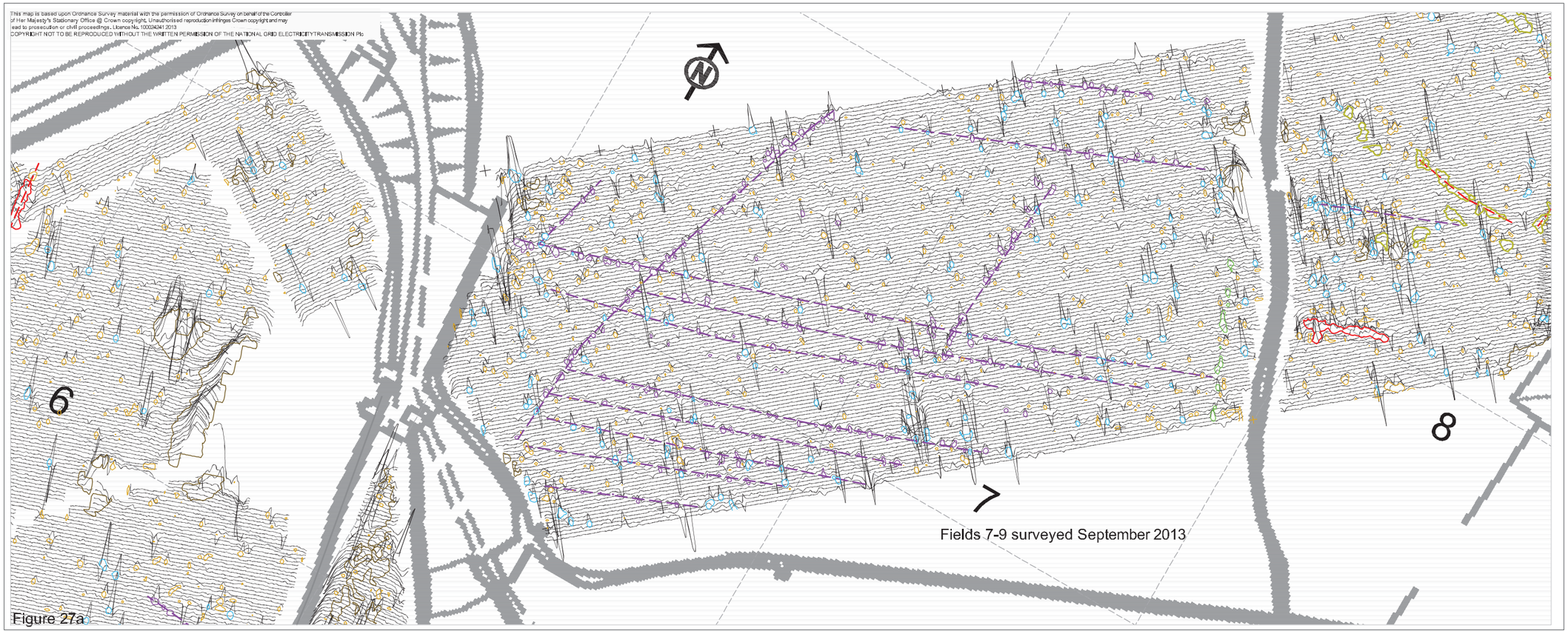

Figure 27a

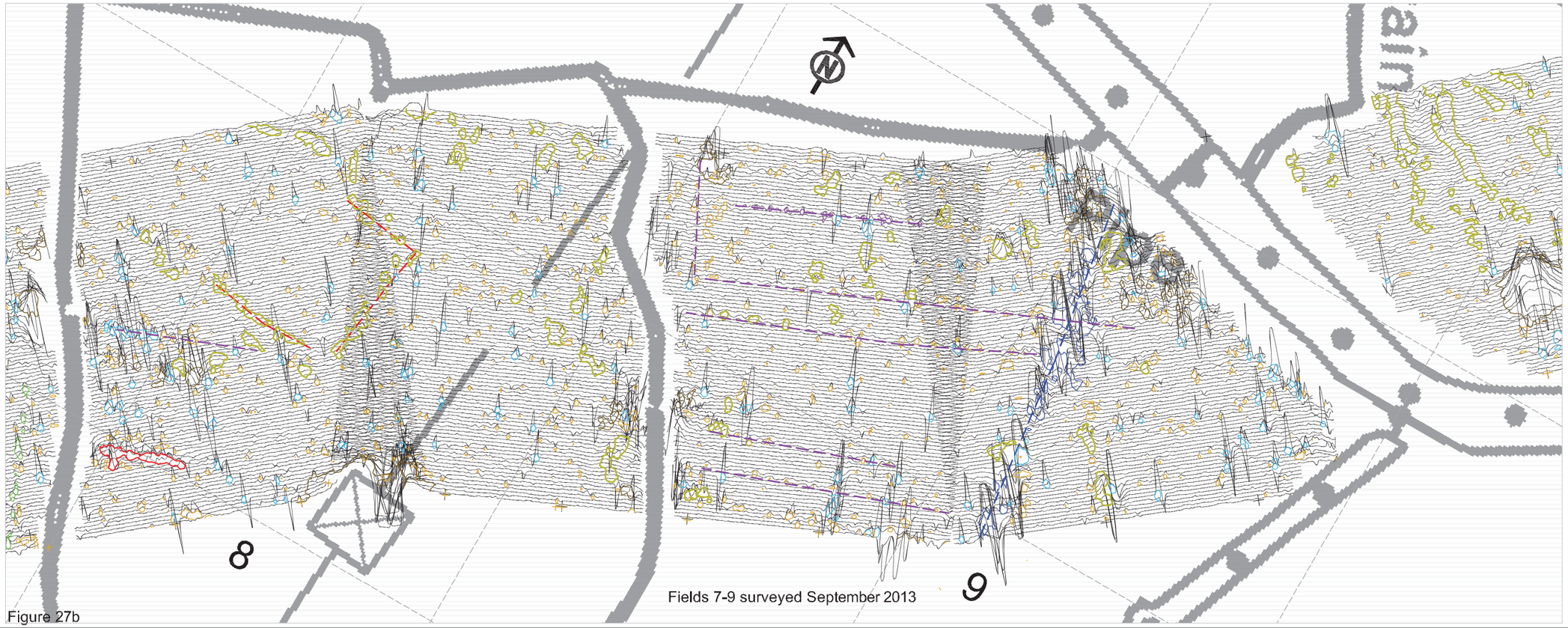

Figure 27b

Key

50 nT

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 50m

Scale 1:1250 @ A3

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Magnetometer survey: graphical plot with interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

NG INVESTMENT No.	FIGURE No.		GIS
20897	27	TEP	A3
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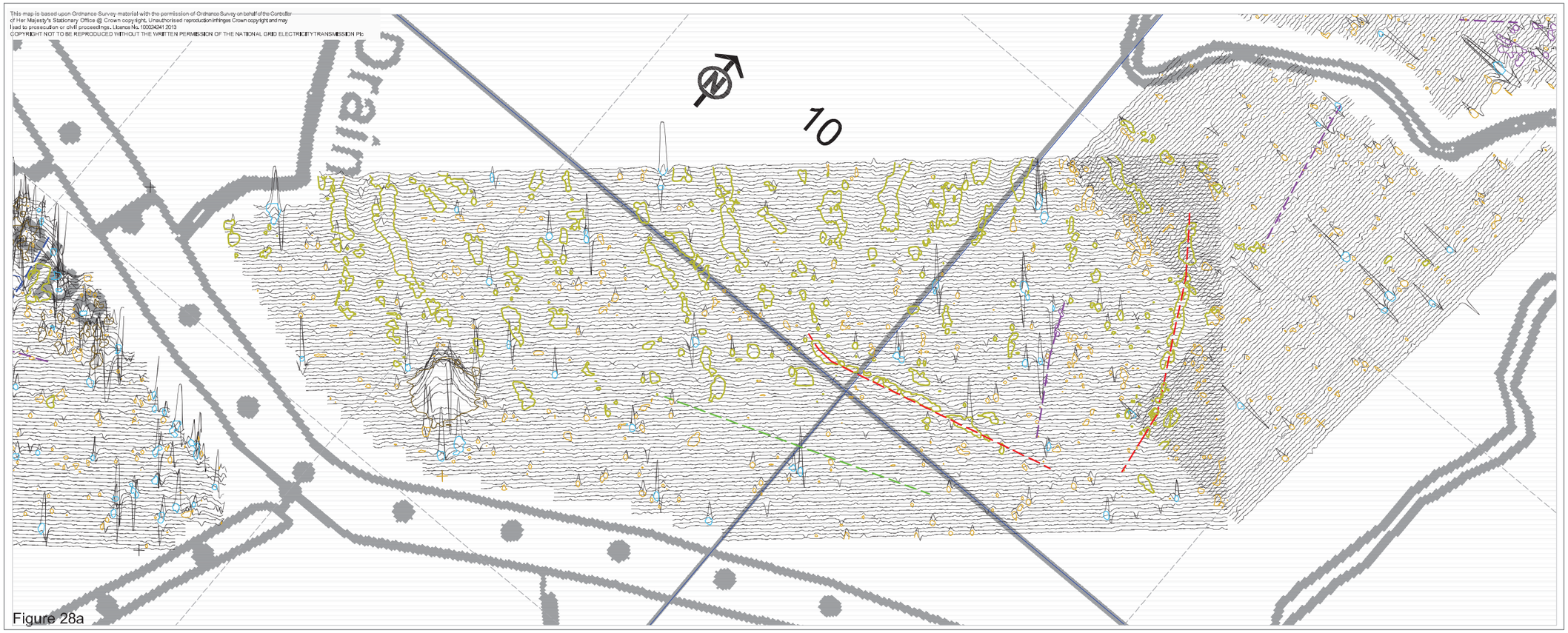

Figure 28a

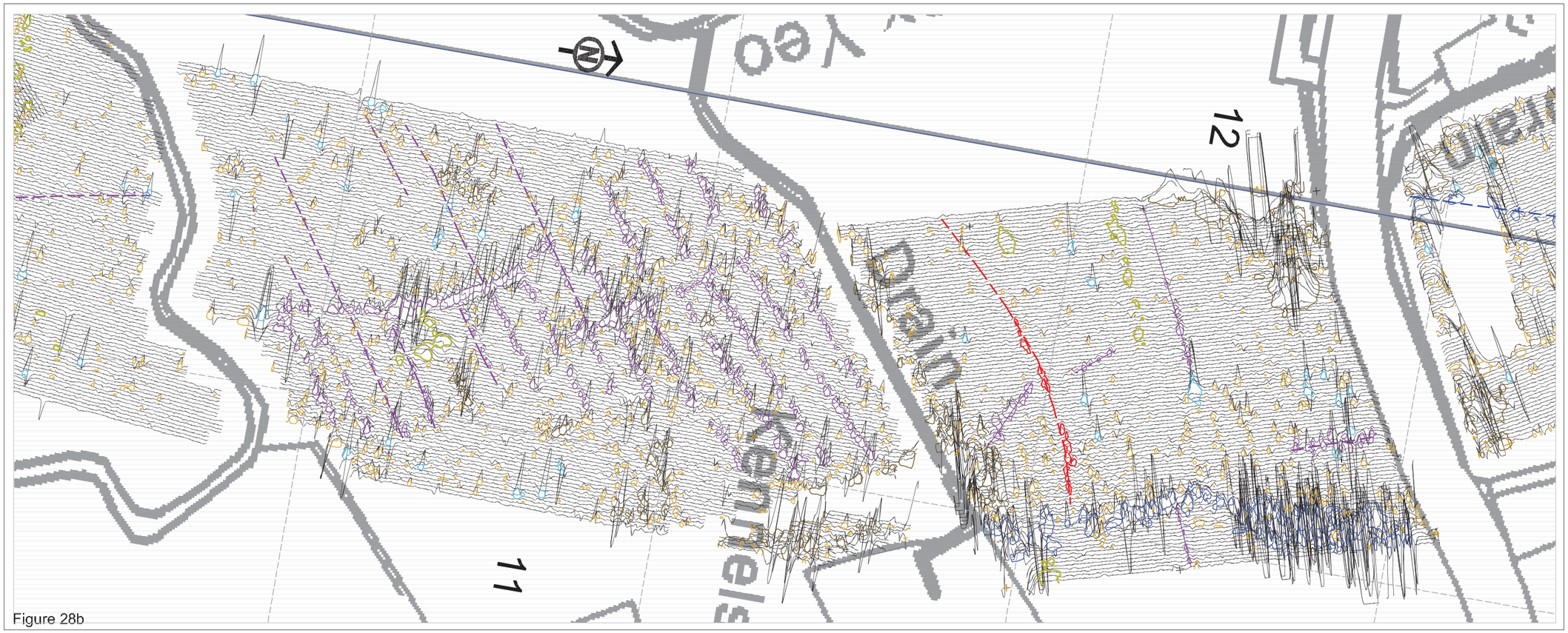

Figure 28b

Key

50 nT

- magnetic anomalies (archaeological ?)
- recent magnetic disturbances ?
- broad / weak natural magnetic anomalies (wetland)
- small background magnetic anomalies (natural / non-archaeological ?)
- cultivation
- pipe
- drain ?
- strong (ferrous) magnetic anomalies

0 50m

Scale 1:1250 @ A3

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NATIONAL GRID (HINKLEY C PROJECT) ENVIRONMENTAL STATEMENT

STUDY AREA C MENDIP HILLS AONB

ARCHAEOLOGICAL GEOPHYSICAL SURVEY: PART 1

Magnetometer survey: graphical plot with interpretation

oxford archaeology
Oxford Archaeology, Janus House, Osney Mead, Oxford OX2 0ES

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