# Land at Alderholt Common, Alderholt, Dorset

Detailed Gradiometer Survey Report

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**Summary**

A gradiometer survey was conducted over land at Land at Alderholt Common, Alderholt, Dorsett (centred on NGR 412018 111797). The project was commissioned by Intelligent Land Ltd with the aim of establishing the presence, or otherwise, and nature of detectable archaeological features in support of a planning application for the development of the site as a solar farm. This report details the data collected to date, with a number of land parcels remaining unsurveyed due to crop.

The gradiometer survey has not identified any anomalies that can confidently be interpreted as archaeology. However, several possible archaeological anomalies have been identified across the site.

Two concentrations of weak ditch-like anomalies have been identified in the south of the site. Given the known features recorded in the surrounding area, it is possible that these relate to enclosures or boundaries dating anywhere from the Bronze Age through to the medieval period. However, these anomalies are noted in areas of variable geological deposits and could relate to natural undulations or modern agricultural activity.

In the north of the site, there is possible evidence for a medieval trackway, consistent with other features in the surrounding area. However, this is recorded in an area of former plantation and could relate to the previous forestry activity.

Numerous pit-like features have been identified across the site. While these have the potential to relate to archaeological pits, such as refuse or extraction pits, they are considered more likely to relate to natural pits and undulations in the sand and gravel deposits. However, given the surrounding prehistoric find spots, enclosures, and barrows recorded in the surrounding area, the possibility for archaeological finds within natural pits cannot be discounted.

The site is known to have a mostly agricultural past since at least the post-medieval period. This is corroborated by the identification of two former field boundaries and areas of ridge and furrow cultivation. There is also evidence of more modern ploughing activity.

The remaining anomalies are thought to be modern or natural in origin. The modern anomalies relate to made ground, drainage, and services.

**Acknowledgements**

Wessex Archaeology would like to thank Intelligent Land Ltd for commissioning the geophysical survey. The assistance of Nigel Jacobs is gratefully acknowledged in this regard.

The fieldwork was undertaken by Jake Bishop, Callum Jervis, and Pamela Warne. Brett Howard processed and interpreted the geophysical data, and prepared illustrations. Lydia Jones processed and interpreted the geophysical data and wrote the report with assistance from Nicholas Crabb. The geophysical work was quality controlled and managed on behalf of Wessex Archaeology by Tom Richardson.

# Land at Alderholt Common, Alderholt, Dorset

## Detailed Gradiometer Survey Report

### 1 INTRODUCTION

#### 1.1 Project background

1.1.1 Wessex Archaeology was commissioned by Intelligent Land Ltd to carry out a geophysical survey at Alderholt Common, Alderholt, Dorset (centred on NGR 412018 111797) (**Figure 1**). The survey forms part of an ongoing programme of archaeological works being undertaken in support of a planning application for the development of the site as a solar farm.

#### 1.2 Scope of document

1.2.1 This report presents a brief description of the methodology followed by the detailed survey results and the archaeological interpretation of the geophysical data. The data presented and discussed here is representative of the data collected in the first phase of survey work. Further work is to be determined by the client, in both scope and accessibility.

#### 1.3 The site

1.3.1 The site is located 300 m south of the village of Alderholt, 3.8 km north-west of Verwood and 16 km south of Salisbury, in the county of Dorset.

1.3.2 The site comprises an area of 130 ha of agricultural land, currently utilised for arable crop and pasture. The site is bounded by Hillbury Road to the east, Cranborne Common to the west, the village of Alderholt to the north, and woodland to the south. An existing solar farm is located in the north-west but is not within the site boundary.

1.3.3 The site undulates from 60 m above Ordnance Datum (aOD) in the north-west to 50 m aOD towards Warren Park Farm to the south. To the east of Ringwood Road, the site rises east to west from 51 m aOD to 55 m aOD.

1.3.4 The solid geology comprises Parkston Sand Member which covers the majority of the site, and the Broadstone Clay Member recorded along Ringwood Road and along the western boundary (BGS 2022). Superficial river terrace deposits of sand and gravel are recorded within three clusters spread across the site.

1.3.5 The soils underlying the site are likely to consist of stagnogleyic argillic brown earths of the 572j (Bursledon) association in the east and north-east, typical gley-podzols of the 641B (Sollom 2) association in the north-west and west and paleo-argillic podzols of the 634 (Southampton) association (SSEW SE Sheet 5 1983). Soils derived from such geological parent material have been shown to produce magnetic contrasts acceptable for the detection of archaeological remains through magnetometer survey.

# 2 ARCHAEOLOGICAL BACKGROUND

## 2.1 Introduction

2.1.1 An archaeological desk-based assessment (DBA) was prepared by Wessex Archaeology which examined the potential for the survival of buried archaeological remains within the development area and a 1 km study area (Wessex Archaeology 2022). The following background is not exhaustive but is summarised from aspects of the DBA that are considered relevant to the interpretation of the geophysical survey data.

## 2.2 Summary of the archaeological and historical resource

2.2.1 There are no designated heritage assets within the site. There are four scheduled monuments and four Grade II listed buildings within the wider area. The scheduled monuments include a deer park bank and ditch (NHLE 1002394) to the north of Alderholt, 430 m north of the site, and bowl barrows within Plumley Wood (NHLE 1018759, 1018756, 1018757) located between 230 m and 970 m to the south.

2.2.2 The listed buildings within the wider area comprise a church (NHLE 1153940) and war memorial (NHLE 1448114) at Daggons Road, 680 m north-west of the site, and two cottages (NHLE 1252911, 1350912) at Harbridge Drove and Bleak Hill respectively, located 720 m and 950 m south-east of the site.

*Mesolithic and Neolithic*

2.2.3 Alderholt, while located in Dorset, forms a promontory into Hampshire and this higher ground would have been attractive for prehistoric activity. A prehistoric axe findspot is recorded in the south of the site. A possible Mesolithic – Neolithic occupation site has been identified 980 m to the east of the site, just to the east of Lomer Lane. Various Mesolithic to Neolithic flint finds have been recorded to the east and south-east of the site.

2.2.4 Prehistoric activity has been recorded to the south, south-west, and east of the site. Small scale meso-neolithic occupation is recorded 600 m to the north-east of the site and a prehistoric enclosure 160 m to the east.

*Bronze Age*

2.2.5 There is some Bronze Age settlement activity within the wider area, including a ditch, an enclosure, and a burnt mound 460 m, 180, m and 1 km to the east of the site respectively. The wider area is rich in funerary activity represented by scheduled barrows (see Section 2.2.1) located between 230 m and 970 m to the south, in addition to multiple findspots denoting the recovery of stone axes and flints. In comparison to the preceding prehistoric periods, there is relatively little Iron Age evidence, indicating that there might have been little continued occupation within the area. A pit and a pottery scatter are located 980 m to the north-east and 765 to the east of the site respectively.

*Roman*

2.2.6 A Roman pottery scatter, a coin hoard, and a corn drier were found to the south of North End Lane between 900 m – 1 km to the south-east of the site.

*Medieval*

2.2.7 The closest settlement to the site recorded in the Domesday Book record appears to have been at Midgham, 1 km east of the site. The condition of the site at that time is unknown, however, it is possible that it was wooded at the time of the early medieval period.

2.2.8 Medieval activity is recorded within the site as a group of medieval to post-medieval pillow mounds likely in use as rabbit warrens within the south-west of the site, and historic trackways thought to be of a similar date in the west of the site. In the wider area to the north and west of the site, further medieval activity is noted in the form of trackways which appear to concentrate on the Cranborne Common area, and a deer park located 450 m to the north of the site where the scheduled deer park bank and ditch is located (NHLE 1002394).

*Post-medieval*

2.2.9 Alderholt parish was not established until the end of the 19th century and formed part of Cranborne parish until then. Based on late 19th century maps showing the extent of the village mainly centred on Sandleheath Road, 800 m north of the eastern section of the site, comprising winding lanes with isolated cottages, farmsteads, and small irregular fields surrounding it.

2.2.10 There is widespread post-medieval activity in the area. One area of ridge and furrow is located within the centre of the site just to the west of Ringwood Road. A series of post-medieval ridge and furrow areas are noted to the north, north-east, and south-west of the village.

2.2.11 The 2017 to 2018 National Mapping Programme (NMP) carried out by Cornwall Archaeological Unit sought to enhance the Dorset Historic Environment Record (DHER) by way of reviewing both aerial photographs and LiDAR data. Based on the results of the NMP captured on the DHER, the pillow mounds, trackways, and ridge and furrow were plotted from the 1940s and 1960s aerial photographs, but were no longer visible on digital data since then, presumably due to ploughing damage.

2.2.12 In addition to be above, evidence of extraction activities is also widespread around the site with the majority of such activities just to the north and north-east of the village. Some are also recorded within the site, in the south-eastern corner, in the centre just to the south of Sleepbrook Farm, and in the south. Further areas of extraction are recorded just to the south of the site. Based on the presence of pottery kilns recorded along Daggons Road (230 m north of the site) identified from historical mapping, it is suggested that the material extracted may have related to pottery production. To the north of Alderholt ran the Dorset to Salisbury rail line, which was closed in the 1960s.

## 2.3 Recent investigations in the area

2.3.1 Four previous archaeological investigations have been recorded within the wider area comprising a desk-based assessment, an evaluation, and two watching briefs. The closest of these investigations to the site was a watching brief at Warren Park Farm 135 m to the south of the site undertaken in 1995, although the results of this are currently unknown.

2.3.2 A series of watching briefs (recorded as Phases 1 – 4) have been undertaken by Wessex Archaeology in the early 2000s at Bleak Hill, 425 m south-east of the site which do not appear to be recorded on the HER (Wessex Archaeology 2002). Phase 1 recorded a single feature thought to be associated with extant field boundaries, but subsequent phases did not reveal any features, even though burnt flint and Roman pottery were recovered during Phase 2.

# 3 METHODOLOGY

## 3.1 Introduction

3.1.1 The geophysical survey was undertaken by Wessex Archaeology's in-house geophysics team over two phases between 15 – 19 August and the 17 – 19 October 2022. Field conditions were mixed but generally conducive for survey. An overall coverage of 65.9 ha was achieved with reductions attributed to crops, a campsite, slurry spreading, livestock and areas of overgrown vegetation.

3.1.2 The methods and standards employed throughout the geophysical survey conform to current best practice, and guidance outlined by the Chartered Institute for Archaeologists' (CIfA 2014) and European Archaeologiae Consilium (Schmidt *et al.* 2015).

## 3.2 Aims and objectives

3.2.1 The aims of the survey comprise the following:

- To determine, as far as is reasonably possible, the nature of the detectable archaeological resource within a specified area using appropriate methods and practices; and
- To inform either the scope and nature of any further archaeological work that may be required; or the formation of a mitigation strategy (to offset the impact of the development on the archaeological resource); or a management strategy.

3.2.2 In order to achieve the above aims, the objectives of the geophysical survey are:

- To conduct a geophysical survey covering as much of the specified area as possible, allowing for on-site obstructions;
- To clarify the presence/absence of anomalies of archaeological potential; and
- Where possible, to determine the general nature of any anomalies of archaeological potential.

## 3.3 Fieldwork methodology

3.3.1 The cart-based gradiometer system used a Leica Captivate RTK GNSS instrument, which receives corrections from a network of reference stations operated by the Ordnance Survey (OS) and Leica Geosystems. Such instruments allow positions to be determined with a precision of 0.02 m in real-time and therefore exceeds European Archaeologiae Consilium recommendations (Schmidt *et al.* 2015).

3.3.2 The detailed gradiometer survey was undertaken using four SenSys FGM650/3 magnetic gradiometers spaced at 1 m intervals and mounted on a non-magnetic cart both hand-pushed and towed by an ATV. Data were collected with an effective sensitivity of ±8 µT over ±1000 nT range at a rate of 100 Hz, producing intervals of 0.02 m along transects spaced 4 m apart.

## 3.4 Data processing

3.4.1 Data from the survey were subjected to minimal correction processes. These comprise a 'Destripe' function (±5 nT thresholds), applied to correct for any variation between the sensors, and an interpolation used to grid the data and discard overlaps where transects have been collected too close together.

3.4.2 Further details of the geophysical and survey equipment, methods and processing are described in **Appendix 1**.

# 4 GEOPHYSICAL SURVEY RESULTS AND INTERPRETATION

## 4.1 Introduction

4.1.1 The detailed gradiometer survey has identified magnetic anomalies across the site, suggestive of possible archaeological pits, enclosures and pillow mounds and trackways. Ridge and furrow, old field boundaries, modern ploughing, natural variations in the underlying deposits, drains, buried services and magnetic disturbance has also been identified. Results are presented as a series of greyscale plots and archaeological interpretations at a scale of 1:1,500 (**Figures 5** to **30**). The data are displayed at -2 nT (white) to +3 nT (black) for the greyscale images.

4.1.2 The interpretation of the datasets highlights the presence of possible archaeological anomalies, ferrous responses, natural variations and magnetic trends (**Figure 4**, **6**, **8**, **10**, **12**, **14**, **16**, **18**, **20**, **22**, **24**, **26**, **28**, and **30**). Full definitions of the interpretation terms used in this report are provided in **Appendix 2**.

4.1.3 Numerous ferrous anomalies are visible throughout the dataset. These are presumed to be modern in provenance and are not referred to, unless considered relevant to the archaeological interpretation.

4.1.4 It should be noted that small, weakly magnetised features may produce responses that are below the detection threshold of magnetometers. It may therefore be the case that more archaeological features may be present than have been identified through geophysical survey.

4.1.5 Gradiometer survey may not detect all services present on site. This report and accompanying illustrations should not be used as the sole source for service locations and appropriate equipment (e.g., CAT and Genny) should be used to confirm the location of buried services before any trenches are opened on site.

## 4.2 Gradiometer survey results and interpretation

4.2.1 A series of weak positive linear anomalies are evident in LP_034, LP_035, and LP_037 in the south-eastern portion of the site, at **4000** to **4004** (**Fig. 20**, **22**, and **28**). All of these anomalies are indicative of ditch features and have some potential to relate to archaeological activity. However, their weak nature and the variable geological responses in the area make more confident interpretation difficult.

4.2.2 The anomalies at **4000** (**Fig. 22** and **28**) cover an area of 75 m east – west by 30 m north – south and comprise several 1 m – 1.5 m wide linear and curvilinear anomalies. There is no clear pattern or form to this collection of anomalies, suggesting they are most likely natural.

4.2.3 Immediately north of the anomalies at **4000**, is an area covering 84 m south-east to north-west by 66 m north-east to south-west at **4001** (**Fig. 22** and **28**). These anomalies do appear to have more of a pattern than those at **4000**, with 1 m – 1.5 m wide linear and rectilinear anomalies identified. This provides limited evidence for boundary features of an unknown date.

4.2.4 To the west of the concentration of anomalies at **4000** and **4001** are more isolated anomalies at **4002** – **4004**. The anomaly at **4002** (**Fig. 22** and **28**) is rectilinear in form, 48 m east – west by 22 m north – south, with a break in the north-eastern corner. To the south-west of **4002**, is a weak curvilinear anomaly (**4003**) 30 m north – south by 24 m east – west. Both of these anomalies are 2 m wide and could relate to enclosure features. However, they could equally relate to natural features or modern agricultural activity.

4.2.5 A further weakly positive curvilinear anomaly is present in the south-west of LP_34 at **4004** (**Fig. 20** and **22**). This appears to form a 14 m square, but the northern and eastern sides are not fully realised. While it is possible this relates to a small archaeological enclosure, its isolation suggests an agricultural or natural origin is more likely.

4.2.6 As well as the linear and curvilinear anomalies at **4000** – **4004**, there are numerous positive discrete anomalies in the area. These have potential to relate to archaeological pit features. However, the number of similar anomalies across the rest of the site suggests they are natural and consistent with natural pitting in the recorded sand and gravel deposits. The magnetically stronger anomalies have been identified as having a higher potential to relate to archaeological activity.

4.2.7 A similar arrangement of weak positive linear and stronger positive discrete anomalies has been identified in LP_011b in the south-western portion of the site, at **4005** and **4006** (**Fig. 16** and **18**). The linear anomalies at **4005** cover an area of 28 m east – west by 35 m north – south. The partial rectilinear anomaly at **4006** is 14 m north – south by 6 m east – west. The individual anomalies are between 1 m and 2 m wide. As with those at **4000** to **4004**, these linear anomalies are accompanied by a spread of discrete, pit-like anomalies. While this may represent an area of archaeological activity, possibly relating to enclosures or field boundaries, it could equally relate to modern agriculture or the variable geological deposits across the site.

4.2.8 Two weak positive parallel linear anomalies, oriented east-north-east to west-south-west have been identified in the west of LP_001, at **4007** (**Figure 6**). They are 31 m long, 1.5 m wide, and are spaced 4 m apart. They are located 10 m to the north-east of two weaker and smaller positive parallel linear anomalies within the same field, at **4008**. These anomalies are typical of cut features, such as ditches. Medieval trackways have been recorded 180 m to the north-west of these anomalies, and so it is possible they are related to these features. However, the area was used for plantation until at least 1955 – 1961 (OS One Inch Seventh Series 1955 - 1961), so these features could also pertain to previous forestry practices.

4.2.9 A weak positive sub-annular anomaly has been detected in the east of LP_001, at **4009** (**Figure 6**). It has a diameter of 7 m, and a break on the north-eastern side. There is a discrete strong positive anomaly at its centre. It is possible this is of archaeological origin relating to a ring ditch with a central pit. However, it could equally relate to forestry or agricultural practices or be caused by natural variation in the underlying soils.

4.2.10 Numerous discrete positive anomalies have been identified across the site, with examples at **4010** and **4011** (**Fig. 20, 22, 26,** and **28**). These anomalies are typically 1 m to 2 m in diameter and may indicate archaeological pits, such as refuse pits or extraction activity. However, the high number of these across the is suggests they most likely relate to natural pits and undulations in the sand and gravel deposits recorded within the site.

4.2.11 In the centre west of the site, an area of negative linear and curvilinear anomalies have been identified across LP_010, LP_011, LP_015, and LP_016 at **4012** – **4015** (**Fig. 16** and **18**). These cover an area of 280 m by 225 m and are arranged in a honeycomb fashion. These anomalies are likely associated with geomorphological processes, namely the drainage through the sands and gravels related to a wetland area, characterised by the drainage ditch forming the boundary between LP_010, LP_011, and LP_015.

4.2.12 In the western portion of the site, two weak positive linear anomalies have been identified at **4016** and **4017** (**Figure 16**)**.** The anomaly at **4016** is 78 m long north-east to south-west, and 5 m wide. The anomaly at **4017** is 97 m long north – south and 2 m to 5 m wide. These anomalies correspond to a former field boundary recorded in the 1899 OS map, which is present until the 1949 – 1971 OS map.

4.2.13 In the eastern portion of the site, another two weak positive linear anomalies have been identified at **4018** and **4019** (**Figure 26**). The anomaly at **4018** is 77 m long east to west, before turning 90 degrees to the south and continuing for a further 68 m. The anomaly at **4019** is 32 m long and aligns with the southern portion of **4018**. Both anomalies are between 3 m and 4 m wide. These anomalies correspond to a former field boundary, first recorded in the 1888 OS map.

4.2.14 Parallel positive and negative linear anomalies are evident in the eastern portion of the site, at **4020** (**Fig. 26** and **28**). These anomalies are spaced between 6 m to 10 m, on an east-north-east to west-south-west orientation. The slightly curved nature of the anomalies suggests they relate to medieval ridge and furrow cultivation, which is recorded in the surrounding area.

4.2.15 Various areas of strong magnetic disturbance have been detected across the site (**4021** to **4023**). These have likely been caused by forestry clearance (**4021**; **Figure 12**), general ground disturbance at field entrances, potential made ground (**4022**; **Fig. 10** and **18**), and, in the north of the site, the location of a former quarry and subsequent construction of housing (**4023**; **Figure 6**).

4.2.16 Numerous parallel, narrowly spaced, weakly positive, linear anomalies have been detected in the eastern portion of the site across LP_034 (**Figure 32**). These follow modern cultivation trends (Google Earth, 2022) and are thought to relate to modern ploughing.

4.2.17 Amorphous areas of enhanced magnetic response have been detected across the site and are considered to represent variations in the underlying geology. In the northern portion of the site, these appear as enhanced positive bands running north-west to south-east across LP_001 at **4024** (**Figure 6**). The anomalies across the majority of the rest of the site however, appear as mottled variations consisting of many small discrete positive and negative anomalies likely representative of variations in the underlying river terrace deposits of sand and gravel (BGS 2022).

4.2.18 Numerous linear trends have been identified in the data (**Fig. 6**, **8**, **10**, **12**, **16**, **18**, **20**, **22**, **24**, **26**, and **28**). These trends lack both strength in magnetic response and associated contextual information to make a confident interpretation. However, given the proximity of drains, cultivation, and movement of livestock in the area, it is likely they are associated with these activities. Without further investigation however, an archaeological origin cannot be ruled out.

4.2.19 Several strong dipolar linear anomalies have been detected within the site (**4025** to **4034**). These are indicative of modern services.

4.2.20 In the centre of LP_019, a magnetically strong negative anomaly with four discrete positive anomalies has been identified at **4035**. This arrangement of the anomalies is indicative of a former pylon base.

## 5 DISCUSSION

5.1.1 The gradiometer survey has not identified any anomalies that can confidently be interpreted as archaeology. However, several possible archaeological anomalies have been identified across the site.

5.1.2 Two concentrations of weak ditch-like anomalies have been identified in the south of the site. Given the known features recorded in the surrounding area, it is possible that these relate to enclosures or boundaries dating anywhere from the Bronze Age through to the

medieval period. However, these anomalies are noted in areas of variable geological deposits and could relate to natural undulations or modern agricultural activity.

5.1.3 In the north of the site, there is possible evidence for a medieval trackway, consistent with other features in the surrounding area. However, this is recorded in an area of former plantation and could relate to the previous forestry activity.

5.1.4 Numerous pit-like features have been identified across the site. While these have the potential to relate to archaeological pits, such as refuse or extraction pits, they are considered more likely to relate to natural pits and undulations in the sand and gravel deposits. However, given the surrounding prehistoric find spots, enclosures, and barrows recorded in the surrounding area, the possibility for archaeological finds within natural pits cannot be discounted.

5.1.5 The site is known to have a mostly agricultural past since at least the post-medieval period. This is corroborated by the identification of two former field boundaries and areas of ridge and furrow cultivation. There is also evidence of more modern ploughing activity.

5.1.6 In the centre of the site, adjacent to an extant drainage channel, are large areas of honeycomb anomalies. These are likely associated with variation in geology, such as drainage through the underlying sands and gravels.

5.1.7 Several areas of increased magnetic response are apparent across the site. These likely relate to the infilling of an old quarry, with subsequent construction of housing, field access points, and areas of disturbed ground associated with former plantations.

5.1.8 The remaining anomalies are thought to be modern, relating to modern services and drains.

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Hampshire Historic Environment Record (HHER)

National Library of Scotland (NLS) https://maps.nls.uk/geo/explore/ (accessed 08/2022)

# APPENDICES

## Appendix 1 Survey Equipment and Data Processing

The magnetic data for this project were acquired using a non-magnetic cart fitted with four SenSys FGM650/3 magnetic gradiometers. The instrument has four sensor assemblies fixed horizontally 1 m apart allowing four traverses to be recorded simultaneously. Each sensor contains two fluxgate magnetometers arranged vertically with a 0.6 m separation and measures the difference between the vertical components of the total magnetic field within each sensor array. This arrangement of magnetometers suppresses any diurnal or low frequency effects.

The gradiometers have an effective resolution of ±8 µT over ±1000 nT range. All of the data are then relayed to a CS35 tablet, running the MONMX program, which is used to record the survey data from the array of FMG650/3 probes at a rate of 20 Hz. The program also receives measurements from a GPS system, which is fixed to the cart at a measured distance from the sensors, providing real time locational data for each data point.

The cart-based system relies upon accurate GPS location data which is collected using a Leica Captivate system with rover and base station. This receives corrections from a network of reference stations operated by the Ordnance Survey and Leica Geosystems, allowing positions to be determined with a precision of 0.02m in real-time and therefore exceed the level of accuracy recommended by European Archaeologiae Consilium recommendations (Schmidt *et al.* 2015) for geophysical surveys.

Data may be collected with a higher sample density where complex archaeological anomalies are encountered, to aid the detection and characterisation of small and ephemeral features. Data may be collected at up to 0.01 m intervals along traverses spaced up to 0.25m apart.

### Post-processing

The magnetic data collected during the survey is downloaded from the system for processing and analysis using both commercial and in-house software. This software allows for both the data and the images to be processed in order to enhance the results for analysis; however, it should be noted that minimal data processing is conducted so as not to distort the anomalies.

Typical data and image processing steps may include:

- GPS DeStripe – Determines the median of each transect and then subtracts that value from each datapoint in the transect within the defined window. May be used to remove the striping effect seen within a survey caused by directional effects, drift, etc.

- Discard Overlaps - Intended to eliminate a track(s) that have been collected too close to one another. Without this, the results of the interpolation process can be distorted as it tries to accommodate very close points with potentially differing values.

- GPS Base Interpolation – Sets the X & Y interval of the interpolated data and the track radius (area around each datapoint that is included in the interpolated result).

Typical displays of the data used during processing and analysis:

- Greyscale – Presents the data in plan view using a greyscale to indicate the relative strength of the signal at each measurement point. These plots can be produced in colour to highlight certain features but generally greyscale plots are used during analysis of the data.

- XY Plot – Presents the data as a trace or graph line for each traverse. Each traverse is displaced down the image to produce a stacked profile effect. This type of image is useful as it shows the full range of individual anomalies.

## Appendix 2 Geophysical interpretation

The interpretation methodology used by Wessex Archaeology separates the anomalies into four main categories: archaeological, modern, agricultural, and uncertain origin/geological.

The archaeological category is used for features when the form, nature and pattern of the anomaly are indicative of archaeological material. Further sources of information such as aerial photographs may also have been incorporated in providing the final interpretation. This category is further sub-divided into three groups, implying a decreasing level of confidence:

- Archaeology – used when there is a clear geophysical response and anthropogenic pattern.
- Possible archaeology – used for features which give a response, but which form no discernible pattern or trend.

The modern category is used for anomalies that are presumed to be relatively modern in date:

- Ferrous – used for responses caused by ferrous material. These anomalies are likely to be of modern origin.
- Modern service – used for responses considered relating to cables and pipes; most are composed of ferrous/ceramic material although services made from non-magnetic material can sometimes be observed.

The agricultural category is used for the following:

- Former field boundaries – used for ditch sections that correspond to the position of boundaries marked on earlier mapping.
- Ridge and furrow – used for broad and diffuse linear anomalies that are considered to indicate areas of former ridge and furrow.
- Ploughing – used for well-defined narrow linear responses, usually aligned parallel to existing field boundaries.
- Drainage – used to define the course of ceramic field drains that are visible in the data as a series of repeating bipolar (black and white) responses.

The uncertain origin/geological category is used for features when the form, nature and pattern of the anomaly are not sufficient to warrant a classification as an archaeological feature. This category is further sub-divided into:

- Increased magnetic response – used for areas dominated by indistinct anomalies which may have some archaeological potential.
- Trend – used for low amplitude or indistinct linear anomalies.
- Superficial geology – used for diffuse edged spreads considered to relate to shallow geological deposits. They can be distinguished as areas of positive, negative, or broad bipolar (positive and negative) anomalies.

# Appendix 3 OASIS form

## Project Details:

| | | | | | |
|---|---|---|---|---|---|
| **Project name** | | Land at Alderholt Common, Alderholt, Dorset: Detailed Gradiometer Survey Report | | | |
| **Type of project** | | Detailed gradiometer survey (Field evaluation) | | | |
| **Project description** | | Potential archaeological activity has been identified across the site, with concentrations in the eastern, southern, and north-western portions of the site. The archaeological activity is widely related to linear anomalies with surrounding pits. There is recorded medieval trackways and agricultural activity recorded in the landscape of which this may be a part. The linear anomalies suggest trackway, enclosure, or boundary features, with the pits associated with possible extraction activity. The features are both too weak and too partial in nature to determine a more confident date or interpretation. It is possible that these features, both linear and pits, are associated with more modern agricultural activity and/or variation in the underlying sands and gravels which make up the local geology.<br>Discrete anomalies have been detected across the site. Many of these coincide with areas of natural variations in the underlying deposits and it is likely these represent pits and are the result of small pockets of enhanced natural material within a pitted, less enhanced, deposit. However, given the surrounding prehistoric find spots, enclosures, and barrows recorded in the Dorset HER, an archaeological origin such as settlement and/or extraction activity cannot be ruled out.<br>Two former field boundaries have been identified, one in the west and one in the east of the site. These correspond with known boundaries noted on historic maps.<br>Ridge and furrow ploughing has been identified in the eastern portion of the site. The regular spacing and straight lines indicate that it may relate to post-medieval ploughing, corroborated by ridge and furrow recorded to the west of the site, close to Warren Farm.<br>In the centre of the site, adjacent to an extant drainage channel, are large amorphous areas consisting of discrete positive anomalies, within which are numerous linear and curvilinear negative anomalies. These form a regular honeycomb pattern in the north-west, and a less regular pattern in the north-east and south. These anomalies are likely associated with variation in geology, such as drainage through the underlying sands and gravels.<br>Several areas of increased magnetic response are apparent across the site. These likely relate to the infilling of an old quarry, with subsequent construction of housing, field access points, and areas of disturbed ground associated with former plantations.<br>The remaining anomalies are thought to be modern which relate to modern services and drains. | | |
| **Project dates** | | **Start:** 15-08-2022 | | **End:** 19-08-2022 | |
| **Previous work** | | DBA | | | |
| **Future work** | | Unknown | | | |
| **Project Code:** | 260451 | **HER event no.** | If relevant | **OASIS form ID:** | wessexar1-509461 |
| | | **NMR no.** | N/A | | |
| | | **SM no.** | N/A | | |
| **Planning Application Ref.** | | N/A | | | |
| **Site Status** | | None | | | |
| **Land use** | | Agricultural | | | |
| **Monument type** | | N/A | **Period** | N/A | |

**Project Location:**

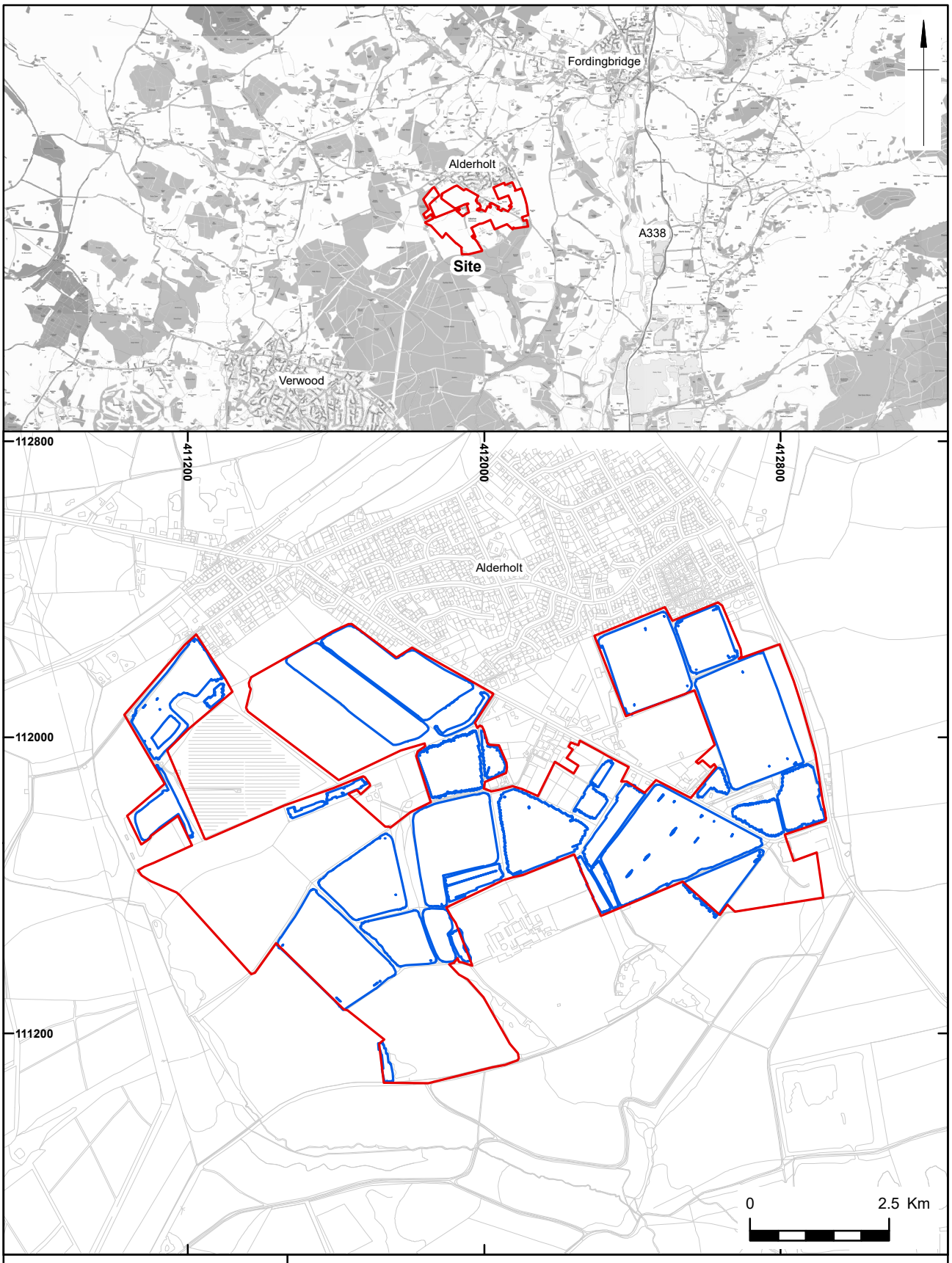
| | | | | | |
|---|---|---|---|---|---|
| **Site Address** | Ringwood Road, Alderholt | | | **Postcode** | SP6 3DF |
| **County** | Dorset | **District** | Dorset | **Parish** | Alderholt |
| **Study Area** | 130 ha / 61.9 ha | **Height OD** | 50 – 60 m aOD | **NGR** | SU 12018 11797 |

**Project Creators:**

| | | | |
|---|---|---|---|
| **Name of Organisation** | Wessex Archaeology | | |
| **Project brief originator** | Intelligent Land Ltd. | **Project design originator** | Intelligent Land Ltd. |
| **Project Manager** | Tom Richardson | **Project Supervisor** | Pamela Warne |
| **Sponsor or funding body** | Intelligent Land Ltd. | **Type of Sponsor** | Private |

**Project Archive and Bibliography:**

| | | | | | |
|---|---|---|---|---|---|
| **Physical archive** | N/A | **Digital Archive** | Geophysical survey and report | **Paper Archive** | N/A |
| **Report title** | Land at Alderholt Common, Alderholt, Dorset | | | **Date** | 2022 |
| **Author** | Wessex Archaeology | **Description** | Unpublished report | **Report ref.** | 260451.03 |




Site boundary

Detailed survey extents

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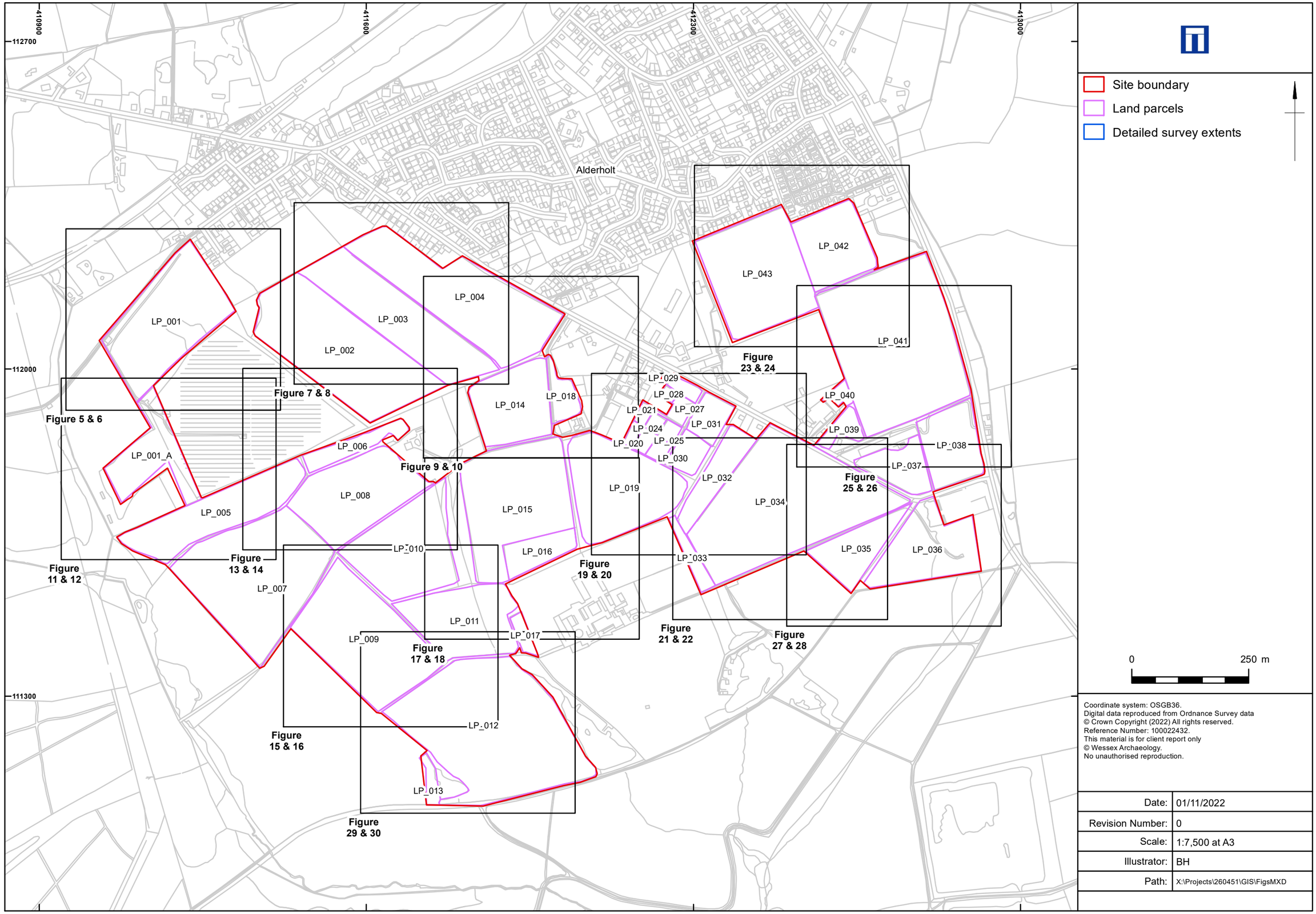
| Path: | X:\Projects\260451\GIS\FigsMXD | | |

Site location and survey extent

Figure 1

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| Illustrator: | BH |
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Detailed gradiometer survey results: figure layout

Figure 2

410900
411600
412300
413000
112700
112000
111300
Alderholt

Site boundary
Detailed survey extents

-2 nT
3 nT
0
250 m



| | |
|---|---|
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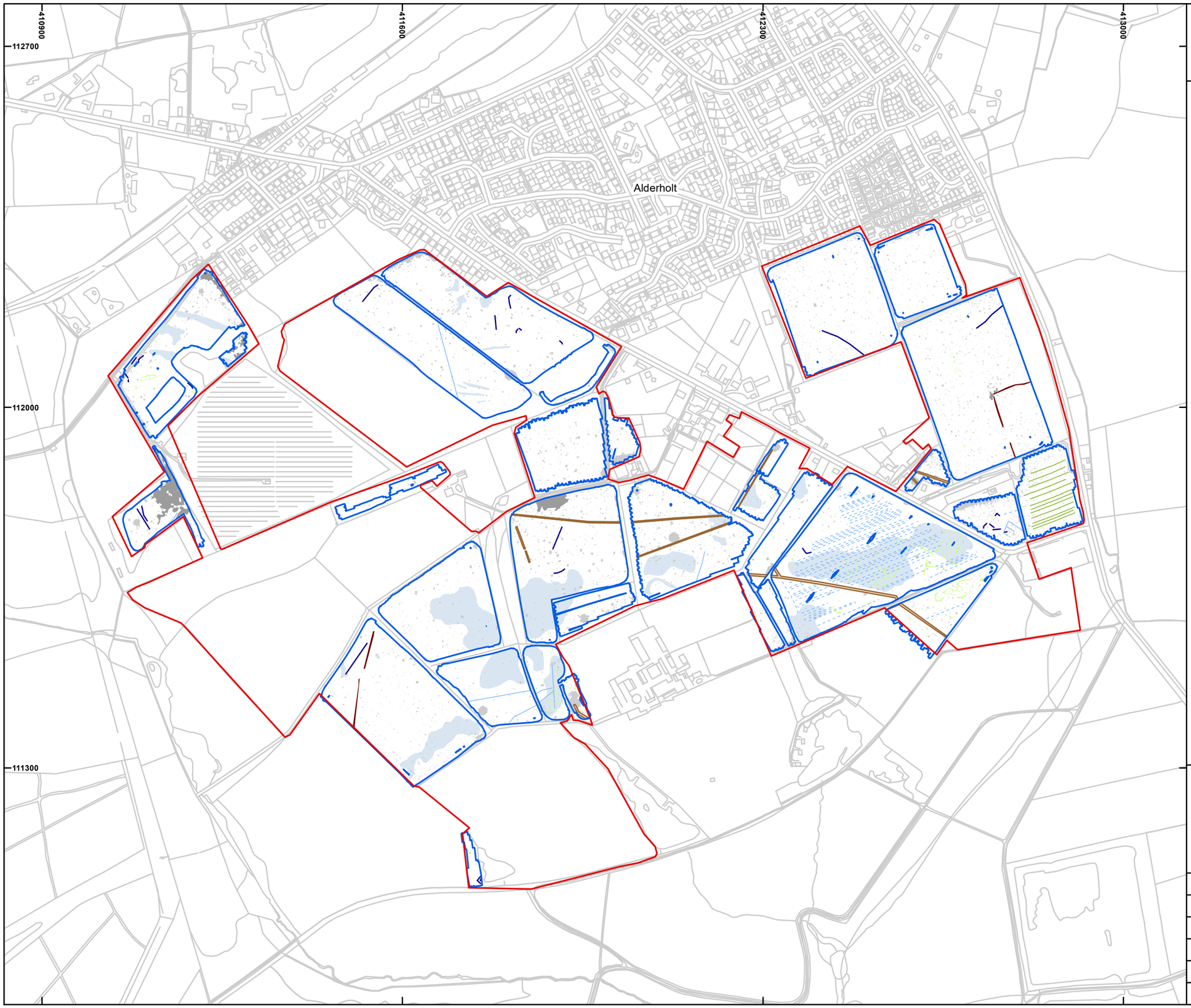
| Revision Number: | 0 |
| Scale: | 1:7,500 at A3 |
| Illustrator: | BH |
| Path: | X:\Projects\260451\GIS\FigsMXD |

Detailed gradiometer survey results: overall greyscale plot

Figure 3




Site boundary
Detailed survey extents
Possible archaeology
Former field boundary
Ridge and furrow
Increased magnetic response
Ploughing
Drain
Superficial geology
Trend
Ferrous
Modern service

0 250 m



| | |
|---|---|
| Date: | 01/11/2022 |
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Detailed gradiometer survey results: overall interpretation

Figure 4

411000

411150

411300

112200

112050

Site boundary

Land parcels

Detailed survey extents

-2 nT

3 nT

0

50 m



| | |
|---|---|
| Date: | 01/11/2022 |
| Revision Number: | 0 |
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| Illustrator: | BH |
| Path: | X:\Projects\260451\GIS\FigsMXD |

Detailed gradiometer survey results: greyscale plot

Figure 5

411000
411150
411300
112200
112050
4023
4024
4007
4008
4009
Site boundary
Land parcels
Detailed survey extents
Possible archaeology
Former field boundary
Ridge and furrow
Increased magnetic response
Ploughing
Drain
Superficial geology
Trend
Ferrous
Modern service
0
50 m


| | |
|---|---|
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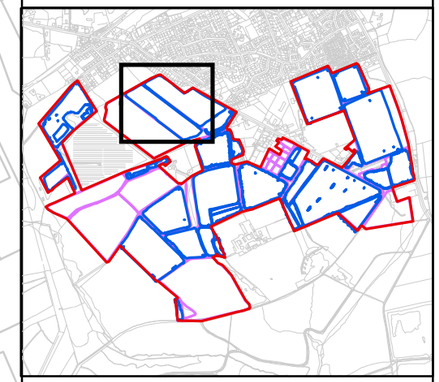
Detailed gradiometer survey results: interpretation

Figure 6

411450
411600
411750
411900
112200
112050



Site boundary
Land parcels
Detailed survey extents

-2 nT
3 nT

0
50 m



| | |
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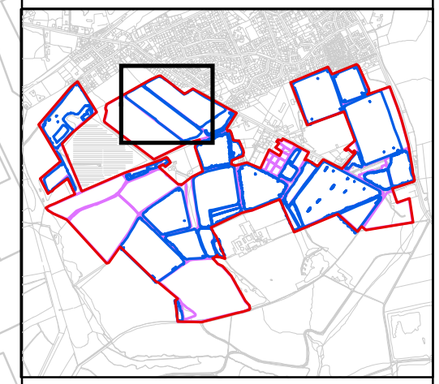
| Date: | 01/11/2022 |
| Revision Number: | 0 |
| Scale: | 1:1,500 at A3 |
| Illustrator: | BH |
| Path: | X:\Projects\260451\GIS\FigsMXD |

Detailed gradiometer survey results: greyscale plot

Figure 7

411450
411600
411750
411900
112200
112050



Site boundary
Land parcels
Detailed survey extents
Possible archaeology
Former field boundary
Ridge and furrow
Increased magnetic response
Ploughing
Drain
Superficial geology
Trend
Ferrous
Modern service

0 50 m



| | |
|---|---|
| Date: | 01/11/2022 |
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| Path: | X:\Projects\260451\GIS\FigsMXD |

Detailed gradiometer survey results: interpretation

Figure 8

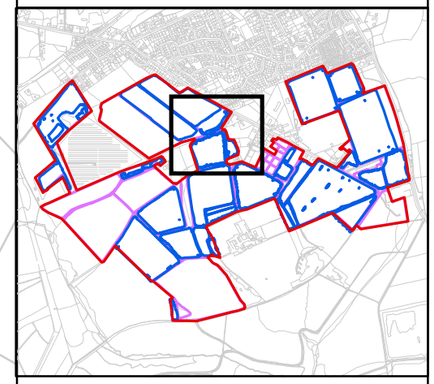
411750

411900

412050

112050

111900



Site boundary

Land parcels

Detailed survey extents

-2 nT

3 nT

0

50 m



| | |
|---|---|
| Date: | 01/11/2022 |
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| Illustrator: | BH |
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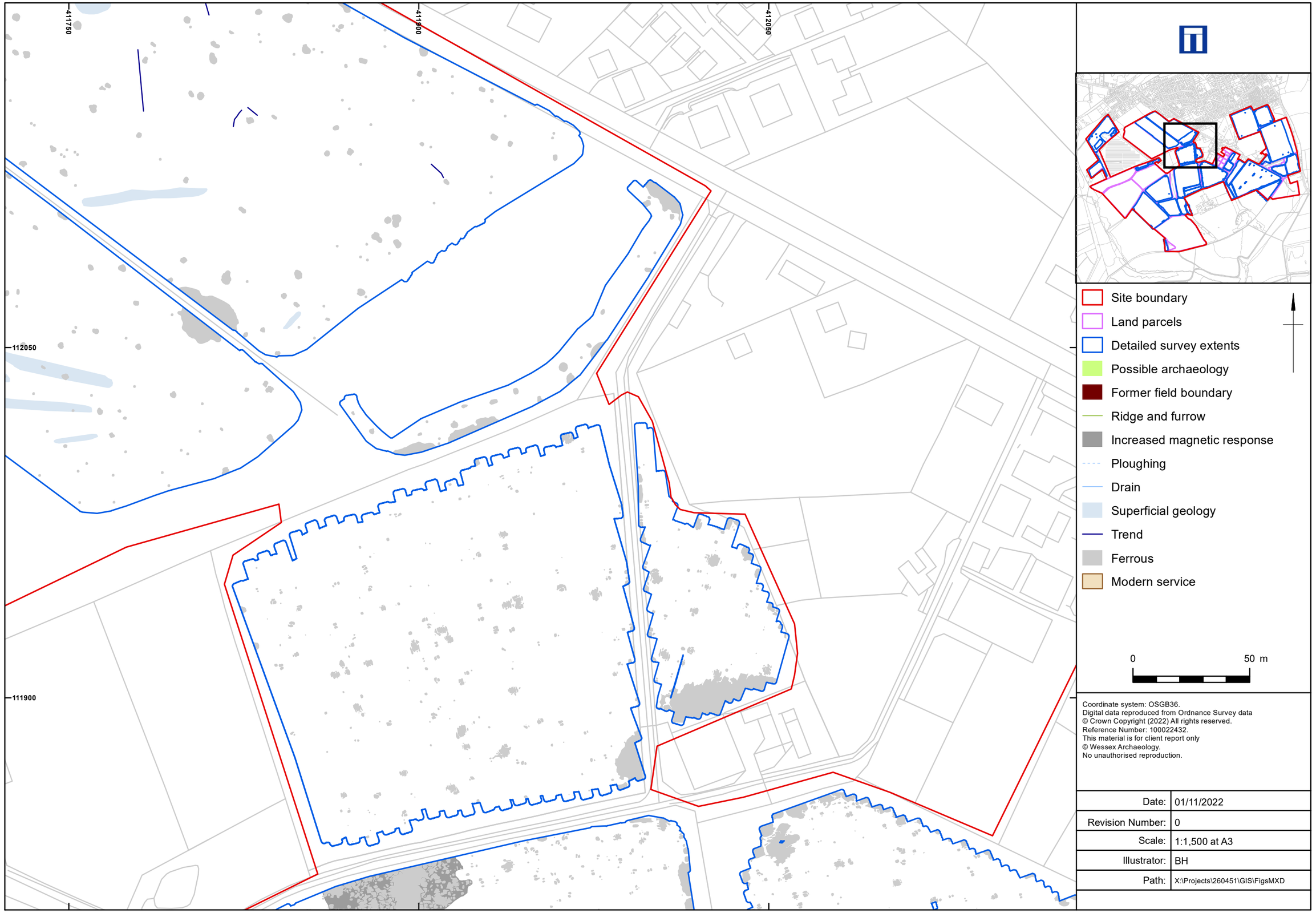
Detailed gradiometer survey results: greyscale plot

Figure 9



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Detailed gradiometer survey results: interpretation

Figure 10

411000

411150

411300

111900

111750

111600

Site boundary

Land parcels

Detailed survey extents

-2 nT

3 nT

0

50 m



| | |
|---|---|
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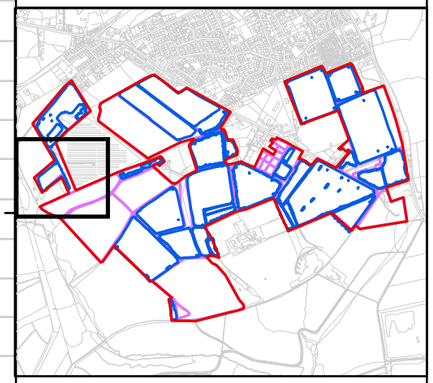
Detailed gradiometer survey results: greyscale plot

Figure 11

411000
411150
411300
111900
111750
111600
4021



Site boundary
Land parcels
Detailed survey extents
Possible archaeology
Former field boundary
Ridge and furrow
Increased magnetic response
Ploughing
Drain
Superficial geology
Trend
Ferrous
Modern service

0 50 m



| | |
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Detailed gradiometer survey results: interpretation

Figure 12

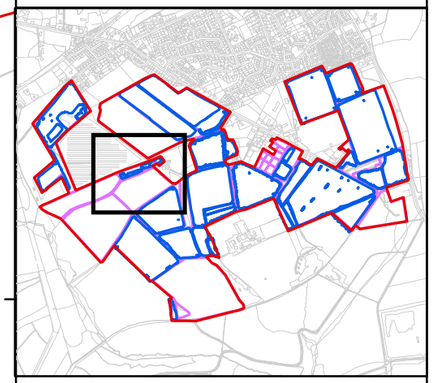
411450

411600

411750

111900

111750



Site boundary

Land parcels

Detailed survey extents

-2 nT

3 nT

0

50 m



| | |
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Detailed gradiometer survey results: greyscale plot

Figure 13

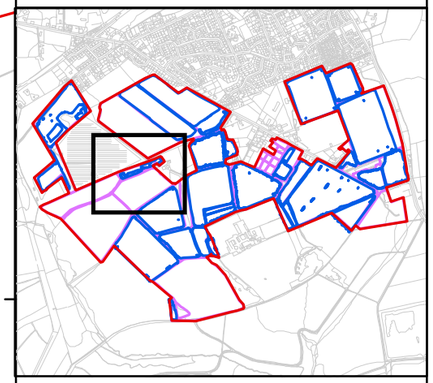
411450

411600

411750

111900

111750



Site boundary

Land parcels

Detailed survey extents

Possible archaeology

Former field boundary

Ridge and furrow

Increased magnetic response

Ploughing

Drain

Superficial geology

Trend

Ferrous

Modern service

0 50 m



| | |
|---|---|
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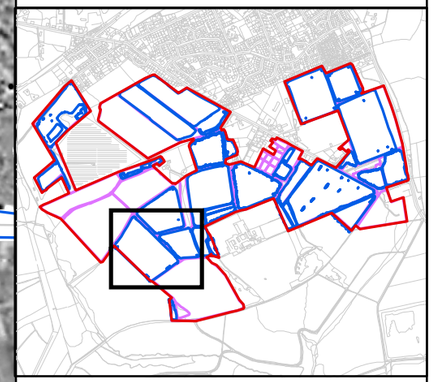
Detailed gradiometer survey results: interpretation

Figure 14

411450
411600
411750
111600
111450
111300



Site boundary
Land parcels
Detailed survey extents

-2 nT
3 nT

0
50 m



| | |
|---|---|
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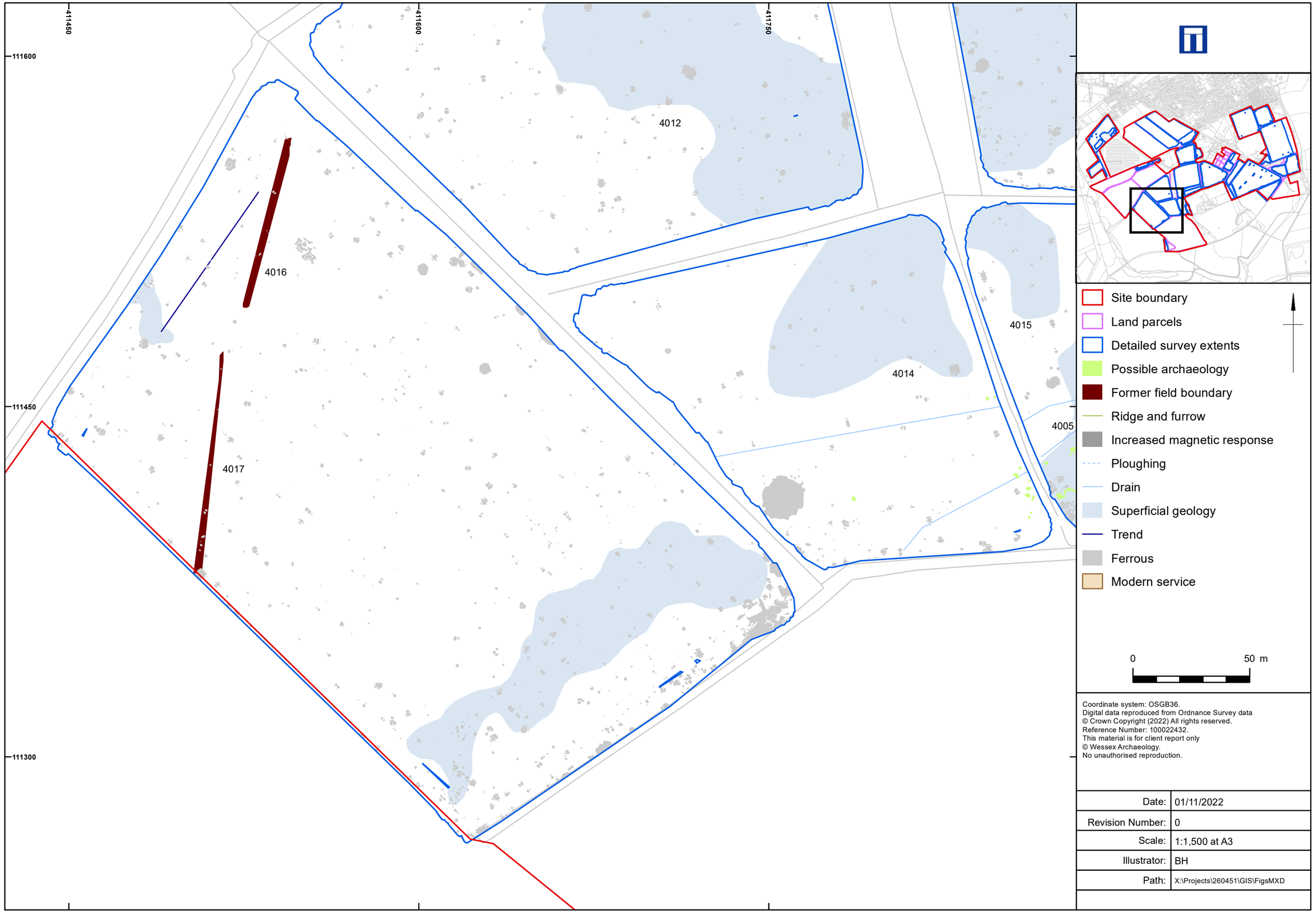
Detailed gradiometer survey results: greyscale plot

Figure 15

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Detailed gradiometer survey results: interpretation

Figure 16

411750

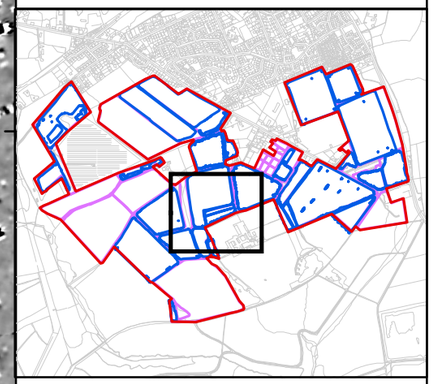
412000

412050

111750

111600

111450



Site boundary

Land parcels

Detailed survey extents

-2 nT

3 nT

0

50 m



| | |
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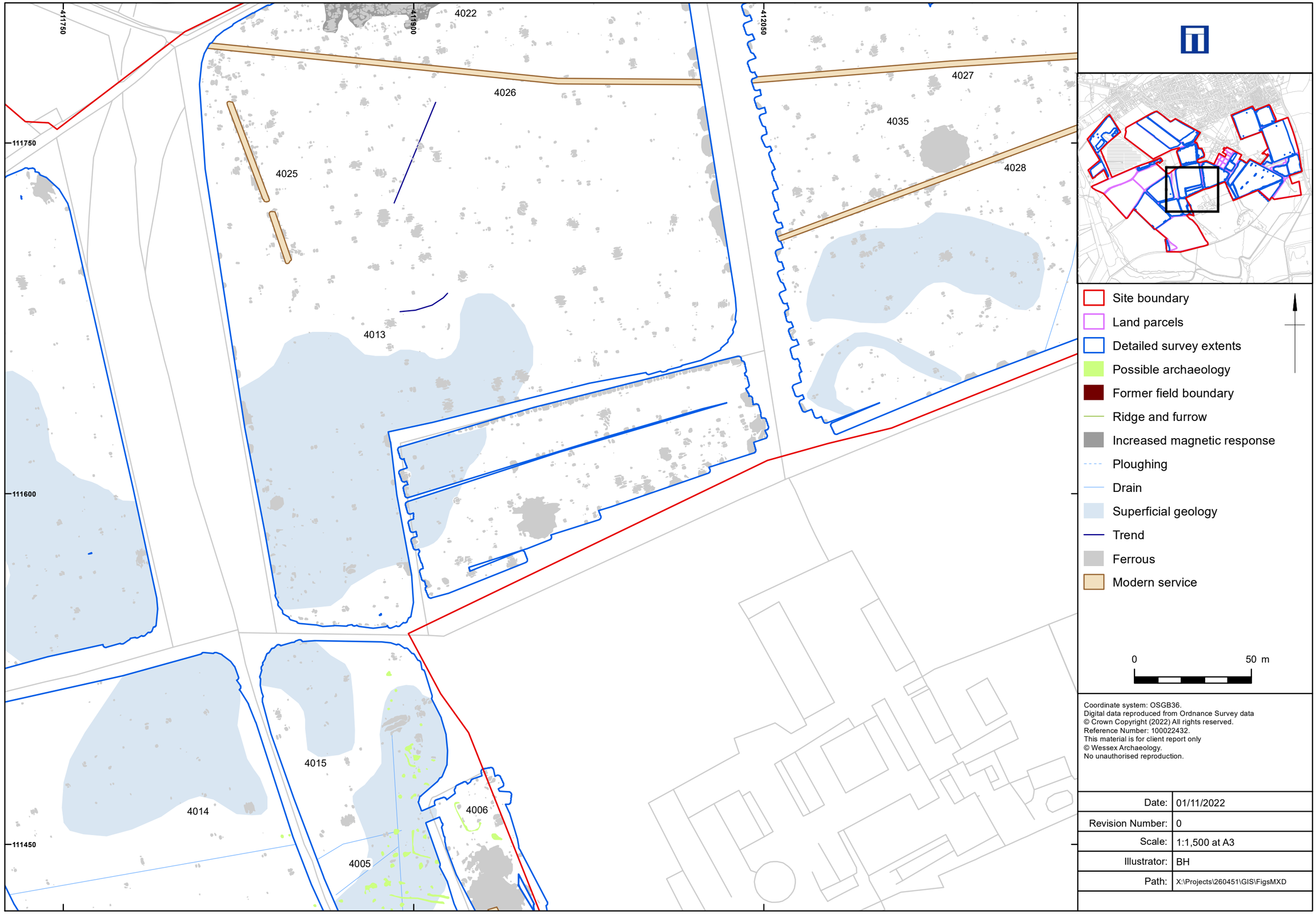
Detailed gradiometer survey results: greyscale plot

Figure 17



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Detailed gradiometer survey results: interpretation

Figure 18

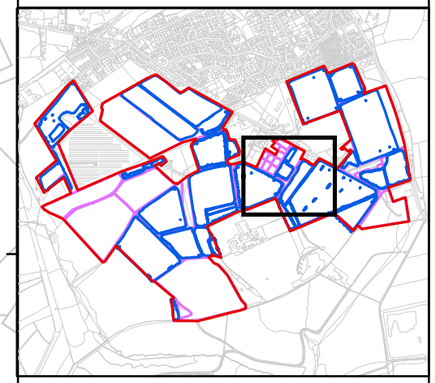
412200

412350

412500

111900

111750



Site boundary

Land parcels

Detailed survey extents

-2 nT

3 nT

0

50 m



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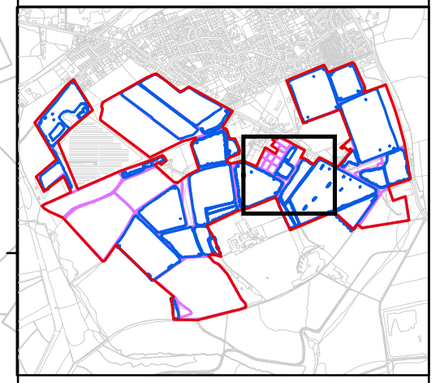
Detailed gradiometer survey results: greyscale plot

Figure 19

412200
412350
412500
111900
111750
4029
4027
4035
4028
4030
4010
4031
4003
4004



Site boundary
Land parcels
Detailed survey extents
Possible archaeology
Former field boundary
Ridge and furrow
Increased magnetic response
Ploughing
Drain
Superficial geology
Trend
Ferrous
Modern service

0 50 m



| | |
|---|---|
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Detailed gradiometer survey results: interpretation

Figure 20

412350
412500
412650
111750
111600

Site boundary
Land parcels
Detailed survey extents

-2 nT
3 nT
0
50 m



| | |
|---|---|
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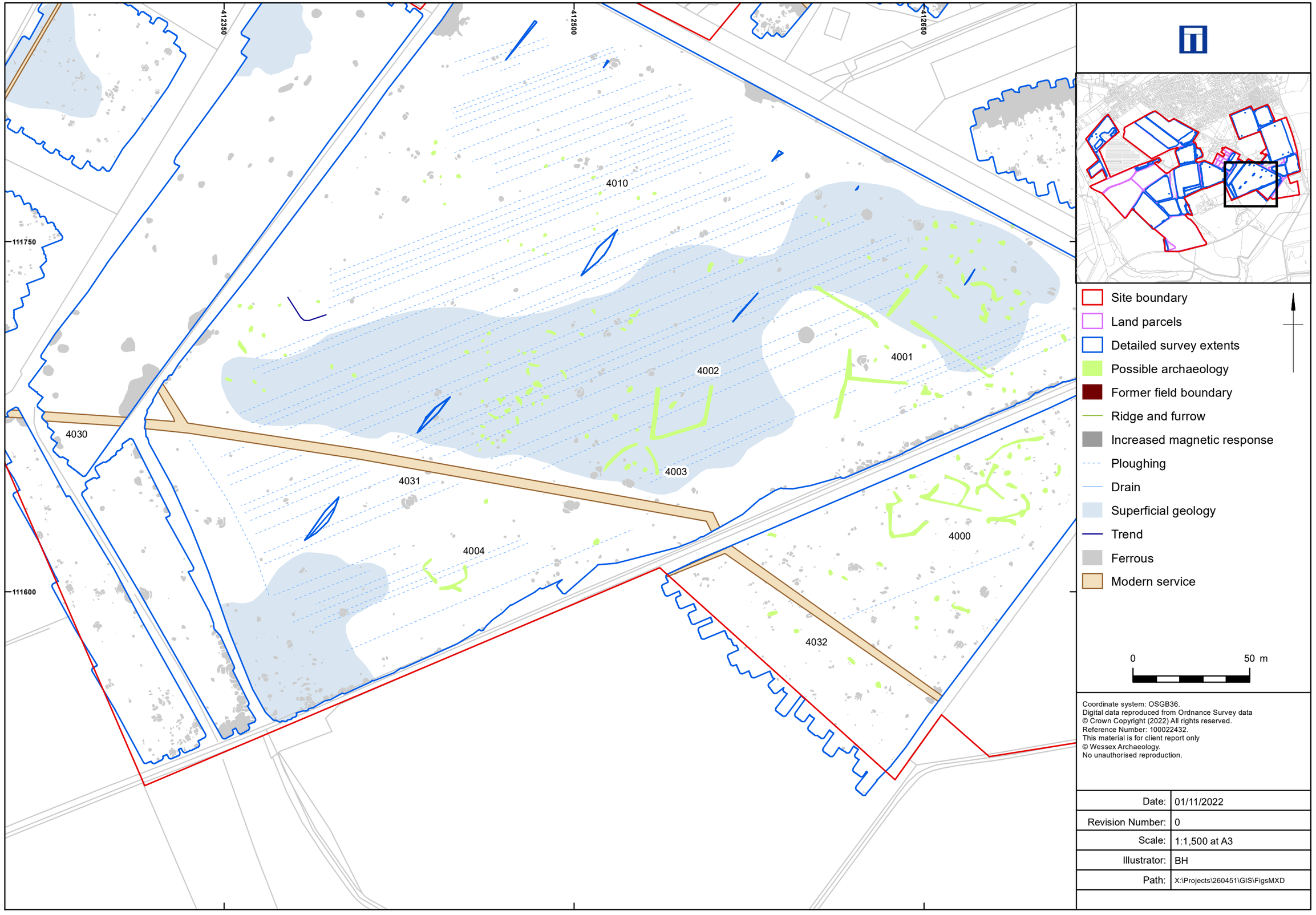
Detailed gradiometer survey results: greyscale plot

Figure 21

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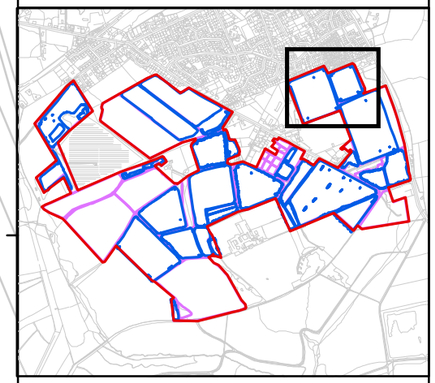
Detailed gradiometer survey results: interpretation

Figure 22

412350
412500
412650
112350
112200
112050



Site boundary
Land parcels
Detailed survey extents

-2 nT
3 nT

0
50 m



| | |
|---|---|
| Date: | 01/11/2022 |
| Revision Number: | 0 |
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Detailed gradiometer survey results: greyscale plot

Figure 23

412350
412500
412650
112350
112200
112050
4011

Site boundary
Land parcels
Detailed survey extents
Possible archaeology
Former field boundary
Ridge and furrow
Increased magnetic response
Ploughing
Drain
Superficial geology
Trend
Ferrous
Modern service

0 50 m



| | |
|---|---|
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Detailed gradiometer survey results: interpretation

Figure 24

412650
412800
412950
112050
111900

Site boundary
Land parcels
Detailed survey extents

-2 nT
3 nT
0
50 m



| | |
|---|---|
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| Revision Number: | 0 |
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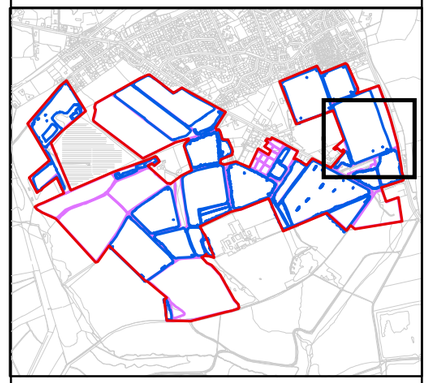
Detailed gradiometer survey results: greyscale plot

Figure 25

412650
412800
412950
112050
111900
4011
4018
4019
4020
4033



Site boundary
Land parcels
Detailed survey extents
Possible archaeology
Former field boundary
Ridge and furrow
Increased magnetic response
Ploughing
Drain
Superficial geology
Trend
Ferrous
Modern service

0 50 m



| | |
|---|---|
| Date: | 01/11/2022 |
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| Scale: | 1:1,500 at A3 |
| Illustrator: | BH |
| Path: | X:\Projects\260451\GIS\FigsMXD |

Detailed gradiometer survey results: interpretation

Figure 26

412650

412800

412950

111750

111600

Site boundary

Land parcels

Detailed survey extents

-2 nT

3 nT

0

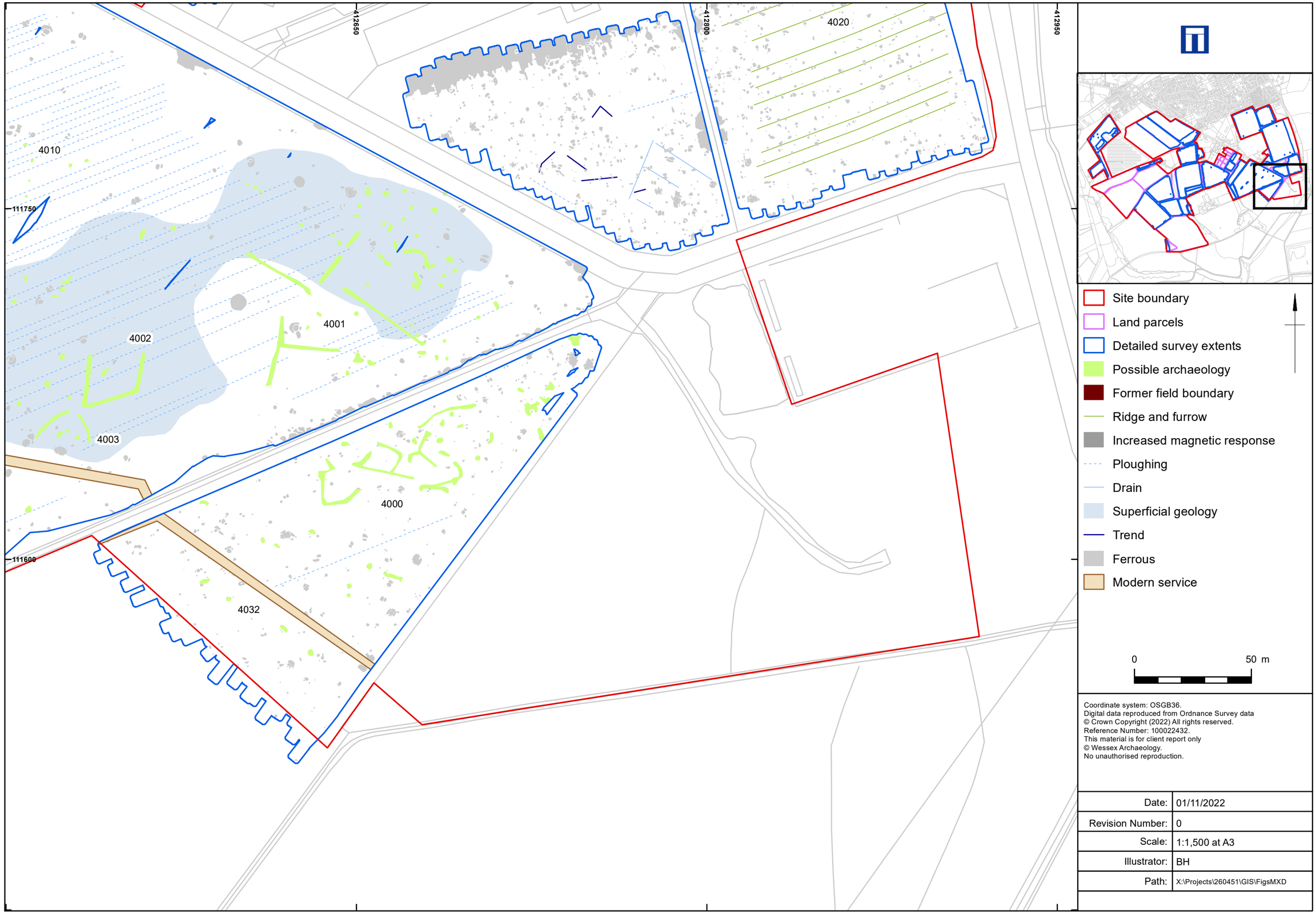
50 m



| | |
|---|---|
| Date: | 01/11/2022 |
| Revision Number: | 0 |
| Scale: | 1:1,500 at A3 |
| Illustrator: | BH |
| Path: | X:\Projects\260451\GIS\FigsMXD |

Detailed gradiometer survey results: greyscale plot

Figure 27






| | |
|---|---|
| Date: | 01/11/2022 |
| Revision Number: | 0 |
| Scale: | 1:1,500 at A3 |
| Illustrator: | BH |
| Path: | X:\Projects\260451\GIS\FigsMXD |

Detailed gradiometer survey results: interpretation

Figure 28

411600
411750
411900
111300
111150

Site boundary
Land parcels
Detailed survey extents

-2 nT
3 nT

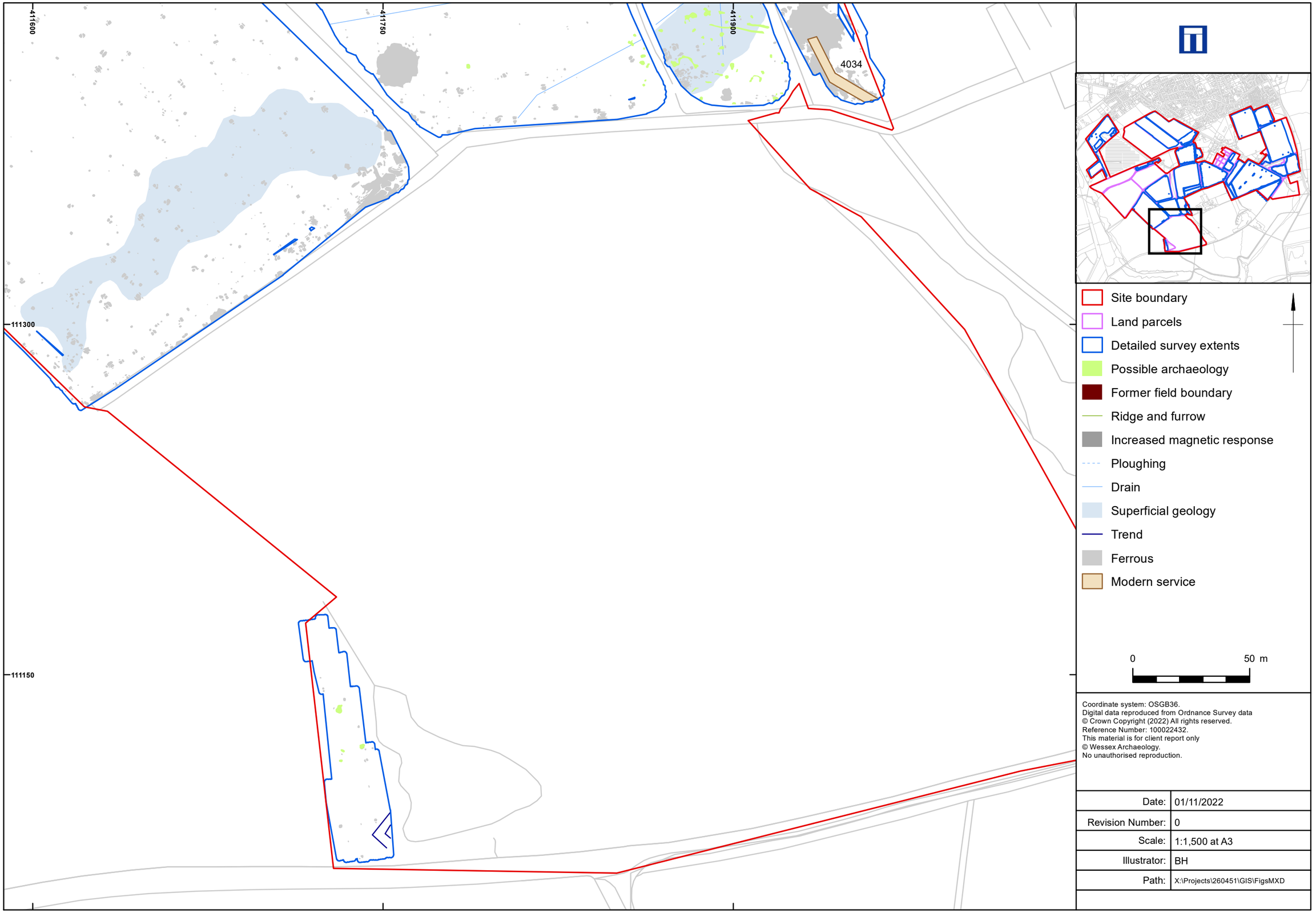
0
50 m



| | |
|---|---|
| Date: | 01/11/2022 |
| Revision Number: | 0 |
| Scale: | 1:1,500 at A3 |
| Illustrator: | BH |
| Path: | X:\Projects\260451\GIS\FigsMXD |

Detailed gradiometer survey results: greyscale plot

Figure 29






| | |
|---|---|
| Date: | 01/11/2022 |
| Revision Number: | 0 |
| Scale: | 1:1,500 at A3 |
| Illustrator: | BH |
| Path: | X:\Projects\260451\GIS\FigsMXD |

Detailed gradiometer survey results: interpretation

Figure 30

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