

Appendix F – Archaeological Geophysical Survey



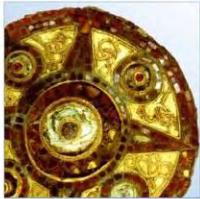
Proposed Solar Farm, Sperberry Hill Solar Hitchin, Hertfordshire

Archaeological Geophysical Survey

National Grid Reference: TL 20710 26367

AOC Project No: 40282

Date: January 2022



ARCHAEOLOGY

| HERITAGE

| CONSERVATION

Proposed Solar Farm, Sperberry Hill Solar Hitchin, Hertfordshire Archaeological Geophysical Survey

On Behalf of:	Axis Well House Barns Chester Road Bretton Chester CH4 0DH
National Grid Reference (NGR):	TL 20710 26367
AOC Project No:	40282
Prepared by:	Kayt Armstrong
Illustrations by:	Kayt Armstrong
Date of survey:	13th – 16th December 2021
Surveyors:	S. O'Connor, M. Hall

This document has been prepared in accordance with AOC standard operating procedures.

Author: Kayt Armstrong **Date: 28th January 2022**

Quality Checked by: James Lawton **Date: 31st January 2022**

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Enquiries to: AOC Archaeology Group
The Lodge
Unit 8, Mortec Park
York Road
Leeds
LS15 4TA

Tel. 01138 232 853
e-mail. leeds@aocarchaeology.com

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Non-Technical Summary

AOC Archaeology Group was commissioned by Axis to undertake an archaeological geophysical gradiometer survey on 13th – 16th December 2021 to investigate the potential for buried archaeological remains ahead of a proposed development at Sperberry Hill Solar, Hertfordshire (centred at TL 20710 26367).

A total of 18 hectares were surveyed and the results of the survey have identified the following.

Four groups of weak curving and rectilinear anomalies have been identified which, based on their interpretation as cut and filled features, are of potential archaeological interest. Further linear and discrete anomalies are unclear in their origins, but an archaeological origin cannot be ruled out.

A former field boundary has been positively identified crossing the survey area. There are also a number of discrete geophysical trends which are most likely related to geological processes and former water courses; but could alternatively be archaeological in origin.

A number of areas of magnetic disturbance, most likely the result of modern activity, were also recorded, including a service crossing the southern portion of the survey area.

1 Introduction

- 1.1 AOC Archaeology Group was commissioned by Axis to undertake an archaeological geophysical gradiometer survey of a site at Sperberry Hill Solar, Hitchin, Hertfordshire. The survey was conducted during 13th – 16th December 2021 as part of a wider scheme of archaeological assessment in advance of the proposed development of the site.
- 1.2 Archaeological geophysical survey uses non-intrusive and non-destructive techniques to determine the presence or absence of anomalies likely to be caused by archaeological features, structures or deposits, as far as is reasonably possible (CIfA, 2014).
- 1.3 The survey was carried out to provide information on the extent and significance of potential buried archaeological remains within the proposed development site.

2 Site Location and Description

- 2.1 The proposed development site (hereafter 'the Site') is located to the south of Stevenage Road, to the east of Little Almshoe Lane, Hitchin, Hertfordshire, centred at TL 20710 26367 (Figure 1).
- 2.2 The Site covers approximately 18 hectares (ha) across two fields consisting of arable ground (Figure 2). The site is situated on undulating uneven ground, ranging from approximately 96m aOD (above Ordnance Datum) in the north, sloping towards the centre to approximately 85m aOD, it then slopes upwards again to the south to approximately 90m aOD.
- 2.3 The bedrock recorded geology within the site consists of Chalk of the Holywell nodular chalk Formation and New Pit chalk formation. In the north the chalk is overlain by superficial diamicton deposits of the Lowestoft formation, whilst to the south it is overlain by glaciofluvial deposits of sand and gravel (BGS, 2022). A tongue of glacial head deposits bisects the two survey areas along the valley bottom in the middle of the survey area. These are overlain by slightly acid loamy and clayey soils with impeded drainage (Soilscapes, 2022).
- 2.4 Gradiometer survey is suggested to provide a good response over chalk, especially over Jurassic limestone bedrocks (David *et al.* 2008, 15). In this case, the clarity of the geophysical results were good, and the local geology was deemed not to have had a detrimental effect on the visibility of trends within the dataset.

3 Archaeological Background

- 3.1 The archaeological background below is summarised from the Heritage Impact Assessment of the site, undertaken in 2021 by AOC Archaeology (AOC, 2021). All references in the archaeological background can be found in the bibliography of the HIA, which in turn is referenced in the bibliography of this report. This HIA was conducted based on the development redline, which includes an area previously subject to geophysical survey, which is not included in this report (see Figure 2).

Prehistoric (500,000 BC – AD 43)

- 3.2 The Site lies within a broad glacial valley cut through the scarp of the Chilterns in the last ice age, known as the 'Hitchin-Stevenage Gap'. Lakes formed in hollows left behind following the retreat of the Anglian ice sheet, which were gradually infilled with fine sediments; these sediments have produced Palaeolithic implements discarded by people active around the edges of the lakes (Wymer 1999, 163). Little Wymondley lies at the eastern edge of a large former lake under the present town of Hitchin. A further lake has been identified at Fisher's Green, to the east of the Site (Fitzpatrick-Matthews 2020a, 5). A Palaeolithic hand axe held by the North Hertfordshire Museum has also been found in the parish

of Wymondley, representing part of a large group of similar artefacts recovered from the Hitchin area (Fitzpatrick-Matthews 2020b, 2). Some of the first metal objects in Britain are reportedly found around Titmore Green to the east of the Site (Fitzpatrick-Matthews 2020a, 5).

- 3.3 The presence of mid-Pleistocene glaciofluvial deposits of clay and silt mapped by the BGS in the Site may suggest an elevated potential for Palaeolithic remains to be encountered within the Site, although such remains are rare.
- 3.4 There are three known heritage assets of likely prehistoric date within the Site boundary recorded in the Hertfordshire HER (Assets 96, 105 and 138), these assets relate to three archaeological event records within the Site; aerial photograph interpretation (Assets 139 and 143) and a geophysical survey (Asset 166). The geophysical survey (Asset 166) (Stephens 2015) undertaken within the west of the Site revealed a large D-shaped enclosure containing several possible roundhouses and a trackway within the south-west of the Site as well as five possible ring ditch features in the north-west of the Site (Asset 138). Aerial photography held by Hertfordshire County Council and dated 1972 (Asset 139) also show cropmarks of two linear ditches within this field although they do not appear to correlate directly with the results of the geophysical survey. In the south-west of the Site, cropmarks interpreted as a pair of round barrows (Assets 96 and 105) potentially dating from Late Neolithic to early Bronze Age (3,000 – 1,201 BC) have been identified through aerial photography (Asset 143). The features recorded in the south-west part of the Site (Assets 96 and 105) are located within an Archaeologically Sensitive Area as recorded in the Hertfordshire Historic Environment Record. The geophysical survey data did not show any well-defined circular responses at this location; instead the 2015 survey has recorded anomalies that appear to form the aforementioned trackway and enclosures. Most of the geophysical responses within the Archaeologically Sensitive Area are relatively distinct, though some of the weaker trends are more tentatively interpreted as archaeology. There are hints of a circular trend near to the recorded location of Asset 96 but this is barely visible above the noisy background, precluding a firm interpretation (Stephens 2015, 3).
- 3.5 In St Ibbs, to the northwest of the Site, a cluster of possible round barrows potentially dating from Late Neolithic to early Bronze Age (3,000 – 1,201 BC) (Assets 101- 104) are also noted as a series of cropmarks made visible through aerial photography (Asset 144). These features are reported as being within the south-western corner of the area targeted for geophysical survey (Asset 166), although point data from the HER does not indicate that any anomalies were identified in this area.
- 3.6 Until recently, relatively few Middle Iron Age sites had been excavated in Hertfordshire but recent excavation of Middle Iron Age enclosures at Bishop's Stortford, Buntingford and Hertford, are along with the geophysical survey evidence from within the west of the Site, are creating a better understanding of the character and patterning of Middle Iron Age settlement in Hertfordshire (Brudenell 2021).
- 3.7 A small single ditched circular enclosure (Asset 97) visible as a cropmark from aerial photography interpreted as Late Neolithic to early Bronze Age (3,000 – 1201 BC) (Assets 97 and 142) and an oval enclosure also visible as a cropmark from aerial photography (Asset 142) interpreted as a ring ditch of a likely Bronze Age barrow were identified to the south-east of the Site.
- 3.8 An archaeological evaluation (Asset 154) in the vicinity of Assets 97 and 142, to the south-east of the Site identified Bronze Age to Roman remains. A late Bronze Age ring ditch (Asset 117) was exposed during the evaluation and part of an enclosure ditch with pottery tentatively dated to the Iron Age (Asset 118) or possibly earlier to the Bronze Age. As pits and ditches were discovered within the enclosure it is likely to have been related to settlement rather than stock control. A Bronze Age burial mound (c. 2,500 – 801 BC) was also identified. During the evaluation a Roman chalk quarry (Asset 116) with

associated settlement evidence was also discovered this is discussed below. Much of the Site of the evaluation (Asset 154) had been razed by deep ploughing. The area of the evaluation and cropmarks noted above are included within an Archaeology Area identified by Hertfordshire HER which extends within 185m south-east of the Site.

- 3.9 A late Iron Age ditch (Asset 90), measuring 4m in width and 0.55m in depth containing a uniform fill inclusive of Iron Age pottery has been identified during archaeological works to the east of the Site. To the south-west of the ditch (Asset 90) and c. 95m east of the Site two slight features, interpreted as pits or post holes containing a fill similar to that identified within Asset 92 were identified. Due to the similarity of fill (Assets 90 & 92) the excavators have theorised that the features are both Iron Age in date.
- 3.10 An evaluation of land north-west of the Site (Asset 60) recorded Late Iron Age/Early Roman remains, primarily ditches, extending across much of the site. These define the northern boundary of a large settlement enclosure and probable field boundaries subdividing associated agricultural land to its north. Although the northern part of the enclosure extends into the south of the site, no features distinctive of occupation activity (buildings, other structures, hearths/ovens, rubbish pits) within it were encountered. Late Iron Age/Early Roman settlement and associated land use within the site appears to have been short-lived with no further evidence of past activity is apparent until the late Post-medieval period (ASE 2020).
- 3.11 Prehistoric findspots have also been identified within the study area; worked flints (Asset 108) to the south-east; worked flints and pottery from early Neolithic to Earlier Bronze Age (4500 BC to 1201 BC) (Asset 87) to the northeast; a Neolithic hand-axe (Asset 186) to the north-west and pottery sherds from early to mid-Iron Age (Asset 88) to the north of the Site.
- 3.12 To the south-west of the Site, a possible ring ditch enclosure (Assets 94 & 141) has been observed as a cropmark on aerial photography however when considering the area is known as Mill Hill it may have been the site of a former windmill.
- 3.13 Given the frequency and density of prehistoric remains recorded within the Site and in the surrounding landscape by the HER, there is considered a High potential for further remains of this date to be encountered within the Site. Although such remains are most likely to be later prehistoric (bronze Age or Iron Age) in date, the presence of earlier and potential Palaeolithic remains associated with Pleistocene deposits recorded within the Site should not be discounted

Romano-British (AD 43 – AD 410)

- 3.14 There are no known Roman remains within the Site.
- 3.15 A Roman Road (Asset 99) aligned roughly north-east; south-west is recorded c. 1km to the east of the Site. The Road connected Baldock to the north-east with Rush Green to the south-west of the Site.
- 3.16 Three Roman sites have been recorded on the western side of the Road (Asset 99) within the 1km study area. A chalk quarry (Asset 116) identified c. 520m east of the Site may have utilised the route for transportation or indeed construction. Approximately c. 780m south-east of the Site evidence of late Iron Age – Roman occupation has been identified. Features including ditches, postholes and a pit (Asset 119) were found at Asset 119. A Romano British settlement (Asset 114), c. 940m south-east of the Site has been interpreted as relating to stock management. A late Iron Age – early Roman period ditch was also found (Asset 114) which may indicate the long duration of activity at Asset 114. It has been theorised by the interpreters that Assets 119 and 114 may relate to one another.

- 3.17 To the north-east of the Site a substantial Roman Farmstead (Asset 91), possibly extending over three hectares was identified during archaeological works in advance of the laying of a water pipeline in 1975. Within the supposed extent of the Farmstead, Roman pottery (Asset 109) was identified around a depression interpreted as a quarry. Correspondence with Letchworth Museum records that Roman pottery was found where topsoil was stripped in advance of the pipe trench. Fieldwalking to the west of the pipeline revealed further Roman pottery, together with tile, slate, bone, stone, flint and chalk rubble, and one decorated piece of stone. The HER notes that the Asset may have been partly destroyed by the construction of the A1(M).
- 3.18 Residual Roman tile was identified during a survey c. 1km to the east of the Site and to the south of the Farmstead (Asset 91) in an area of ridge and furrow.
- 3.19 Roman remains have been identified to the east of the Site, to the west of a Roman Road. Whilst it cannot be discounted that Roman activity extended away from the Road, this is what the data currently suggests and as such there is judged to be a Medium potential for archaeology to this date to survive on the Site. As such there is judged to be a Medium potential for archaeology of this period to be present within the Site.

Early Historic (AD 410 – AD 1066) and Medieval (AD 1066 – AD 1600)

- 3.20 The placename Wymondley is first recorded in the 11th century as 'Wilmundeslea', combining an Old English person's name Wilmund with the suffix lea/lēah meaning woodland clearing (Mills 2011). It is possible that the area in which the Site was located was located in woodland in the pre-medieval period. The Portable Antiquities Scheme (PAS) records several finds of 7th to 8th century sceattas at Jacks Hill, over 1km to the north-east of the Site; these coins have been used to suggest the possible location of a market in the Early Medieval period (Fitzpatrick-Matthews 2020b, 18).
- 3.21 A Hundred Moot at Sperberry (Asset 121) is thought to have met to the north-west of the Site. The name Sperberry ('Speleburwe' in 13th century records) means 'hill of speech' in Anglo-Saxon, and Sperberry (Asset 121) is recorded as the probable meeting place of the half-hundred of Hitchin. It survives as a road name above the Ippollits Brook at St Ibbs, just off the London road south of Hitchin. The church of St Ippolyts is located to the north-west of the Site. It is traditionally believed to have been founded in 1087 and parts of the church, including the nave and chancel, contain elements of 11th-century fabric. The majority of the church dates to the 14th century, with 19th century alterations.
- 3.22 Evidence for middle Saxon activity is recorded north-west of the Site within the 1km study area. This evidence comprises a find of 7th century pouch bottle urn (Asset 184) found at Vicar's Grove Gravel Pit in 1938. A late 6th/early 7th century inhumation (Asset 190) was found nearby during construction work at Pound Farm. Associated finds comprised a scramasax belt buckle and tag and a knife. Other isolated burials are said to have been found in the vicinity, but there is no real evidence to support this apart from the contemporary vessel from Vicar's Grove (Asset 184).
- 3.23 Whilst an Early Historic moot has been recorded within the study area, settlements within the study area appear to date from the early medieval period and as such it is likely that the Site was located in undeveloped land or woodland in the Early Historic period. As such there is judged to be a Low potential for remains of this date to be present on the Site.
- 3.24 The manor of Wymondley (Asset 114) is recorded as 'Wimundeslai' by the time of the Domesday Survey in 1086. It is mentioned in four separate entries in the Domesday Book, with the largest landholding containing the village of Great Wymondley, the Conservation Area of which (Asset 170) extends within 2km of the Site to the north held by King William I and granted to Reginald de Argentein (Fitzpatrick-Matthews 2020b, 19-20). In 1285 a licence of free warren was granted to Reginald de Argentein 'in all his demesne lands in Wymondley', and from 1299 the manorial court rolls refer to a

park, and a park and warren. One of these records, dated 1369, is for renewal of a fence between the park and the lord's hall. This implies that there was a deer park (Asset 137) adjacent to the manor house. The separate settlements of Great Wymondley (Conservation Area Asset 170) and Little Wymondley to the north of the Site are not referred to until the late-12th century. A Norman castle was constructed at Great Wymondley, over 2km north of the Site.

- 3.25 The word "Green" can indicate the location of secondary settlements and it is possible that Redcoats Green to the north-east of the Site may have originated as a secondary settlement to the closer Lower Wymondley in the medieval period. The word Redcoats seems to have originated from an individual, John le Radecone who is recorded as dying in 1349. The Old English of "read" or "red" refers to a gravel outcrop and the "cot" is thought to refer to a cottage, and thence Redcoats would mean a cottage by or on a gravel outcrop (Fitzpatrick-Matthews 2020a, 18). Two metres of gravel was identified in a borehole to the north-east of the Site and the underlying geology does contain gravel deposits. However, the first documentary record of Redcoats Green is dated to 1602 (Fitzpatrick-Matthews 2020a, 18).
- 3.26 The settlements of Hytchin, Epaletts, Wimley Magna and Wimley Parua around the Site are annotated on Saxton's 1577 (Figure 4) and 1583 maps (not illustrated), however Redcoats is not annotated. A medieval deer park (Asset 106) is recorded to the south of the Site, although it is not depicted on Saxton's maps. The deer park known from c.1320 is documented in 1358 when it was visited by Queen Isabella. The park may be earlier in date and may be historically documented Almshoe park owned by Simon Fitz Adam around c.1240, around his grand new manor house of Almshoe Bury.
- 3.27 The Scheduled Wymondley Priory (Asset 2) c. 1.7km north-east of the Site was founded as an Augustinian monastic hospital dedicated to St Mary by Richard de Argentein between 1203 and 1207 (Farris 1989, 142). The medieval history of the priory is documented within its surviving 13th century Cartulary held at the British Museum (Add M.S. 43972). The priory represented one of the smaller houses at its dissolution in 1537, with the Prior and four canons living there described as 'of slender report' by the Royal commissioner's (VCH 1971). Part of the un-aisled nave of the medieval priory church survives as the taller part of the 16th century house, the Grade I Listed The Priory (Asset 18). Surrounding Grade II Listed Garden walls (Asset 79) incorporate medieval foundations to the east of the house, together with re-used stonework from the priory buildings. The Priory and an early Grade II* Listed post-Dissolution barn (Assets 18 & 55) are located within an enclosure defined by a moat of possible medieval date, although a detailed survey for the National Monuments Record concluded that it may have instead formed an ornamental feature associated with the post-Dissolution house.
- 3.28 Minsden Chapel (Asset 1) is located c. 1.5km south-west of the Site. The Scheduled Monument is also a Grade II Listed Building. Minsden Chapel is a ruined 14th century two cell church dedicated to St Nicholas with bellcote, which was likely ruined by the end of the 17th century.
- 3.29 St Ippolyts Village (centred Asset 169) developed around the Grade I Listed, 11th century Church (Asset 69). The Church post-dates the Domesday Book and as such the settlement likely has origins in the late 11th and early 12th century (NHDC, 2021b). Gosmore village (Asset 168), to the west of the Site is first recorded in the 14th century as part of the parish of St Ippolyts and is thought to have developed as a farming settlement at a crossroads. Medieval Listed Buildings within the Conservation Area were originally farm buildings.
- 3.30 The two Grade I Listed Buildings within the 2km study area not within a Conservation Area; Almshouses (Asset 31), and Wymondley Bury (Asset 80) both date to the medieval period. The late 15th century Grade II* Listed Redcoats Farmhouse Hotel (Asset 6) is located within 100m north-east of the Site and was probably built for John Sturgeon (High Sheriff in 1479) (HHER, 2021). In

association with the Farmhouse Hotel there are two 17th century barns (Assets 7 and 8) and an 18th century granary (Asset 9). The Wyck (Asset 42) is a 16th century, timber built, former open hall house with later post-medieval chapel (Asset 136) and stable (Asset 127). The medieval buildings within the 2km study area largely reflect a dispersed agricultural landscape.

- 3.31 Three medieval farms are recorded to the east of the Site (Assets 10, 16 and 66) and evidence of ridge and furrow has been recorded to the east and north-east (Assets 110, 113 and 134). A medieval findspot (Asset 122) is also recorded within the 1km study area.
- 3.32 The Site appears to have been located within an agricultural landscape in the medieval period. Settlements are documented within 1km of the Site in this period and the Grade II* Redcoats Farmhouse Hotel (Asset 6) likely originated as a farmhouse in this period. It is likely due to its later associations that the Site was included within the landholding of Redcoats from at least the late 15th century if not earlier. There is judged to be a Medium potential for agricultural medieval remains and a Low potential for other medieval remains to survive on the Site.

Post medieval – Industrial Period (AD 1600 – 1900)

- 3.33 Early pre-Ordnance Survey maps tend to be schematic and lack detail, although these maps can give some idea of the nature of settlement. Norden and Kip's 1637 map of Hertfordshire (not illustrated) annotates both of the villages of 'Wimley P[arva]' and 'Wimley M[agna]' although provides little detail of the Site itself. Blaeu's 1646 map (not illustrated) records no further information about the Site than Saxton's 1577 (Figure 4) or 1583 map, although the Priory, most likely a reference to Wymondley Priory (Asset 1) is annotated to the north-east of the Site.
- 3.34 A map by Drury dated 1760 – 1790 map (Figure 5) depicts the Site in land south of Titmore Green. Buildings illustrated south of a roughly aligned east-west road to the north of the Site may represent the buildings at Redcoats (Assets 6-9) to the north-east of the Site. This map does not record the landuse on the Site in the late 18th century.
- 3.35 A map by Hyett dated to 1810 (Figure 6) annotates Redcoats Green north-east of the Site and shows a cluster of building south of the fork in the road consistent with the location of Redcoats Farm. Land to the south of Redcoats, within the Site is shown to be within enclosed agricultural fields.
- 3.36 The 1811 enclosure map (Hertfordshire archives reference: QS/E81) (Figure 7) records eastern portion of the Site within the parishes of Little Wymondley and the Great Wymondley parish. Land within the north-western corner the eastern field include a freehold allotment, south of northern boundary, and land held by Edward Kitchiner from James Lucas Esquire also reported as allotments. Plots belonging to Edward Kitchiner recorded as 355, 354 and 360 are also recorded within the north and central area of the Site. The southern portion of the Site also appears to belong to Edward Kitchiner. Edward Kitchiner is recorded as the owner of Redcoats Farm (Asset 6) to the northeast of the Site. The farm is depicted as an enclosed, courtyard farm. The map suggests that the Site was in use as agricultural land in the early 19th century.
- 3.37 A later 1816 enclosure (Hertfordshire archives reference: DP/59/29/1) (Figure 8) records the land in the west of the Site. The land is shown to be owned by Thomas Dashwood and it is split into six separate land holdings. The two land holdings in the west appear to be under the sole control of Thomas Dashwood whereas the four to the east are leased out to William Lax and Edward Kitchiner. Edward Kitchiner is also shown as the main landholder in the east of the Site, although a small allotment is recorded as being leased from T Dashwood. The southern portion of the Site is also annotated as allotments.

- 3.38 The 1851 census records Edward Kitchiner aged 37, living at Redcoats Green, Great Wymondley with his wife, Mary 37, children Sarah aged eight, Mary aged six, Edward William aged three and Benjamin aged one. Four servants; a house maid, nursemaid and two farm servants are also recorded as residing at the house and indicate that it was relatively substantial property at the time.
- 3.39 The Ordnance Survey map published in 1884 (Figure 9) shows the eastern half of the Site occupying at least four fields, whereas the western part of the Site is shown to have been amalgamated into one large field. The Site was likely located in agricultural land. There is a parish boundary line indicating that the Site lay in the west of the parish of Great Wymondley and Little Wymondley and in the east of the parish of Ippolyts. A ditch aligned roughly east-west is depicted bisecting the eastern half of the Site. An area of woodland annotated “Dell Close” is recorded immediately east of the Site. Redcoats Green is annotated to the north-east of the Site and the buildings within the farm are depicted similar to the enclosure map, as a courtyard style farm. A small plantation of trees is depicted between the buildings and the Site, and this may be evidence of the beautification of the gardens of the Farmhouse (Asset 6) or may be evidence of a small orchard. The sale of the Estate in 1887 notes that there were highly productive pleasure gardens (Hertfordshire archive reference: DE/RV/B494). No features are shown within the single large field that comprises the western half of the Site. Joyner’s Folly (Asset 135) is shown on the western side of Tittendell Lane.
- 3.40 Redcoats Green Estate was to be sold at auction in 1887 (Hertfordshire archive reference: DE/RV/B494). An accompanying map records the land use within the Site in the late 19th century as being mixed; the northern portion of the Site is noted as being wholly arable, with a small meadow located in the centre of the Site and another meadow recorded in the southern most area of the Site. Redcoats Farmhouse (Asset 6) is described as an “old fashioned” family dwelling house, with landscaped garden and a number of agricultural buildings including cattle sheds, barns and stables.
- 3.41 The OS map published in 1899 (not illustrated) depicts no changes to the Site when compared to the earlier OS map in the late 19th century.
- 3.42 The HER records numerous further post-medieval farm buildings not related to Redcoats within 1km of the Site many of which are Listed Buildings and discussed in Section 6.2 and also recorded in detail in Appendix 2. There are also numerous buildings shown on historic mapping which have subsequently been removed. For example, Titmoregreen Farm (Asset 130) is shown on the 1881 OS map with ranges of buildings around a yard. There were at least 11 buildings here but most of these disappeared from maps between 1898 and 1923. The 1881 OS maps show a building marked ‘Chapel’ (Asset 136) between The Wyck and Almshoebury Farm. No denomination is given, and it is not recorded in the 1847 or 1851 surveys so was presumably built between 1851 and 1881 to serve the local population. It has since been demolished. West of the Site, and adjacent to The Wyck (Asset 42), the OS map of 1881 shows a long building (Asset 127) running alongside the road north of the house near the junction. By 1924 this had been demolished and a new L-plan building erected south-east of The Wyck.
- 3.43 Given that the Site is likely to have been located within undeveloped agricultural land throughout the postmedieval period, the potential for substantial post-medieval remains to be encountered within the Site is considered Low. Any potential remains dating to the post-medieval period are likely to be agricultural in nature and relate to the management of land as part of Redcoats Green Farm.

Modern (1900 – present)

- 3.44 Ordnance Survey mapping appears to show very little change to the Site during much of the 20th century. The OS map of 1924 shows (Figure 10) shows numerous footpaths crossing through the eastern half of the Site.

- 3.45 The Site underwent very little change in the modern era and as such there is judged to be a Low potential for modern archaeological remains to survive within the Site.

Undated

- 3.46 A cropmark of an oval enclosure (Asset 98) has been identified via aerial photograph to the south-east of the Site. The HER record for the cropmark (Asset 98) does not suggest a date for the feature, although an evaluation in that area identified remains dating from the Bronze Age to Roman period and as such it may be assumed that the enclosure is of a similar period. However, as no invasive works have been undertaken the cropmark (Asset 98) cannot be confidently dated. Similarly linear cropmarks at Asset 185 south-west of the Site and Asset 192 north of the Site likely indicate the presence of former field boundaries and ditches but their date cannot be ascertained without further investigation.
- 3.47 Bones were reportedly found in a mound at Asset 107 to the north-west of the Site in the 1920's. However, the mound is not recorded on historic maps and no further record of the remains was made. The date of the feature, and its associated remains is unknown.

4 Aims

- 4.1 The aim of the geophysical survey was to identify any potential archaeological anomalies that would enhance the current understanding of the archaeological resource within the proposed survey area.
- 4.2 Specifically, the aims of the gradiometer survey were;
- To locate, record and characterise any surviving sub-surface archaeological remains within the survey area,
 - To help determine the next stage of works as per the client's instruction,
 - To provide an assessment of the potential significance of any identified archaeological remains in a local, regional and (if relevant) national context,
 - To produce a comprehensive site archive (Appendix 2) and report.

5 Methodology

- 5.1 The geophysical survey was undertaken between 13th and 16th December 2021.
- 5.2 All geophysical survey work was carried out in accordance with recommended good practice specified in the EAC guideline documents published by Historic England (Schmidt et al. 2016) and the Chartered Institute for Archaeologists Standard and Guidance for archaeological geophysical survey (2014).
- 5.3 Parameters and survey methods were selected that were suitable for the prospective aims of the survey and in accordance with recommended professional good practice (Schmidt et al. 2016).
- 5.4 Digital photographs of every survey parcel were taken before, during and after geophysical survey to show any changes to field conditions following the programme of works. The photos were downloaded and stored off site.
- 5.5 The gradiometer survey was carried out using a Bartington Non-Magnetic Cart. The cart system utilises two Grad-01 fluxgate gradiometer sensors mounted upon a carbon fibre frame, along with data logging equipment and batteries (see Appendix 3). Before each session of use, the cart system was balanced around a single set up point within the Site specifically chosen for being magnetically quiet. In balancing the machine around this point, it produces a more uniform dataset throughout and allows all data to be plotted with ease.
- 5.6 Data was collected using zig-zag traverses alongside a constant stream of GPS data collected through a Trimble R10 GPS, enabling the collected data to be spatially georeferenced without the need for a

pre-determined grid system. The data was collected through a laptop mounted to the cart using Geomar MLGrad601 software.

- 5.7 A total of 18ha were surveyed using the Bartington cart, across two agricultural fields. Other elements of the development area had already been previously surveyed, or were unsuitable for survey at this time. The complete development boundary comprised 38ha in total (see Figure 2).
- 5.8 Care was taken to attempt to avoid metal obstacles present within the survey area, such as metal fencing around hedge boundaries as gradiometer survey is affected by 'above-ground noise' and avoiding these improves the overall data quality and results obtained.
- 5.9 The data was downloaded from MLGrad601 and converted into a .xyz file in Geomar MultiGrad601 before being processed along with the GPS data in TerraSurveyor v3.0.34.10. The details of these processes can be found in Appendices 3 and 4.
- 5.10 Interpretations of the data were created in ArcGIS Pro and the technical terminology used to describe the identified features can be found in Appendix 5.

6 Results and Interpretation

- 6.1 The gradiometer survey results have been visualised as greyscale plots. A variety of plotting ranges were assembled within a GIS environment alongside the XY traces of the survey data, historical maps and aerial imagery, in order to interpret the survey results. The presented processed data is also plotted at -5nT to 5nT and can be seen in Figures 3, 4 & 5. An interpretation of the data can be seen in Figures 6 & 7, and an individual characterisation of the identified anomalies can be seen in Appendix 1.
- 6.2 For the most part, only anomalies of a possible archaeological or historical origin have been assigned an anomaly number on the interpretation figures, although other anomalies that are integral to the discussion have also been assigned anomaly numbers.

Archaeology

- 6.3 No anomalies indicating the presence of definitive archaeological remains have been identified in the dataset, though this does not rule out the presence of archaeological features that lack magnetic contrasts or clear characteristics associated with buried remains. This is underlined by the presence of numerous linear trends identified within the data as potentially of archaeological interest, and of uncertain origin.

Possible Archaeology

- 6.4 Several discrete linear trends have been identified within the data which in form and magnetic character have the potential to be of archaeological interest. These are characterised by an irregular layout, with apparent curved and straight segments, and clear right-angled returns. They occur in four distinct groupings. One group is located in the north-western corner of Area 1 and consists of a dispersed set of positive linear anomalies that are stronger and more sharply defined than those interpreted as being related to the geology (see below). These may be cut features with enhanced fills, such as ditches (**1A**). A second group of anomalies, located in the centre of the northern edge of Area 1, is similar in character, but with a greater concentration of anomalies and more clear intersections between them (**1B**). A further group, on the eastern side of Area 1, consists of two parallel curving linear positive anomalies, which could be the ditches of a track or drove leading from the valley bottom (**1C**). Potentially related anomalies straddle the valley bottom at the southern edge of Area 1 and the northern edge of Area 2 (**1D**, **2A**). These are similar in character to one another, sharing a clear and sharp positive linear signal, and rectilinear arrangement, aside from a small arc within the

group at **2A**. Aside from the possible track at **1C**, it is difficult to suggest a function or date for these anomalies, or to assign them a confident archaeological origin, because they lack clear morphological or magnetic characteristics.

- 6.5 There are further scattered linear positive anomalies throughout the survey area of similar character but which are less clearly associated with any spatial grouping of anomalies.

Unclear Origins

- 6.6 A number of trends are visible across the dataset which have unclear origins. These have been differentiated from the possible archaeology by their weaker anomaly strength (or in some cases their negative signal) and the lack of a sharp edge to the signal. One group of three apparent rectilinear small enclosures in the southern part of area 2 deserves a mention: these may be coincidentally shaped natural cracks within the chalk, or they could be anthropogenic in nature (**2B**). The parent geology within the survey area can have surface cracking in geometric patterns that are difficult to distinguish from human-made features.
- 6.7 Within the central part of Area 1 there is a dispersed group of discrete positive anomalies. These have been assigned an uncertain interpretation because they lack clear relationships with other anomalies of potential archaeological interest, but it remains possible that these are anthropogenic rather than natural hollows with enhanced fills.

Agricultural

- 6.8 A linear trend has been identified running roughly north to south bisecting area 1 (**1E**). When cross referenced with historical mapping from 1888; a former field boundary (NLS, 2022), track and parish boundary are shown in this position. Enhanced magnetism surrounding the former boundary and track likely relates to material from the feature having been ploughed out into the surrounding subsoil.
- 6.9 Ploughing trends, likely modern in age, run roughly north-south in both survey areas. A sample of these have been drawn for illustrative purposes.

Non - Archaeology

- 6.10 A strong linear dipolar anomaly, with a strong 'halo' of disturbance crosses area 2 running southwest to northeast. This anomaly is characteristic of a buried service. It is possible that the strong halo is masking other more ephemeral anomalies within the impacted area.
- 6.11 Further magnetic disturbance is visible around the periphery of the Site and relates to modern metallic boundary fencing, adjacent infrastructure and modern debris at the field edges.
- 6.12 A moderate level of isolated dipolar anomalies (ferrous / iron spikes) are visible throughout the dataset which are likely modern in origin.
- 6.13 A strongly positive sinuous linear anomaly occurs along the southern border of Area 1 (**1F**). This is interpreted as a former water course, based on the braided appearance of the anomaly. It coincides with the parish boundary depicted on the 1888 OS map mentioned above, suggesting that the former watercourse used to be the boundary feature of the land parcel, but that it had shifted course or been canalised by 1888. Other geological anomalies indicated in the interpretation relate to further fluvial features, differential erosion of the chalk parent material, or cracking at its interface with the soils and superficial geology.

7 Conclusion

- 7.1 The gradiometer survey has not identified any anomalies or features of a definitive archaeological nature. However, four groups of linear anomalies have been identified as being of possible

archaeological interest, with further anomalies having unclear origins whereby archaeological interest cannot be ruled out. The ephemeral nature of the detected anomalies prevents stronger functional classification or dating.

- 7.2 A former field boundary that also served as a parish boundary has been identified, along with a former water course which at one time formed the southern boundary of this land parcel.
- 7.3 Several areas of magnetic disturbance of a likely modern date were also detected, including a service crossing Area 2.
- 7.4 In assessing the results of the geophysical survey against the specific aims set out in Section 4;
- The survey has succeeded in locating, recording and characterising surviving sub-surface remains within the Site, though more remains may be present that are not suitable for detection through magnetometry;
 - The survey will help in determining the next stage of works as it has provided evidence that remains of an uncertain origin are most likely present on site, and has provided a number of targets for further investigation;
 - It is not possible to provide an assessment of the potential significance of the identified remains in a local, regional or national context as it has not been possible to definitively characterise the nature of the anomalies identified through survey alone;
 - The survey has resulted in a comprehensive report and archive.
- 7.5 The geophysical survey has produced good quality gradiometer results which have successfully helped to clarify whether archaeological or uncertain remains are present across the Site. There is a high confidence level that the methodology and survey strategy chosen were appropriate to assess the archaeological potential across the Site.

8 Statement of Indemnity

- 8.1 Although the results and interpretation detailed in this report have been produced as accurately as possible, it should be noted that the conclusions offered are a subjective assessment of collected data sets.
- 8.2 The success of a geophysical survey in identifying archaeological remains can be heavily influenced by several factors, including geology, seasonality, field conditions and the properties of the features being detected. Therefore, the geophysical interpretation may only reveal certain archaeological features and not produce a complete plan of all the archaeological remains within a survey area.

9 Archive Deposition

- 9.1 In accordance professional standard practice an 'Online Access to the Index of archaeological investigations' ('OASIS') record will be completed for submission to the HER and Archaeological Data Service (ADS) (Appendix 2).
- 9.2 One digital and hard copy of the report and data will be submitted to the relevant Historic Environment Record (HER) at the Client's discretion.
- 9.3 A digital copy of the report and data will also be submitted to the ADS at the Client's discretion.

10 Bibliography

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11 Plates



Plate 1. Site centre looking south



Plate 2. Site centre looking west

12 Figures

SPERBERRY HILL SOLAR (40282):
ARCHAEOLOGICAL GEOPHYSICAL SURVEY

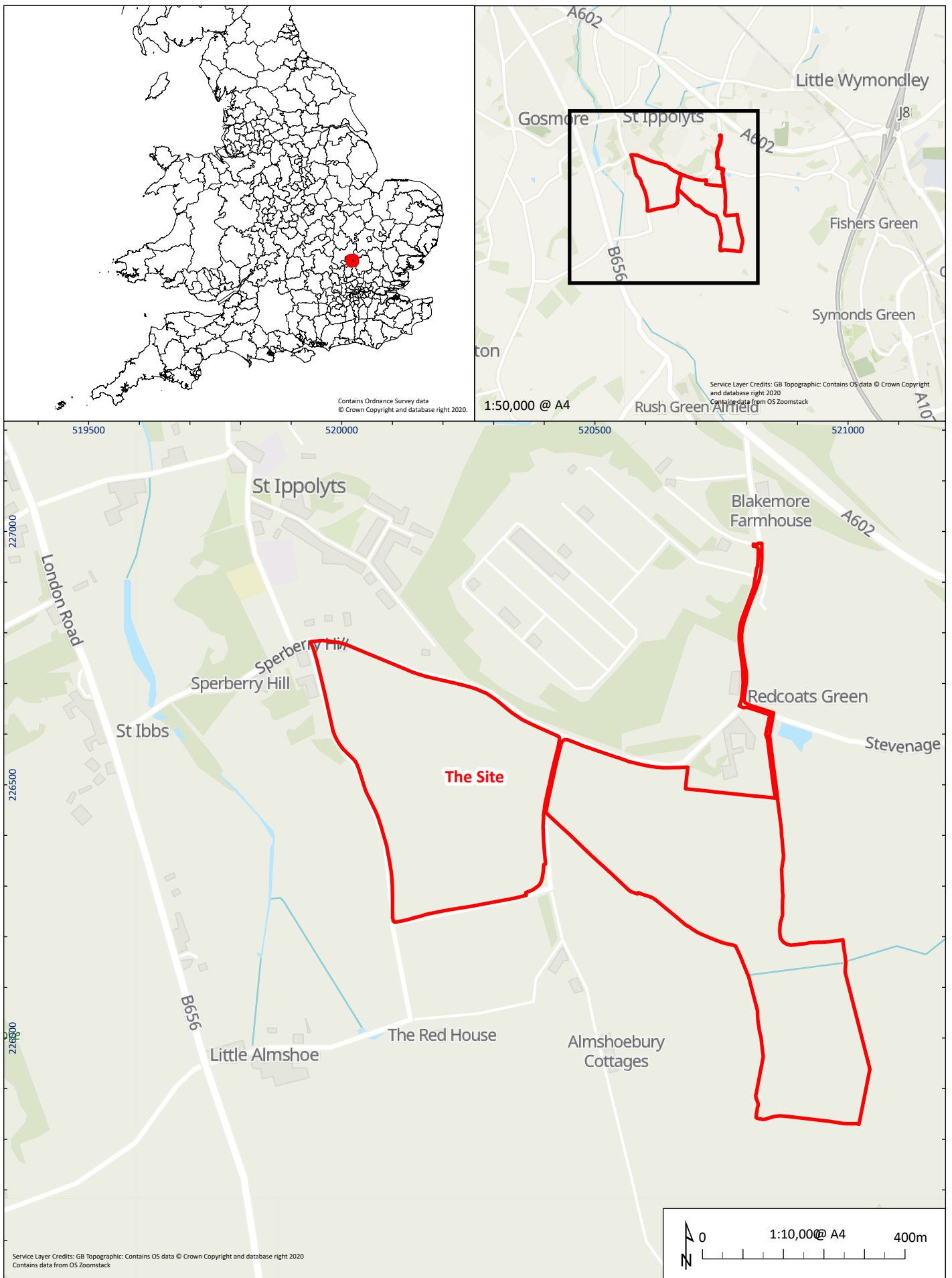
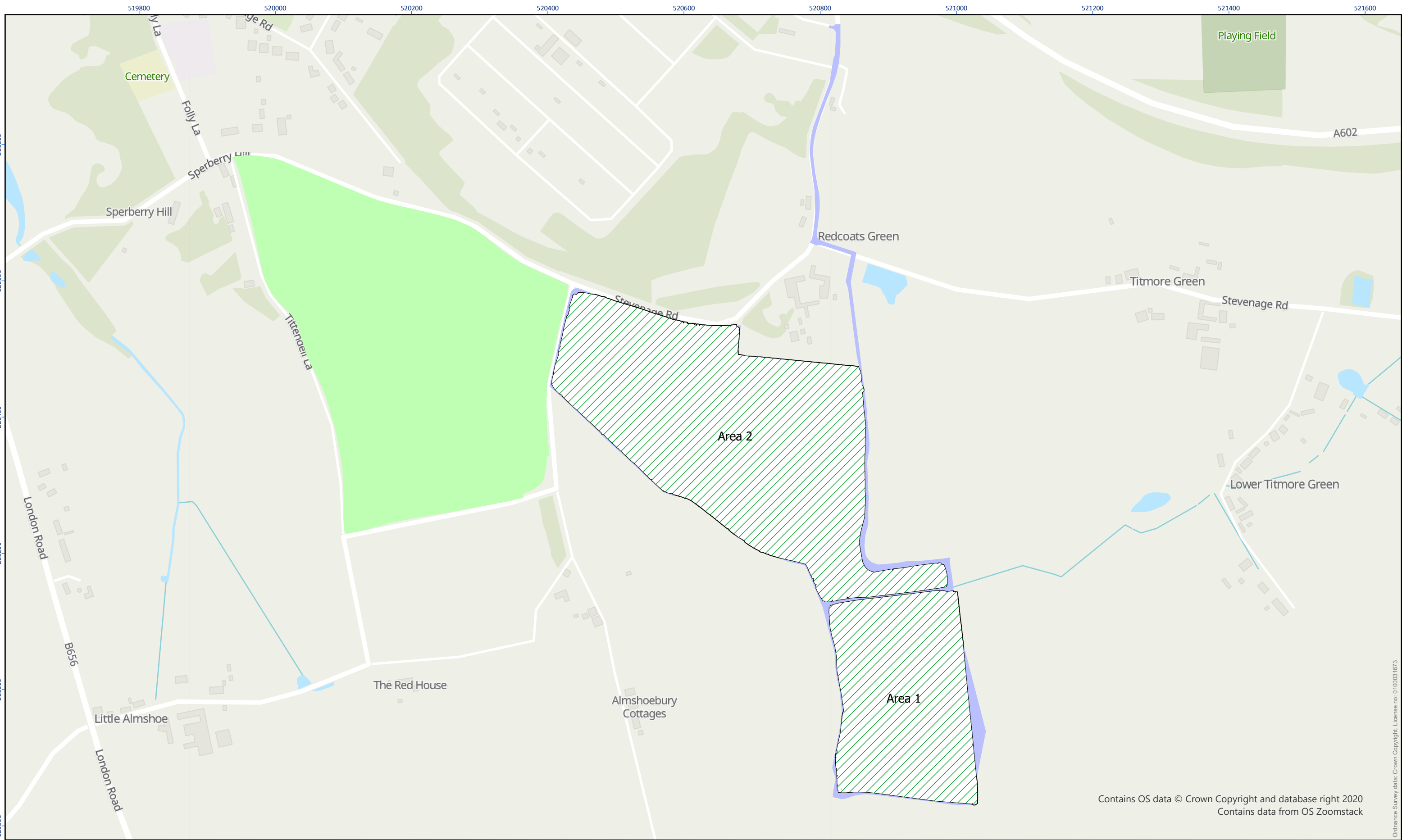


Figure 1: Site Location (development boundary)

03/40282/GEO/01/01



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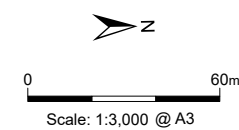
Ordnance Survey data: Crown Copyright. License no. 0100031673

Survey Areas Showing Completed Survey, Areas Unsuitable for Survey and Historically Surveyed Areas within the Development Area

Figure 02		Surveyed Area AOC Survey Area - Unsuitable Historically Surveyed	N 060m Scale: 1:5,000 @ A3	Drawing Number: 05/40282/GEO/002/01	AOC Archaeology Group
				Created by: KA Date: 14/02/2022	
				Checked by: JL Date: 14/02/2022	
				Approved by: JL Date: 14/02/2022	



Figure 3: Processed Greyscale Gradiometer Data Overview (North to the right)

Figure
03

Drawing Number: 05/40282/GEO/03/02

Created by: KA Date: 14/02/2022

Checked by: JL Date: 14/02/2022

Approved by: JL Date: 14/02/2022

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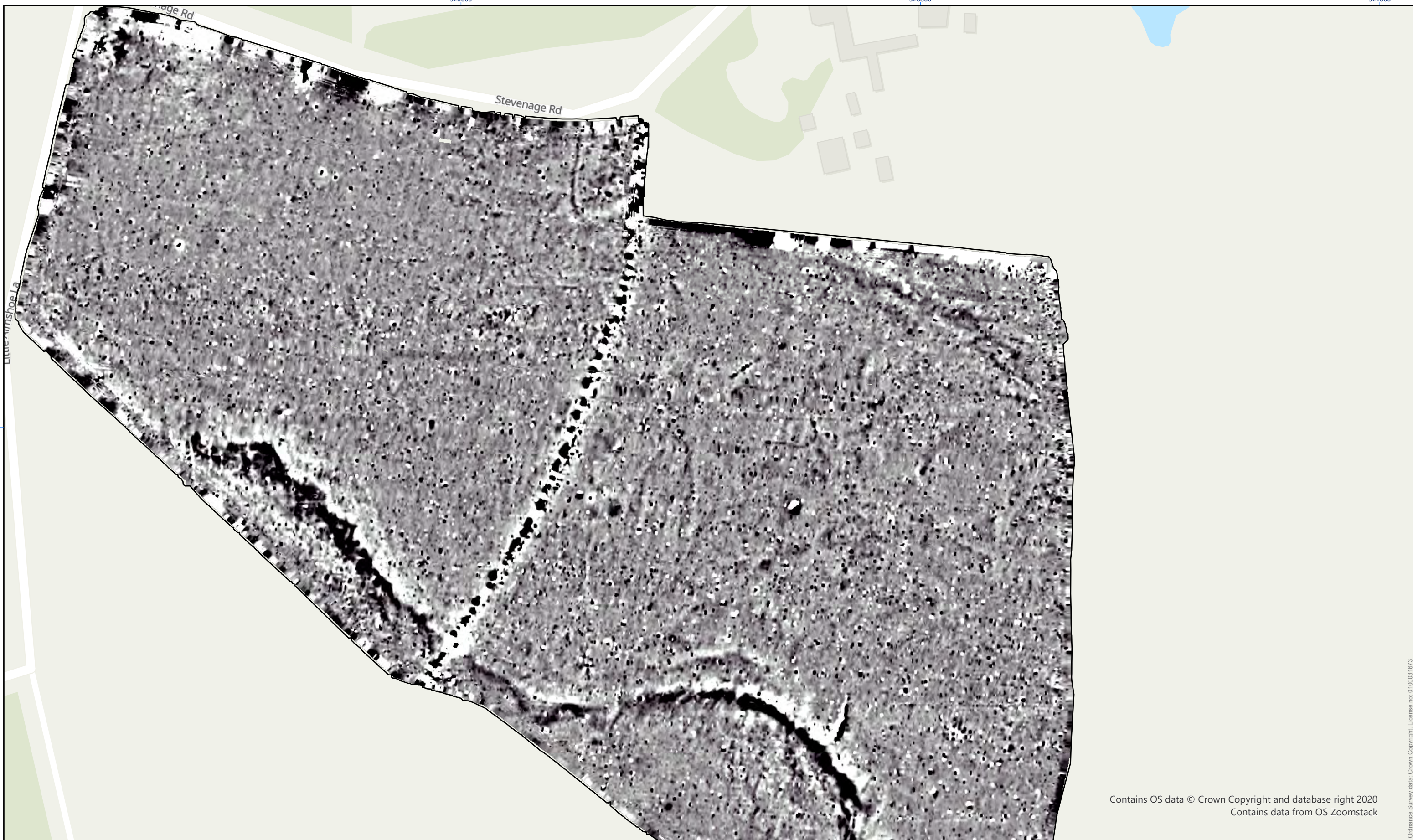
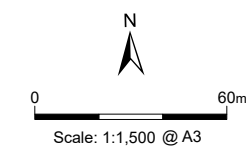
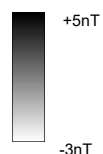


Figure 4: Processed Greyscale Gradiometer Data: Area 1

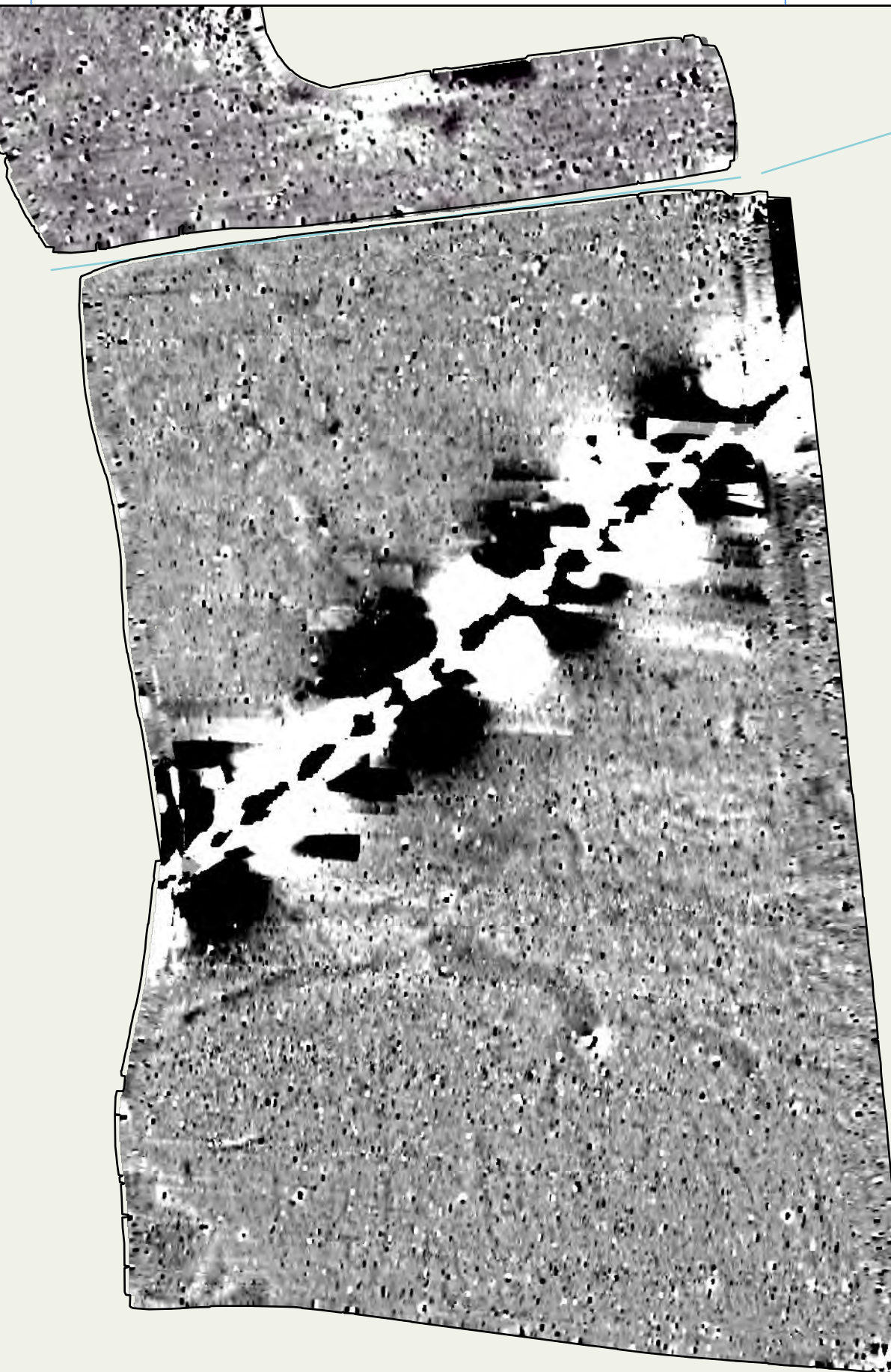
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04

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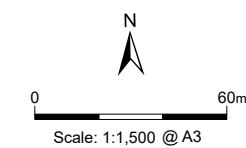
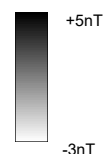
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Figure 5: Processed Greyscale Gradiometer Data Area 2

Figure
05



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Created by: KA	Date: 14/02/2022
Checked by: JL	Date: 14/02/2022
Approved by: JL	Date: 14/02/2022



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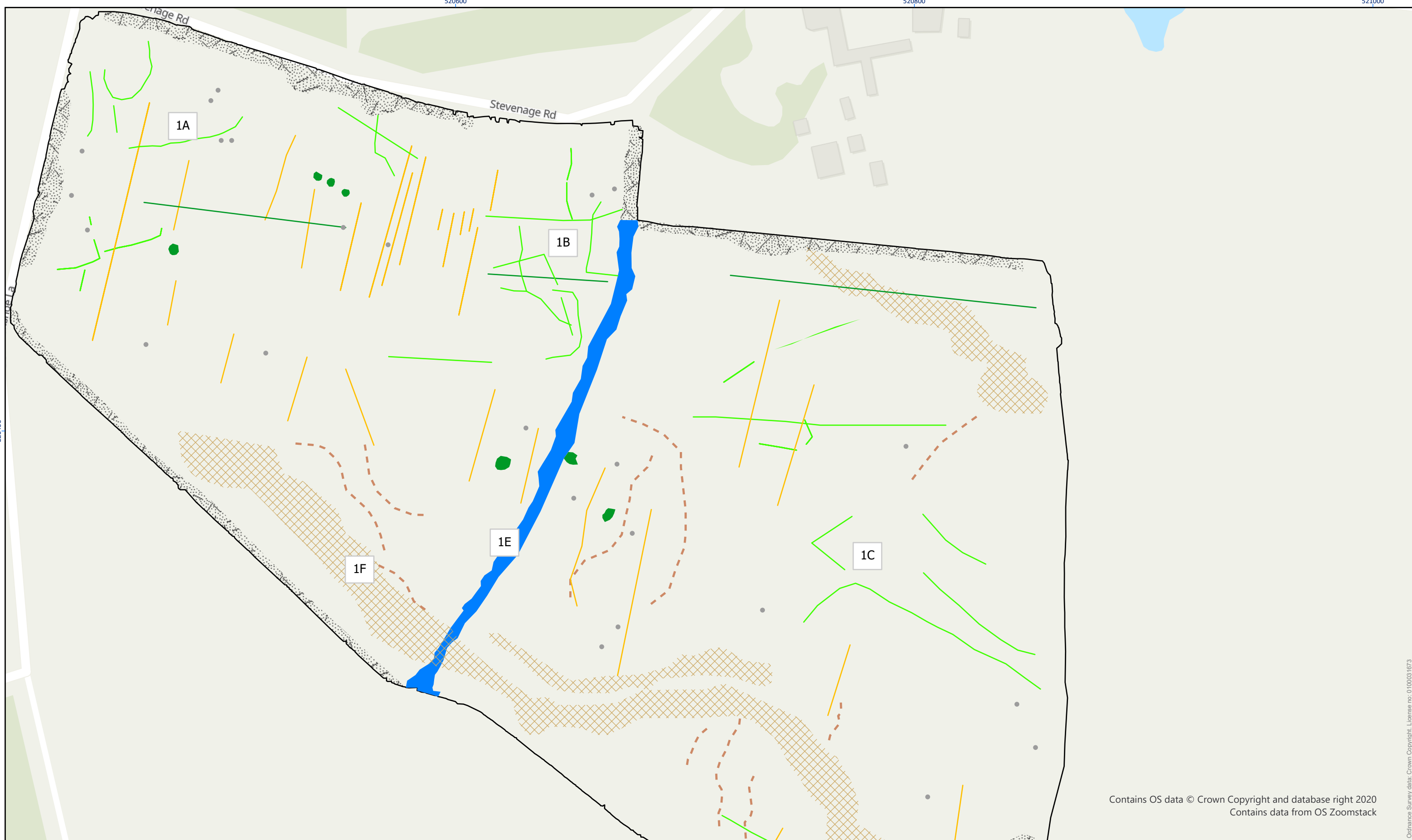
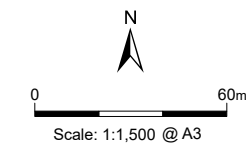


Figure 6: Interpretation Area 1

Figure
06

- | | | | |
|--------------------------|------------------------------|---------------------------------------|-------------------------------------|
| Survey Outline | Trend (Possible Archaeology) | Geology/Natural | Enhanced Magnetism (Modern) |
| Ferrous/Iron Spike | Trend (Unclear Origin) | Enhanced Magnetism (Historic Feature) | Linear Trend (Possible Archaeology) |
| Linear Trend (Ploughing) | Trend (Geology/ Natural) | Linear Trend (Historic Feature) | Linear Trend (Unclear Origin) |

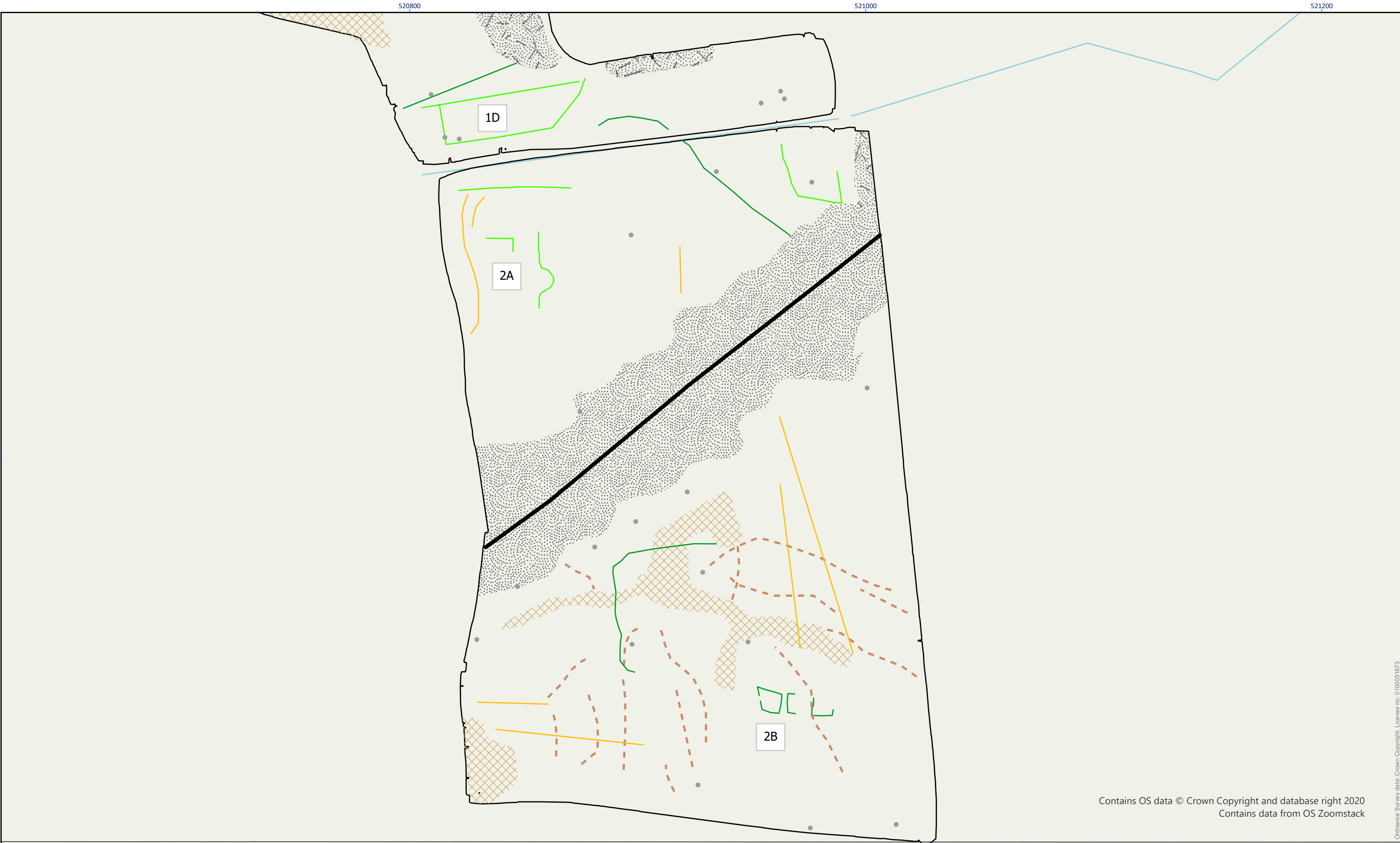


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Created by: KA Date: 14/02/2022

Checked by: JL Date: 14/02/2022

Approved by: JL Date: 14/02/2022



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Figure 7: Interpretation Area 2

Figure 07	Survey Outline	Linear Trend (Utility)	Enhanced Magnetism (Historic Feature)	 Scale: 1:1,500 @ A3	Drawing Number: 05/40282/GEO/07/01		
	Ferrous/Iron Spike	Trend (Unclear Origin)	Enhanced Magnetism (Modern)		Created by: KA	Date: 14/02/2022	
	Linear Trend (Ploughing)	Trend (Geology/ Natural)	Enhanced Magnetism (Utility)		Checked by: JL	Date: 14/02/2022	
	Trend (Possible Archaeology)	Geology/Natural			Approved by: JL	Date: 14/02/2022	

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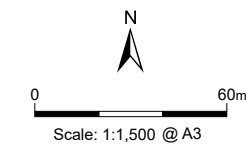
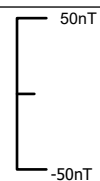
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Figure 8 - XY Trace Plot Area 1 shown over 1888 OS 1st Edition Map

Figure

8



Drawing Number: 05/40282/GEO/08/01
Created by: KA Date: 14/02/2022
Checked by: JL Date: 14/02/2022
Approved by: JL Date: 14/02/2022

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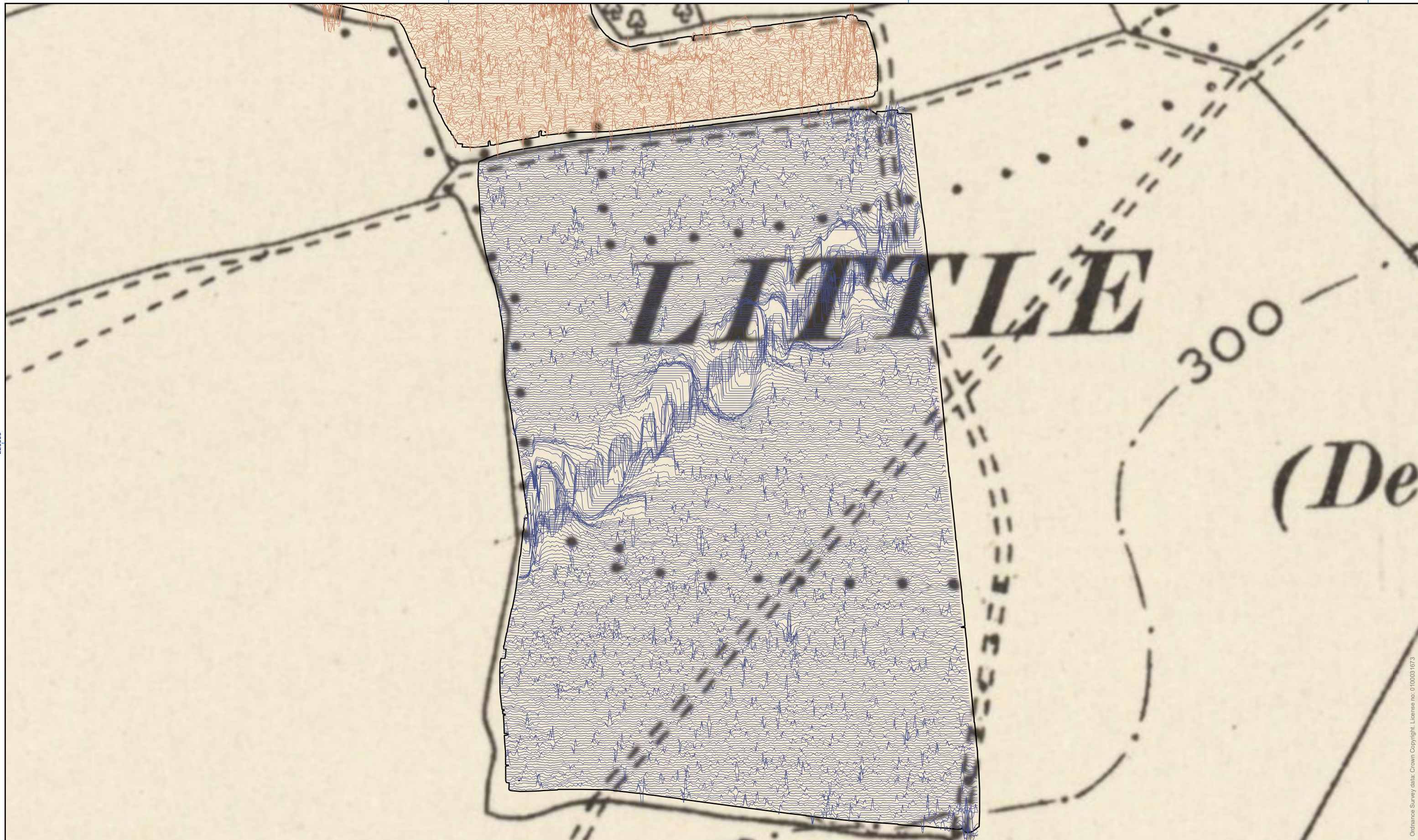


Figure 9 - XY Trace Plot Area 2 shown over 1888 OS 1st Edition Map

Figure
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0 60m
Scale: 1:1,500 @ A3

Drawing Number: 05/40282/GEO/09/01

Created by: KA Date: 14/02/2022

Checked by: JL Date: 14/02/2022

Approved by: JL Date: 14/02/2022

Appendix 1: Characterisation of Anomalies

Gradiometer survey

Anomaly	Type of Anomaly
1A	Linear trend – Possible Archaeology
1B	Linear trend – Possible Archaeology
1C	Linear trend – Possible Archaeology
1D	Linear trend – Possible Archaeology
1E	Linear trend – Historical Feature (boundary on 1888 OS)
1F	Linear trend – Geology – former water course
2A	Linear trend – Possible Archaeology
2B	Linear trend – Unclear Origins

Appendix 2: Survey Metadata**Oasis ID: aocarcha1-432986**

Field	Description
Surveying Company	AOC Archaeology
Data collection staff	Sacha O'Connor, Margueritte Hall
Client	Axis
Site name	Sperberry Hill Solar
County	Hertfordshire
NGR	TL 20710 26367
Land use/ field condition	Arable young cereal crop
Duration	13/12/21 - 16/12/21
Weather	Overcast/Sunny
Survey type	Gradiometer Survey
Instrumentation	Bartington cart survey: Bartington Non-Magnetic Cart, three Bartington Grad 601-2, Trimble R10 GNSS System
Area covered	18 ha
Download software	MLGrad601
Processing software	Geomar, MultiGrad601 and TerraSurveyor
Visualisation software	ArcGIS Pro
Geology	Chalk of the Holywell Nodular Chalk Formation and New Pit Chalk Formation. In the north the chalk is overlain by superficial Diamicton deposits of the Lowestoft Formation, whilst to the south it is overlain by glaciofluvial deposits of sand and gravel. There is a band of glacial head material bisecting the survey area east-west through the valley in the centre of the survey area (BGS, 2022).
Soils	These are overlain by slightly acid loamy and clayey soils with impeded drainage (Soilscapes, 2022).
Scheduled Ancient Monument	No
Known archaeology on site	None
Historical documentation/ mapping on site	None
Report title	Sperberry Hill Solar, Gloucestershire: Archaeological Geophysical Survey
Project number	40282
Report Author	Kayt Armstrong
Quality Checked by	James Lawton

Appendix 3: Archaeological Prospection Techniques, Instrumentation and Software Utilised

Gradiometer Survey

Gradiometer surveys measure small changes in the earth's magnetic field. Archaeological materials and activity can be detected by identifying changes to the magnetic values caused by the presence of weakly magnetised iron oxides in the soil (Aspinall et al., 2008, 23; Sharma, 1997, 105). Human inhabitation often causes alterations to the magnetic properties of the ground (Aspinall et al, 2008, 21). There are two physical transformations that produce a significant contrast between the magnetic properties of archaeological features and the surrounding soil: the enhancement of magnetic susceptibility and thermoremanent magnetization (Aspinall et al., 2008, 21; Heron and Gaffney 1987, 72).

Ditches and pits can be easily detected through gradiometer survey as the topsoil is generally suggested to have a greater magnetisation than the subsoil caused by human habitation. Areas of burning or materials which have been subjected to heat commonly also have high magnetic signatures, such as hearths, kilns, fired clay and mudbricks (Clark 1996, 65; Lowe and Fogel 2010, 24).

It should be noted that negative anomalies can also be useful for characterising archaeological features. If the buried remains are composed of a material with a lower magnetisation compared to the surrounding soil, the surrounding soil will consequently have a greater magnetization, resulting in the feature in question displaying a negative signature. For example, stone materials of a structural nature that are composed of sedimentary rocks are considered non-magnetic and so will appear as negative features within the dataset.

Ferrous objects – i.e. iron and its alloys - are strongly magnetic and are typically detected as high-value peaks in gradiometer survey data, though it is not usually possible to determine whether these relate to archaeological or modern objects.

Although gradiometer surveys have been successfully carried out in all areas of the United Kingdom, the effectiveness of the technique is lessened in areas with complex geology, particularly where igneous and metamorphic bedrock is present or thick layers of alluvium or till. All magnetic geophysical surveys must therefore take the effects of background geological and geomorphological conditions into account.

Bartington Non-Magnetic Cart Instrumentation and Software

AOC Archaeology's cart-based surveys are carried out using a Bartington Non-Magnetic Cart. The cart enables multiple traverses of data to be collected at the same time, increasing the speed at which surveys may be carried out and offers the benefits of reduced random measurement noise and rapid area coverage (Schmidt et al 2015, 60-62, David et al. 2008, 21).

The cart uses a configuration of six Grad-01-1000L sensors mounted upon a carbon fibre frame along with three DL601 dataloggers and two BC601 battery cassettes. The sensors are normally positioned at 1m intervals on a horizontal bar, with the datalogger taking readings every 12.5cm along each traverse, though this can be altered to increase / reduce resolution if required. The data is georeferenced via a Trimble R10 Real Time Kinematic (RTK) VRS Now GNSS GPS which streams data throughout survey and allows the data to be recorded relative to a WGS1984 UTM coordinate system.

The gradiometer data is collected through Geomar MLGrad601 software on a laptop in real-time during the survey. The data is downloaded and converted into a .xyz file in Geomar MultiGrad601 before being processed along with the GPS data in TerraSurveyor v3.0.34.10 (see Appendix 4 for a summary of the processes used in Geoplot to create final data plots).

Appendix 4: Summary of Data Processing

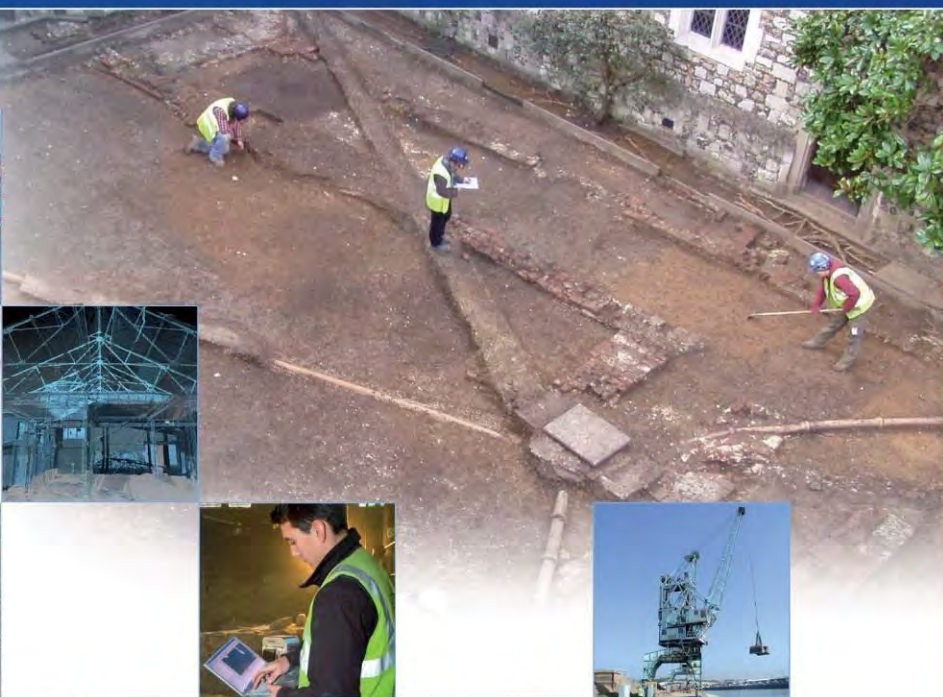
Process	Effect
Clip	Limits data values to within a specified range
De-spike	Removes exceptionally high readings in the data that can obscure the visibility of archaeological features. In resistivity survey, these can be caused by poor contact of the mobile probes with the ground. In gradiometer survey, these can be caused by highly magnetic items such as buried ferrous objects.
De-stagger	Corrects a misalignment of data when the survey is conducted in a zig-zag traverse pattern.
Discard Overlap (TerraSurveyor)	Removes datapoints which occur too closely together and can cause digital artefacts in the data which are caused by the overlapping of parallel traverses.
Edge Match	Counteracts edge effects in grid composites by subtracting the difference between mean values in the two lines either side of the grid edge.
Filter (MAGNETO)	Much like a zero mean traverse, it resets the median value of each point to zero, in order to address the effect of striping in the data and counteract edge effects. In MAGNETO the individual values take into account the value of all uncorrected points within a certain distance to create its own median.
GPS Filter (MAGNETO)	Used to either remove or reduce the appearance of constant and reoccurring features that are not consistent with the GPS signal in use by the cart system.
High pass filter	Removes low-frequency, large scale detail in order to remove background trends in the data, such as variations in geology.
Interpolate	Increases the resolution of a survey by interpolating new values between surveyed data points, creating a smoother overall effect.
Low Pass filter	Uses a Gaussian filter to remove high-frequency, small scale detail, typically for smoothing the data.
Periodic Filter	Used to either remove or reduce the appearance of constant and reoccurring features that distort other anomalies, such as plough lines.
Remove Turns (TerraSurveyor)	Uses analysis of the direction of travel derived from the GNSS data to break continuous streams of data into individual traverses.
Zero Mean Grid	Resets the mean value of each grid to zero, in order to counteract grid edge discontinuities in composite assemblies.
Zero Mean Traverse	Resets the mean value of each traverse to zero, in order to address the effect of striping in the data and counteract edge effects.

Processing Steps

Bartington Cart survey	
Process	Extent
Base Settings	Interval 0.121m, Track Radius 1.06m
Remove Turns	Threshold Angle 90°, Cut Length 5m
Discard Overlap	Threshold Distance 0.4m, Minimum Track 5, Newest
Despike	Mean Diameter 3 Threshold 12
Destripe	Mean Traverse SD 1.5
High Pass Filter	Uniform (Median) 12
Clip	-100/100

Appendix 5: Technical Terminology

Type of Anomaly	Description
Archaeology	<i>Interpretation is supported by the presence of known archaeological remains or by other forms of evidence such as HER records, LiDAR data or cropmarks identified through aerial photography.</i>
Trend	Linear / curvilinear / rectilinear anomalies either characterised by an increase or decrease in values compared to the magnetic background.
Area of enhanced magnetism	A zone of enhanced magnetic responses over a localised area. These anomalies do not have the high dipolar response which are manifested in an 'iron spike' anomaly and likely have a relationship with nearby archaeological trends.
Pit	An anomaly composed of an increase in magnetic values with a patterning on the XY trace plot that is pit-like in appearance.
Possible Archaeology	<i>Trends are likely to have an archaeological origin, however without supporting evidence from known archaeological remains, HER records, LiDAR or aerial photography, they can only be classed as having a possible archaeological origin.</i>
Trend	Linear / curvilinear / rectilinear anomalies either characterised by an increase or decrease in values compared to the magnetic background.
Area of enhanced magnetism	A zone of enhanced magnetic responses over a localised area. These anomalies do not have the high dipolar response which are manifested in an 'iron spike' anomaly but lacks definitive records to be classed as being archaeological.
Pit-like anomaly	An anomaly composed of an increase in magnetic values with a patterning on the XY trace plot that is pit-like in appearance.
Burnt area	An anomaly with a patterning on the XY trace plot that is suggestive of industrial activity such as a kiln or hearth.
Unclear Origin	<i>Trends are magnetically weak, fractured or isolated and their context is difficult to ascertain. Whilst an archaeological origin is possible, an agricultural, geological or modern origin is also likely.</i>
Trend	Linear / curvilinear / rectilinear anomalies which are composed of a weak or different change in magnetic values. The trends do not appear to form a patterning that is suggestive of archaeological remains, such as enclosures or trackways.
Area of enhanced magnetism	A zone of enhanced magnetic responses which lack context for a conclusive interpretation. They do not appear to have a relationship with nearby trends of an archaeological origin. Can often be caused by areas of former woodland, geological variations or agricultural activity.
Agricultural	<i>Trends associated with agricultural activity, either historical or modern.</i>
Old Field Boundary	These isolated long linear anomalies, most often represented as a negative or fractured magnetic trend, relate to former field boundaries when their positioning is cross referenced with historical mapping.
Historical Features	Features observed on historical mapping that correspond with anomalies or trends in the data. Areas of enhanced magnetism could relate to former buildings, trackways, quarries or ponds.
Ridge and Furrow / Rig and Furrow	A series of regular linear or curvilinear anomalies either composed of an increased or decreased magnetic response compared to background values. The wide regular spacing between the anomalies is consistent with that of a ridge and furrow / rig and furrow ploughing regime. The anomalies often present as a positive 'ridge' trend adjacent to a negative 'furrow' trend.
Ploughing Trends	A series of regular linear anomalies either composed of an increased or decreased magnetic response compared to background values. Anomalies seen parallel to field edges are representative of headlands caused by ploughing.
Field Drainage	A series of magnetic linear anomalies of an indeterminate date, usually with a regular or herringbone patterning.
Non - Archaeology	<i>Trends which are likely to have derived from non-archaeological processes or activities.</i>
Geology / Natural	An area of enhanced magnetism that is composed of irregular weak increases or decreases in magnetic values compared with background readings. It is likely to indicate natural variations in soil composition or reflect variations in the bedrock or superficial geology.
Possible Modern Service	Anomalies of a linear form often composed of contrasting high positive and negative dipolar values. Such anomalies usually signify a feature with a high level of magnetisation and are likely to belong to modern activity such as pipes or modern services.
Magnetic Disturbance	A zone of highly magnetic disturbance that has been caused by or is a reflection of modern activity, such as metallic boundary fencing, gateways, roads, boreholes, adjacent buildings, rubbish at field edges or a spread of green waste material.
Isolated Dipolar Anomalies / Ferrous (iron spikes) and Ferrous Zones	A response caused by ferrous materials on the ground surface or within the subsoil, which causes a 'spike' in the data representing a rapid variation in the magnetic response. These generally represent modern material often re-deposited during manuring.



AOC Archaeology Group The Lodge, Unit 8, Mortec Park, Leeds, LS15 4TA
tel: 01138 232 853 | email: leeds@aocarchaeology.com

www.aocarchaeology.com