Hampshire Water Transfer and Water Recycling Project

Environmental Statement – Appendix 7.8 Detailed gradiometer survey report – Phase 2

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Addendum Appendix 7.8 Detailed gradiometer survey report – Phase 2

1. The following document forming Environmental Statement (ES) Appendix 7.8 Detailed gradiometer survey report – Phase 2, Volume II (Document reference 6.2, DCO Volume 6) presents the results of the Phase 2 geophysical survey conducted by Wessex Archaeology, commissioned by Southern Water Services Ltd., for the Hampshire Water Transfer and Water Recycling Project (hereafter referred to as the Proposed Development) between June and October 2024.
2. The results presented in this report have informed both decisions relating to the design of the Proposed Development and the assessment of the likely significant effects on archaeology and cultural heritage from the construction, operation, and decommissioning of the Proposed Development within the ES Chapter 7 Archaeology and cultural heritage, Volume I (Document reference 6.1, DCO Volume 6).
3. This report has therefore been included as an appendix to provide additional supporting detail to the assessment contained in ES Chapter 7 Archaeology and cultural heritage, Volume I (Document reference 6.1, DCO Volume 6).
4. However, having been written at the time of the geophysical survey being conducted, this document includes references to terminology and documents in place at the point in time the geophysical survey was carried out. This appendix should as a result be read in conjunction with ES Chapter 7 Archaeology and cultural heritage, Volume I (Document reference 6.1, DCO Volume 6) and associated appendices.

Hampshire Water Transfer – Phase 2

Detailed Gradiometer Survey Report

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Summary

Wessex Archaeology was commissioned by Southern Water Services Ltd to carry out a gradiometer survey along a linear route between Southwick in the south-east (NGR 471899 108721) to Otterbourne in the north-west (NGR 446672 123092) and Staunton Country Park (NGR 471735 , 108885).

The survey forms part of an ongoing programme of archaeological surveys being undertaken in support of a Development Consent Order for Hampshire Water Transfer and Water Recycling Project and reflects a secondary phase of survey. The programme includes a number of measures to manage demand and leakage reduction, however the majority of the deficit would be provided by a strategic new water source – the Hampshire Water Recycling and Water Transfer Project.

The site comprises arable fields, pasture, and horse paddocks, covering an area of 67.66 ha. The geophysical survey was undertaken between 4 June and 31 October 2024.

The survey has identified areas of archaeological potential, as well as several anomalies which could prove to be archaeological in origin. Additionally, an extensive agricultural hinterland was revealed across the scheme.

A prehistoric enclosure has been identified in the southern part of the scheme. It is situated in a landscape where Bronze Age barrows and Mesolithic flint scatters are known. It has no indication of settlement activity and it is thought to serve as a husbandry enclosure. Several possible roundhouses are located west of it.

Numerous anomalies associated with former agricultural activity have been identified. These include former field boundaries and areas of ridge and furrow cultivation. The form of these is suggestive of post-medieval cultivation practices, rather than earlier activity.

Areas of increased magnetic response have been identified across the site. Many of these are associated with historical landscape features such as former chalk pits identified on historical OS mapping. Further areas of increased magnetic response are evident across the site. These have been interpreted as areas of modern disturbance, possible further historical extraction activity, spreads of enhanced magnetic material, or made ground.

The remaining anomalies noted across the scheme pertain to drainage, modern ploughing, and modern services.

Acknowledgements

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The fieldwork was undertaken by Filippo Carrozzo, Calum Jervis, Jo Instone-Brewer David Butcher Andrew Marke, Jack Trueman and Manasi Patil. Rok Plesnicar processed and interpreted the geophysical data with assistance from Filippo Carrozzo, Calum Jervis and Jack Trueman. Rok Plesnicar wrote the report with contributions from Bethan Haeley. The geophysical work was quality controlled by Tom Richardson. Illustrations were prepared by Rok Plesnicar. The project was managed on behalf of Wessex Archaeology by Patricia Edwards.

Hampshire Water Transfer – Phase 2

Detailed Gradiometer Survey Report

1 INTRODUCTION

1.1 Project background

1.1.1 Wessex Archaeology was commissioned by Southern Water Services Ltd to carry out a geophysical survey along a linear route between Southwick in the south-east (NGR 471899 108721) to Otterbourne in the north-west (NGR 446672 123092) and Staunton Country Park (NGR 471735 , 108885) (**Figure 1**). The survey forms part of an ongoing programme of archaeological works being undertaken in support of a Development Consent Order for the Hampshire Water Recycling and Water Transfer Project. The programme includes a number of measures to manage demand and leakage reduction, however the majority of the deficit would be provided by a strategic new water source – the Hampshire Water Recycling and Water Transfer Project.

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 for this secondary phase of the project.

1.3 The Proposed Development

1.3.1 The scheme runs on a linear route for 36 km from Staunton Country Park and Southwick in the south-east to Otterbourne in the north-west, and an additional field north of Havant to the south-east. The second phase of the Proposed Development survey comprises 132 ha of agricultural land, currently utilised as pasture, crop, and scrub.

1.3.2 The topography along the route varies greatly. The southeast area of the route has an elevation of approximately 35 m Ordnance Datum (OD) with areas to the south, close to London Road, Portsdown Hill Road and the A3 having elevations that fluctuate between 80 m OD to 95 m OD. The elevation within the central part of the route, to the south of Wickham and west of Bishops Waltham, ranges between 20 m OD and 40 m OD. The elevations in the northwest area near Otterbourne WSW range from approximately 25 m OD to 30 m OD.

1.3.3 The solid geology underlying the majority of the site consists of Clay, Silt, and Sand of the Thames Group, Bracklesham Group, and the Lambeth Group, with a small area of White Chalk of the White Chalk Subgroup underlying SE23.1_2 - SE10.2 (BGS 2024) at the south-eastern part of the scheme. Superficial deposits are only listed for HP783623.1, which are listed as river terrace deposits (BGS 2024).

1.3.4 The soils underlying the site are likely to consist of pelo-stagnogley soils of the 712c (Windsor) association (SSEW SE Sheet 6 1983) for the majority of the site and typical paleo-argillic brown earths of the 581d (Carstens) association (SSEW SE Sheet 6 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 The archaeological and historical background set out below has considered the recorded historic environment within a 1 km study area of the scheme. The following archaeological background is not exhaustive but discusses known heritage assets relevant to the interpretation of the geophysical survey data. It uses publicly available online resources such as the Historic Environment Record (HER) for Hampshire and Winchester HER, the National Heritage List for England (NHLE), and historical Ordnance Survey (OS) mapping (National Library of Scotland (NLS)). All distances discussed are from the nearest site boundary.

2.2 Summary of the archaeological resource

Monuments

2.2.1 There are 11 scheduled monuments within 1 km of phase 2 of the Proposed Development.

2.2.2 The 19th century Southwick brewhouse (NHLE 1001788) is 880 m north of SE23.1_2.

2.2.3 Two 19th century forts along the chalk ridge of Portsdown Hill are scheduled monuments within 1 km of the site. These are Fort Southwick (NHLE 1167213) 540 m south-east of SE23.1_2 and Fort Nelson (NHLE 1350616) 470 m south of SE10.2.

2.2.4 Southwick Priory (NHLE 1001902), the remains of an Augustine priory, is listed 720 m north-east of SE23.1_2.

2.2.5 The Moated Site at Marwell Manor (NHLE 1012196) is listed 400 m north-east of HP220424.2, a rural manor of the Bishops of Winchester from the 10th century. An associated park from the 13th century is evidenced by park pales which are also scheduled monuments. These are located 330 m north (NHLE 1012308), 510 m north (NHLE 1012198), and 520 m west (NHLE 1012309) of HP220424.2; and 500 m north (NHLE 1017607) of HP759708.

2.2.6 The Moated site at Otterbourne Manor (NHLE 1013055) is located 120 m east of Z3031.2.

2.2.7 A World War II Heavy Anti-aircraft gun site at Monument Farm (NHLE 1020960) is located 375 m south of SE10.4.

Listed buildings

2.2.8 There are 203 listed buildings within 1 km of the site comprising 6 Grade I, 12 Grade II* and 185 Grade II buildings. These include the previously mentioned Grade I listed Fort Southwick and Fort Nelson; as well as Grade I listed New House (NHLE 1095660), a 20th century country house 210 m south-west of HP585327. The Grade I listed churches of St James (NHLE 1167160) and St Nicholas (NHLE 1350613) are 970 m north of SE23.1_2 and 280 m north of SE10.4 respectively.

Prehistoric

2.2.9 A Mesolithic and Neolithic worked flint findspot is located 140 m north of SE23.2.

2.2.10 In the field to the south of SE23.1_2 are two bowl barrows, located 500 m away. Several Mesolithic flints were found in the same field, including a Mesolithic microlith.

2.2.11 Evidence of pre-Bronze Age activity can be found 15 m south-east of SE10.4 and is a findspot which contained a collection of Mesolithic flint flakes.

2.2.12 A findspot containing a Thames pick and a small flaked flint knife was located 50 m south-west of Z3819.

2.2.13 A collection of prehistoric flints, likely Neolithic or Bronze Age in date are located 1 km SSE of SE23.1_2.

2.2.14 North of Heytesbury Farm, 470 m west of HP670236, is a Bronze Age pit excavated in 2013. The excavation revealed that the pit contained 300 sherds of pottery. Several ditches were found in the same field. Although they cannot be dated, large quantities of burnt flint suggest that they are related to the pit.

2.2.15 Located 480 m north-east of HP760793.2 is a findspot containing a collection of Bronze Age axe heads.

2.2.16 Located 1 km east of HP534223.1 is the site of a possible Bronze Age disc barrow that has been ploughed out, as well as an enclosure.

2.2.17 Located 170 m south of SE10.3 is a collection of findspots that contained Iron Age pottery, alongside a medieval whetstone, and medieval pottery.

2.2.18 Upper Barn Copse earthworks along Fishers Pond are distinguished as a significant Iron Age feature. The earthwork is likely the scale of the deer park boundary; however, traces of the western ditch suggest it once acted as a defensive boundary of an enclosure. This is situated 800 m south of HP760793.2.

Romano-British

2.2.19 Located 450 m south-west of HP428159 is the line of the Roman Road, which was discovered along with other objects. 500 m south of HP428159 is a findspot that contains four Roman coins and a bone hair pin.

2.2.20 The site of the Roman Road from Winchester to Wickham lies 20 m east of Z1066 and 70 m east of HP736203.

Medieval

2.2.21 Located 530 m west of SE23.1_2, within the grounds of New Barns Farm, are indications of medieval earthworks in the large open areas between the buildings.

2.2.22 In a field 250 m south-west of SE461 is a possible medieval field system. In the same field is a post-medieval quarry and post-medieval or possible modern sand pit.

2.2.23 Evidence of medieval activity includes a medieval or post-medieval pathway 650 m north-east of HP796195.

2.2.24 Some medieval agricultural activity can be seen 100 m south-west of HP736203 and is a site of ridge and furrow.

2.2.25 Further medieval activity includes a field system 550 m west of Z10660.1 as well as two curved banks of a nearby field system 200 m south of HP491539.3. A medieval or post medieval bank, which follows the parish boundary line is within LP_079 (HP487549). Finally, 100 m east of LP_074 (HP717922), is a medieval trackway.

2.2.26 Two single ditch linear features are visible 900 m south of HP760793.2 and are likely to be a part of a field system.

Post-medieval

2.2.27 The area surrounding SE2 – SE461 contains many localised chalk pits and other small quarries. Some examples of these are 200 m south of SE461 and 220 m southwest of SE2.

2.2.28 Seen 160 m south of SE2 is a linear bank, 120 m in length, thought to be a former field boundary or pathway.

2.2.29 A group of four post-medieval extraction pits are located 240 m west of HP428159. Other pits and quarrying activity can be seen throughout the area, for example 180 m and 280 m north of are two linear mounds that are likely spoil heaps or agricultural features. Close to Park Place, 600 m south-west of HP428159, is Wickham deer park, originally recorded in John Speed's 1611 map.

Modern

2.2.30 A plane crash of a Hurricane fighter plane has been recorded in HP351530.2 and excavated by Winchester University in 2019.

2.2.31 The Bishops Waltham World War II prisoner of war camp was located 515 m north-east of Z1066.

2.2.32 13 oval features can be seen 300 m west of HP803665.3 in aerial photography. Thought to be recent in origin, possibly tree removal holes or charcoal burning platforms.

2.3 Recent investigations in the immediate vicinity

Geophysical survey

2.3.1 The current survey forms part of an ongoing programme of archaeological works being undertaken in support of a planning application for Hampshire Water Recycling and Water Transfer Project. Previous works include a detailed gradiometer survey undertaken by Wessex Archaeology's in-house geophysics team between March and September 2023 (Wessex Archaeology 2023). The survey comprised 275.2 ha of land on a linear route for 25 km from Bedhampton in the south-east to Fishers Pond in the north-west. This was successful in identifying anomalies of archaeological interest, including a ring ditch associated with prehistoric settlement or funerary activity, as well as a large number of coherent ferrous responses.

2.3.2 A gradiometer and ground penetrating radar (GPR) survey have been undertaken by the Wessex Archaeology in-house team in December 2023 (Wessex Archaeology 2024a), where several possible prehistoric ring ditches and a small enclosure have been identified. The GPR survey has identified the location of the excavation of a World War II plane crash site.

2.3.3 Tiral threnching has been conducted in 2024 by Wessex Archaeology comprising 67 trenches. The remains of ditches, postholes and pits indicating three main phases of activity: Iron Age, Romano-British and post-medieval/modern have been identified (Wessex Archaeology 2024b).

3 METHODOLOGY

3.1 Introduction

3.1.1 The geophysical survey was undertaken by Wessex Archaeology's in-house geophysics team between 4 June and 31 October 2024. Field conditions at the time of the survey were variable throughout the period of the survey. An overall coverage of 67.66 ha out of 132 ha was achieved. The reductions are mainly related to access issues, in addition to several areas comprising dense vegetation and horse paddocks which prevented survey.

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.
- To undertake a programme of detailed geophysical survey across targeted sections along the proposed development (Phase 1), followed by as much coverage as possible (Phase 2);
- identify and characterise sub-surface anomalies that may have an archaeological origin (including defining the spatial limits of already known or suspected heritage assets);
- discount areas within the survey area that are found to have been subject to previous 'modern' disturbance, for example where geophysical survey data indicate the presence of 'made' or previously heavily disturbed ground;
- provide an interpretation (in written form with accompanying GIS data) of all recorded geophysical anomalies to inform the Archaeology and Cultural Heritage PEIR Chapter and subsequent ES Chapter;
- prepare a fully illustrated report on the results of Phase 1 and Phase 2 Archaeological Geophysical Surveys that is compliant with all relevant standards, guidance and good practice; and
- produce a site archive for deposition with an appropriate local museum service (anticipated to be Hampshire County Council Arts and Museum Service (HCCAMS) – to be confirmed by the archaeological sub-contractor) and to provide information for accession to the Hampshire Historic Environment Record (HER) and Winchester HER.

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 Carlson BRX-7 RTK GNSS instrument, which receives corrections from a network of reference stations operated by the OS. 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 survey was conducted using four Sensys FGM650/3 magnetic gradiometers spaced at 1 m intervals and mounted on a non-magnetic cart. 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. Results are presented as a series of greyscale plots and archaeological interpretations. The overview plots are at a scale of 1:15000 (**Figures 2** – **13**) and the detailed results are presented at a scale of 1:2000 (**Figures 14** – **59**). The data are displayed at -2 nT (white) to +3 nT (black) for the greyscale image.

4.1.2 The interpretation of the datasets highlights the presence of potential archaeological anomalies, ferrous responses, burnt or fired objects, and magnetic trends (**Odd numbered figures 3** – **59**). 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

*SH13990 (**Figure 15**)*

4.2.1 An area of weak positive and negative linear anomalies (**5000**) has been identified in the south-eastern part of the survey area. They are spaced about 10 m apart, slightly curving from east to west. Similar anomalies (**5001**) have been identified to the north-west of **5000**. They are on a north – south alignment and spaced about 8 m apart. These kinds of anomalies are indicative of historical cultivation practices such as ridge and furrow.

4.2.2 An area of increased magnetic response has been identified traversing the western portion of the survey area at **5002**. It corresponds with modern footpath within the survey area.

4.2.3 The remainder of the identified anomalies indicate weak positive trends and land drains.

*SE23.1_2, SE23.2, SE18.1, SE18.2 (**Figures 17**, **19**)*

4.2.4 A weak positive linear anomaly has been identified in the western part of SE18.1 at **5010** (**Figure 19**). It is up to 2 m wide and occupies an area of 65 m east – west by 45 m south – north indicating a ditch-like feature. On the northern side, it extends beyond the survey area. Several small, positive circular discrete anomalies are identified within, possibly indicating pit-like features. Combined, these features are interpreted as a possible agricultural enclosure of likely prehistoric origin, given the Mesolithic and Bronze Age funerary and settlement activities known within 500 m the south-east of this area.

4.2.5 A weak positive linear anomaly aligned on a north – south orientation has been identified in the western part of SE23.1_2 at **5011** (**Figure 17**). It is up to 1 m wide and likely extends beyond the survey boundary on both sides. This anomaly has been interpreted as a ditch-like feature, likely pertaining to a field system predating available maps.

4.2.6 In SE18.2, located 100 m to the east of **5010** is a series of weak positive penannular anomalies at **5012** (**Figure 19**). They are 1 m wide and have a diameter of up to 9 m. Several small, positive, discrete anomalies have been identified within, with diameters of up to 1 m. They are interpreted as ditch-like features indicating ditches or gullies pertaining to round houses with post holes or storage/refuse pits within. Prehistoric presence from the wider landscape strengthens this interpretation, however, due to their weak amplitudes, they could also be the result of natural processes or modern farming practices.

4.2.7 A succession of broad weak positive and negative linear anomalies (**5013**) have been identified surrounding the possible round houses at **5012**. They are aligned on a north – south orientation and have been identified as ridge and furrow of an unknown date.

4.2.8 Two areas of increased magnetic responses have been identified in SE23.1_2 and SE23.2 at **5014** – **5015** (**Figure 17**). They are irregular in shape, occupying an area of 70 m by 57 m and 67 m by 55 m respectively. They correspond with the location of chalk pits noted on the second edition OS map of Hampshire & Isle of Wight Sheet LXXV.NE from 1898.

4.2.9 An area of strong positive and negative anomalies (**5016**) is located to the east of **5014**. It occupies a 110 m long and up to 9 m wide area along the eastern site boundary. These kinds of anomalies indicate the spread of magnetically enhanced material in the area and are usually associated with man-made ground.

4.2.10 Several strong linear dipolar anomalies (**5017** – **5021**) have been identified throughout the area. They indicate modern services.

4.2.11 Several weak positive linear trends were identified throughout the area. They are not clear enough for a confident interpretation. Additionally, indications of modern agricultural practices, such as plough lines and drains have been identified.

4.2.12 Weak, broad, positive anomalies of irregular shapes identified in SE23.1_2 (**Figure 17**) are considered geological in origin and as such archaeologically irrelevant.

*SE464, SE2, HP428159 (**Figure 21**, **23**)*

4.2.13 A series of small discrete positive anomalies have been identified in the northern part of SE464 at **5030** (**Figure 21**). They are up to 1 m in diameter forming a ring with a diameter of 10.5 m. They are spaced about 2 m apart in two groups of 5, with a 3 m gap on the eastern side and a 6 m gap on the western side. These pit-like features likely indicate post holes pertaining to a possible prehistoric roundhouse. Due to their weak magnetic signature, they could as well be natural in origin.

4.2.14 A linear dipolar anomaly has been identified in the north-eastern corner of HP428159 at **5031** (**Figure 23**). It is up to 1 m wide and runs on an east – west orientation for 31 m before it turns north for an additional 33 m. On the northern and eastern sides, it may extend beyond the survey area. This likely indicates a field boundary or small enclosure absent from available mapping; however, due to its increased magnetic value, it could be more modern in origin.

4.2.15 Two strong dipolar linear anomalies are present within this portion of the scheme at **5032** – **5033** (**Figures 21** and **23**). They are indicative of modern services.

4.2.16 Several weak positive linear trends have been identified throughout these areas. These anomalies are not well defined enough for a confident interpretation but may reflect more recent agricultural activity. Indications of modern agricultural practices in the form of ploughing and land drains have been confirmed throughout these survey areas.

4.2.17 Weak broad positive anomalies of irregular form have been identified across SE464 and SE2 (**Figure 21**). These anomalies likely reflect variations in the superficial underlying deposits and are considered to be geological in origin.

*HP428159, HP717267.2, HP351530.2, HP715020.2 (**Figures 25**, **27**, **29**)*

4.2.18 A positive square anomaly has been identified in the centre of HP351530.2 at **5040** (**Figure 27**). It measures 4 m by 4 m indicating a pit feature. It corresponds with the excavation of the Hawker fighter aeroplane from World War II which crashed in the field and was subsequently excavated by Winchester University in 2019.

4.2.19 Several fragmented, positive linear anomalies have been identified in HP428159 at **5041** – **5044** (**Figure 25**) and HP717267.2 (**Figure 27**). They are 2 m wide and between 28 m and 125 m long. They are interpreted as ditch-like features, likely representing field boundaries not recorded on any historical mapping. They all are aligned in an orthogonal arrangement to existing field boundaries which further supports their interpretation as former land divisions of unknown archaeological origin.

4.2.20 Several areas of increased magnetic response have been noted in HP717267.2 (**Figure 27**). They are associated with the spread of magnetically enhanced material across this area and likely relate to modern deposition of material, possibly as part of agricultural practices.

4.2.21 Several weak positive linear trends have been identified throughout the portion of the scheme. They are not clear enough for a confident interpretation. Additionally, indications of modern agricultural practices, such as ploughing and land drains have been detected.

4.2.22 Two strong dipolar linear anomalies at **5045** (**Figure 27**) and **5046** (**Figure 29**) are present within the survey area. They are indicative of modern services.

*HP400903, HP64746, HP844934 (**Figure 31**, **33**, **35**)*

4.2.23 A weak positive penannular anomaly has been identified in the eastern part of HP64746 at **5050** (**Figure 33**). It is up to 0.7 m wide and has a diameter of 9 m. It indicates a possible ditch-like feature, such as a gully or ring dich of a roundhouse due to its size and overall morphology. The weak nature of the feature makes this interpretation tentative at best and it may be the result of modern agricultural activity.

4.2.24 To the south and west of **5050** are several fragmented, positive linear anomalies (**5051** – **5054**) which indicate ditch-like features (**Figure 33**). They are on average up to 2 m wide and between 25 m and 140 m long. They are aligned in numerous orientations predominantly NNE – SSW and south-west – north-east. A similar anomaly has been identified in HP844934 at **5055** (**Figure 35**) it is 1 m wide and 33 m long. Combined, these ditch-like features may be associated with unrecorded field boundaries. However, the limited survey area makes interpretation difficult as there is no context to these ditches and they could equally relate to modern agricultural practices such as land drains.

4.2.25 An array of positive parallel broad linear anomalies have been identified in HP64746 at **5056** (**Figure 33**). They are on a north-east to south-west alignment and are indicative of medieval to post-medieval ridge and furrow.

4.2.26 An area of increased magnetic response is present at the western edge of HP64746 at **5057** (**Figure 33**). This indicates man-made ground deposited alongside the edge of the field noted at the time of survey.

4.2.27 Several areas of increased magnetic responses have been identified in HP400903 at **5058** (**Figure 31**). They indicate a spread of magnetically enhanced material across the site. Structures are visible within this field on satellite images from Google Earth in 2000 and it is surmised that this spread of material indicates demolition material and remains of foundations of these structures.

4.2.28 Several weak positive linear trends have been identified throughout the area. They are not clear enough for a confident interpretation. Additionally, indications of modern agricultural practices such as plough lines and drains have been recorded.

4.2.29 A network of strong, dipolar linear anomalies is present within HP 64746 at **5059** (**Figure 33**) and indicates modern services.

*HP491539.4, HP491539.3, HP491539.2, HP491539.1, HP487549, HP534223.1, HP534223.2, HP534223.3, HP465865 (**Figures 37**, **39**, **41**, **43**)*

4.2.30 Three weak positive broad linear anomalies have been identified in HP534223.3 at **5070** – **5072** (**Figure 41**). They are on average 3 m wide and indicate a ditch feature. The ditch identified at **5070** is 32 m long on a north – south alignment and could extend beyond the northern edge of the survey area. The ditches at **5071** and **5072** are L-shaped and 82 m and 59 m long respectively. They are likely former field boundaries predating available maps.

4.2.31 A weak positive anomaly has been detected traversing broadly north – south through the centre of HP487549 at **5073** (**Figure 37**). It is up to 1 m wide and 80 m long indicating a ditch-like feature which likely extends beyond the survey boundary. Similar anomalies have been identified in HP534223.1 (**5074** – **5075**) (**Figure 39**) and HP534223.3 (**5076** – **5077**) (**Figure 41**). These anomalies indicate former field boundaries identified on the 2nd edition OS Map for Hampshire and Isle of Wight LVIII - OS 25 inch England and Wales, 1909 and on Google Earth 2005.

4.2.32 A series of weak, positive, broad linear anomalies (**5078**) have been identified between **5074** and **5075** at an interval between 3 m – 4 m on an east – west orientation (**Figure 39**). They have been interpreted as ridge and furrow within an agricultural field system. Similar anomalies are observed to the north at **5079** and within HP534223.2 at **5080**. These anomalies have all been identified as historical ploughing or ridge and furrow field systems.

4.2.33 Areas of strong dipolar anomalies have been identified at **5081** in HP491539.4 and **5082** in HP487549 (**Figure 37**). Their strong magnetic enhancement indicates that they are likely modern in provenance and indicate made ground.

4.2.34 Several weak positive linear trends have been identified throughout the area. They are not clear enough for a confident interpretation. Additionally, indications of modern agricultural practices such as ploughing and water management in the form of drains have been identified throughout this portion of the scheme.

4.2.35 Two strong dipolar linear anomalies are present within this portion of the scheme at **5083** – **5084** (**Figure 38** and **39**). They are indicative of modern services.

*HP549728.1, HP549728.2, HP322075, HP759708, HP650780 (**Figures 45**, **47**, **49**)*

4.2.36 A weak positive linear anomaly has been identified in HP549728.1 at **5090** (**Figure 45**). It is up to 1 m wide on an east – west orientation and likely extends beyond the survey boundary on both sides. It indicates a ditch-like feature. A similar anomaly has been identified in HP650780 at **5091** (**Figure 49**). It is up to 1 m wide and 85 m long. Both are noted as field boundaries on the Six Inch OS county map from Hampshire & Isle of Wight Sheet LVIII from 1871.

4.2.37 Two areas of increased magnetic response have been identified in the east of HP322075 at **5092** – **5093** (**Figure 45**). They are both irregular in shape, covering an area of up to 30 m by 21 m. They most likely pertain to enhanced magnetic material spread across the surface, likely made ground.

4.2.38 Several weak positive linear trends have been identified throughout the area. They are not clear enough for a confident interpretation. Additionally, indications of modern agricultural practices as ploughing and drains have been identified throughout these areas.

4.2.39 A strong dipolar linear anomaly is present within the northern boundary of HP322075 at **5094** (**Figure 47**). This indicates a modern service.

*HP760793.2, HP760793.1, Z3819, HP783623.1, HP783623.2-2, HP783623.2-1, HP783623.3 (**Figures 51**, **53**, **55**)*

4.2.40 A weak positive linear anomaly has been identified in the west of Z3819 at **5100** (**Figure 53**). It is up to 1 m wide and 50 m long indicating a ditch-like feature on a north – south alignment. It likely continues beyond the northern edge of the survey area. This corresponds with a former field boundary noted on the Six Inch OS county map from Hampshire & Isle of Wight Sheet LVIII from 1871.

4.2.41 Positive linear broad anomalies are located in the northern part of HP783623.2-2 at **5101** (**Figure 53**). They are spaced 7 m apart, slightly curving on a south-west to north-east orientation. This has been identified as medieval to post-medieval ridge and furrow cultivation.

4.2.42 An area of increased magnetic response has been located in the northern part of HP783623.3 at **5102** (**Figure 55**). It occupies an irregular area of 55 m by 40 m and due to its increased magnetic value likely indicates man-made ground.

4.2.43 Several weak positive linear trends have been recorded throughout this area. They are not clear enough for a confident interpretation. Additionally, indications of modern agricultural practices, such as plough lines and drains are present within this portion of the route.

4.2.44 A strong dipolar linear anomaly **5103** is present within the western end of HP783623.3 (**Figure 55**). This is indicative of modern services.

*Z3031.1, Z3031.2, Z3031.3, HP704093 (**Figures 57**, **59**)*

4.2.45 A weak positive linear anomaly has been noted in Z3031 at **5110** (**Figure 57**). This is up to 1 m wide and 56 m long on a north – south orientation before it turns eastwards for a further 12 m. It indicates a ditch-like feature and it has been identified as a former field boundary on the 1897 Second Edition OS map for Hampshire & Isle of Wight Sheet LVII.NE.

4.2.46 An array of positive linear anomalies has been identified at **5111** in the northern part of HP704093 (**Figure 59**). They are on the east – west alignment spaced 7 m apart and have been interpreted as medieval to post-medieval ridge and furrow cultivation.

4.2.47 Several weak positive linear trends have been identified throughout these areas, aligned on numerous orientations. From the geophysical results alone it is not clear what they represent. Indications of modern agricultural practices such as ploughing and drainage have also been identified.

4.2.48 Several strong dipolar linear anomalies at **5112** – **5114** are present within this portion of the scheme (**Figure 57** and **59**) and represent modern services.

5 DISCUSSION

5.1.1 The geophysical survey has identified areas of archaeological potential, as well as several anomalies which could prove to be archaeological in origin. Additionally, an extensive agricultural hinterland has been revealed across the site.

5.1.2 A prehistoric enclosure has been identified in the southern part of the scheme. It is situated in a landscape where Bronze Age barrows and Mesolithic flint scatters are known. It has no indication of settlement activity and it is thought to serve as a husbandry enclosure. Several possible roundhouses are located west of it; however, this interpretation is tentative as they lack clarity in the results.

5.1.3 Numerous anomalies associated with former agricultural activity have been identified. These include former field boundaries noted on historical OS mapping and areas of ridge and furrow cultivation. The form of these features is suggestive of post-medieval cultivation practices, rather than earlier activity. Many of the features also respect noted former field boundaries, as well as contemporary ones, further supporting the interpretation of post-medieval cultivation. However, many of these anomalies are weak and may be associated with modern ploughing, drains, or variations in local geology.

5.1.4 Areas of increased magnetic response have been identified across the site. Many of these are associated with historical landscape features such as former chalk pits identified on historical OS mapping. Further areas of increased magnetic response are evident across the site. These have been interpreted as modern disturbance, possible further historical extraction activity, spreads of enhanced magnetic material, or made ground.

5.1.5 Weak linear anomalies are noted but marked as trends as they are too weak to interpret further. They may pertain to archaeological activity, but further investigation would be required.

5.1.6 The remaining anomalies noted across the site pertain to drainage, modern ploughing, and modern services.

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Online resources

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Google Earth website http://earth.google.com (accessed October 2024)

Hampshire Historic Environment Record (accessed October 2024) https://maps.hants.gov.uk/historicenvironment/

Historic England (HE) website https://historicengland.org.uk/listing/the-list/map-search accessed October 2024)

Historic England Aerial Photography Maps https://historicengland.maps.arcgis.com/ (accessed October 2024)

Heritage Gateway website https://www.heritagegateway.org.uk/gateway (accessed October 2024)

National Library of Scotland (NLS) https://maps.nls.uk/geo/explore/ (accessed October 2024)

APPENDICES

Appendix 1 Survey equipment and data processing

Survey methods and equipment

The magnetic data for this project were acquired using a non-magnetic hand-pushed 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 will be 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 100 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 Carlson BRX-7 RTK system. This receives corrections from a network of reference stations operated by the Ordnance Survey, allowing positions to be determined with a precision of 0.02 m in real-time and therefore exceed the level of accuracy recommended by Europae Archaeologiae Consilium (Schmidt *et al.* 2015).

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.
(Schmidt *et al.* 2015).

Post-processing

The magnetic data collected during the detail survey were downloaded from the Sensys 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 was conducted so as not to distort the anomalies.

The cart-based system generally requires a lesser amount of post-processing than the handheld instrument. This is largely because mounting the gradiometers on the cart reduces the occurrence of operator error, caused by inconsistent walking speeds and deviation in traverse position due to varying ground cover and topography.

Typical data and image processing steps include:

- Destripe – Applying a zero-mean traverse in order to remove differences caused by directional effects inherent in the magnetometer;
- Destagger – Shifting each traverse longitudinally by a number of readings. This corrects for operator errors and is used to enhance linear features;

- Despike – Filtering isolated data points that exceed the mean by a specified amount to reduce the appearance of dominant anomalous readings (generally only used for earth resistance data)

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.

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

OASIS Summary for wessexar1-529790

OASIS ID (UID)	wessexar1-529790
Project Name	Geophysical Survey at Document titleHampshire Water Transfer - Phase 2
Sitename	Document titleHampshire Water Transfer - Phase 2
Sitecode	275082
Project Identifier(s)	275082, Hampshire Water Transfer – Phase 2
Activity type	Geophysical Survey, MAGNETOMETRY SURVEY
Planning Id	
Reason For Investigation	Planning: Pre application
Organisation Responsible for work	Wessex Archaeology
Project Dates	04-Jul-2024 - 31-Oct-2024
Location	Document titleHampshire Water Transfer - Phase 2 NGR : SU 71899 08721 LL : 50.873525635015746, -0.979518233145115 12 Fig : 471899,108721
Administrative Areas	Country : England County/Local Authority : Hampshire Local Authority District : Havant Parish : Havant, unparished area
Project Methodology	The cart-based gradiometer system used a Carlson BRX-7 RTK GNSS instrument, which receives corrections from a network of reference stations operated by the OS. 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). The survey was conducted using four Sensys FGM650/3 magnetic gradiometers spaced at 1 m intervals and mounted on a non-magnetic cart. 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.
Project Results	A prehistoric enclosure has been identified in the southern part of the scheme. It is situated in a landscape where Bronze Age barrows and Mesolithic flint scatters are known. It has no indication of settlement activity and it is thought to serve as a husbandry enclosure. Several possible roundhouses are located west of it. Numerous anomalies associated with former agricultural activity have been identified. These include former field boundaries and areas of ridge and furrow cultivation. The form of these is suggestive of post-medieval cultivation practices, rather than earlier activity. Areas of increased magnetic response have been identified across the site. Many of these are associated with historical landscape features such as former chalk pits identified on historical OS mapping. Further areas of increased magnetic response are evident across the site. These have been interpreted as areas of modern disturbance, possible further historical extraction activity, spreads of enhanced magnetic material, or made ground. The remaining anomalies noted across the site pertain to drainage, modern ploughing, and modern services.
Keywords	

Funder	Private or public corporation Southern Water Services Ltd
HER	Hampshire Archaeology and Historic Buildings Record (AHBR) - unRev - STANDARD
Person Responsible for work	Patricia Edwards
HER Identifiers	
Archives	

Report generated on: 22 Nov 2024, 09:43

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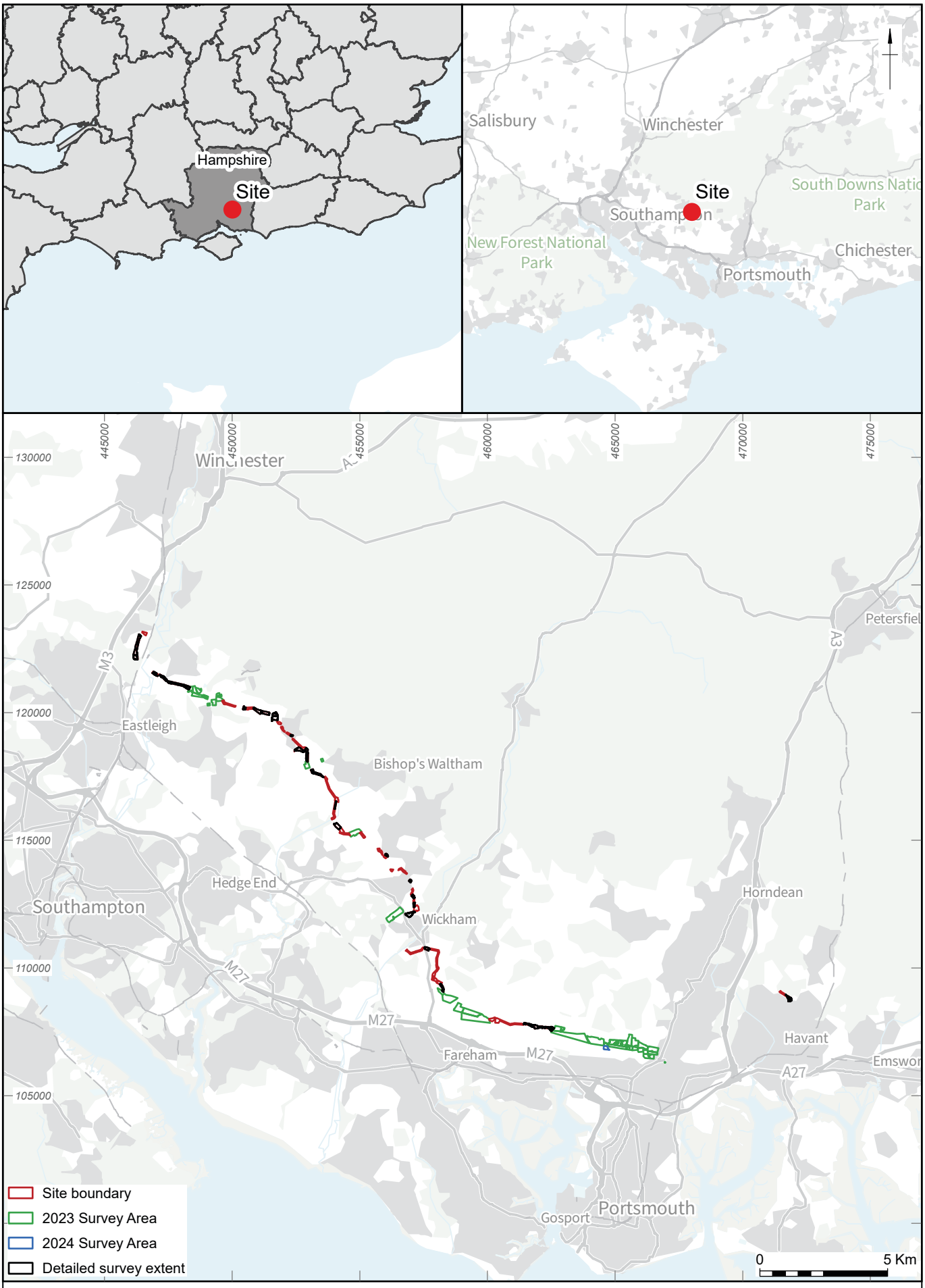

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Figure 1: Site location and survey extent

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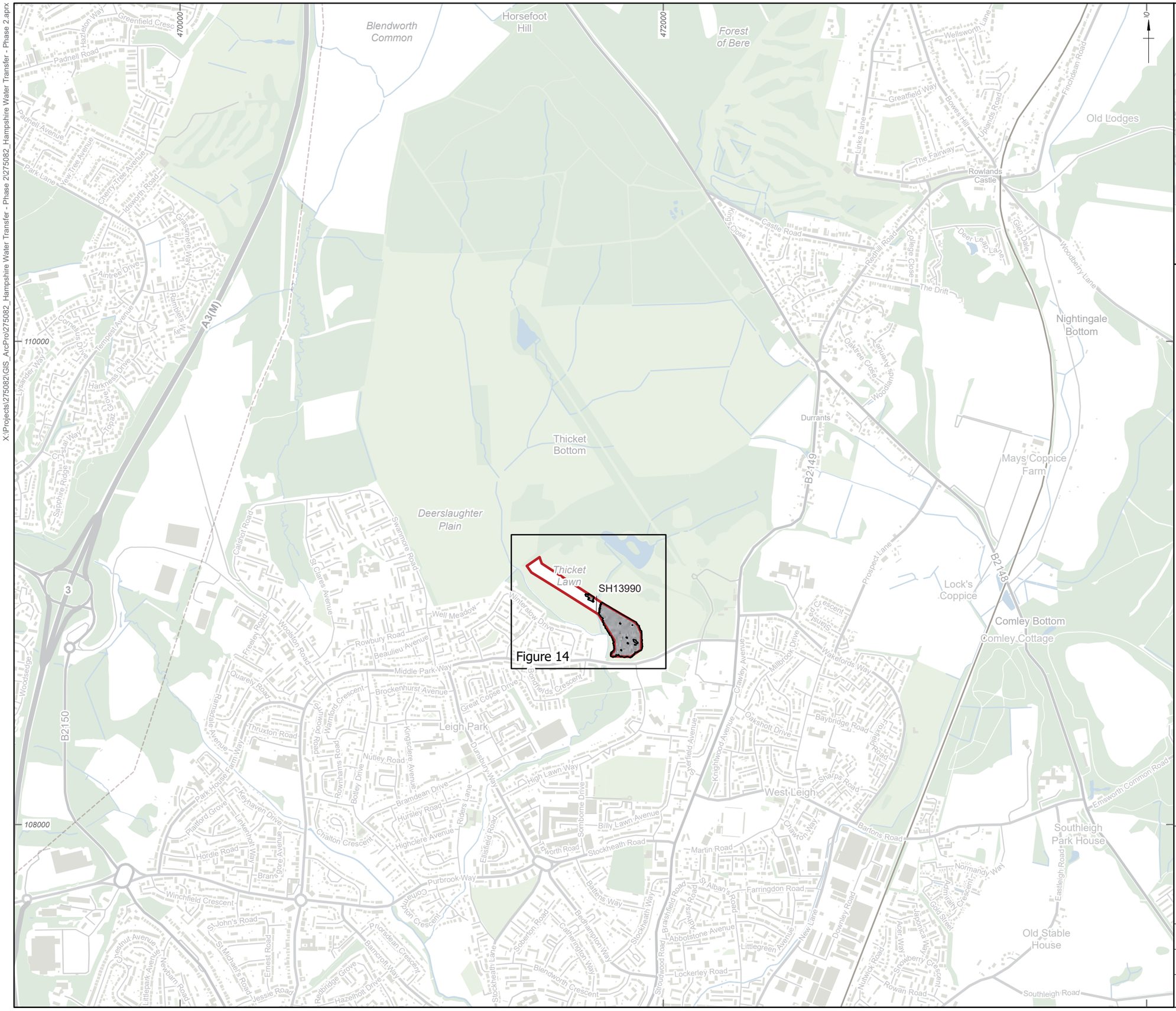

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Figure 2: Gradiometer survey results: Overall greyscale plot (1 of 6)

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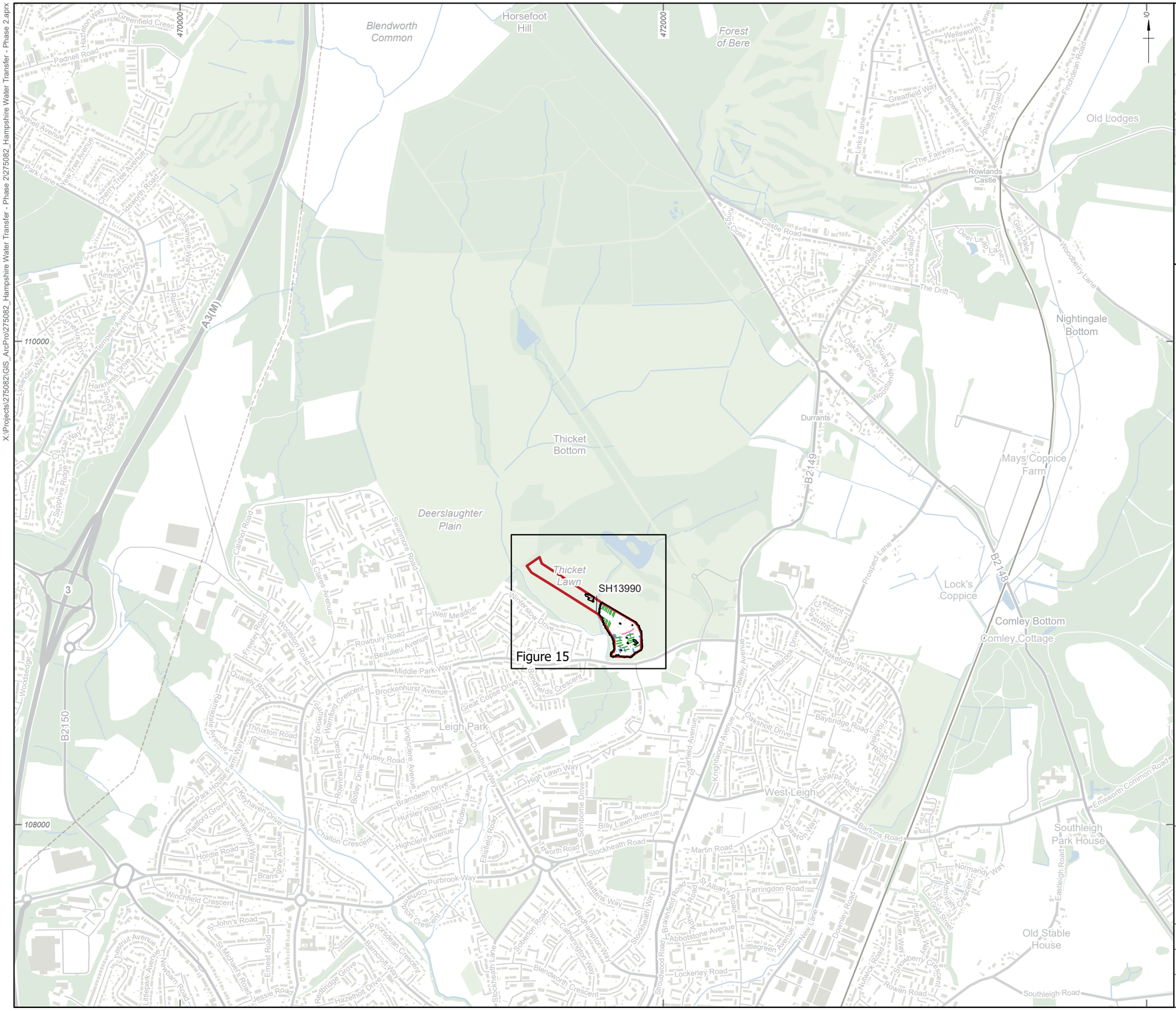

- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

Date: 21/11/2024	Created by: RP
Scale: 1:15,000	Revision: 0

Figure 3: Gradiometer survey results: Overall interpretation plot (1 of 6)

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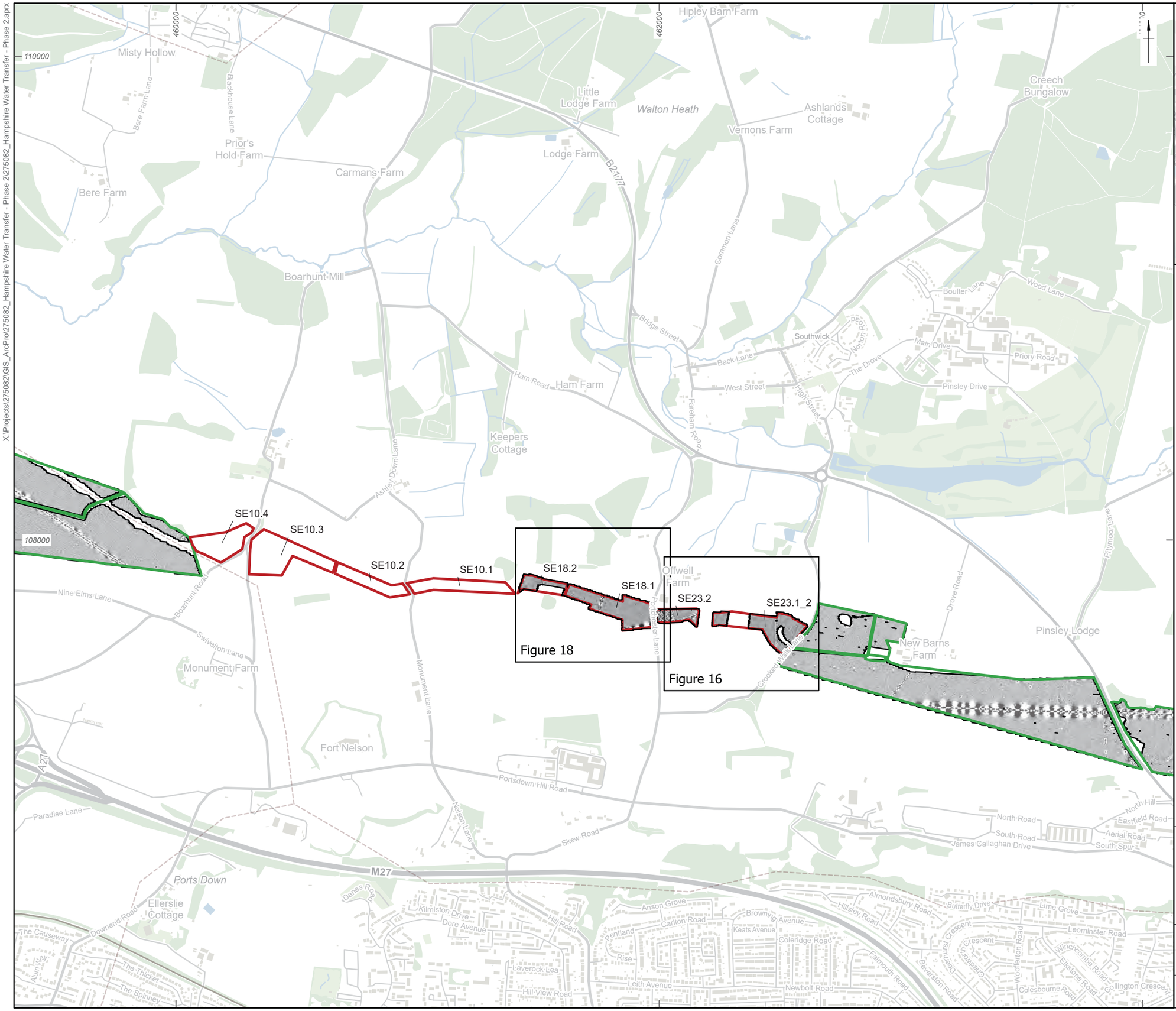

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Figure 4: Gradiometer survey results: Overall greyscale plot (2 of 6)

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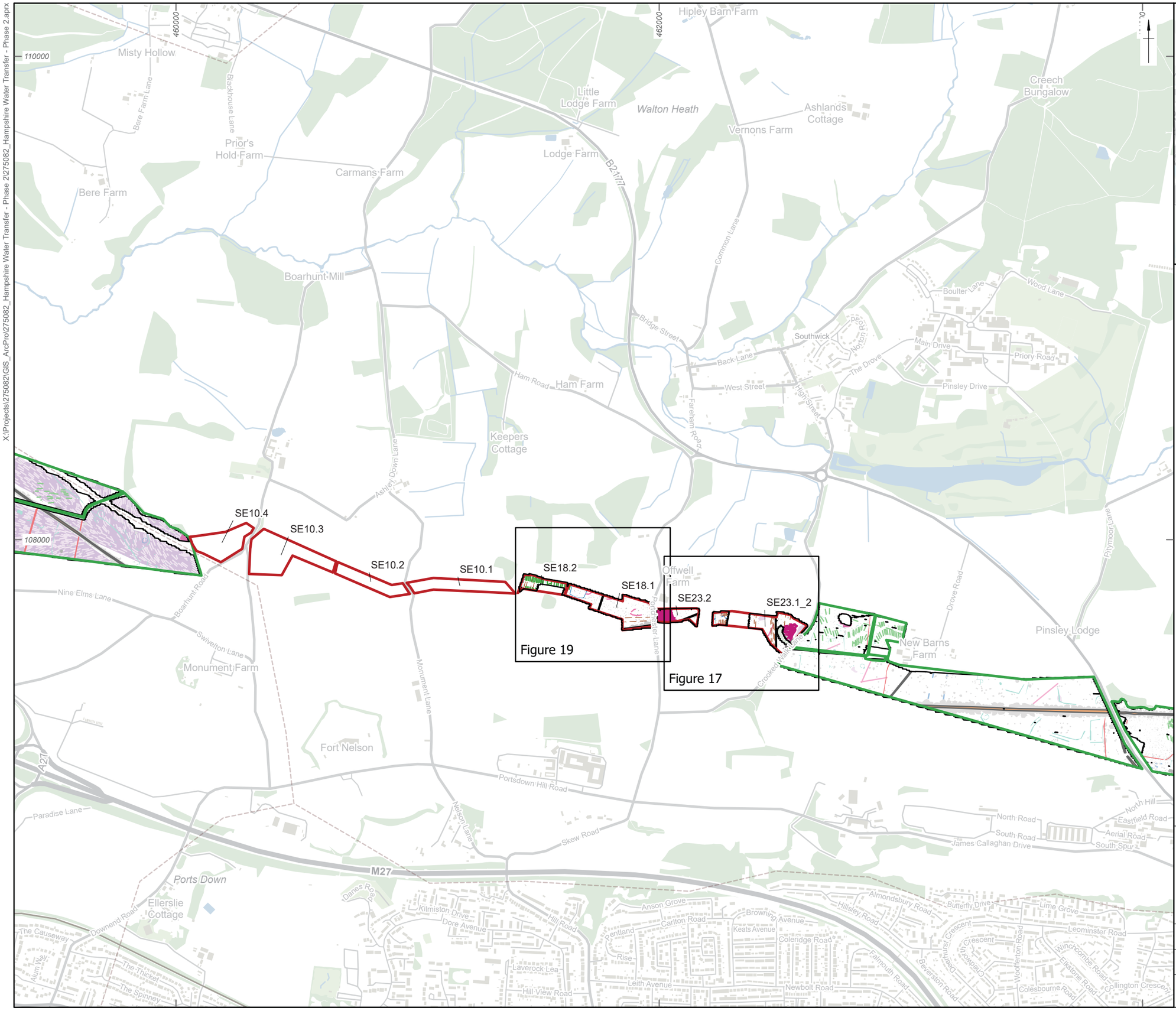

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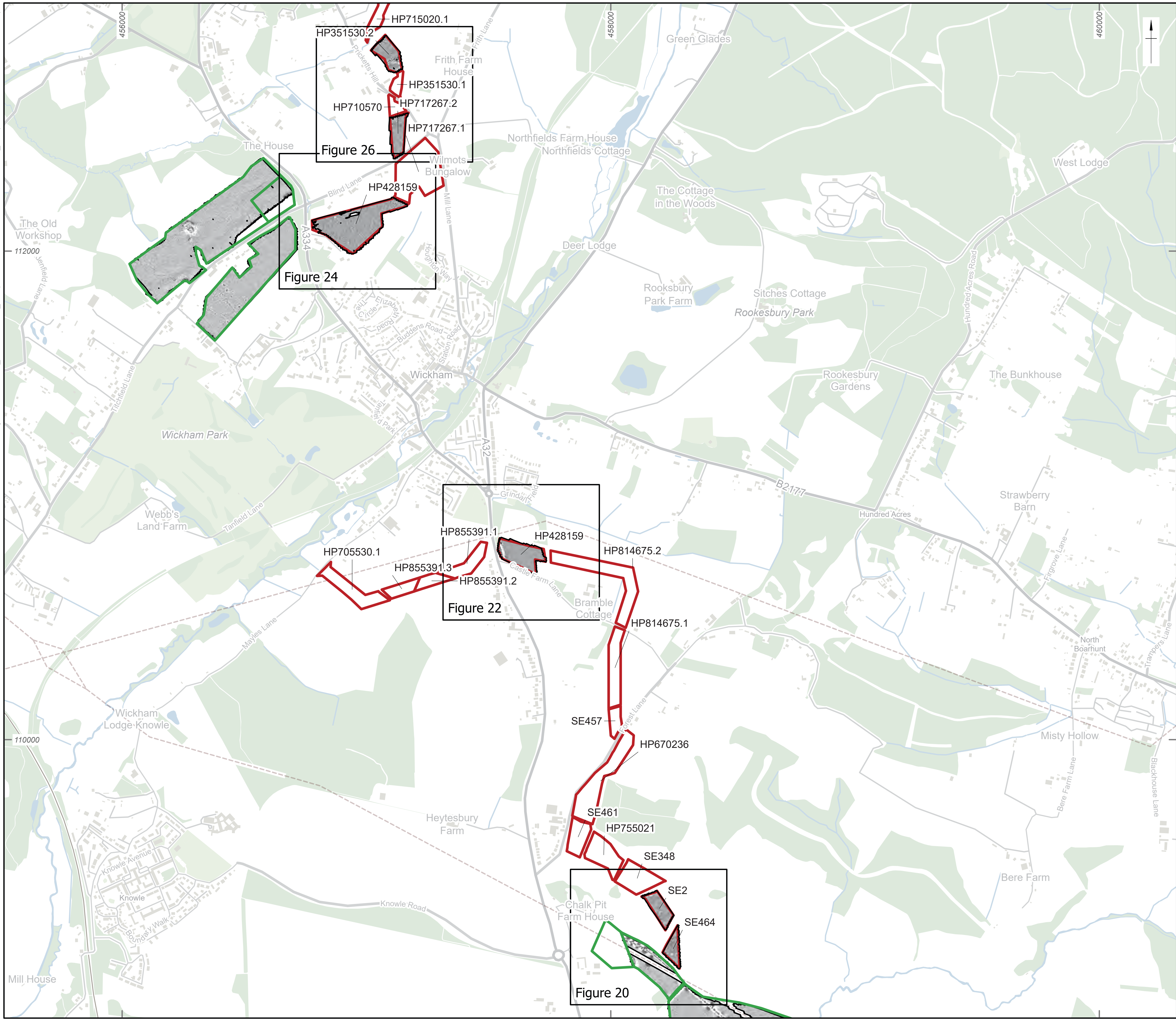
Figure 5: Gradiometer survey results: Overall interpretation plot (2 of 6)



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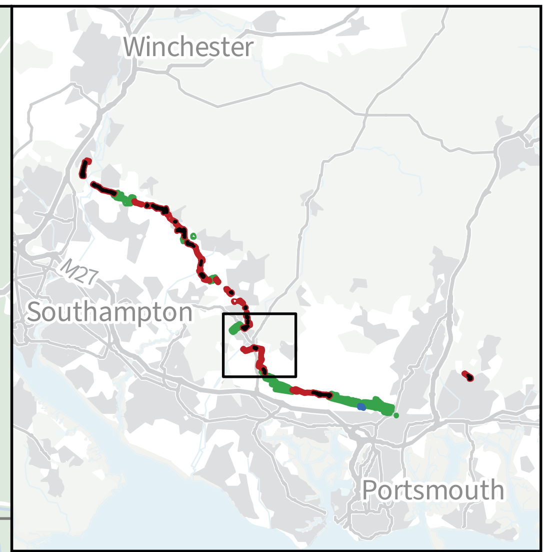
458000
460000
112000
110000
HP715020.1
HP351530.2
HP351530.1
HP710570
HP717267.2
HP717267.1
Figure 26
HP428159
Figure 24
Frith Farm House
Wilmots Bungalow
The House
The Old Workshop
Blind Lane
A334
Mill Lane
Houghton Way
Green Glades
Northfields Farm House
Northfields Cottage
The Cottage in the Woods
Deer Lodge
West Lodge
Rooksbury Park Farm
Sitches Cottage
Rookesbury Park
Rookesbury Gardens
The Bunkhouse
Hundred Acres Road
Wickham
Wickham Park
A32
B2177
Hundred Acres
Strawberry Barn
Webb's Land Farm
Tanfield Lane
Titchfield Lane
HP855391.1
HP428159
HP814675.2
HP705530.1
HP855391.3
HP855391.2
Figure 22
Castle Farm Lane
Bramble Cottage
HP814675.1
Mayles Lane
North Boarhunt
Trampers Lane
Wickham Lodge Knowle
SE457
Forest Lane
HP670236
Misty Hollow
Blackhouse Lane
Bere Farm Lane
Heytesbury Farm
SE461
HP755021
SE348
SE2
SE464
Bere Farm
Chalk Pit Farm House
Knowle Road
Knowle Avenue
Knowle
Mill House
Figure 20



Survey boundary

2023 Survey boundary

Detailed survey extent

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Figure 6: Gradiometer survey results: Overall greyscale plot (3 of 6)

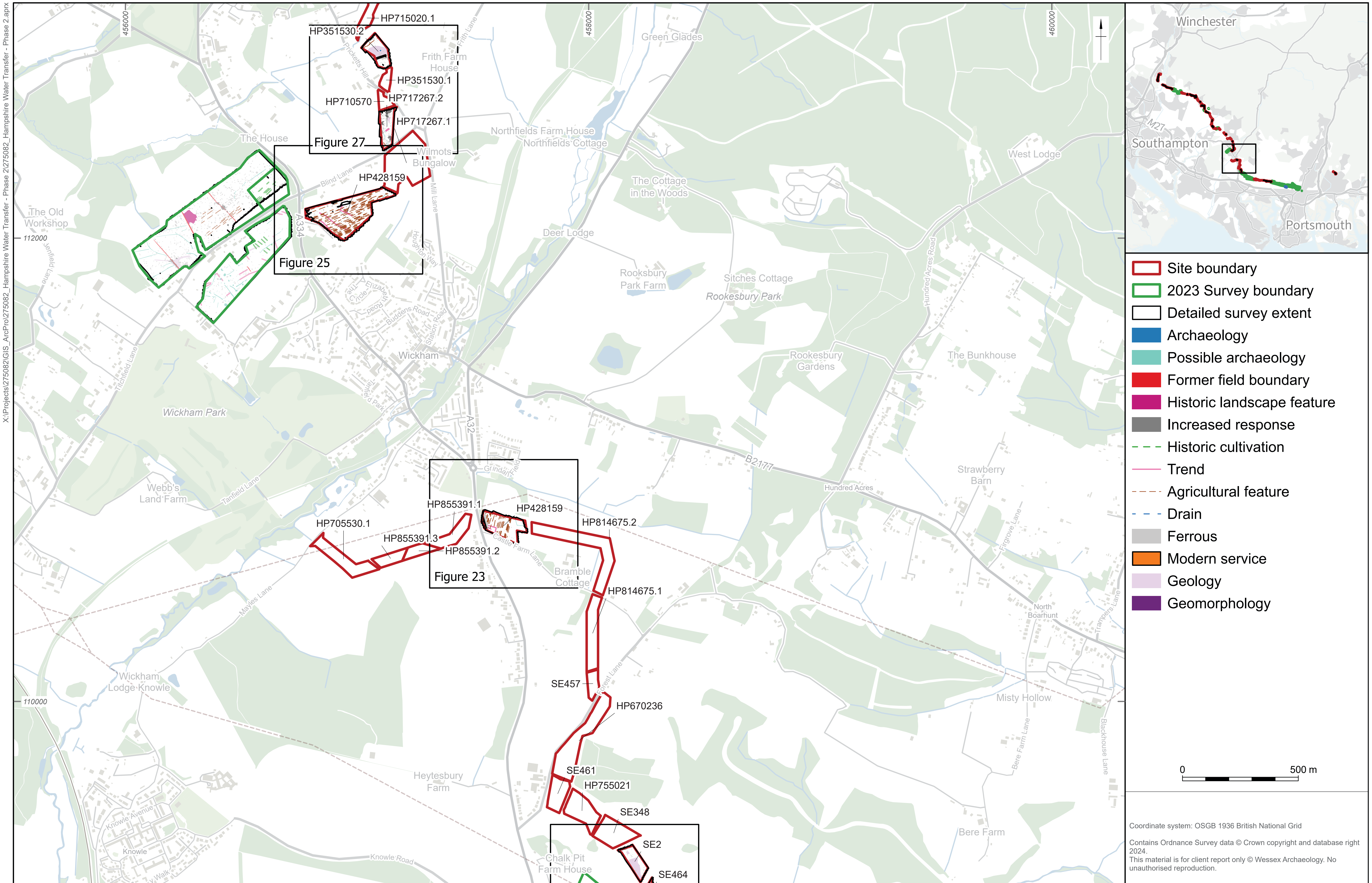
HP715020.1
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Figure 27
HP428159
Figure 25
HP855391.1
HP428159
HP814675.2
HP705530.1
HP855391.3
HP855391.2
Figure 23
HP814675.1
SE457
HP670236
SE461
HP755021
SE348
SE2
SE464
Figure 21
Frith Farm House
The House
Wilmots Bungalow
Northfields Farm House
Northfields Cottage
Green Glades
The Cottage in the Woods
Deer Lodge
Rooksbury Park Farm
Sitches Cottage
Rookesbury Park
Rookesbury Gardens
West Lodge
The Bunkhouse
The Old Workshop
Wickham
Wickham Park
Webb's Land Farm
Strawberry Barn
Hundred Acres
North Boarhunt
Misty Hollow
Wickham Lodge Knowle
Heytesbury Farm
Chalk Pit Farm House
Bramble Cottage
Bere Farm
Mill House
Knowle
A334
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B2177
456000
458000
460000
112000
110000
Winchester
Southampton
Portsmouth
M27
Site boundary
2023 Survey boundary
Detailed survey extent
Archaeology
Possible archaeology
Former field boundary
Historic landscape feature
Increased response
Historic cultivation
Trend
Agricultural feature
Drain
Ferrous
Modern service
Geology
Geomorphology
0
500 m
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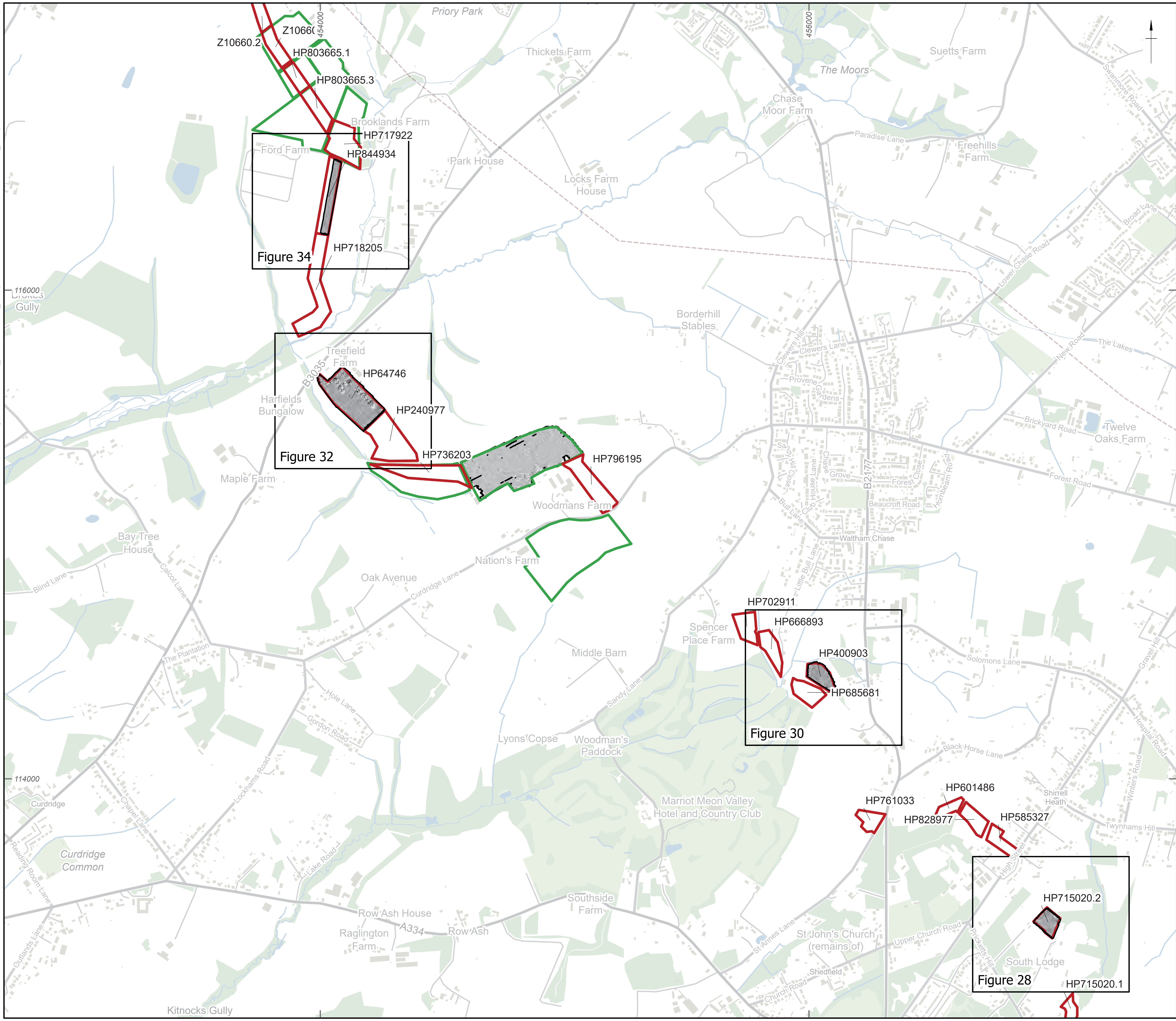
Figure 7: Gradiometer survey results: Overall interpretation plot (3 of 6)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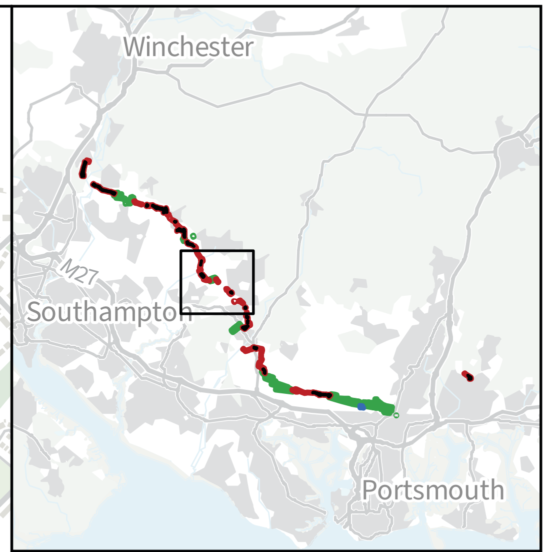
HP803665.1
HP803665.3
Thickets Farm
The Moors
Suetts Farm
Chase Moor Farm
Brooklands Farm
HP717922
Ford Farm
HP844934
Park House
Locks Farm House
Paradise Lane
Freehills Farm
HP718205
Figure 34
116000
Gully
Borderhill Stables
Treefield Farm
B3035
HP64746
Harfields Bungalow
HP240977
Figure 32
HP736203
HP796195
Maple Farm
Woodmans Farm
Bay Tree House
Nation's Farm
Oak Avenue
Curdridge Lane
B2177
Waltham Chase
Beaucroft Road
Forest Road
Brickyard Road
Twelve Oaks Farm
The Lakes
New Road
Broad Lane
Lower Chase Road
Swanmore Road
HP702911
HP666893
Spencer Place Farm
HP400903
HP685681
Figure 30
Middle Barn
Sandy Lane
The Plantation
Hole Lane
Gordon Road
Lyons Copse
Woodman's Paddock
Black Horse Lane
Solomons Lane
114000
Curdridge
Marriot Meon Valley Hotel and Country Club
HP761033
HP601486
HP828977
HP585327
Shirrell Heath
Twynhams Hill
Curdridge Common
Lake Road
Southside Farm
HP715020.2
Row Ash House
A334
Row Ash
Raglington Farm
St John's Church (remains of)
Upper Church Road
Shedfield
South Lodge
Figure 28
HP715020.1
Kitnocks Gully



Survey boundary
2023 Survey boundary
Detailed survey extent

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0 500 m

Coordinate system: OSGB 1936 British National Grid

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Figure 8: Gradiometer survey results: Overall greyscale plot (4 of 6)

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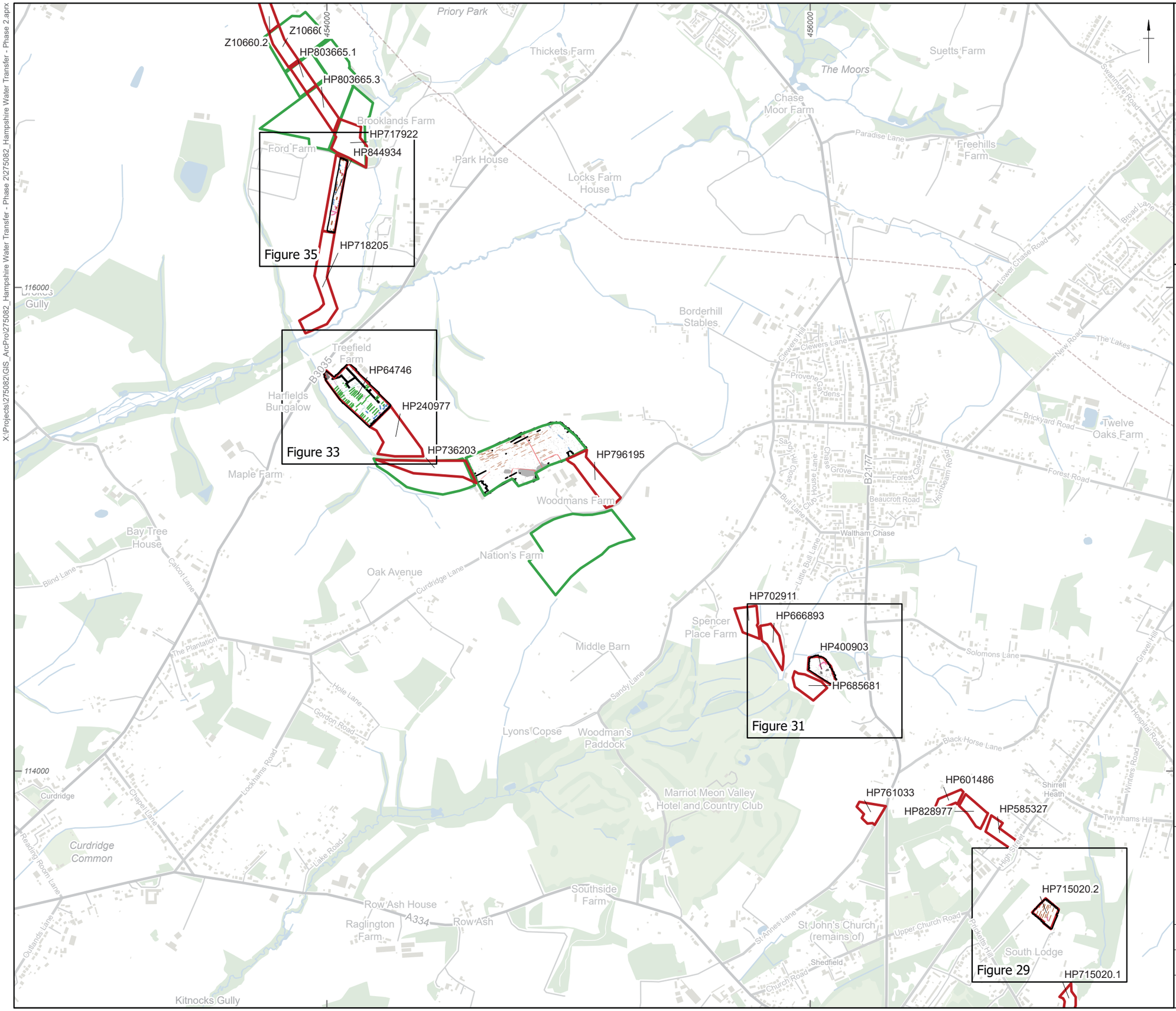

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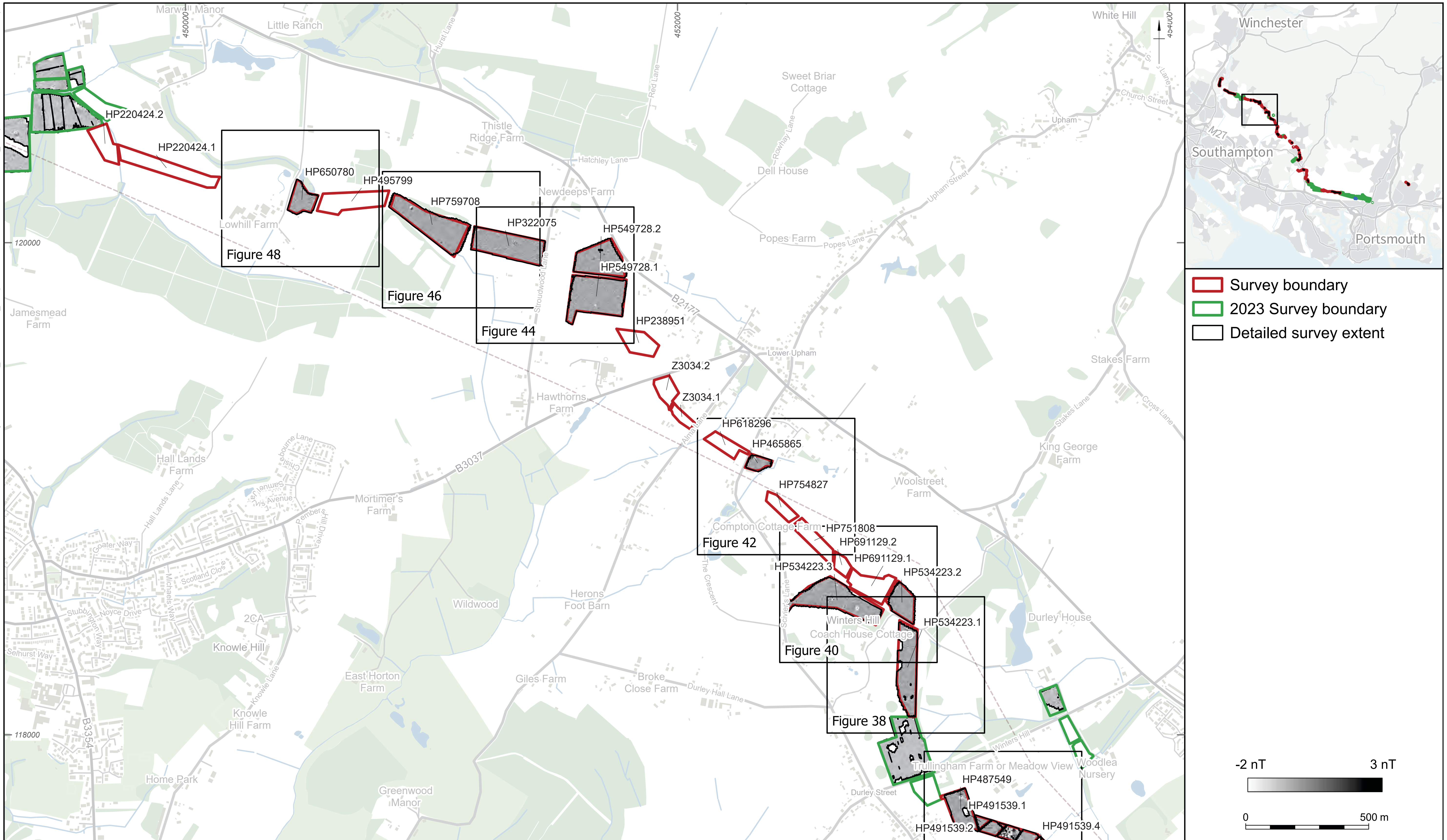
Scale: 1:15,000	Revision: 0

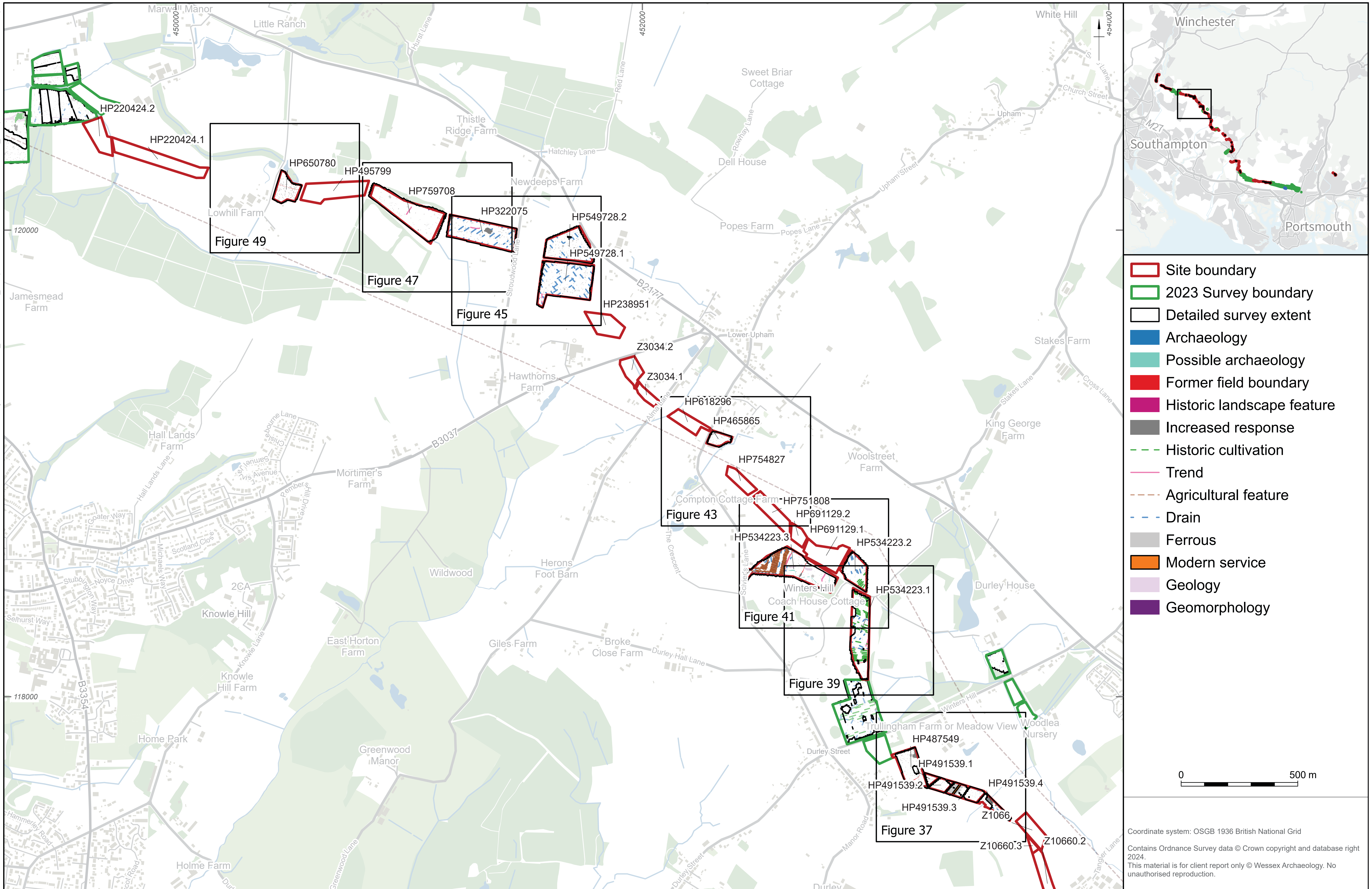
Figure 9: Gradiometer survey results: Overall interpretation plot (4 of 6)


Winchester
Southampton
Portsmouth
M27
Survey boundary
2023 Survey boundary
Detailed survey extent
-2 nT
3 nT
0
500 m
450000
452000
454000
120000
118000
X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx
Figure 48
Figure 46
Figure 44
Figure 42
Figure 40
Figure 38
Figure 36
HP220424.2
HP220424.1
HP650780
HP495799
HP759708
HP322075
HP549728.2
HP549728.1
HP238951
Z3034.2
Z3034.1
HP618296
HP465865
HP754827
HP751808
HP691129.2
HP691129.1
HP534223.3
HP534223.2
HP534223.1
HP487549
HP491539.1
HP491539.2
HP491539.3
HP491539.4
Z1066
Z10660.3
Z10660.2
Z10660.1
HP803665.1
HP803665.3
Marwell Manor
Little Ranch
White Hill
Sweet Briar Cottage
Thistle Ridge Farm
Hatchley Lane
Newdeeps Farm
Dell House
Popes Farm
Lowhill Farm
Jamesmead Farm
B2177
Lower Upham
Stakes Farm
Hawthorns Farm
King George Farm
Woolstreet Farm
Hall Lands Farm
B3037
Mortimer's Farm
Compton Cottage Farm
Winters Hill
Coach House Cottage
Durley House
Herons Foot Barn
Wildwood
2CA
Knowle Hill
East Horton Farm
Giles Farm
Broke Close Farm
Durley Hall Lane
Knowle Hill Farm
B3354
Home Park
Greenwood Manor
Trullingham Farm or Meadow View
Woodlea Nursery
Durley Street
Holme Farm
Firs Croft Lodge
Durley Manor Farm
Tangier View Farm
Horton Heath
Perlins Farm

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP
Scale: 1:15,000	Revision: 0

Figure 10: Gradiometer survey results: Overall greyscale plot (5 of 6)



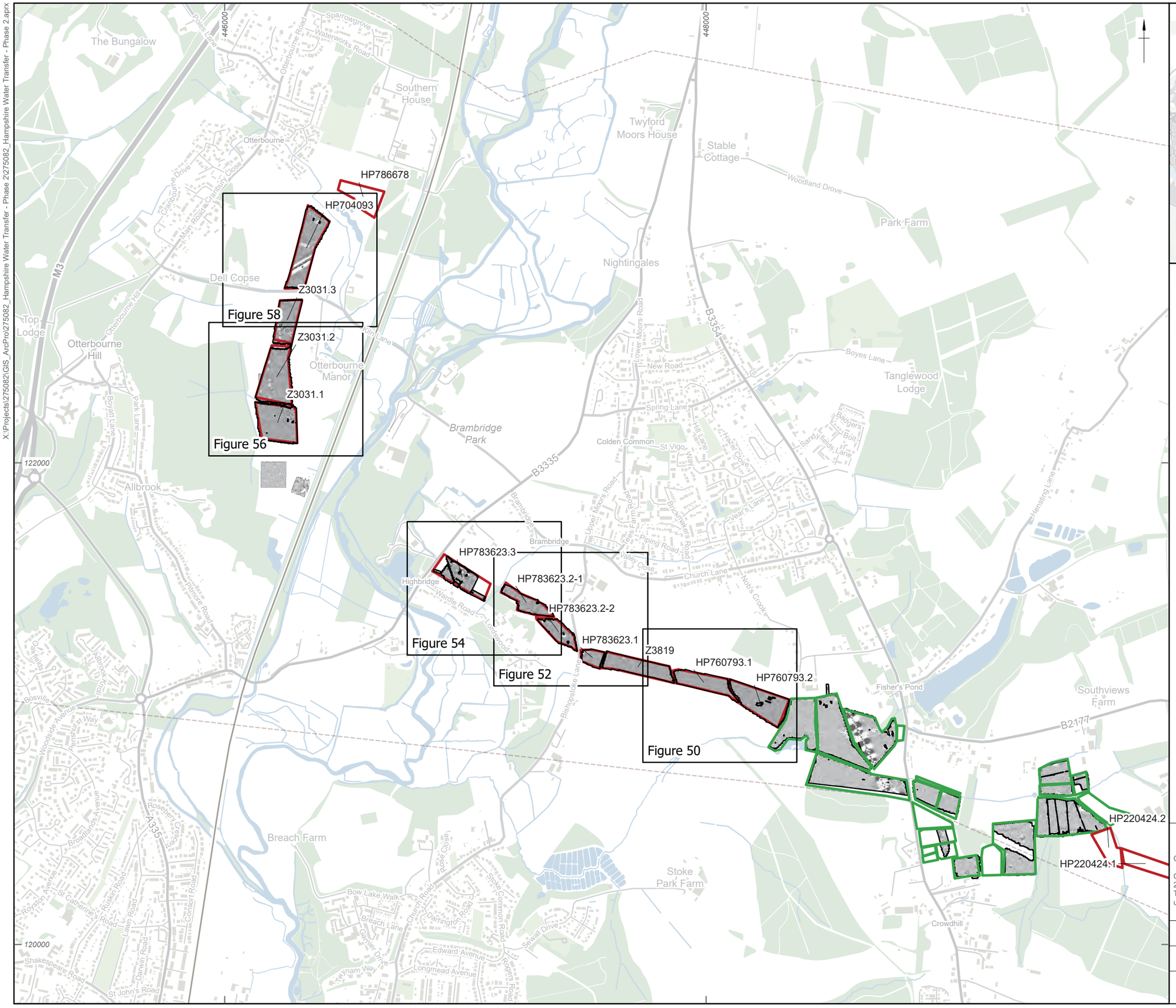
Winchester
M27
Southampton
Portsmouth
Site boundary
2023 Survey boundary
Detailed survey extent
Archaeology
Possible archaeology
Former field boundary
Historic landscape feature
Increased response
Historic cultivation
Trend
Agricultural feature
Drain
Ferrous
Modern service
Geology
Geomorphology
0
500 m
HP220424.2
HP220424.1
HP650780
HP495799
HP759708
HP322075
HP549728.2
HP549728.1
HP238951
Z3034.2
Z3034.1
HP618296
HP465865
HP754827
HP751808
HP691129.2
HP691129.1
HP534223.3
HP534223.2
HP534223.1
HP487549
HP491539.1
HP491539.2
HP491539.3
HP491539.4
Z1066
Z10660.3
Z10660.2
Z10660.1
HP803665.1
HP803665.3
Figure 49
Figure 47
Figure 45
Figure 43
Figure 41
Figure 39
Figure 37
450000
452000
454000
120000
118000
Marwell Manor
Little Ranch
Lowhill Farm
Thistle Ridge Farm
Newdeeps Farm
Sweet Briar Cottage
Dell House
Popes Farm
White Hill
Jamesmead Farm
Hawthorns Farm
Hall Lands Farm
Mortimer's Farm
Compton Cottage Farm
Woolstreet Farm
King George Farm
Stakes Farm
Wildwood
Herons Foot Barn
Knowle Hill
East Horton Farm
Giles Farm
Broke Close Farm
Winters Hill
Coach House Cottage
Durley House
Knowle Hill Farm
Home Park
Greenwood Manor
Trullingham Farm or Meadow View
Woodlea Nursery
Holme Farm
Firs Croft Lodge
Horton Heath
Durley Manor Farm
Tangier View Farm
Perlins Farm
B2177
B3037
B3354
Lower Upham
X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

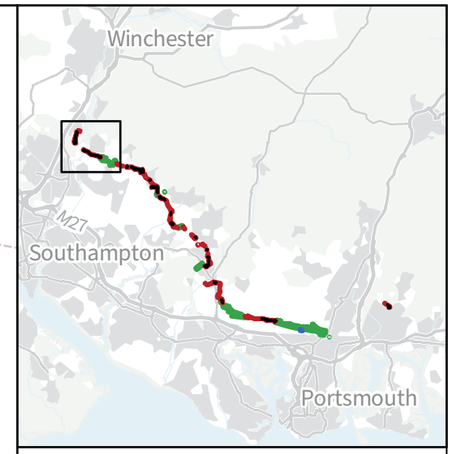
Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP
Scale: 1:15,000	Revision: 0

Figure 11: Gradiometer survey results: Overall interpretation plot (5 of 6)

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx





Survey boundary
2023 Survey boundary
Detailed survey extent

-2 nT 3 nT

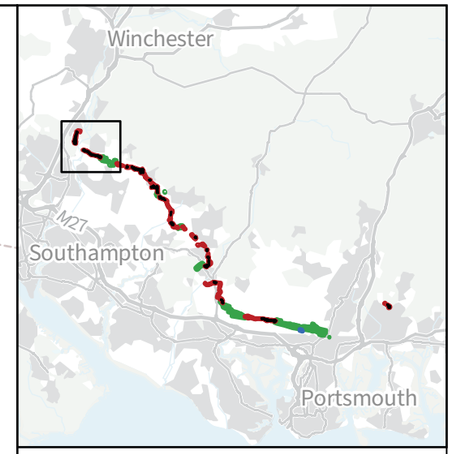
0 500 m

Date: 21/11/2024	Created by: RP	
Scale: 1:15,000	Revision: 0	

Figure 12: Gradiometer survey results: Overall greyscale plot (6 of 6)

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

HP786678
HP704093
Z3031.3
Figure 59
Z3031.2
Z3031.1
Figure 57
HP783623.3
HP783623.2-1
HP783623.2-2
HP783623.1
Figure 55
Z3819
HP760793.1
HP760793.2
Figure 53
Figure 51
HP220424.2
HP220424.1



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 500 m

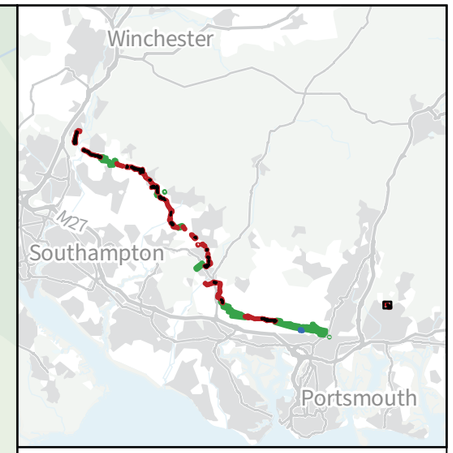
Date: 21/11/2024 | Created by: RP

Scale: 1:15,000 | Revision: 0

Figure 13: Gradiometer survey results: Overall interpretation plot (6 of 6)

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

471400
471600
471800
10
109000
108800
Thicket Lawn
SH13990
Winterslow Drive
Crondall Avenue
Silksteadd Avenue
Hawkley Close
Bitterne Close
Middle Park Way



Survey boundary
2023 Survey boundary
Detailed survey extent

-2 nT
3 nT

0
100 m

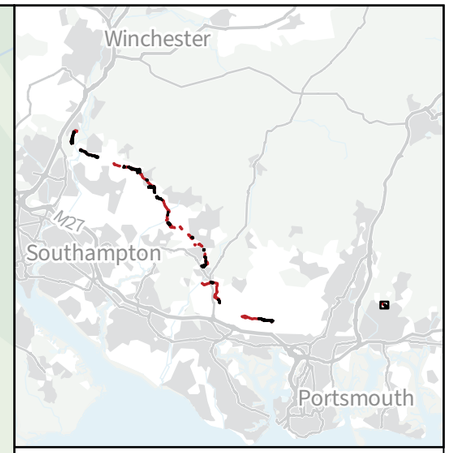
Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP	
Scale: 1:2,000	Revision: 0	

Figure 14: Gradiometer survey results: greyscale plot - SH13990

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

471400
471600
471800
109000
108800
Thicket Lawn
5002
SH13990
5001
5000
Winterslow Drive
Crondall Avenue
Silkstead Avenue
Hawkley Close
Bitterne Close
Middle Park Way



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Date: 21/11/2024	Created by: RP
Scale: 1:2,000	Revision: 0

Figure 15: Gradiometer survey results: interpretation plot SH13990

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

462200

462400

462600

107800

107600

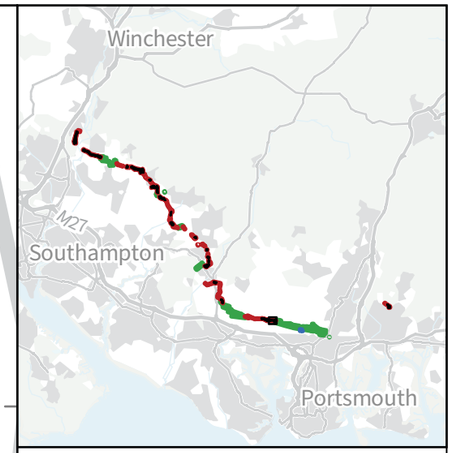
107400

Offwell Farm

SE23.2

SE23.1_2

Cradle Walk Lane



Survey boundary

2023 Survey boundary

Detailed survey extent

-2 nT

3 nT

0

100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

Figure 16: Gradiometer survey results: greyscale plot - SE23.1_2, SE23.2

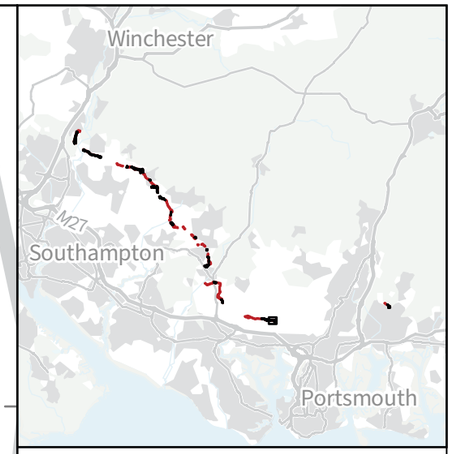
X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

462200
462400
462600
107800
107600
107400

Offwell Farm

5015
SE23.2
5018
5011
SE23.1_2
5017
5014
5016

Crooked Withy Lane



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

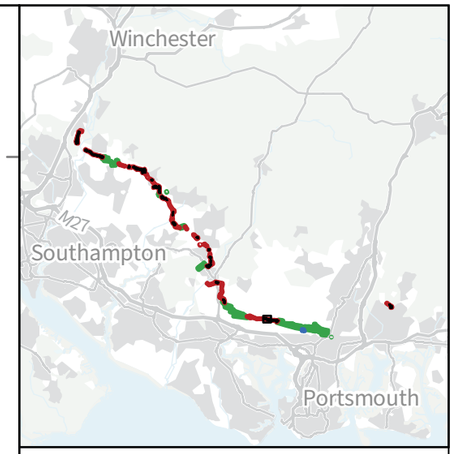
Figure 17: Gradiometer survey results: interpretation plot SE23.1_2, SE23.2

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

461600
461800
462000
108000
107800
107600

SE18.2
SE18.1
SE23.2

Porchester Lane



Survey boundary
2023 Survey boundary
Detailed survey extent

-2 nT
3 nT

0
100 m

Coordinate system: OSGB 1936 British National Grid

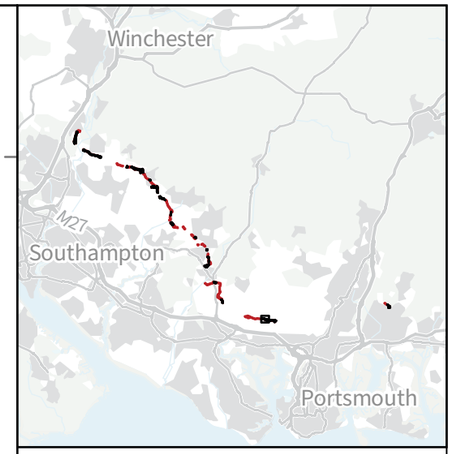
Date: 21/11/2024	Created by: RP	
Scale: 1:2,000	Revision: 0	

Figure 18: Gradiometer survey results: greyscale plot - SE23.2, SE18.1, SE18.2

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

461600
461800
462000
108000
107800
107600

5013
SE18.2
5012
5021
5010
5020
SE18.1
SE23.2
5015
5019
Portchester Lane



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP
Scale: 1:2,000	Revision: 0

Figure 19: Gradiometer survey results: interpretation plot SE23.2, SE18.1, SE18.2

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

458000

458200

458400

HP755021

SE348

109400

SE2

Chalk Pit Farm House

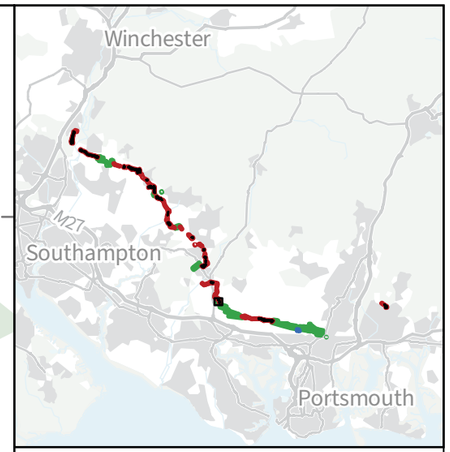
SE464

109200

Albany Farm

109000

A32



Survey boundary

2023 Survey boundary

Detailed survey extent

-2 nT

3 nT

0

100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP
Scale: 1:2,000	Revision: 0

Figure 20: Gradiometer survey results: greyscale plot - SE464, SE2, SE348, HP755021

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

458000

458200

458400

109400

109200

109000

HP755021

SE348

5032

SE2

5030

SE464

Chalk Pit Farm House

Albany Farm

A32

M27

Winchester

Southampton

Portsmouth

Site boundary
2023 Survey boundary
Detailed survey extent
Archaeology
Possible archaeology
Former field boundary
Historic landscape feature
Increased response
Historic cultivation
Trend
Agricultural feature
Drain
Ferrous
Modern service
Geology
Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

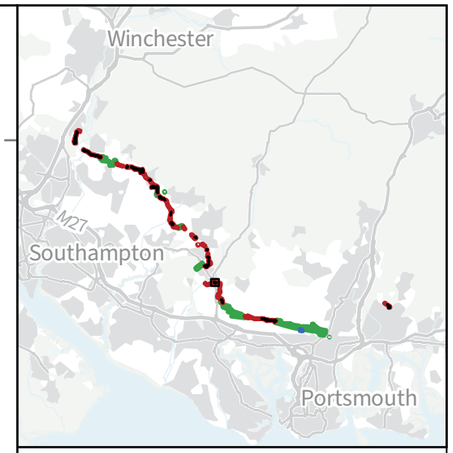
Figure 21: Gradiometer survey results: interpretation plot SE464, SE2, SE348, HP755021

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

457400
457600
457800
111000
110800
110600

A334
A32
Partridge Way
Grindall Field
Manx Close
Castle Farm Lane
Bramble Cottage

HP855391.1
HP428159
HP814675.2
HP855391.2



Survey boundary
2023 Survey boundary
Detailed survey extent

-2 nT
3 nT

0
100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP
Scale: 1:2,000 | Revision: 0

Figure 22: Gradiometer survey results: greyscale plot - HP814675.2, HP428159, HP855391.1, HP855391.2

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

457400 457600 457800

111000 110800 110600

A334 A32

Manx Close

Partridge Way

Grindall Field

Castle Farm Lane

Bramble Cottage

HP855391.1

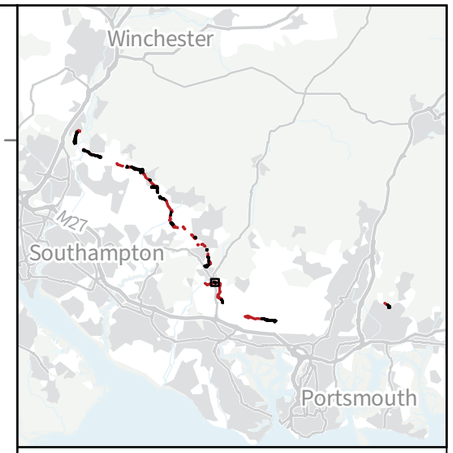
HP428159

5031

5033

HP814675.2

HP855391.2



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

Figure 23: Gradiometer survey results: interpretation plot HP814675.2, HP428159, HP855391.1,

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

456800

457000

457200

HP717267.2

HP717267.1

HP428159

112200

112000

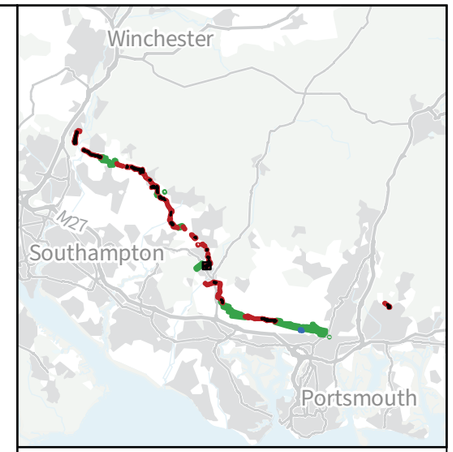
Blind Lane

Titchfield Lane

A334

Houghton Way

The Spur



Survey boundary

2023 Survey boundary

Detailed survey extent

-2 nT

3 nT

0

100 m

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

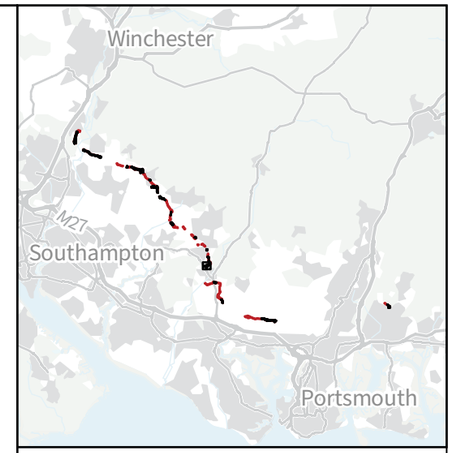
Figure 24: Gradiometer survey results: greyscale plot - HP428159, HP717267.1, HP717267.2

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

456800
457000
457200
112200
112000

HP717267.2
HP717267.1
HP428159
5042
5041

Blind Lane
Titchfield Lane
A334
Houghton Way
The Spur



Site boundary
2023 Survey boundary
Detailed survey extent
Archaeology
Possible archaeology
Former field boundary
Historic landscape feature
Increased response
Historic cultivation
Trend
Agricultural feature
Drain
Ferrous
Modern service
Geology
Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

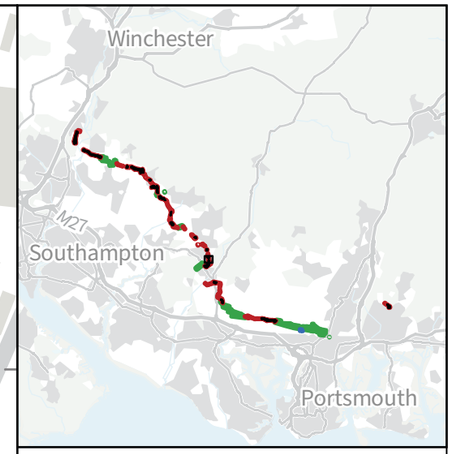
Figure 25: Gradiometer survey results: interpretation plot HP428159, HP717267.1, HP717267.2

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

457000
457200
457400
112800
112600
112400

HP715020.1
HP351530.2
HP351530.1
HP710570
HP717267.2
HP717267.1

Frith Farm House
Frith Lane
Prickets Hill
Northfields Farm Lane
Blind Lane
Mill Lane



Survey boundary
2023 Survey boundary
Detailed survey extent

-2 nT
3 nT

0
100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP
Scale: 1:2,000	Revision: 0

Figure 26: Gradiometer survey results: greyscale plot - HP710570, HP717267.1, HP717267.2,

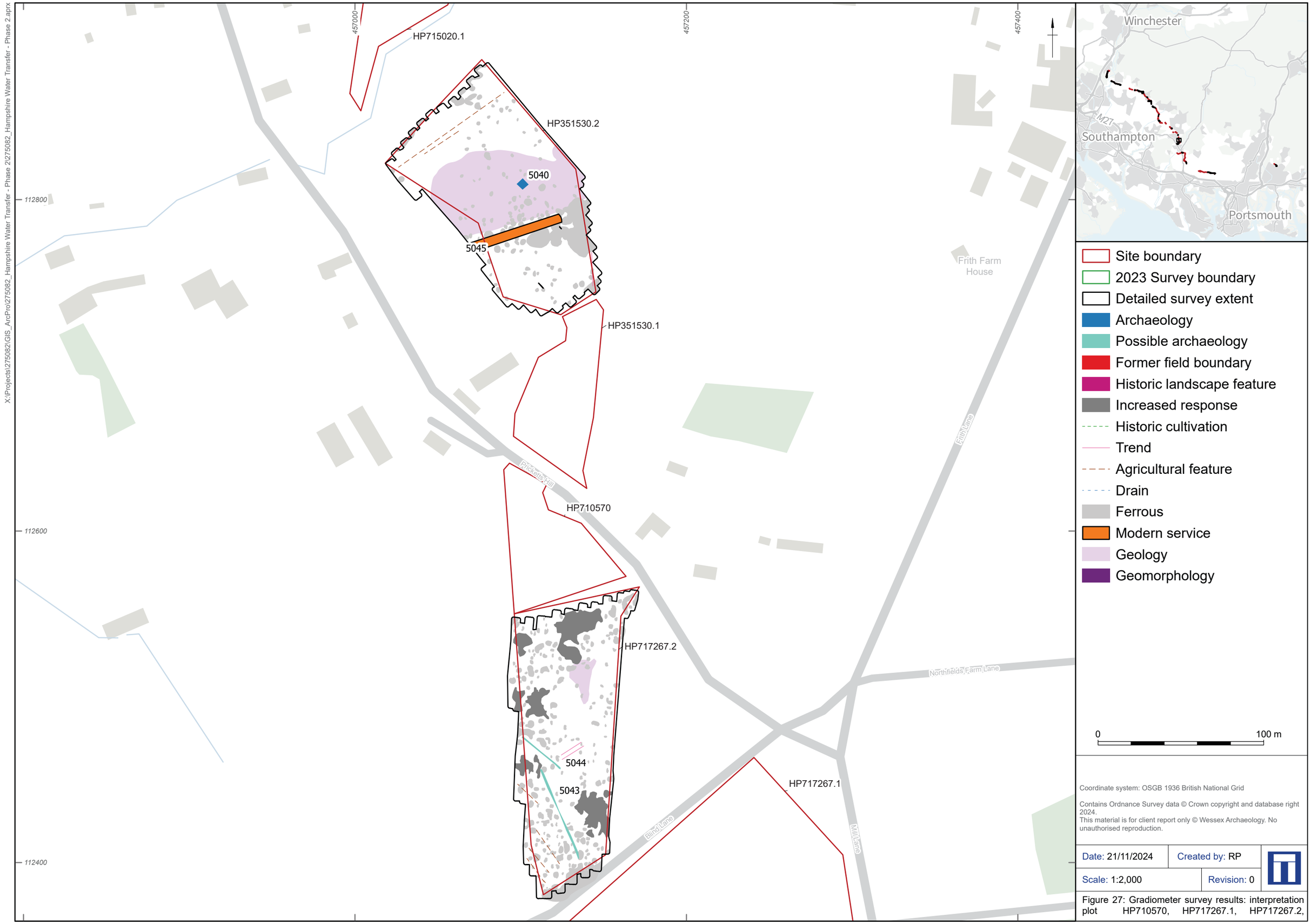
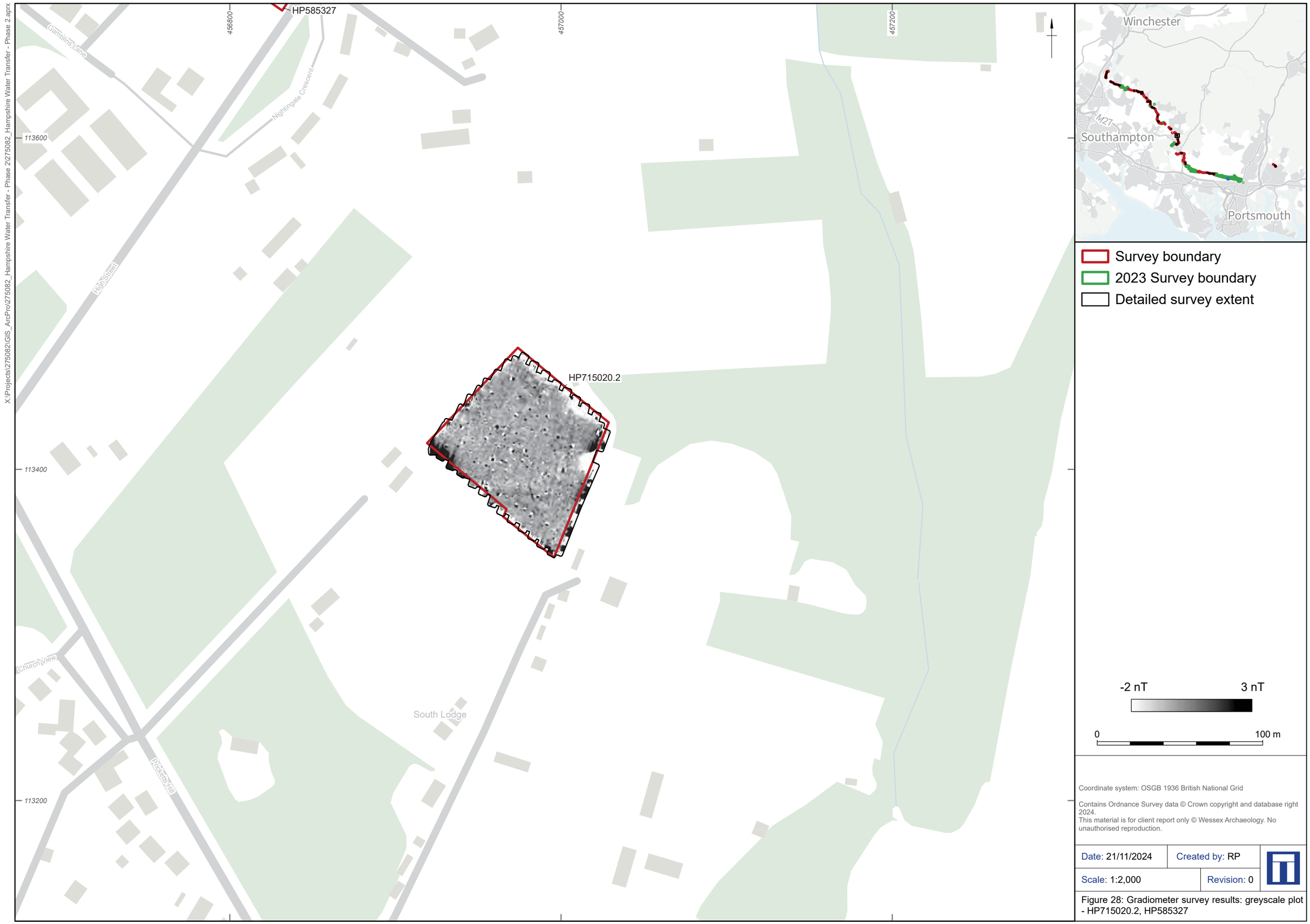


Figure 27: Gradiometer survey results: interpretation plot HP710570, HP717267.1, HP717267.2,



X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

Figure 28: Gradiometer survey results: greyscale plot - HP715020.2, HP585327

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

HP585327

HP715020.2

5046

South Lodge

Gambling Lane

Nightingale Crescent

High Street

Church View

Prickett's Hill

456800

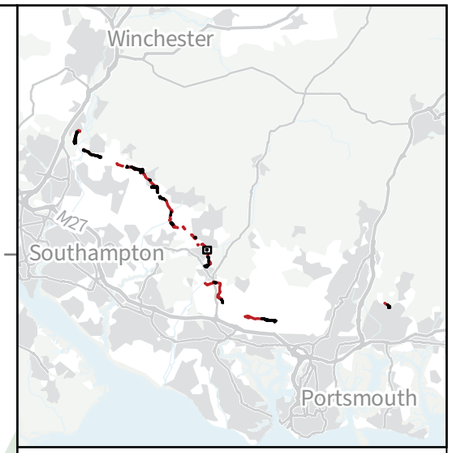
457000

457200

113600

113400

113200



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

Figure 29: Gradiometer survey results: interpretation plot HP715020.2, HP585327

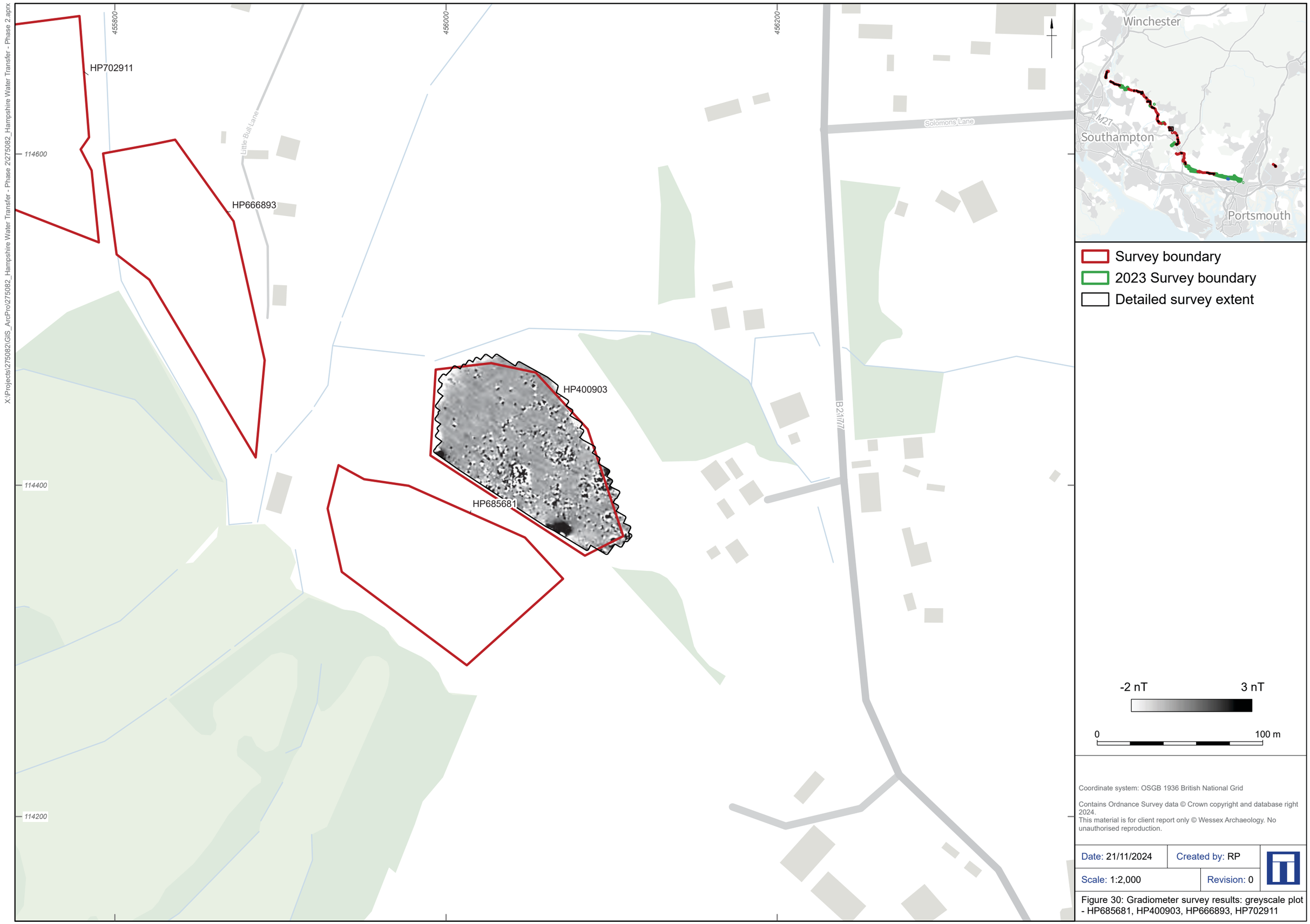
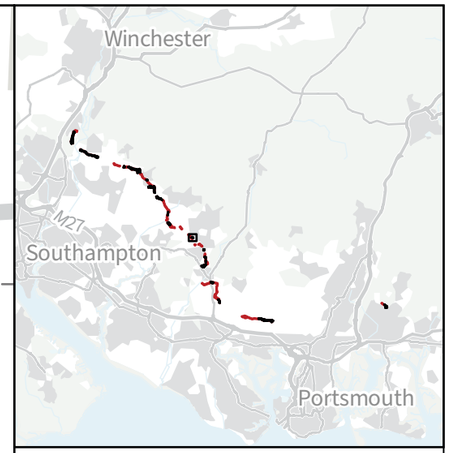


Figure 30: Gradiometer survey results: greyscale plot - HP685681, HP400903, HP666893, HP702911

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

455800
456000
456200
114600
114400
114200

HP702911
HP666893
HP400903
5058
HP685681
Little Bull Lane
Solomons Lane
B2177



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

Figure 31: Gradiometer survey results: interpretation plot HP685681, HP400903, HP666893, HP702911

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

HP718205

454000

454200

454400

115800

115600

115400

Treefield Farm

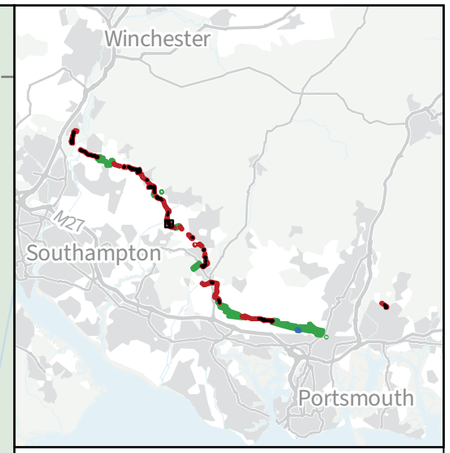
B3035

Harfields Bungalow

HP64746

HP240977

HP736203



Survey boundary

2023 Survey boundary

Detailed survey extent

-2 nT

3 nT

0

100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

Figure 32: Gradiometer survey results: greyscale plot - HP736203, HP240977, HP64746, HP718205

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

HP718205

454000

454200

454400

115800

115600

115400

B3035

Treefield Farm

Harfields Bungalow

5057

5059

5059

HP64746

5053

5054

5052

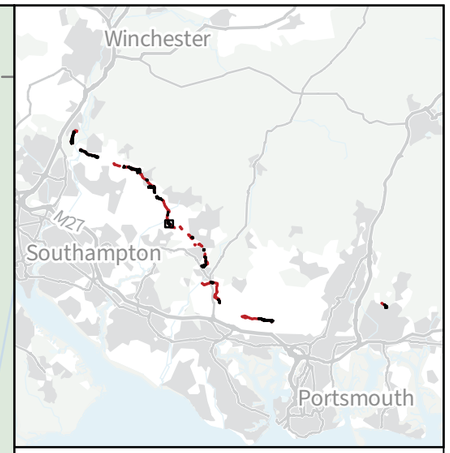
5050

5056

5051

HP240977

HP736203



Site boundary
2023 Survey boundary
Detailed survey extent
Archaeology
Possible archaeology
Former field boundary
Historic landscape feature
Increased response
Historic cultivation
Trend
Agricultural feature
Drain
Ferrous
Modern service
Geology
Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP
Scale: 1:2,000	Revision: 0

Figure 33: Gradiometer survey results: interpretation plot HP736203, HP240977, HP64746, HP718205

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

453800

454000

454200

116600

116400

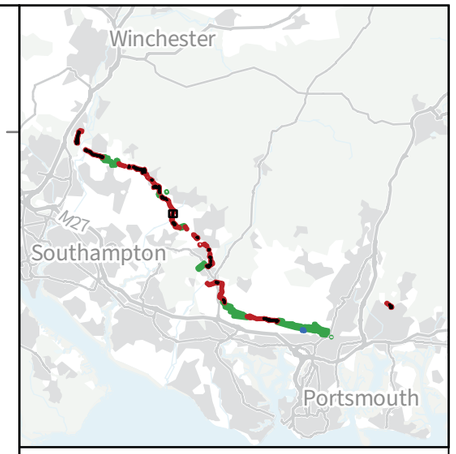
116200

Ford Farm

HP717922

HP844934

HP718205



Survey boundary

2023 Survey boundary

Detailed survey extent

-2 nT

3 nT

0

100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

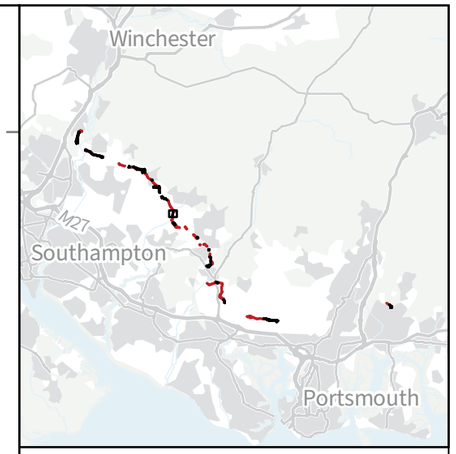
Figure 34: Gradiometer survey results: greyscale plot - HP844934, HP718205, HP717922

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

453800
454000
454200
116600
116400
116200

Ford Farm

HP717922
HP844934
5055
HP718205



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

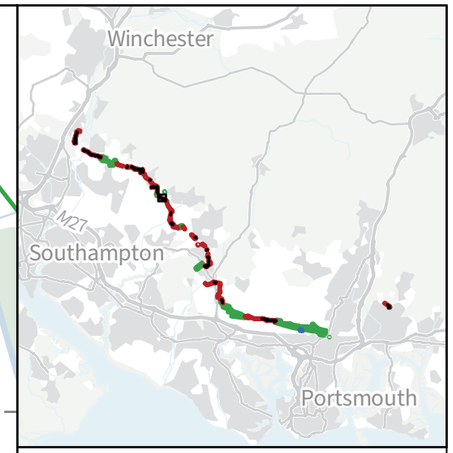
Figure 35: Gradiometer survey results: interpretation plot HP844934, HP718205, HP717922

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

453200
453400
453600
117800
117600
117400

Winters Hill
Trullingham Farm
or Meadow View
The Drove

HP487549
HP491539.1
HP491539.2
HP491539.3
HP491539.4
Z1066



Survey boundary
2023 Survey boundary
Detailed survey extent

-2 nT
3 nT

0
100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP
Scale: 1:2,000 | Revision: 0

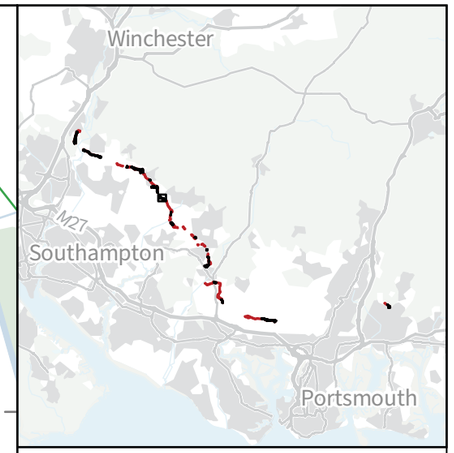
Figure 36: Gradiometer survey results: greyscale plot - Z1066, HP491539.1, HP491539.2, HP491539.3,

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

453200
453400
453600
117800
117600
117400

Winters Hill
Trullingham Farm
or Meadow View
The Drove

5082
HP487549
5073
HP491539.1
HP491539.2
5083
HP491539.3
5081
HP491539.4
Z1066



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

Figure 37: Gradiometer survey results: interpretation plot Z1066, HP491539.1, HP491539.2, HP491539.3,

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

HP534223.3

HP691129.1

HP534223.2

453000

453200

Winters Hill

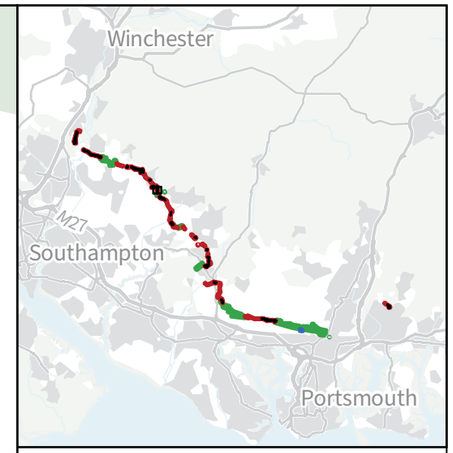
Coach House Cottage

118400

HP534223.1

118200

Scivern's Lane



Survey boundary

2023 Survey boundary

Detailed survey extent

-2 nT

3 nT

0

100 m

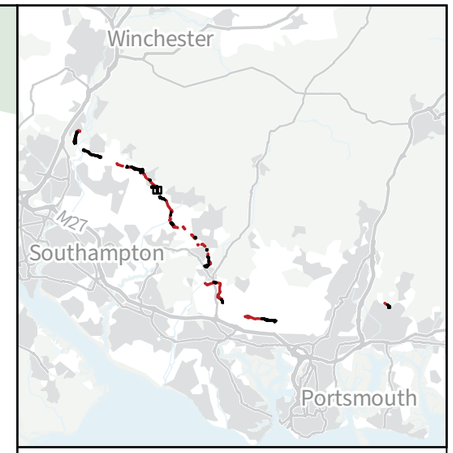
Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP
Scale: 1:2,000	Revision: 0

Figure 38: Gradiometer survey results: greyscale plot - HP534223.1, HP534223.2, HP534223.3,

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

5072
5071
5070
HP534222
452800
HP691129.1
HP534223.2
453000
453200
5080
Winters Hill
Coach House Cottage
118400
5084
HP534223.1
5079
5075
5078
5074
118200
Solver's Lane



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP
Scale: 1:2,000	Revision: 0

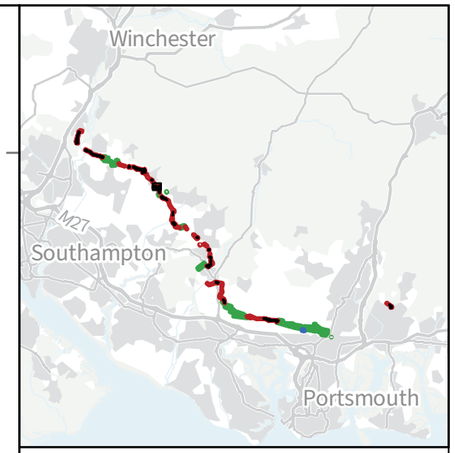
Figure 39: Gradiometer survey results: interpretation plot HP534223.1, HP534223.2, HP534223.3,

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

452600
452800
453000
118800
118600
118400

HP751808
HP691129.2
HP691129.1
HP534223.3
HP534223.2
HP534223.1

Winters Hill
Coach House Cottage
Scriven's Lane



Survey boundary
2023 Survey boundary
Detailed survey extent

-2 nT
3 nT

0
100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP
Scale: 1:2,000 | Revision: 0

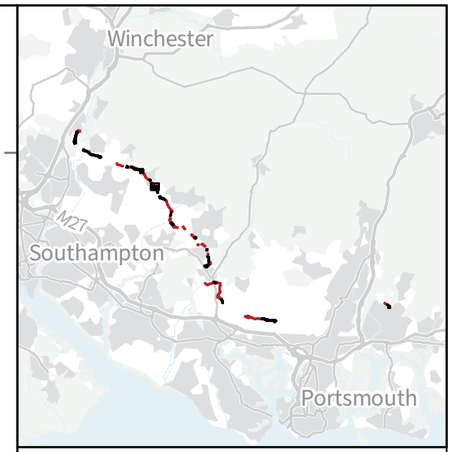
Figure 40: Gradiometer survey results: greyscale plot - HP534223.1, HP534223.2, HP534223.3,

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

452600
452800
453000
118800
118600
118400

HP751808
HP691129.2
HP691129.1
HP534223.3
HP534223.2
HP534223.1
5077
5076
5072
5071
5070
5080
5084
5079

Winters Hill
Coach House Cottage
Scivers Lane



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

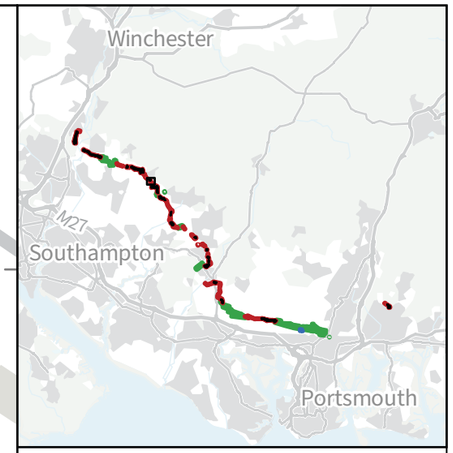
Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP
Scale: 1:2,000	Revision: 0

Figure 41: Gradiometer survey results: interpretation plot HP534223.1, HP534223.2, HP534223.3,

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

452200
452400
452600
119200
119000
118800
Alma Lane
Sclater's Lane
The Crescent
Torbay Farm
B2177
Compton Cottage Farm
HP618296
HP465865
HP754827
HP751808
HP691129.2



Survey boundary
2023 Survey boundary
Detailed survey extent

-2 nT
3 nT

0
100 m

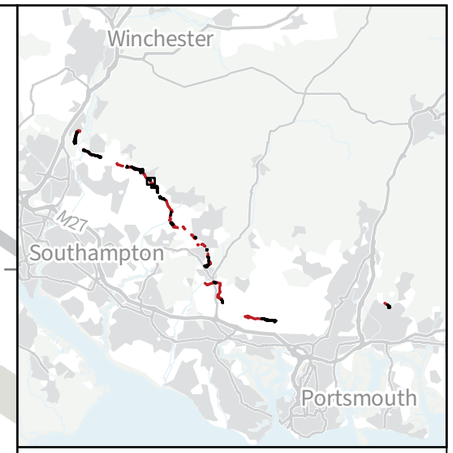
Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP
Scale: 1:2,000	Revision: 0

Figure 42: Gradiometer survey results: greyscale plot - HP691129.2, HP751808, HP754827, HP465865,

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

452200
452400
452600
119200
119000
118800
Alma Lane
Scriver's Lane
The Crescent
Torbay Farm
B2177
Compton Cottage Farm
HP618296
HP465865
HP754827
HP751808
HP691129.2



Site boundary
2023 Survey boundary
Detailed survey extent
Archaeology
Possible archaeology
Former field boundary
Historic landscape feature
Increased response
Historic cultivation
Trend
Agricultural feature
Drain
Ferrous
Modern service
Geology
Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP
Scale: 1:2,000	Revision: 0

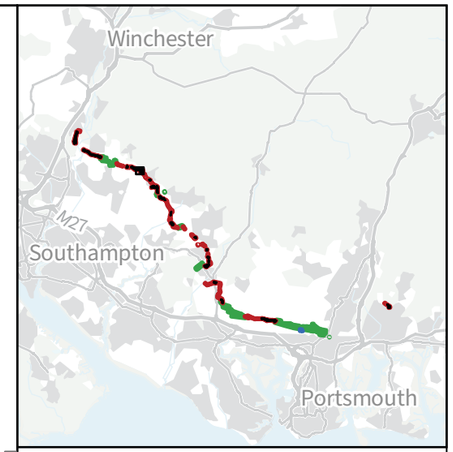
Figure 43: Gradiometer survey results: interpretation plot HP691129.2, HP751808, HP754827,

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

451200
451400
451600
451800
120000
119800
119600

Stroudwood Lane
B2177

HP322075
HP549728.2
HP549728.1
HP238951



Survey boundary
2023 Survey boundary
Detailed survey extent

-2 nT
3 nT

0
100 m

Coordinate system: OSGB 1936 British National Grid

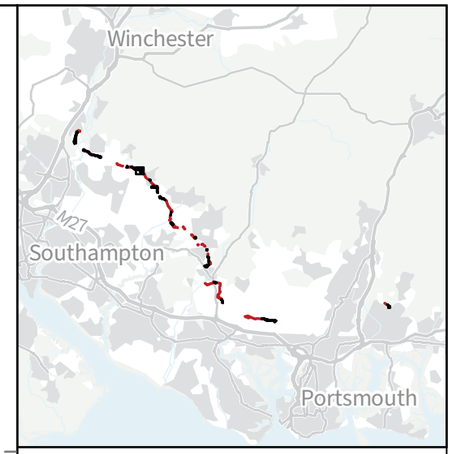
Date: 21/11/2024 | Created by: RP
Scale: 1:2,000 | Revision: 0

Figure 44: Gradiometer survey results: greyscale plot - HP238951, HP549728.1, HP549728.2, HP322075

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

451200
451400
451600
451800
120000
119800
119600

5094
HP322075
5092
5093
5090
HP549728.2
HP549728:1
HP238951
Stroudwood Lane
B2177



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

Figure 45: Gradiometer survey results: interpretation plot HP238951, HP549728.1, HP549728.2,

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

451000

451200

451400

120200

120000

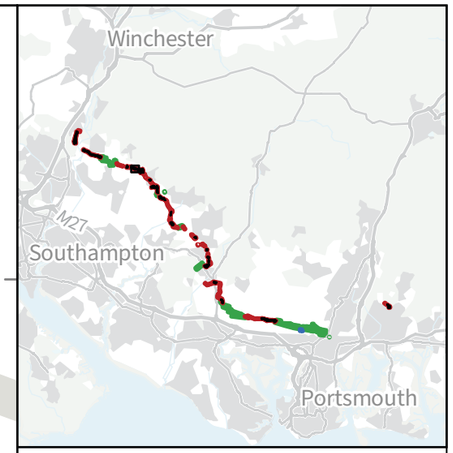
119800

HP495799

HP759708

HP322075

Stroudwood Lane



Survey boundary

2023 Survey boundary

Detailed survey extent

-2 nT

3 nT

0

100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

Figure 46: Gradiometer survey results: greyscale plot - HP322075, HP759708, HP495799

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

451000

451200

451400

120200

120000

119800

HP495799

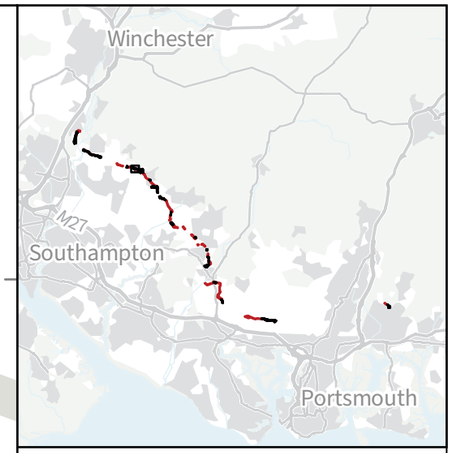
HP759708

5094

HP322075

5092

Stroudwood Lane



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

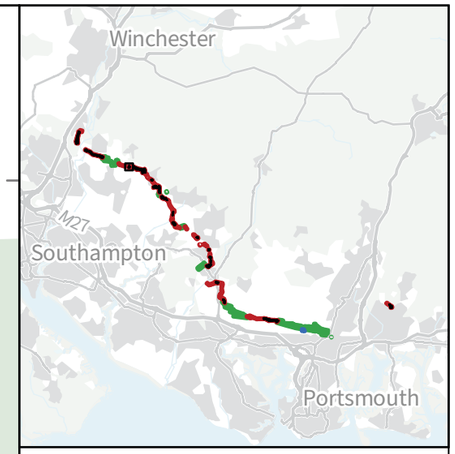
Figure 47: Gradiometer survey results: interpretation plot HP322075, HP759708, HP495799

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

450200
450400
450600
120400
120200
120000

HP650780
HP495799

Lowhill Farm



Survey boundary
2023 Survey boundary
Detailed survey extent

-2 nT
3 nT

0
100 m

Date: 21/11/2024	Created by: RP
Scale: 1:2,000	Revision: 0

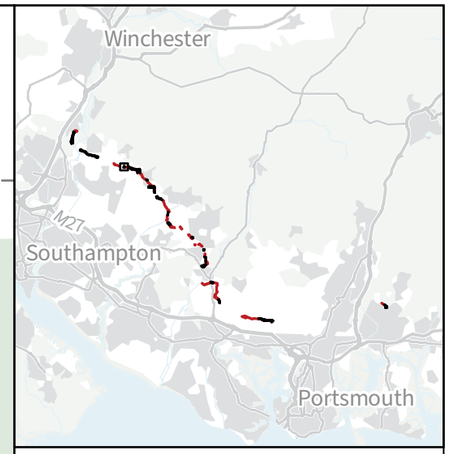
Figure 48: Gradiometer survey results: greyscale plot - HP495799, HP650780

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

450200
450400
450600
120400
120200
120000

HP650780
HP495799
5091

Lowhill Farm



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

Figure 49: Gradiometer survey results: interpretation plot HP495799, HP650780

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

447800

448000

448200

121200

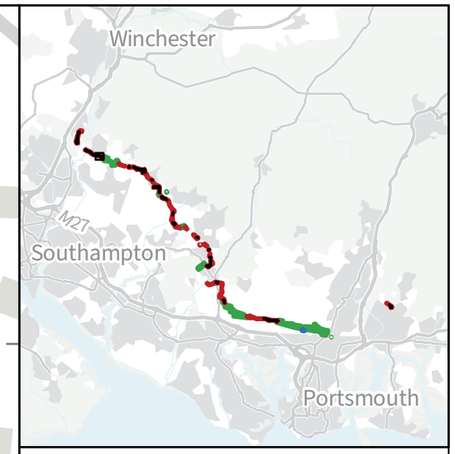
121000

120800

Z3819

HP760793.1

HP760793.2



Survey boundary

2023 Survey boundary

Detailed survey extent

-2 nT

3 nT

0

100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

Figure 50: Gradiometer survey results: greyscale plot - HP760793.1, HP760793.2, Z3819

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

447800

448000

448200

121200

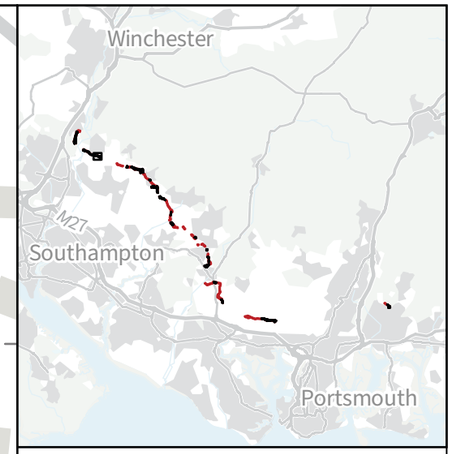
121000

120800

Z3819

HP760793.1

HP760793.2



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP
Scale: 1:2,000	Revision: 0

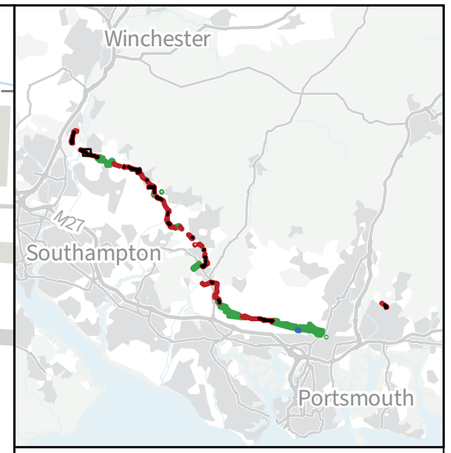
Figure 51: Gradiometer survey results: interpretation plot HP760793.1, HP760793.2, Z3819

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

447200
447400
447600
121600
121400
121200

Trees Farm Road
Valley Close
Church Lane
Bishopstoke Lane
Lordswood

HP783623.2-1
HP783623.2-2
HP783623.1
Z3819



Survey boundary
2023 Survey boundary
Detailed survey extent

-2 nT
3 nT
0
100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP
Scale: 1:2,000 | Revision: 0

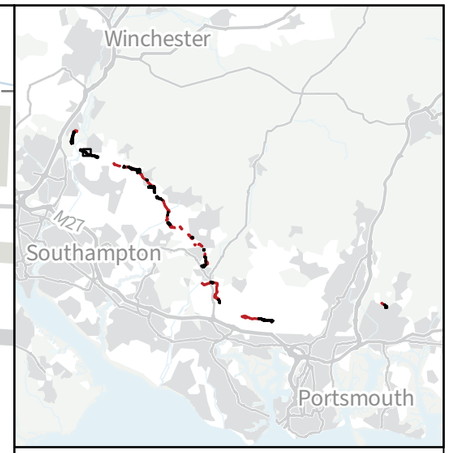
Figure 52: Gradiometer survey results: greyscale plot - Z3819, HP783623.1, HP783623.2-2, HP783623.2-1

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

447200
447400
447600
121600
121400
121200

Trees Farm Road
Valley Close
Church Lane
Bishopstoke Lane
Lordswood

HP783623.2-1
HP783623.2-2
5101
HP783623.1
Z3819
5100



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP

Scale: 1:2,000 | Revision: 0

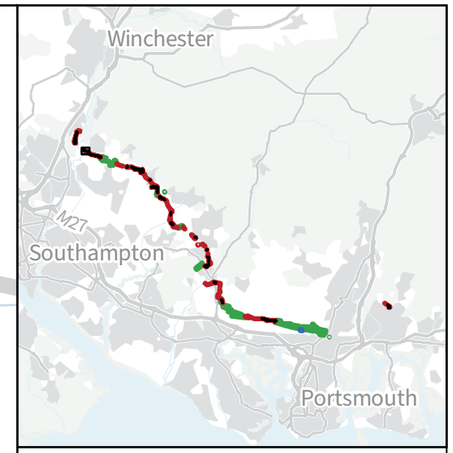
Figure 53: Gradiometer survey results: interpretation plot Z3819, HP783623.1, HP783623.2-2,

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

446800
447000
447200
121600
121400

B3335
Highbridge
Wardle Road
Lordswood
Brambridge
Brambridge

HP783623.3
HP783623.2-1
HP783623.2-2



Survey boundary
2023 Survey boundary
Detailed survey extent

-2 nT
3 nT

0
100 m

Date: 21/11/2024 | Created by: RP
Scale: 1:2,000 | Revision: 0

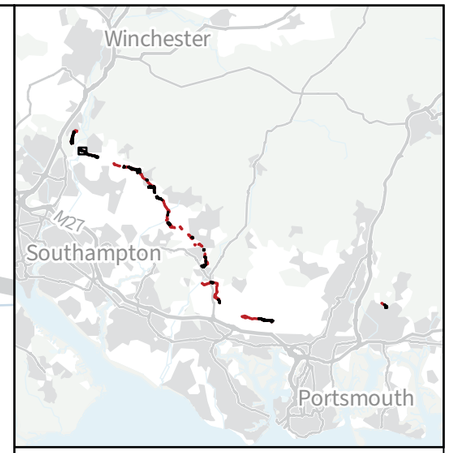
Figure 54: Gradiometer survey results: greyscale plot - HP783623.2-2, HP783623.2-1, HP783623.3

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

446800
447000
447200
121600
121400

B3335
Highbridge
Wardle Road
Brambridge
Brambridge
Lordswood

5102
HP783623.3
5103
HP783623.2-1
HP783623.2-2
5101



Site boundary
2023 Survey boundary
Detailed survey extent
Archaeology
Possible archaeology
Former field boundary
Historic landscape feature
Increased response
Historic cultivation
Trend
Agricultural feature
Drain
Ferrous
Modern service
Geology
Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP
Scale: 1:2,000 | Revision: 0

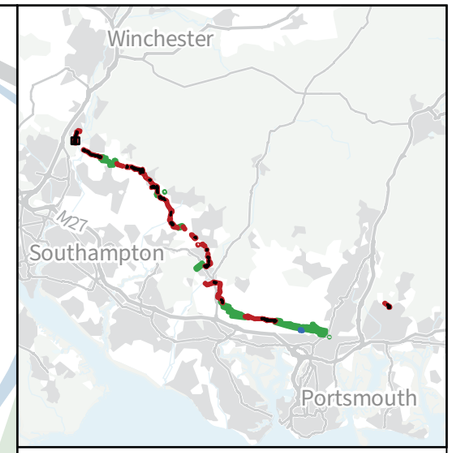
Figure 55: Gradiometer survey results: interpretation plot HP783623.2-2, HP783623.2-1, HP783623.3

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

446000
446200
446400
122400
122200

Z3031.3
Z3031.2
Z3031.1

Otterbourne Manor



Survey boundary
2023 Survey boundary
Detailed survey extent

-2 nT
3 nT

0
100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP
Scale: 1:2,000	Revision: 0

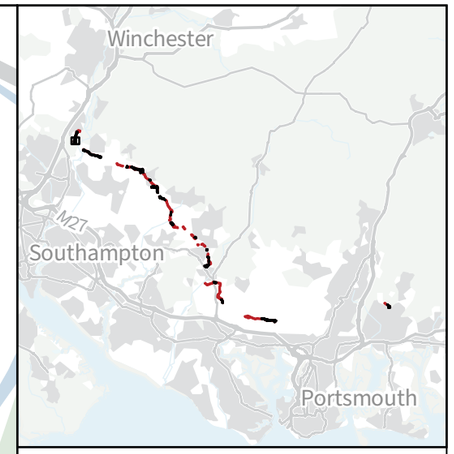
Figure 56: Gradiometer survey results: greyscale plot - Z3031.1, Z3031.2, Z3031.3

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

446000
446200
446400
122400
122200

Z3031.3
5113
5112
Z3031.2
Z3031.1
5110

Otterbourne Manor



- Site boundary
- 2023 Survey boundary
- Detailed survey extent
- Archaeology
- Possible archaeology
- Former field boundary
- Historic landscape feature
- Increased response
- Historic cultivation
- Trend
- Agricultural feature
- Drain
- Ferrous
- Modern service
- Geology
- Geomorphology

0 100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP
Scale: 1:2,000	Revision: 0

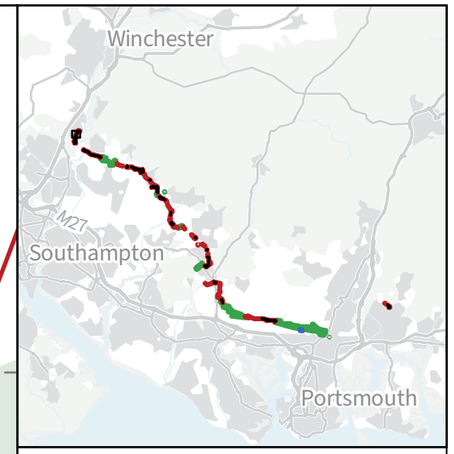
Figure 57: Gradiometer survey results: interpretation plot Z3031.1, Z3031.2, Z3031.3

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

446000
446200
446400
446600
123000
122800
122600

HP786678
HP704093
Z3031.3

Dell Copse
Kiln Lane



Survey boundary
2023 Survey boundary
Detailed survey extent

-2 nT
3 nT

0
100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024	Created by: RP	
Scale: 1:2,000	Revision: 0	

Figure 58: Gradiometer survey results: greyscale plot - Z3031.3, HP704093, HP786678

X:\Projects\275082\GIS_ArcPro\275082_Hampshire Water Transfer - Phase 2\275082_Hampshire Water Transfer - Phase 2.aprx

446000
446200
446400
446600
123000
122800
122600

HP786678
HP704093
5111
5114
Z3031.3
Dell Copse
Kiln Lane

Winchester
M27
Southampton
Portsmouth

Site boundary
2023 Survey boundary
Detailed survey extent
Archaeology
Possible archaeology
Former field boundary
Historic landscape feature
Increased response
Historic cultivation
Trend
Agricultural feature
Drain
Ferrous
Modern service
Geology
Geomorphology

0
100 m

Coordinate system: OSGB 1936 British National Grid

Date: 21/11/2024 | Created by: RP
Scale: 1:2,000 | Revision: 0

Figure 59: Gradiometer survey results: interpretation plot Z3031.3, HP704093, HP786678

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