THAMES VALLEY ARCHAEOLOGICAL SERVICES

Farley Hall Estate, Arborfield, Berkshire

Geophysical Survey (Magnetic)

by Kyle Beaverstock and Tim Dawson

Site Code: FEA15/27

(SU 7440 6713)

Farley Hall Estate, Arborfield, Berkshire

Geophysical Survey (Magnetic) Report

For Cemex

by Kyle Beaverstock and Tim Dawson

Thames Valley Archaeological Services Ltd

Site Code FEA 15/27

May 2015

Summary

Site name: Farley Hall Estate, Arborfield, Berkshire

Grid reference: SU 7440 6713

Site activity: Magnetometer survey

Date and duration of project: 4th March - 8th May 2015

Project manager: Steve Ford

Site supervisor: Tim Dawson and Kyle Beaverstock

Site code: FEA 15/27

Area of site: 1.98km², *c*.24.6ha surveyed multiple areas

Summary of results: A wide range of magnetic anomalies were recorded across the survey's 24.6ha area. These included several which may represent buried archaeological features such as ditches and pits, although the majority of these were only weak or diffuse variations from the background readings. Several of the potential archaeological magnetic anomalies appear to align with known cropmarks, suggesting that they do indeed represent buried features. The areas targeted as "blank" samples did prove to be devoid of anomalies of archaeological origin.

Location of archive: The archive is presently held at Thames Valley Archaeological Services, Reading in accordance with TVAS digital archiving policies.

Report edited/checked by:	Steve Ford✓ 28.05.15 Andrew Mundin✓ 28.05.15

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Farley Hall Estate, Arborfield, Berkshire
A Geophysical Survey (Magnetic)

by Kyle Beaverstock and Tim Dawson

Report 15/27

Introduction

This report documents the results of a geophysical survey (magnetic) carried out at Farley Hall Estate, Arborfield, Berkshire (SU 74404 67135) (Fig. 1). The work was commissioned by Mr Mike Lang Hall, of Lang Hall Archaeology, 10 Orchard Close, Woolhampton, Reading, Berkshire RG7 5SD of behalf of Cemex Ltd.

Planning permission is to be sought for mineral extraction. As a consequence of the possibility of archaeological deposits on the site which may be damaged or destroyed by development, a geophysical survey has been requested in order to inform a mitigation strategy. The field investigation was carried out to a specification approved by Mr Roland Smith, Archaeology Officer at Berkshire Archaeology. The fieldwork was undertaken by Kyle Beaverstock, Natasha Bennett, Rebecca Constable, Tim Dawson, Sophie Frampton, Anna Ginger, Rhian Greenaway and Andrew Mundin and the site code is FEA 15/27.

The archive is presently held at Thames Valley Archaeological Services, Reading in accordance with TVAS digital archiving policies.

Location, topography and geology

The site is located to the south-western of the village of Arborfield, *c*.6km to the south-east of Reading (Fig. 1). The proposal site itself covers an area of 1.98km², of which *c*.24.6ha was surveyed, straddling the western and eastern banks of the River Loddon to the south of the A327 Arborfield Road (Fig. 2). The majority of the site is arable land, with the southern-most fields (Areas J, L, M, N and O) being used for dairy pasture and the fields on the west bank of the Loddon for grazing horses. The fields called Anthills and Gravel Pits (Fig. 2) in which Areas W and Y were located had been recently ploughed and seeded. Field boundaries varied with different combinations of hedgerows, post-and-wire and electric fences being used across the site area. The topography of the site is varied but not extreme with the highest point recorded being 49m above Ordinance Datum (aOD) at the north-eastern end of the site and the lowest point being 40m aOD on the meadows adjacent to the river. The underlying geology is recorded as London Clay overlain in places with River Terrace Deposits 2 (Areas G, J, L, M, N, O, W and Hyde End Road Farm east), River Terrace Deposits 3 (Areas AI, N, O and Hyde End Road

Farm west), brickearth (Lovegroves, Lawtons and Area M) and alluvium (Areas G and X) (BGS 1946). Areas M, N and O were located on the junction of areas of brickearth, London Clay and Terraces 2 and 3.

Conditions varied throughout the survey period with the earlier, north-eastern, areas being largely dry and bright with morning frost while the weather generally got warmer but with more rain as the survey progressed to the south-west (Pl. 1-16). Ground conditions were generally firm although Area X, located within the Bridge Water Meadows, were fairly waterlogged, with the western-most X survey area being underwater until nearing the end of the survey period when a run of dry weather cleared the standing water.

Site history and archaeological background

A desk-based assessment of the proposed extraction area concludes that the site has moderate to high archaeological potential (Lang Hall 2014). In summary, the report details the archaeological evidence which points strongly to human activity and settlement in the prehistoric and Roman periods. The underlying gravel geology is well known for its richness in archaeological remains from the Mesolithic through to the Saxon period. Several aerial surveys were taken of the archaeology of the river gravels in response to the rapid expansion of the extraction industry in these areas (e.g. Gates 1975, TVAS 1999). These identified a wide range of sites which were visible from the air as cropmarks. In the proposal site itself the aerial surveys were followed by intensive field survey (fieldwalking) (Ford 1997) which went on to identify clusters of worked flint or pottery which may be interpreted as foci of human settlement or activity ranging from the Mesolithic to the medieval periods. A re-evaluation of the aerial photographic record was undertaken for the desk-based assessment (Lang Hall 2014) noted several possible archaeological sites within the proposal site including possible Bronze Age barrows, Iron Age/Roman enclosures and trackways and post-medieval ridge-and-furrow.

A range of archaeological interventions, mainly watching briefs and evaluation trenching, have taken place in the Arborfield and Shinfield areas of the Loddon valley, none of which have located any features of archaeological interest (e.g. Taylor 2005, 2006). Work at Shinfield Infants School located only a single shallow ditch containing modern finds (McNicoll-Norbury 2014) while an undated ditch or large pit were recorded during a watching brief at Hall Farm, Arborfield (Taylor and Jenkins 2002).

Methodology

Sample interval

Data collection required a temporary grid to be established across the survey area using wooden pegs at 20m intervals with further subdivision where necessary. Readings were taken at 0.25m intervals along traverses 1m apart. This provides 1600 sampling points across a full 20m × 20m grid (English Heritage 2008), providing an appropriate methodology balancing cost and time with resolution. The survey of the majority of the proposed area was carried out as intended, however there were a small number of obstructions that prevented some areas from being fully surveyed. These included thick vegetation, standing structures, field boundaries and trackways.

The Grad 601-2 has a typical depth of penetration of 0.5m to 1.0m. This would be increased if strongly magnetic objects have been buried in the site. Under normal operating conditions it can be expected to identify buried features >0.5m in diameter. Features which can be detected include disturbed soil, such as the fill of a ditch, structures that have been heated to high temperatures (magnetic thermoremnance) and objects made from ferro-magnetic materials. The strength of the magnetic field is measured in nano Tesla (nT), equivalent to 10^{-9} Tesla, the SI unit of magnetic flux density.

Equipment

The purpose of the survey was to identify geophysical anomalies that may be archaeological in origin in order to inform a targeted archaeological investigation of the site prior to development. The survey and report generally follow the recommendations and standards set out by both English Heritage (2008) and the Chartered Institute *for* Archaeologists (2002, 2011, 2014).

Magnetometry was chosen as a survey method as it offers the most rapid ground coverage and responds to a wide range of anomalies caused by past human activity. These properties make it ideal for fast yet detailed survey of an area.

The detailed magnetometry survey was carried out using a dual sensor Bartington Instruments Grad 601-2 fluxgate gradiometer. The instrument consists of two fluxgates mounted 1m vertically apart with a second set positioned at 1m horizontal distance. This enables readings to be taken of both the general background magnetic field and any localised anomalies with the difference being plotted as either positive or negative buried features. All sensors are calibrated to cancel out the local magnetic field and react only to anomalies above or below this base line. On this basis, strong magnetic anomalies such as burnt features (kilns and hearths) will give a high response as will buried ferrous objects. More subtle anomalies such as pits and ditches, can be seem from their infilling soils containing higher proportions of humic material, rich in ferrous oxides, compared to the undisturbed subsoil. This will stand out in relation to the background magnetic readings and appear in plan following the course of a linear feature or within a discrete area.

A Trimble Geo7x handheld GPS system with sub-decimetre real-time accuracy was used to tie the site grid into the Ordnance Survey national grid. This unit offers both real-time correction and post-survey processing; enabling a high level of accuracy to be obtained both in the field and in the final post-processed data.

Data gathered in the field was processed using the TerraSurveyor software package. This allows the survey data to be collated and manipulated to enhance the visibility of anomalies, particularly those likely to be of archaeological origin. The table below lists the processes applied to this survey, full survey and data information is recorded in Appendix 1.

Process	**Effect**
Clip from -1.80 to 2.20 nT	Enhance the contrast of the image to improve the appearance of possible archaeological anomalies.
Interpolate: *y* doubled	Increases the resolution of the readings in the *y* axis, enhancing the shape of anomalies.
De-stripe: median, all sensors	Removes the striping effect caused by differences in sensor calibration, enhancing the visibility of potential archaeological anomalies.
De-spike: threshold 1, window size 3×3	Compresses outlying magnetic points caused by interference of metal objects within the survey area.
De-stagger: all grids, both by -1 intervals	Cancels out effects of site's topography on irregularities in the traverse speed.

Once processed, the results are presented as a greyscale plot shown in relation to the site (Fig. 3), followed by a second plan to present the abstraction and interpretation of the magnetic anomalies (Fig. 4). Anomalies are shown as colour-coded lines, points and polygons. Detailed plots and interpretations for each of the survey areas were produced to allow closer inspection.

The greyscale plot of the processed data is exported from TerraSurveyor in a georeferenced portable network graphics (.PNG) format, a raster image format chosen for its lossless data compression and support for transparent pixels, enabling it to easily be overlaid onto an existing site plan. The data plot is combined with grid and site plans in QGIS 2.6.1 Brighton and exported again in .PNG format in order to present them in figure templates in Adobe InDesign CS5.5, creating .INDD file formats. Once the figures are finalised they are exported in .PDF format for inclusion within the finished report.

Results

A range of magnetic anomalies were recorded across the survey areas (Fig. 4). The clearest of these were caused by modern services but there were also some which are possibly archaeological in origin and a few which may represent variation in the natural geology (Fig. 5). The magnetic anomalies of possible archaeological origin are recognisable as both positive and negative variations in the site's general magnetic field. The positive anomalies usually represent buried cut features such as ditches or pits whereas negative anomalies are indicative of earthen banks, or thickened and disturbance of subsoil.

<u>Hyde End Road Farm west (Figs. 5-6)</u>

This 1ha block was located to target a "blank" area at the western end of the site, on the western bank of the River Loddon. The survey recorded three short sections of linear positive anomaly which may have been archaeological in origin. They appear to form three sides of a sub-rectangular shape in the centre of the area's north-eastern edge **[Fig. 6: 1]**, although none of them join at the corners. A large number of discrete magnetic spikes were recorded scattered across the area. These were probably caused by buried ferromagnetic objects with those at regular intervals in straight lines possibly representing temporary fence lines. The area itself was in use as a horse paddock with several of the neighbouring fields containing lengths of temporary electric fencing to sub-divide the larger areas.

<u>Hyde End Road Farm east (Figs. 7-8)</u>

The second "blank" area to the west of the Loddon was originally planned as being 100m × 100m but the presence of a large amount of the temporary electric fencing necessitated changing the area to measure 60m × 160m. The magnetic survey recorded no anomalies of archaeological interest. It did, however, identify the course of a large service pipe or cable **[Fig. 8: 2]** crossing the northern half of the area and another patch of magnetic disturbance caused by a nearby overhead electricity pylon **[3]**. As with the previous area several magnetic spikes were recorded across the plot.

<u>Area G (Figs. 9-10)</u>

The first survey area to specifically target cropmarks, Area G was located directly adjacent to the River Loddon, with a north-western annexe extending into the next field (Fig. 9). The cropmarks, a series of circular shapes along the north-western edge of the main part of Area G, were interpreted as a possible group of Bronze Age barrows (Lang Hall 2014). The only magnetic anomaly that appears to match this description is a length of weak positive anomaly which forms a slightly skewed semicircle **[Fig. 10: 4]** to the south-west of the centre of the annexe. The only other anomalies with possible archaeological origins are three discrete positive patches in the main area of G **[5, 6, 7]**. These are roughly circular strong anomalies, which may represent buried pits. In the north-eastern end of Area G the survey recorded a large area of strong positive and negative readings **[8]** which, due to their organic appearance, most likely indicates a variation in the underlying geology. A more extreme range of values was recorded at the southern end of Area G with what appears to be a dense scatter of magnetic spikes **[9]**. These are most likely indicative of ferromagnetic debris although they may also represent an area of buried heavily disturbed ground. Immediately adjacent to this patch area two areas of stronger magnetic disturbance caused by the close proximity of the steel field gate and what appears to be a water pipe protruding vertically from the ground.

The two parts of Area G are located on different geology with the main south-eastern one on alluvium and the north-western extension on River Terrace Deposits 2 (BGS 1946). These differences seem to be reflected in the background magnetic "noise" in both plots, with the gravels giving a much noisier reading to the more diffuse alluvium (Fig. 9).

<u>Area J - Tanners Left (Figs. 11-12)</u>

While the survey plot of Area J is dominated by a large swathe of magnetic disturbance that cuts across the centre of the site indicating the presence of a buried service **[Fig 12: 14]**, several weaker positive linear anomalies can be identified around the edges (Fig. 11). These all appear to be on a similar alignment **[10, 11, 12, 13]**, with some forming 90° corners **[11, 12]**, however these are very faint, with **[10]** and **[11]** appearing more as general trends rather than identifiable features. A series of small square enclosures on a similar alignment has been identified in this location as cropmarks and it is possible that the magnetic anomalies which were identified relate to these.

<u>Area L - Tanners Right (Figs. 13-14)</u>

Area L was positioned to target two linear cropmarks which ran parallel to the existing field boundaries. Of these, however, only one was identified in the geophysical survey **[Fig. 14: 15]**. This consisted of a weak trend of positive anomalies which extended for *c*.152m south-east from the area's north-western boundary, possibly representing a buried ditch. A large positive anomaly with diffuse edges **[16]** sits in the centre of the linear anomaly but is most likely natural in origin rather than archaeological. The fencing which bordered the field caused several smaller areas of magnetic disturbance along the northern and western perimeter of the survey area.

Areas M, N and O - Tanners Hill and Back of Dairy (Figs. 15-16)

Areas M, N and O were located to target a series of linear cropmarks interpreted as possible Iron Age or Romano-British trackways at the north-western end of Tanners Hill and Back of Dairy fields. M, to the north-east in Tanners Hill. This was found to contain only a short length of weak positive linear anomaly of possible archaeological origin in its northern corner **[Fig. 16: 17]**. Three further lengths of very weak linear positive anomaly **[18, 19, 20]** were identified in N to the south-west. All four anomalies appear to match the cropmarks plotted in these locations and therefore may be archaeological in origin. Other anomalies recorded include a strong set of discrete positive readings which form a close-packed line **[21]** and represent the lowered fence which marks the boundary between Areas N and O. This feature includes several stronger areas of disturbance and dipolar spikes. In Area M a diffuse positive discrete anomaly **[22]** is probably the result of a buried natural depression while an area of strong dipolar readings to the south-west **[23]** indicate the presence of scattered ferrous debris or an area of heavily disturbed ground. A steel drinking trough prevented a small area of M from being surveyed masked the readings close to it, while the fence along the north-eastern boundary of Area N also caused a zone of strong magnetic disturbance.

Lawtons (Figs. 17-18)

The 1ha survey area in Lawtons field was placed to target a "blank" area of the landscape. The only magnetic anomaly of note was a series of stronger positive and negative readings which formed a line parallel to the edge of the field **[Fig. 17: 24]**. This appeared to coincide with an area of deeper rutting in the ground surface. Several strong magnetic spikes were noted in this survey area, possibly representing buried ferrous objects, along with a large discrete positive anomaly **[25]**, which probably indicates the presence of a buried natural depression or hollow.

Lovegroves (Figs. 19-20)

The Lovegroves survey area was targeted as another "blank" sample location. This proved to be the case with only some weaker positive anomalies being identified in the plot (Fig. 19). With their organic shapes these are probably natural variations within the subsoil or underlying geology. As with the other survey areas several magnetic spikes were recorded scattered across the plot.

Area W - Anthill (Figs. 21-22)

The largest survey area, Area W, was positioned to target a complex of cropmarks which had been interpreted as a series of Iron Age or Romano-British enclosures. The geophysical survey did identify several linear positive anomalies which may represent buried archaeological activity, but these were all very weak with several being more positive trends than well defined features (Fig. 21). Two of the stronger anomalies were detected in the western-most corner of the survey area **[Fig. 22: 26]** and appear to form a right-angled junction. These are in the same location but at a different orientation to a similar feature recorded by the cropmark studies. The largest magnetic anomalies within Area W are a series of five weak positive linear trends **[27, 28]** which extend south-westwards from the eastern edge of the area. The parallel layout and diffuse appearance of these anomalies suggest that they may represent the furrow components of a medieval or post-medieval ridge-and-furrow agriculture. A shorter length of positive linear anomaly with a similar appearance **[29]** was noted on the northern edge of **[27]**. This directly aligns with the western edge of a subrectangular enclosure which was identified as a cropmark (TVAS 1999). Similarly, two more weak linear positive anomalies were identified in the northern corner of the area, forming a T-shape **[30]**, which, again, corresponds to a junction in two longer linear cropmarks. A shorter section of weak linear positive anomaly appears on a different orientation a short distance to the west **[31]**.

A clear shape is formed by a series of anomalies **[32, 33]** in the south-eastern corner of the survey area. This appears to primarily consist of strong positive and dipolar discrete or short linear anomalies with a gap in the south-western edge. Its orientation and position regarding the field boundaries to the east suggest that it represents an extension of Area U or a smaller field that has since been merged with the larger Anthills field.

Of particular note in Area W is the change in the field's background magnetic readings. The western half is much noisier than the eastern, possibly indicating a change in the underlying geology although this is recorded as River Terrace Deposits 2 for the whole area (BGS 1947). The noise appears to increase towards the river, opposite to that observed in Area G (Fig. 9) which had a smoother variation on the alluvial ground. In Area W the disturbance is so intense that it may have a masking affect on any weaker anomalies.

<u>Area X west - Bridge Water Meadows (Figs. 23-24)</u>

Area X was divided into four 1ha blocks to cover a series of cropmarks which had been interpreted as a possible Iron Age or Romano-British complex. The westernmost 1ha area was flooded for the first half of the survey period due to a combination of wet weather and its close proximity to the Loddon. Once it had dried out approximately two thirds of the area were available for surveying with the north-western corner being an area of wetland along the riverbank.

The survey of this area identified several magnetic anomalies, including six of potential archaeological origin. A discrete strong positive anomaly was located in the centre of the area **[Fig. 24: 34]**, possibly indicating the presence of a buried pit, while a series of weaker positive linear features crossed the area from north-east to south-west. Of these, **[35]** and **[36]** appear as parallel trends rather than clear features while **[37]** has a much stronger signature. Another weaker positive anomaly **[38]** runs on a perpendicular alignment. All of these weaker linear anomalies **[35, 36, 38]** appear to correspond to cropmarks of the enclosures which make up the western end of the Area X complex. Other anomalies recorded in this area include a patch of strong positive and negative readings in the south-western corner **[39]** and a slightly coarser one in the centre **[40]** which most likely represent changes in the underlying geology or, in the case of the latter, scattered ferromagnetic debris.

<u>Area X east - Bridge Water Meadows (Figs. 25-26)</u>

Of the remaining three 1ha blocks of Area X, the two southernmost were found to be devoid of any anomalies which may be of archaeological origin while the north-eastern block contained several (Fig. 25). All of these were identified as linear weak positive trends **[Fig. 26: 41, 42, 43, 44]**, most of which ran parallel to one-another in a north-west to south-east direction. Another weak positive trend **[45]** appears to cross the northernmost of these **[43]** with a second one on a loosely similar orientation to the west **[44]**. The two longer trends **[42, 43]** may correspond to cropmarks which have been plotted as crossing this location. To the north of the linear trends are two much more amorphous strong positive anomalies **[46]** which are probably geological in origin. The centre of the block contains a high concentration of magnetic spikes, probably indicating a series of buried ferrous objects.

<u>Area Y - Gravel Pits (Figs. 27-28)</u>

Area Y was positioned to target the cropmarks of a possible roundhouse. These were potentially located in the form of two very weak curvilinear positive anomalies **[Fig. 28: 47]** which together appear to form half of the perimeter of a circle. A much stronger positive linear anomaly with associated negative response **[48]** extends from the southern tip of **[47]** westwards towards Rounds Copse. Another weaker curvilinear positive anomaly **[49]** was identified extending from the northern edge of the survey area to its southern edge, cutting across the eastern side of the possible semicircular anomaly **[47]**. A slightly less well defined pair of positive linear anomalies extend parallel to one another at a distance of *c*.7m some 40m north-eastwards into the survey area **[50]**. They appear to terminate in a linear area of magnetic disturbance **[51]** which probably represents a modern service run. This part of Area Y was the site of game breeding coops so it is likely that the service is water or electricity that was used to supply them.

<u>Area AE - Back of Bridge (Figs. 29-30)</u>

Cropmarks noted in the south-western corner of Back of Bridge field suggested the presence of roundhouses and Area AE was located in order to target them. This has potentially been successful as a series of weak positive anomalies appear to form sub circular shapes, *c*.12m in diameter, in the western part of the survey area **[Fig. 30:**

52, 53]. The eastern part of **[53]** is linked to a short length of linear weak positive anomaly **[54]** which extends eastwards for *c*.8.5m and may be related to another east-west linear anomaly further east **[55]**. To the north of this is a section of weak positive linear anomaly with a right-angled turn **[56]**. Another, less well-defined, weak positive anomaly **[57]** appears to the north of the circles and extends south-east until it terminates in a small area of magnetic noise **[58]**.

<u>Back of Bridge (Figs. 31-32)</u>

The survey area in the north-eastern corner of Back of Bridge field was located to target a prehistoric pottery scatter identified by the Loddon Valley Survey (Ford 1997). While several magnetic spikes were recorded (Fig. 31) they did not appear to be associated with any buried archaeological features. The only anomaly of note in this area was a concentration of magnetic spikes **[Fig. 32: 59]** north-west of the area's centre point.

<u>Area AI - Home Field (Figs. 33-34)</u>

The final two survey areas were located in the north-eastern corner of the proposal site in order to target a series of possible pits. The only anomalies of possible archaeological origin were found in the northern of the two areas, both consisting of weak positive linear anomalies **[Fig. 34: 60, 61]** with the southernmost **[61]** including a obtuse-angled turn towards the south-west. A discrete strong positive anomaly was recorded at the join of the angle, possibly indicating a buried pit. Both parts of Area AI were dominated by a very strong linear area of magnetic disturbance **[62, 63]** caused by a high pressure gas main that runs under the fields at this point.

Conclusion

A wide range of magnetic anomalies were recorded across the survey's 24.6ha area. These included several which may represent buried archaeological features such as ditches and pits, although the majority of these were only weak or diffuse variations from the background readings. It is unclear as to what has caused these anomalies to be so weak, particularly as the site's underlying geology is so variable, so poor geological conditions in one place would not necessarily affect other survey areas. Several of the potential archaeological magnetic anomalies appear to align with known cropmarks, suggesting that they do indeed represent buried features. The areas targeted as "blank" samples did prove to be devoid of anomalies of archaeological origin.

The majority of the survey areas were successfully covered by the geophysical survey although there were some that had to be reshaped due to the presence of unforeseen fences or reduced in size as a result of vegetation-based obstructions. One area, Area Z, which was to be positioned at the southern end of Gravel Pits, to the south of Area Y, was abandoned completely as game bird coops had been erected in a row up the length of the area. Unlike those in Area Y, it was not possible to have them moved due to a need to allow access due to the presence of breeding birds.

References

BGS, 1946, *British Geological Survey*, 1:50,000, Sheet 268, Drift Edition, Keyworth

CI*f*A, 2002, *The Use of Geophysical Techniques in Archaeological Evaluation*, IFA Paper No. 6, Reading

CI*f*A, 2011, *Standard and Guidance: for archaeological geophysical survey*, Reading

CI*f*A, 2014, *Standard and Guidance: for archaeological geophysical survey*, Reading

English Heritage, 2008, *Geophysical Survey in Archaeological Field Evaluation*, English Heritage, Portsmouth (2nd edn)

Ford, S, 1997, 'Loddon Valley (Berkshire) fieldwalking survey', *Berkshire Archaeological Journal* **75**, (for 1994-7), 11-33

Gates, T, 1975, *The Middle Thames Valley: an Archaeological Survey of the River Gravels*, Berkshire Archaeological Committee Publication 1, Reading

Lang Hall, M, 2014, 'Farley Hall Estate, Shinfield Berkshire: An archaeological assessment of the implications of mineral extraction', Lang Hall Archaeology unpublished report, Woolhampton

McNicoll-Norbury, J, 2014, 'Shinfield Infants School, Schoolgreen, Shinfield, Berkshire: An archaeological evaluation', Thames Valley Archaeological Services report 14/30, Reading

Taylor, A, 2005, '12 Arborfield Road, Shinfield, Reading, Berkshire: An archaeological evaluation', Thames Valley Archaeological Services report 05/55, Reading

Taylor, A, 2006, '41 Hyde End Road, Shinfield, Reading, Berkshire: An archaeological watching brief', Thames Valley Archaeological Services report 06/69, Reading

Taylor, A and Jenkins, P, 2002, 'Hall Farm, Church Lane, Arborfield, Berkshire: An archaeological watching brief', Thames Valley Archaeological Services report 02/64, Reading

TVAS, 1999, 'Catalogue of probable later prehistoric/Roman cropmark evidence', Thames Valley Archaeological Services report 99/10, Reading

Appendix 1. Survey and data information

Programme:
Name: TerraSurveyor
Version: 3.0.25.0

Hyde End Road Farm west
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 472729.13, 166102.58 m
Southeast corner: 472829.13, 166002.58 m
Direction of 1st Traverse: 307.37 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 400 x 100
Survey Size (meters): 100 m x 100 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 99.97
Min: -100.00
Std Dev: 2.17
Mean: 0.68
Median: 0.60
Composite Area: 1 ha
Surveyed Area: 1 ha

Source Grids: 25
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd
3 Col:0 Row:2 grids\03.xgd
4 Col:0 Row:3 grids\04.xgd
5 Col:0 Row:4 grids\05.xgd
6 Col:1 Row:0 grids\06.xgd
7 Col:1 Row:1 grids\07.xgd
8 Col:1 Row:2 grids\08.xgd
9 Col:1 Row:3 grids\09.xgd
10 Col:1 Row:4 grids\10.xgd
11 Col:2 Row:0 grids\11.xgd
12 Col:2 Row:1 grids\12.xgd
13 Col:2 Row:2 grids\13.xgd
14 Col:2 Row:3 grids\14.xgd
15 Col:2 Row:4 grids\15.xgd
16 Col:3 Row:0 grids\16.xgd
17 Col:3 Row:1 grids\17.xgd
18 Col:3 Row:2 grids\18.xgd
19 Col:3 Row:3 grids\19.xgd
20 Col:3 Row:4 grids\20.xgd
21 Col:4 Row:0 grids\21.xgd
22 Col:4 Row:1 grids\22.xgd
23 Col:4 Row:2 grids\23.xgd
24 Col:4 Row:3 grids\24.xgd
25 Col:4 Row:4 grids\25.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.55
Mean: 0.02
Median: 0.01

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

Hyde End Road Farm east
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 473079.44, 166330.46 m
Southeast corner: 473139.44, 166170.46 m
Direction of 1st Traverse: 54.57 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 240 x 160
Survey Size (meters): 60 m x 160 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 100.00
Min: -100.00
Std Dev: 17.88
Mean: -0.12
Median: 0.65
Composite Area: 0.96 ha
Surveyed Area: 0.94745 ha

Source Grids: 24
1 Col:0 Row:0 grids\15.xgd
2 Col:0 Row:1 grids\16.xgd
3 Col:0 Row:2 grids\17.xgd
4 Col:0 Row:3 grids\18.xgd
5 Col:0 Row:4 grids\19.xgd
6 Col:0 Row:5 grids\20.xgd
7 Col:0 Row:6 grids\21.xgd
8 Col:0 Row:7 grids\22.xgd
9 Col:1 Row:0 grids\08.xgd
10 Col:1 Row:1 grids\09.xgd
11 Col:1 Row:2 grids\10.xgd
12 Col:1 Row:3 grids\11.xgd
13 Col:1 Row:4 grids\12.xgd
14 Col:1 Row:5 grids\13.xgd
15 Col:1 Row:6 grids\14.xgd
16 Col:1 Row:7 grids\23.xgd
17 Col:2 Row:0 grids\01.xgd
18 Col:2 Row:1 grids\02.xgd
19 Col:2 Row:2 grids\03.xgd
20 Col:2 Row:3 grids\04.xgd
21 Col:2 Row:4 grids\05.xgd
22 Col:2 Row:5 grids\06.xgd
23 Col:2 Row:6 grids\07.xgd
24 Col:2 Row:7 grids\24.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 1.01
Mean: 0.03
Median: 0.00

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -2 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

Area G (main)
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 473450.28, 166499.06 m
Southeast corner: 473570.28, 166299.06 m

Direction of 1st Traverse: 117.45 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 480 x 200
Survey Size (meters): 120 m x 200 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 100.00
Min: -100.00
Std Dev: 9.01
Mean: -1.40
Median: -0.90
Composite Area: 2.4 ha
Surveyed Area: 1.38 ha

Source Grids: 46
1 Col:0 Row:7 grids\27.xgd
2 Col:1 Row:0 grids\18.xgd
3 Col:1 Row:1 grids\19.xgd
4 Col:1 Row:2 grids\20.xgd
5 Col:1 Row:3 grids\21.xgd
6 Col:1 Row:4 grids\22.xgd
7 Col:1 Row:5 grids\23.xgd
8 Col:1 Row:6 grids\24.xgd
9 Col:1 Row:7 grids\25.xgd
10 Col:1 Row:8 grids\26.xgd
11 Col:2 Row:0 grids\38.xgd
12 Col:2 Row:1 grids\39.xgd
13 Col:2 Row:2 grids\40.xgd
14 Col:2 Row:3 grids\41.xgd
15 Col:2 Row:4 grids\42.xgd
16 Col:2 Row:5 grids\43.xgd
17 Col:2 Row:6 grids\44.xgd
18 Col:2 Row:7 grids\45.xgd
19 Col:2 Row:8 grids\46.xgd
20 Col:3 Row:0 grids\28.xgd
21 Col:3 Row:1 grids\29.xgd
22 Col:3 Row:2 grids\30.xgd
23 Col:3 Row:3 grids\31.xgd
24 Col:3 Row:4 grids\32.xgd
25 Col:3 Row:5 grids\33.xgd
26 Col:3 Row:6 grids\34.xgd
27 Col:3 Row:7 grids\35.xgd
28 Col:3 Row:8 grids\36.xgd
29 Col:3 Row:9 grids\37.xgd
30 Col:4 Row:0 grids\09.xgd
31 Col:4 Row:1 grids\10.xgd
32 Col:4 Row:2 grids\11.xgd
33 Col:4 Row:3 grids\12.xgd
34 Col:4 Row:4 grids\13.xgd
35 Col:4 Row:5 grids\14.xgd
36 Col:4 Row:6 grids\15.xgd
37 Col:4 Row:7 grids\16.xgd
38 Col:4 Row:8 grids\17.xgd
39 Col:5 Row:0 grids\01.xgd
40 Col:5 Row:1 grids\02.xgd
41 Col:5 Row:2 grids\03.xgd
42 Col:5 Row:3 grids\04.xgd
43 Col:5 Row:4 grids\05.xgd
44 Col:5 Row:5 grids\06.xgd
45 Col:5 Row:6 grids\07.xgd
46 Col:5 Row:7 grids\08.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.96
Mean: 0.06
Median: 0.01

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

<u>Area G (annexe)</u>
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 473323.4, 166414.95 m
Southeast corner: 473383.4, 166314.95 m
Direction of 1st Traverse: 41.78 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 240 x 100
Survey Size (meters): 60 m x 100 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 100.00
Min: -100.00
Std Dev: 6.78
Mean: -0.29
Median: -0.28
Composite Area: 0.6 ha
Surveyed Area: 0.5229 ha

Source Grids: 15
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd
3 Col:0 Row:2 grids\03.xgd
4 Col:0 Row:3 grids\04.xgd
5 Col:0 Row:4 grids\05.xgd
6 Col:1 Row:0 grids\06.xgd
7 Col:1 Row:1 grids\07.xgd
8 Col:1 Row:2 grids\08.xgd
9 Col:1 Row:3 grids\09.xgd
10 Col:1 Row:4 grids\10.xgd
11 Col:2 Row:0 grids\11.xgd
12 Col:2 Row:1 grids\12.xgd
13 Col:2 Row:2 grids\13.xgd
14 Col:2 Row:3 grids\14.xgd
15 Col:2 Row:4 grids\15.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.82
Mean: 0.04
Median: 0.01

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

<u>Area J</u>
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 473808.67, 166025.32 m
Southeast corner: 473928.67, 165865.32 m
Direction of 1st Traverse: 316.81 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.

Dummy Value: 2047.5

Dimensions
Composite Size (readings): 480 x 160
Survey Size (meters): 120 m x 160 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 100.00
Min: -100.00
Std Dev: 30.52
Mean: 1.58
Median: 1.52
Composite Area: 1.92 ha
Surveyed Area: 1.5691 ha

Source Grids: 44
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd
3 Col:0 Row:2 grids\03.xgd
4 Col:0 Row:3 grids\04.xgd
5 Col:0 Row:4 grids\05.xgd
6 Col:0 Row:5 grids\06.xgd
7 Col:0 Row:6 grids\07.xgd
8 Col:0 Row:7 grids\08.xgd
9 Col:1 Row:0 grids\09.xgd
10 Col:1 Row:1 grids\10.xgd
11 Col:1 Row:2 grids\11.xgd
12 Col:1 Row:3 grids\12.xgd
13 Col:1 Row:4 grids\13.xgd
14 Col:1 Row:5 grids\14.xgd
15 Col:1 Row:6 grids\15.xgd
16 Col:1 Row:7 grids\16.xgd
17 Col:2 Row:0 grids\17.xgd
18 Col:2 Row:1 grids\18.xgd
19 Col:2 Row:2 grids\19.xgd
20 Col:2 Row:3 grids\20.xgd
21 Col:2 Row:4 grids\21.xgd
22 Col:2 Row:5 grids\22.xgd
23 Col:2 Row:6 grids\23.xgd
24 Col:2 Row:7 grids\24.xgd
25 Col:3 Row:0 grids\25.xgd
26 Col:3 Row:1 grids\26.xgd
27 Col:3 Row:2 grids\27.xgd
28 Col:3 Row:3 grids\28.xgd
29 Col:3 Row:4 grids\29.xgd
30 Col:3 Row:5 grids\30.xgd
31 Col:3 Row:6 grids\31.xgd
32 Col:4 Row:0 grids\32.xgd
33 Col:4 Row:1 grids\33.xgd
34 Col:4 Row:2 grids\34.xgd
35 Col:4 Row:3 grids\35.xgd
36 Col:4 Row:4 grids\36.xgd
37 Col:4 Row:5 grids\37.xgd
38 Col:4 Row:6 grids\38.xgd
39 Col:5 Row:0 grids\39.xgd
40 Col:5 Row:1 grids\40.xgd
41 Col:5 Row:2 grids\41.xgd
42 Col:5 Row:3 grids\42.xgd
43 Col:5 Row:4 grids\43.xgd
44 Col:5 Row:5 grids\44.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 1.28
Mean: 0.09
Median: 0.00

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

<u>Area L</u>
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 474072.61, 166345.83 m
Southeast corner: 474212.61, 166145.83 m
Direction of 1st Traverse: 214.51 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 560 x 200
Survey Size (meters): 140 m x 200 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 100.00
Min: -100.00
Std Dev: 3.94
Mean: 0.25
Median: 0.28
Composite Area: 2.8 ha
Surveyed Area: 2.0873 ha

Source Grids: 62
1 Col:0 Row:2 grids\60-a.xgd
2 Col:0 Row:3 grids\61-a.xgd
3 Col:0 Row:4 grids\62-a.xgd
4 Col:0 Row:8 grids\59-a.xgd
5 Col:0 Row:9 grids\58-a.xgd
6 Col:1 Row:0 grids\48-a.xgd
7 Col:1 Row:1 grids\49-a.xgd
8 Col:1 Row:2 grids\50-a.xgd
9 Col:1 Row:3 grids\51-a.xgd
10 Col:1 Row:4 grids\52-a.xgd
11 Col:1 Row:5 grids\53-a.xgd
12 Col:1 Row:6 grids\54-a.xgd
13 Col:1 Row:7 grids\55-a.xgd
14 Col:1 Row:8 grids\56-a.xgd
15 Col:1 Row:9 grids\57-a.xgd
16 Col:2 Row:0 grids\38-a.xgd
17 Col:2 Row:1 grids\39-a.xgd
18 Col:2 Row:2 grids\40-a.xgd
19 Col:2 Row:3 grids\41-a.xgd
20 Col:2 Row:4 grids\42-a.xgd
21 Col:2 Row:5 grids\43-a.xgd
22 Col:2 Row:6 grids\44-a.xgd
23 Col:2 Row:7 grids\45-a.xgd
24 Col:2 Row:8 grids\46-a.xgd
25 Col:2 Row:9 grids\47-a.xgd
26 Col:3 Row:0 grids\28-a.xgd
27 Col:3 Row:1 grids\29-a.xgd
28 Col:3 Row:2 grids\30-a.xgd
29 Col:3 Row:3 grids\31-a.xgd
30 Col:3 Row:4 grids\32-a.xgd
31 Col:3 Row:5 grids\33-a.xgd
32 Col:3 Row:6 grids\34-a.xgd
33 Col:3 Row:7 grids\35-a.xgd
34 Col:3 Row:8 grids\36-a.xgd
35 Col:3 Row:9 grids\37-a.xgd
36 Col:4 Row:0 grids\19-a.xgd
37 Col:4 Row:1 grids\20-a.xgd
38 Col:4 Row:2 grids\21-a.xgd
39 Col:4 Row:3 grids\22-a.xgd
40 Col:4 Row:4 grids\23-a.xgd
41 Col:4 Row:5 grids\24-a.xgd
42 Col:4 Row:6 grids\25-a.xgd
43 Col:4 Row:7 grids\26-a.xgd
44 Col:4 Row:8 grids\27-a.xgd
45 Col:5 Row:0 grids\10-a.xgd

46 Col:5 Row:1 grids\11-a.xgd
47 Col:5 Row:2 grids\12-a.xgd
48 Col:5 Row:3 grids\13-a.xgd
49 Col:5 Row:4 grids\14-a.xgd
50 Col:5 Row:5 grids\15-a.xgd
51 Col:5 Row:6 grids\16-a.xgd
52 Col:5 Row:7 grids\17-a.xgd
53 Col:5 Row:8 grids\18-a.xgd
54 Col:6 Row:0 grids\01-a.xgd
55 Col:6 Row:1 grids\02-a.xgd
56 Col:6 Row:2 grids\03-a.xgd
57 Col:6 Row:3 grids\04-a.xgd
58 Col:6 Row:4 grids\05-a.xgd
59 Col:6 Row:5 grids\06-a.xgd
60 Col:6 Row:6 grids\07-a.xgd
61 Col:6 Row:7 grids\08-a.xgd
62 Col:6 Row:8 grids\09-a.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.52
Mean: 0.02
Median: 0.00

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

Area M
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 474233.65, 166313.59 m
Southeast corner: 474333.65, 166153.59 m
Direction of 1st Traverse: 134.24 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 400 x 160
Survey Size (meters): 100 m x 160 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 100.00
Min: -100.00
Std Dev: 5.61
Mean: -1.14
Median: -1.05
Composite Area: 1.6 ha
Surveyed Area: 1.3189 ha

Source Grids: 36
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd
3 Col:0 Row:2 grids\03.xgd
4 Col:0 Row:3 grids\04.xgd
5 Col:0 Row:4 grids\05.xgd
6 Col:0 Row:5 grids\06.xgd
7 Col:0 Row:6 grids\07.xgd
8 Col:0 Row:7 grids\08.xgd
9 Col:1 Row:0 grids\09.xgd
10 Col:1 Row:1 grids\10.xgd
11 Col:1 Row:2 grids\11.xgd
12 Col:1 Row:3 grids\12.xgd
13 Col:1 Row:4 grids\13.xgd
14 Col:1 Row:5 grids\14.xgd
15 Col:1 Row:6 grids\15.xgd
16 Col:2 Row:0 grids\16.xgd
17 Col:2 Row:1 grids\17.xgd
18 Col:2 Row:2 grids\18.xgd
19 Col:2 Row:3 grids\19.xgd
20 Col:2 Row:4 grids\20.xgd
21 Col:2 Row:5 grids\21.xgd
22 Col:2 Row:6 grids\22.xgd
23 Col:3 Row:0 grids\23.xgd
24 Col:3 Row:1 grids\24.xgd
25 Col:3 Row:2 grids\25.xgd
26 Col:3 Row:3 grids\26.xgd
27 Col:3 Row:4 grids\27.xgd
28 Col:3 Row:5 grids\28.xgd
29 Col:3 Row:6 grids\29.xgd
30 Col:4 Row:0 grids\30.xgd
31 Col:4 Row:1 grids\31.xgd
32 Col:4 Row:2 grids\32.xgd
33 Col:4 Row:3 grids\33.xgd
34 Col:4 Row:4 grids\34.xgd
35 Col:4 Row:5 grids\35.xgd
36 Col:4 Row:6 grids\36.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.64
Mean: 0.00
Median: 0.00

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

Areas N and O
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 474134.62, 166038.27 m
Southeast corner: 474234.62, 165898.27 m
Direction of 1st Traverse: 306.39 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 400 x 140
Survey Size (meters): 100 m x 140 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 100.00
Min: -100.00
Std Dev: 11.84
Mean: -2.20
Median: -0.25
Composite Area: 1.4 ha
Surveyed Area: 1.2814 ha

Source Grids: 35
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd
3 Col:0 Row:2 grids\03.xgd
4 Col:0 Row:3 grids\04.xgd
5 Col:0 Row:4 grids\05.xgd
6 Col:0 Row:5 grids\06.xgd
7 Col:0 Row:6 grids\07.xgd
8 Col:1 Row:0 grids\08.xgd
9 Col:1 Row:1 grids\09.xgd
10 Col:1 Row:2 grids\10.xgd
11 Col:1 Row:3 grids\11.xgd

12 Col:1 Row:4 grids\12.xgd
13 Col:1 Row:5 grids\13.xgd
14 Col:1 Row:6 grids\14.xgd
15 Col:2 Row:0 grids\15.xgd
16 Col:2 Row:1 grids\16.xgd
17 Col:2 Row:2 grids\17.xgd
18 Col:2 Row:3 grids\18.xgd
19 Col:2 Row:4 grids\19.xgd
20 Col:2 Row:5 grids\20.xgd
21 Col:2 Row:6 grids\21.xgd
22 Col:3 Row:0 grids\22.xgd
23 Col:3 Row:1 grids\23.xgd
24 Col:3 Row:2 grids\24.xgd
25 Col:3 Row:3 grids\25.xgd
26 Col:3 Row:4 grids\26.xgd
27 Col:3 Row:5 grids\27.xgd
28 Col:3 Row:6 grids\28.xgd
29 Col:4 Row:0 grids\29.xgd
30 Col:4 Row:1 grids\30.xgd
31 Col:4 Row:2 grids\31.xgd
32 Col:4 Row:3 grids\32.xgd
33 Col:4 Row:4 grids\33.xgd
34 Col:4 Row:5 grids\34.xgd
35 Col:4 Row:6 grids\35.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.72
Mean: -0.03
Median: 0.01

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

<u>Lawtons</u>
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 474426.46, 166629.73 m
Southeast corner: 474526.46, 166529.73 m
Direction of 1st Traverse: 233.71 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 400 x 100
Survey Size (meters): 100 m x 100 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 99.76
Min: -100.00
Std Dev: 2.99
Mean: -1.29
Median: -1.06
Composite Area: 1 ha
Surveyed Area: 0.98975 ha

Source Grids: 25
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd
3 Col:0 Row:2 grids\03.xgd
4 Col:0 Row:3 grids\04.xgd
5 Col:0 Row:4 grids\05.xgd
6 Col:1 Row:0 grids\06.xgd
7 Col:1 Row:1 grids\07.xgd
8 Col:1 Row:2 grids\08.xgd
9 Col:1 Row:3 grids\09.xgd
10 Col:1 Row:4 grids\10.xgd
11 Col:2 Row:0 grids\11.xgd
12 Col:2 Row:1 grids\12.xgd
13 Col:2 Row:2 grids\13.xgd
14 Col:2 Row:3 grids\14.xgd
15 Col:2 Row:4 grids\15.xgd
16 Col:3 Row:0 grids\16.xgd
17 Col:3 Row:1 grids\17.xgd
18 Col:3 Row:2 grids\18.xgd
19 Col:3 Row:3 grids\19.xgd
20 Col:3 Row:4 grids\20.xgd
21 Col:4 Row:0 grids\21.xgd
22 Col:4 Row:1 grids\22.xgd
23 Col:4 Row:2 grids\23.xgd
24 Col:4 Row:3 grids\24.xgd
25 Col:4 Row:4 grids\25.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.49
Mean: 0.01
Median: 0.00

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

<u>Lovegroves</u>
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 474399.7, 166897.74 m
Southeast corner: 474499.7, 166797.74 m
Direction of 1st Traverse: 0.6931 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 400 x 100
Survey Size (meters): 100 m x 100 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 100.00
Min: -49.23
Std Dev: 2.09
Mean: 0.13
Median: -0.01
Composite Area: 1 ha
Surveyed Area: 1 ha

Source Grids: 25
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd
3 Col:0 Row:2 grids\03.xgd
4 Col:0 Row:3 grids\04.xgd
5 Col:0 Row:4 grids\05.xgd
6 Col:1 Row:0 grids\06.xgd
7 Col:1 Row:1 grids\07.xgd
8 Col:1 Row:2 grids\08.xgd
9 Col:1 Row:3 grids\09.xgd
10 Col:1 Row:4 grids\10.xgd
11 Col:2 Row:0 grids\11.xgd
12 Col:2 Row:1 grids\12.xgd
13 Col:2 Row:2 grids\13.xgd
14 Col:2 Row:3 grids\14.xgd
15 Col:2 Row:4 grids\15.xgd

16 Col:3 Row:0 grids\16.xgd
17 Col:3 Row:1 grids\17.xgd
18 Col:3 Row:2 grids\18.xgd
19 Col:3 Row:3 grids\19.xgd
20 Col:3 Row:4 grids\20.xgd
21 Col:4 Row:0 grids\21.xgd
22 Col:4 Row:1 grids\22.xgd
23 Col:4 Row:2 grids\23.xgd
24 Col:4 Row:3 grids\24.xgd
25 Col:4 Row:4 grids\25.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.43
Mean: 0.02
Median: 0.00

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

Area W
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 473890.14, 167043.7 m
Southeast corner: 474090.14, 166783.7 m
Direction of 1st Traverse: 127.37 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 800 x 260
Survey Size (meters): 200 m x 260 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 100.00
Min: -100.00
Std Dev: 2.77
Mean: 0.00
Median: 0.13
Composite Area: 5.2 ha
Surveyed Area: 4.093 ha

Source Grids: 103
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd
3 Col:0 Row:2 grids\03.xgd
4 Col:0 Row:3 grids\04.xgd
5 Col:0 Row:4 grids\05.xgd
6 Col:0 Row:5 grids\06.xgd
7 Col:0 Row:6 grids\07.xgd
8 Col:0 Row:7 grids\08.xgd
9 Col:0 Row:8 grids\09.xgd
10 Col:0 Row:9 grids\10.xgd
11 Col:0 Row:10 grids\11.xgd
12 Col:0 Row:11 grids\12.xgd
13 Col:0 Row:12 grids\13.xgd
14 Col:1 Row:0 grids\14.xgd
15 Col:1 Row:1 grids\15.xgd
16 Col:1 Row:2 grids\16.xgd
17 Col:1 Row:3 grids\17.xgd
18 Col:1 Row:4 grids\18.xgd
19 Col:1 Row:5 grids\19.xgd
20 Col:1 Row:6 grids\20.xgd
21 Col:1 Row:7 grids\21.xgd
22 Col:1 Row:8 grids\22.xgd
23 Col:1 Row:9 grids\23.xgd
24 Col:1 Row:10 grids\24.xgd
25 Col:1 Row:11 grids\25.xgd
26 Col:1 Row:12 grids\26.xgd
27 Col:2 Row:0 grids\27.xgd
28 Col:2 Row:1 grids\28.xgd
29 Col:2 Row:2 grids\29.xgd
30 Col:2 Row:3 grids\30.xgd
31 Col:2 Row:4 grids\31.xgd
32 Col:2 Row:5 grids\32.xgd
33 Col:2 Row:6 grids\33.xgd
34 Col:2 Row:7 grids\34.xgd
35 Col:2 Row:8 grids\35.xgd
36 Col:2 Row:9 grids\36.xgd
37 Col:2 Row:10 grids\37.xgd
38 Col:2 Row:11 grids\38.xgd
39 Col:2 Row:12 grids\39.xgd
40 Col:3 Row:0 grids\40.xgd
41 Col:3 Row:1 grids\41.xgd
42 Col:3 Row:2 grids\42.xgd
43 Col:3 Row:3 grids\43.xgd
44 Col:3 Row:4 grids\44.xgd
45 Col:3 Row:5 grids\45.xgd
46 Col:3 Row:6 grids\46.xgd
47 Col:3 Row:7 grids\47.xgd
48 Col:3 Row:8 grids\48.xgd
49 Col:3 Row:9 grids\49.xgd
50 Col:3 Row:10 grids\50.xgd
51 Col:3 Row:11 grids\51.xgd
52 Col:3 Row:12 grids\52.xgd
53 Col:4 Row:0 grids\53.xgd
54 Col:4 Row:1 grids\54.xgd
55 Col:4 Row:2 grids\55.xgd
56 Col:4 Row:3 grids\56.xgd
57 Col:4 Row:4 grids\57.xgd
58 Col:4 Row:5 grids\58.xgd
59 Col:4 Row:6 grids\59.xgd
60 Col:4 Row:7 grids\60.xgd
61 Col:4 Row:8 grids\61.xgd
62 Col:4 Row:9 grids\62.xgd
63 Col:4 Row:10 grids\63.xgd
64 Col:4 Row:11 grids\64.xgd
65 Col:4 Row:12 grids\65.xgd
66 Col:5 Row:0 grids\66.xgd
67 Col:5 Row:1 grids\67.xgd
68 Col:5 Row:2 grids\68.xgd
69 Col:5 Row:3 grids\69.xgd
70 Col:5 Row:4 grids\70.xgd
71 Col:5 Row:5 grids\71.xgd
72 Col:5 Row:6 grids\72.xgd
73 Col:5 Row:7 grids\73.xgd
74 Col:6 Row:0 grids\74.xgd
75 Col:6 Row:1 grids\75.xgd
76 Col:6 Row:2 grids\76.xgd
77 Col:6 Row:3 grids\77.xgd
78 Col:6 Row:4 grids\78.xgd
79 Col:6 Row:5 grids\79.xgd
80 Col:6 Row:6 grids\80.xgd
81 Col:6 Row:7 grids\81.xgd
82 Col:7 Row:0 grids\82.xgd
83 Col:7 Row:1 grids\83.xgd
84 Col:7 Row:2 grids\84.xgd
85 Col:7 Row:3 grids\85.xgd
86 Col:7 Row:4 grids\86.xgd
87 Col:7 Row:5 grids\87.xgd
88 Col:7 Row:6 grids\88.xgd
89 Col:7 Row:7 grids\89.xgd
90 Col:8 Row:1 grids\90.xgd
91 Col:8 Row:2 grids\91.xgd
92 Col:8 Row:3 grids\92.xgd
93 Col:8 Row:4 grids\93.xgd
94 Col:8 Row:5 grids\94.xgd
95 Col:8 Row:6 grids\95.xgd
96 Col:8 Row:7 grids\96.xgd
97 Col:9 Row:1 grids\97.xgd
98 Col:9 Row:2 grids\98.xgd

99 Col:9 Row:3 grids\99.xgd
100 Col:9 Row:4 grids\100.xgd
101 Col:9 Row:5 grids\101.xgd
102 Col:9 Row:6 grids\102.xgd
103 Col:9 Row:7 grids\103.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.63
Mean: 0.02
Median: 0.00

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

Area X - west
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 473987.74, 167240.17 m
Southeast corner: 474087.74, 167140.17 m
Direction of 1st Traverse: 270.02 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 400 x 100
Survey Size (meters): 100 m x 100 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 100.00
Min: -100.00
Std Dev: 9.06
Mean: -0.47
Median: 0.00
Composite Area: 1 ha
Surveyed Area: 0.8032 ha

Source Grids: 22
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\06.xgd
3 Col:0 Row:2 grids\11.xgd
4 Col:0 Row:3 grids\16.xgd
5 Col:0 Row:4 grids\20.xgd
6 Col:1 Row:0 grids\02.xgd
7 Col:1 Row:1 grids\07.xgd
8 Col:1 Row:2 grids\12.xgd
9 Col:1 Row:3 grids\17.xgd
10 Col:1 Row:4 grids\21.xgd
11 Col:2 Row:0 grids\03.xgd
12 Col:2 Row:1 grids\08.xgd
13 Col:2 Row:2 grids\13.xgd
14 Col:2 Row:3 grids\18.xgd
15 Col:2 Row:4 grids\22.xgd
16 Col:3 Row:0 grids\04.xgd
17 Col:3 Row:1 grids\09.xgd
18 Col:3 Row:2 grids\14.xgd
19 Col:3 Row:3 grids\19.xgd
20 Col:4 Row:0 grids\05.xgd
21 Col:4 Row:1 grids\10.xgd
22 Col:4 Row:2 grids\15.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.87
Mean: 0.08
Median: 0.01

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

Area X - central
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 474054.69, 167233.59 m
Southeast corner: 474154.69, 167133.59 m
Direction of 1st Traverse: 0.25 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 400 x 100
Survey Size (meters): 100 m x 100 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 61.67
Min: -80.66
Std Dev: 1.47
Mean: 0.10
Median: 0.11
Composite Area: 1 ha
Surveyed Area: 1 ha

Source Grids: 25
1 Col:0 Row:0 grids\21.xgd
2 Col:0 Row:1 grids\16.xgd
3 Col:0 Row:2 grids\11.xgd
4 Col:0 Row:3 grids\06.xgd
5 Col:0 Row:4 grids\01.xgd
6 Col:1 Row:0 grids\22.xgd
7 Col:1 Row:1 grids\17.xgd
8 Col:1 Row:2 grids\12.xgd
9 Col:1 Row:3 grids\07.xgd
10 Col:1 Row:4 grids\02.xgd
11 Col:2 Row:0 grids\23.xgd
12 Col:2 Row:1 grids\18.xgd
13 Col:2 Row:2 grids\13.xgd
14 Col:2 Row:3 grids\08.xgd
15 Col:2 Row:4 grids\03.xgd
16 Col:3 Row:0 grids\24.xgd
17 Col:3 Row:1 grids\19.xgd
18 Col:3 Row:2 grids\14.xgd
19 Col:3 Row:3 grids\09.xgd
20 Col:3 Row:4 grids\04.xgd
21 Col:4 Row:0 grids\25.xgd
22 Col:4 Row:1 grids\20.xgd
23 Col:4 Row:2 grids\15.xgd
24 Col:4 Row:3 grids\10.xgd
25 Col:4 Row:4 grids\05.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.38
Mean: 0.02
Median: 0.01

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All

3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

<u>Area X - south-east (south)</u>
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 474259.01, 167248.91 m
Southeast corner: 474339.01, 167128.91 m
Direction of 1st Traverse: 270.52 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 320 x 120
Survey Size (meters): 80 m x 120 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 81.83
Min: -100.00
Std Dev: 2.74
Mean: 0.86
Median: 0.83
Composite Area: 0.96 ha
Surveyed Area: 0.37105 ha

Source Grids: 15
1 Col:0 Row:3 grids\15.xgd
2 Col:1 Row:2 grids\12.xgd
3 Col:1 Row:3 grids\13.xgd
4 Col:1 Row:4 grids\14.xgd
5 Col:2 Row:1 grids\07.xgd
6 Col:2 Row:2 grids\08.xgd
7 Col:2 Row:3 grids\09.xgd
8 Col:2 Row:4 grids\10.xgd
9 Col:2 Row:5 grids\11.xgd
10 Col:3 Row:0 grids\01.xgd
11 Col:3 Row:1 grids\02.xgd
12 Col:3 Row:2 grids\03.xgd
13 Col:3 Row:3 grids\04.xgd
14 Col:3 Row:4 grids\05.xgd
15 Col:3 Row:5 grids\06.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.57
Mean: 0.02
Median: 0.00

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

<u>Area X - south-east (north)</u>
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 474299.8, 167390.58 m
Southeast corner: 474359.8, 167270.58 m
Direction of 1st Traverse: 180.54 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 240 x 120
Survey Size (meters): 60 m x 120 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 56.99
Min: -100.00
Std Dev: 3.09
Mean: -1.81
Median: -1.75
Composite Area: 0.72 ha
Surveyed Area: 0.346 ha

Source Grids: 14
1 Col:0 Row:0 SE 2\06.xgd
2 Col:0 Row:1 SE 2\05.xgd
3 Col:0 Row:2 SE 2\04.xgd
4 Col:0 Row:3 SE 2\03.xgd
5 Col:0 Row:4 SE 2\02.xgd
6 Col:0 Row:5 SE 2\01.xgd
7 Col:1 Row:0 SE 2\12.xgd
8 Col:1 Row:1 SE 2\11.xgd
9 Col:1 Row:2 SE 2\10.xgd
10 Col:1 Row:3 SE 2\09.xgd
11 Col:1 Row:4 SE 2\08.xgd
12 Col:1 Row:5 SE 2\07.xgd
13 Col:2 Row:1 SE 2\14.xgd
14 Col:2 Row:2 SE 2\13.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.66
Mean: 0.04
Median: 0.02

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

<u>Area X - north-east</u>
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 474272.92, 167434.69 m
Southeast corner: 474372.92, 167334.69 m
Direction of 1st Traverse: 270.41 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 400 x 100
Survey Size (meters): 100 m x 100 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 100.00
Min: -100.00
Std Dev: 4.23
Mean: 1.07
Median: 0.97
Composite Area: 1 ha
Surveyed Area: 0.90865 ha

Source Grids: 25
1 Col:0 Row:0 grids\21.xgd
2 Col:0 Row:1 grids\22.xgd
3 Col:0 Row:2 grids\23.xgd

4 Col:0 Row:3 grids\24.xgd
5 Col:0 Row:4 grids\25.xgd
6 Col:1 Row:0 grids\16.xgd
7 Col:1 Row:1 grids\17.xgd
8 Col:1 Row:2 grids\18.xgd
9 Col:1 Row:3 grids\19.xgd
10 Col:1 Row:4 grids\20.xgd
11 Col:2 Row:0 grids\11.xgd
12 Col:2 Row:1 grids\12.xgd
13 Col:2 Row:2 grids\13.xgd
14 Col:2 Row:3 grids\14.xgd
15 Col:2 Row:4 grids\15.xgd
16 Col:3 Row:0 grids\06.xgd
17 Col:3 Row:1 grids\07.xgd
18 Col:3 Row:2 grids\08.xgd
19 Col:3 Row:3 grids\09.xgd
20 Col:3 Row:4 grids\10.xgd
21 Col:4 Row:0 grids\01.xgd
22 Col:4 Row:1 grids\02.xgd
23 Col:4 Row:2 grids\03.xgd
24 Col:4 Row:3 grids\04.xgd
25 Col:4 Row:4 grids\05.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.91
Mean: 0.07
Median: 0.00

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -3 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

<u>Area Y</u>
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 474363.73, 167385.87 m
Southeast corner: 474463.73, 167285.87 m
Direction of 1st Traverse: 0.16 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 400 x 100
Survey Size (meters): 100 m x 100 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 100.00
Min: -100.00
Std Dev: 12.26
Mean: -0.74
Median: -0.58
Composite Area: 1 ha
Surveyed Area: 0.99225 ha

Source Grids: 25
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd
3 Col:0 Row:2 grids\03.xgd
4 Col:0 Row:3 grids\04.xgd
5 Col:0 Row:4 grids\05.xgd
6 Col:1 Row:0 grids\06.xgd
7 Col:1 Row:1 grids\07.xgd
8 Col:1 Row:2 grids\08.xgd
9 Col:1 Row:3 grids\09.xgd
10 Col:1 Row:4 grids\10.xgd
11 Col:2 Row:0 grids\11.xgd
12 Col:2 Row:1 grids\12.xgd
13 Col:2 Row:2 grids\13.xgd
14 Col:2 Row:3 grids\14.xgd
15 Col:2 Row:4 grids\15.xgd
16 Col:3 Row:0 grids\16.xgd
17 Col:3 Row:1 grids\17.xgd
18 Col:3 Row:2 grids\18.xgd
19 Col:3 Row:3 grids\19.xgd
20 Col:3 Row:4 grids\20.xgd
21 Col:4 Row:0 grids\21.xgd
22 Col:4 Row:1 grids\22.xgd
23 Col:4 Row:2 grids\23.xgd
24 Col:4 Row:3 grids\24.xgd
25 Col:4 Row:4 grids\25.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.79
Mean: 0.04
Median: 0.01

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

<u>Area AE</u>
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 474750.83, 166931.93 m
Southeast corner: 474850.83, 166831.93 m
Direction of 1st Traverse: 0.6944 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 400 x 100
Survey Size (meters): 100 m x 100 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 99.61
Min: -54.33
Std Dev: 1.44
Mean: 0.12
Median: 0.17
Composite Area: 1 ha
Surveyed Area: 0.99965 ha

Source Grids: 25
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd
3 Col:0 Row:2 grids\03.xgd
4 Col:0 Row:3 grids\04.xgd
5 Col:0 Row:4 grids\05.xgd
6 Col:1 Row:0 grids\06.xgd
7 Col:1 Row:1 grids\07.xgd
8 Col:1 Row:2 grids\08.xgd
9 Col:1 Row:3 grids\09.xgd
10 Col:1 Row:4 grids\10.xgd
11 Col:2 Row:0 grids\11.xgd
12 Col:2 Row:1 grids\12.xgd
13 Col:2 Row:2 grids\13.xgd
14 Col:2 Row:3 grids\14.xgd
15 Col:2 Row:4 grids\15.xgd
16 Col:3 Row:0 grids\16.xgd
17 Col:3 Row:1 grids\17.xgd

18 Col:3 Row:2 grids\18.xgd
19 Col:3 Row:3 grids\19.xgd
20 Col:3 Row:4 grids\20.xgd
21 Col:4 Row:0 grids\21.xgd
22 Col:4 Row:1 grids\22.xgd
23 Col:4 Row:2 grids\23.xgd
24 Col:4 Row:3 grids\24.xgd
25 Col:4 Row:4 grids\25.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.34
Mean: 0.02
Median: 0.00

Processes: 6
1 Base Layer
2 DeStripe Median Sensors: All
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

Back of Bridge
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 474959.52, 167211.48 m
Southeast corner: 475059.52, 167111.48 m
Direction of 1st Traverse: 0.7456 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 400 x 100
Survey Size (meters): 100 m x 100 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 99.94
Min: -85.77
Std Dev: 2.64
Mean: -0.11
Median: -0.28
Composite Area: 1 ha
Surveyed Area: 1 ha

Source Grids: 25
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd
3 Col:0 Row:2 grids\03.xgd
4 Col:0 Row:3 grids\04.xgd
5 Col:0 Row:4 grids\05.xgd
6 Col:1 Row:0 grids\06.xgd
7 Col:1 Row:1 grids\07.xgd
8 Col:1 Row:2 grids\08.xgd
9 Col:1 Row:3 grids\09.xgd
10 Col:1 Row:4 grids\10.xgd
11 Col:2 Row:0 grids\11.xgd
12 Col:2 Row:1 grids\12.xgd
13 Col:2 Row:2 grids\13.xgd
14 Col:2 Row:3 grids\14.xgd
15 Col:2 Row:4 grids\15.xgd
16 Col:3 Row:0 grids\16.xgd
17 Col:3 Row:1 grids\17.xgd
18 Col:3 Row:2 grids\18.xgd
19 Col:3 Row:3 grids\19.xgd
20 Col:3 Row:4 grids\20.xgd
21 Col:4 Row:0 grids\21.xgd
22 Col:4 Row:1 grids\22.xgd
23 Col:4 Row:2 grids\23.xgd
24 Col:4 Row:3 grids\24.xgd
25 Col:4 Row:4 grids\25.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 0.55
Mean: 0.01
Median: 0.01

Processes: 6
1 Base Layer
2 De Stagger: Grids: All Mode: Both By: -1 intervals
3 DeStripe Median Sensors: All
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT

Area AI - north
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 474710.55, 167486.57 m
Southeast corner: 474810.55, 167366.57 m
Direction of 1st Traverse: 0 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

Dimensions
Composite Size (readings): 400 x 120
Survey Size (meters): 100 m x 120 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 100.00
Min: -100.00
Std Dev: 39.52
Mean: -7.52
Median: -0.81
Composite Area: 1.2 ha
Surveyed Area: 1.004 ha

Source Grids: 26
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd
3 Col:0 Row:2 grids\03.xgd
4 Col:0 Row:3 grids\04.xgd
5 Col:0 Row:4 grids\05.xgd
6 Col:1 Row:0 grids\06.xgd
7 Col:1 Row:1 grids\07.xgd
8 Col:1 Row:2 grids\08.xgd
9 Col:1 Row:3 grids\09.xgd
10 Col:1 Row:4 grids\10.xgd
11 Col:2 Row:0 grids\11.xgd
12 Col:2 Row:1 grids\12.xgd
13 Col:2 Row:2 grids\13.xgd
14 Col:2 Row:3 grids\14.xgd
15 Col:2 Row:4 grids\15.xgd
16 Col:3 Row:0 grids\16.xgd
17 Col:3 Row:1 grids\17.xgd
18 Col:3 Row:2 grids\18.xgd
19 Col:3 Row:3 grids\19.xgd
20 Col:3 Row:4 grids\21.xgd
21 Col:3 Row:5 grids\20.xgd
22 Col:4 Row:0 grids\22.xgd
23 Col:4 Row:1 grids\23.xgd
24 Col:4 Row:2 grids\24.xgd
25 Col:4 Row:3 grids\25.xgd
26 Col:4 Row:4 grids\26.xgd

Processed data
Stats
Max: 2.20
Min: -1.80

Std Dev: 1.44
Mean: 0.05
Median: 0.01

Processes: 7
1 Base Layer
2 Move (Area: Top 100, Left 240, Bottom 119, Right 319) to X 0, Y -40
3 De Stagger: Grids: All Mode: Both By: -1 intervals
4 DeStripe Median Sensors: All
5 Despike Threshold: 1 Window size: 3x3
6 Interpolate: Y Doubled.
7 Clip from -1.80 to 2.20 nT

Area AI - south
Raw data
Survey corner coordinates (X/Y):
Northwest corner: 474767.42, 167364.52 m
Southeast corner: 474867.42, 167264.52 m
Direction of 1st Traverse: 0.8208 deg
Collection Method: ZigZag
Sensors: 2 @ 1.00 m spacing.
Dummy Value: 2047.5

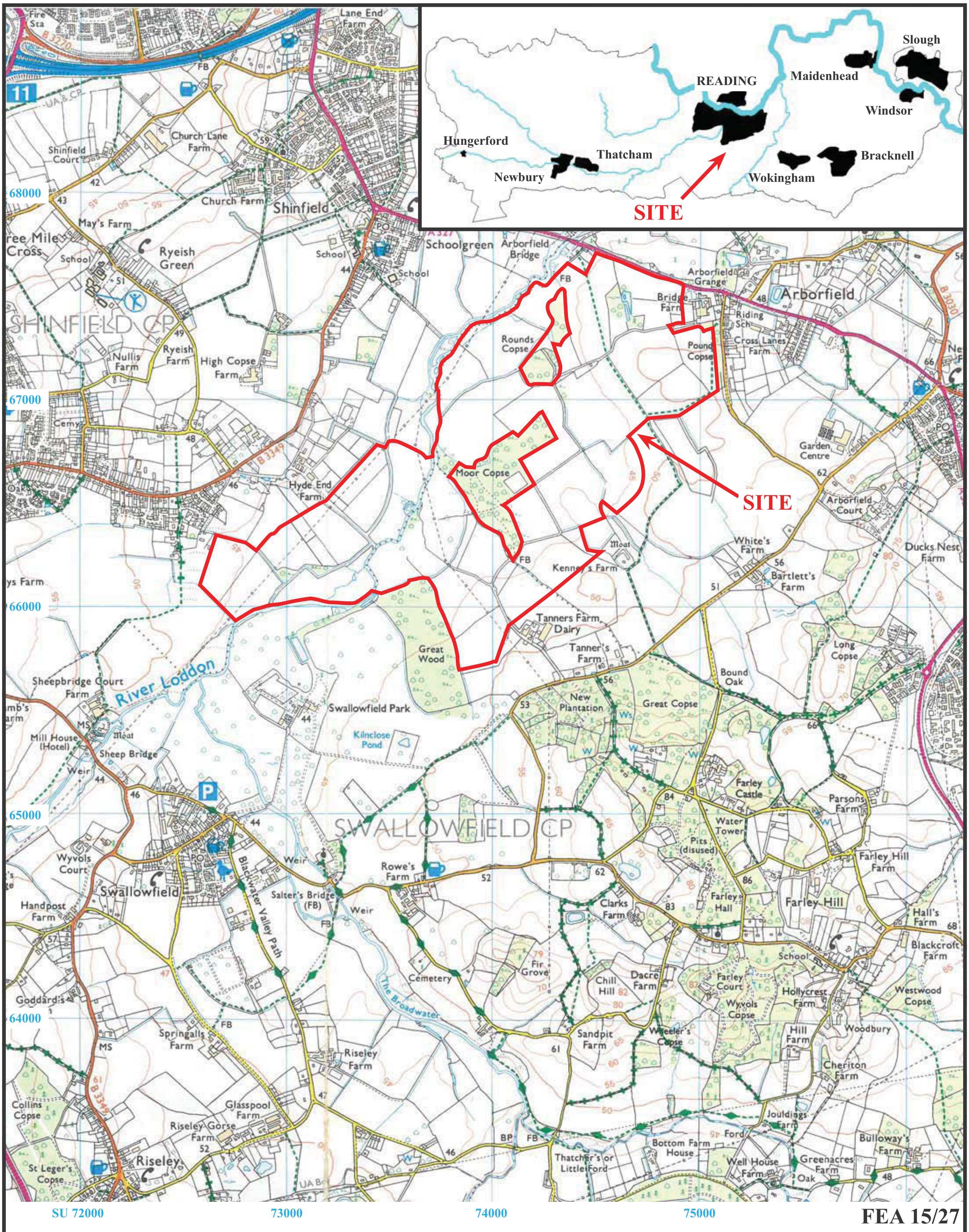
Dimensions
Composite Size (readings): 400 x 100
Survey Size (meters): 100 m x 100 m
Grid Size: 20 m x 20 m
X Interval: 0.25 m
Y Interval: 1 m

Stats
Max: 100.00
Min: -100.00
Std Dev: 38.42
Mean: -6.03
Median: -1.31
Composite Area: 1 ha
Surveyed Area: 0.99345 ha

Source Grids: 25
1 Col:0 Row:0 grids\01.xgd
2 Col:0 Row:1 grids\02.xgd
3 Col:0 Row:2 grids\03.xgd
4 Col:0 Row:3 grids\04.xgd
5 Col:0 Row:4 grids\05.xgd
6 Col:1 Row:0 grids\06.xgd
7 Col:1 Row:1 grids\07.xgd
8 Col:1 Row:2 grids\08.xgd
9 Col:1 Row:3 grids\09.xgd
10 Col:1 Row:4 grids\10.xgd
11 Col:2 Row:0 grids\11.xgd
12 Col:2 Row:1 grids\12.xgd
13 Col:2 Row:2 grids\13.xgd
14 Col:2 Row:3 grids\14.xgd
15 Col:2 Row:4 grids\15.xgd
16 Col:3 Row:0 grids\16.xgd
17 Col:3 Row:1 grids\17.xgd
18 Col:3 Row:2 grids\18.xgd
19 Col:3 Row:3 grids\19.xgd
20 Col:3 Row:4 grids\20.xgd
21 Col:4 Row:0 grids\21.xgd
22 Col:4 Row:1 grids\22.xgd
23 Col:4 Row:2 grids\23.xgd
24 Col:4 Row:3 grids\24.xgd
25 Col:4 Row:4 grids\25.xgd

Processed data
Stats
Max: 2.20
Min: -1.80
Std Dev: 1.40
Mean: 0.07
Median: 0.00

Processes: 6
1 Base Layer
2 De Stagger: Grids: All Mode: Both By: -1 intervals
3 DeStripe Median Sensors: All
4 Despike Threshold: 1 Window size: 3x3
5 Interpolate: Y Doubled.
6 Clip from -1.80 to 2.20 nT



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Geophysical Survey (Magnetic)

Figure 1. Location of site within Arborfield and Berkshire.

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Ordnance Survey Licence 100025880

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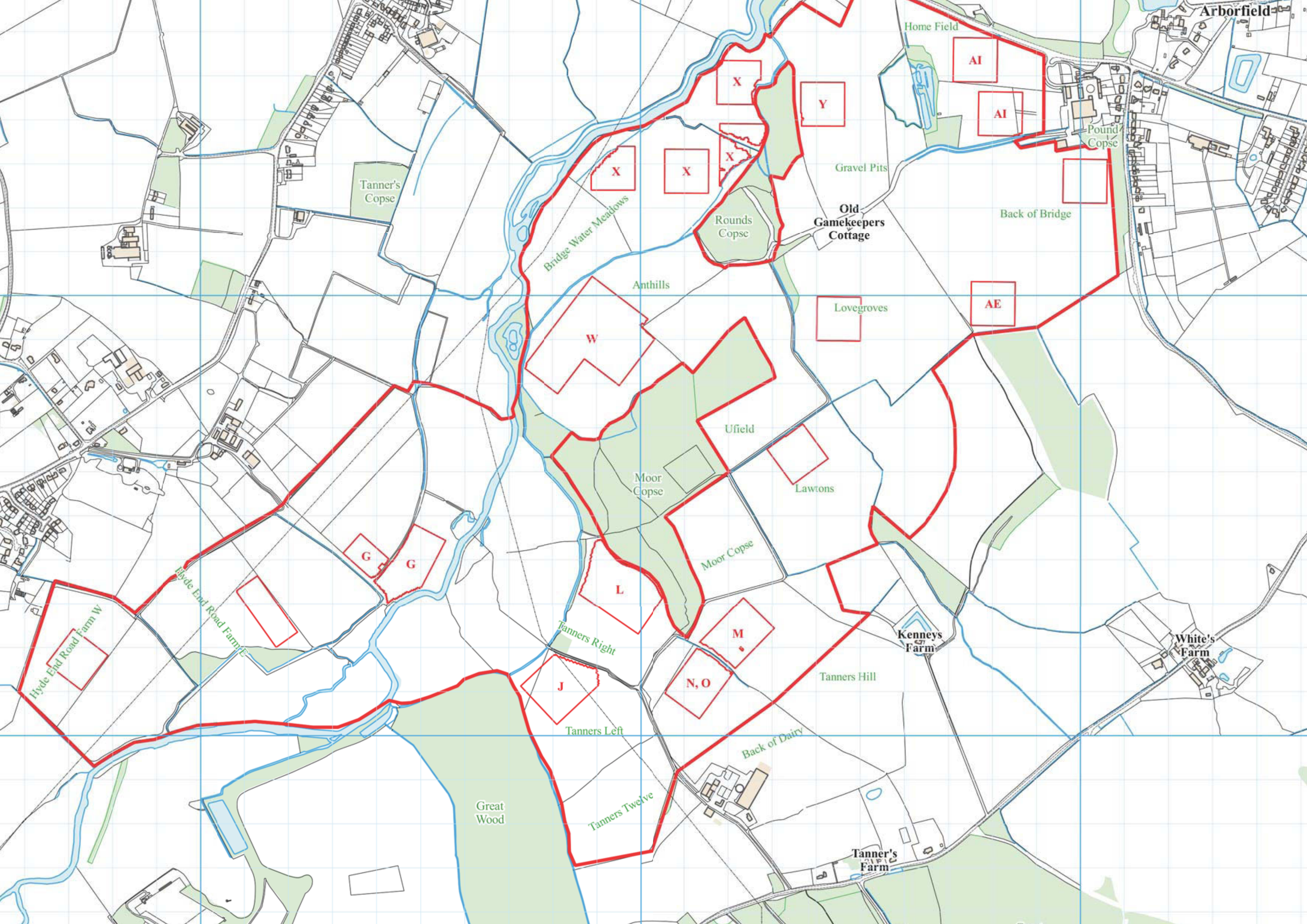
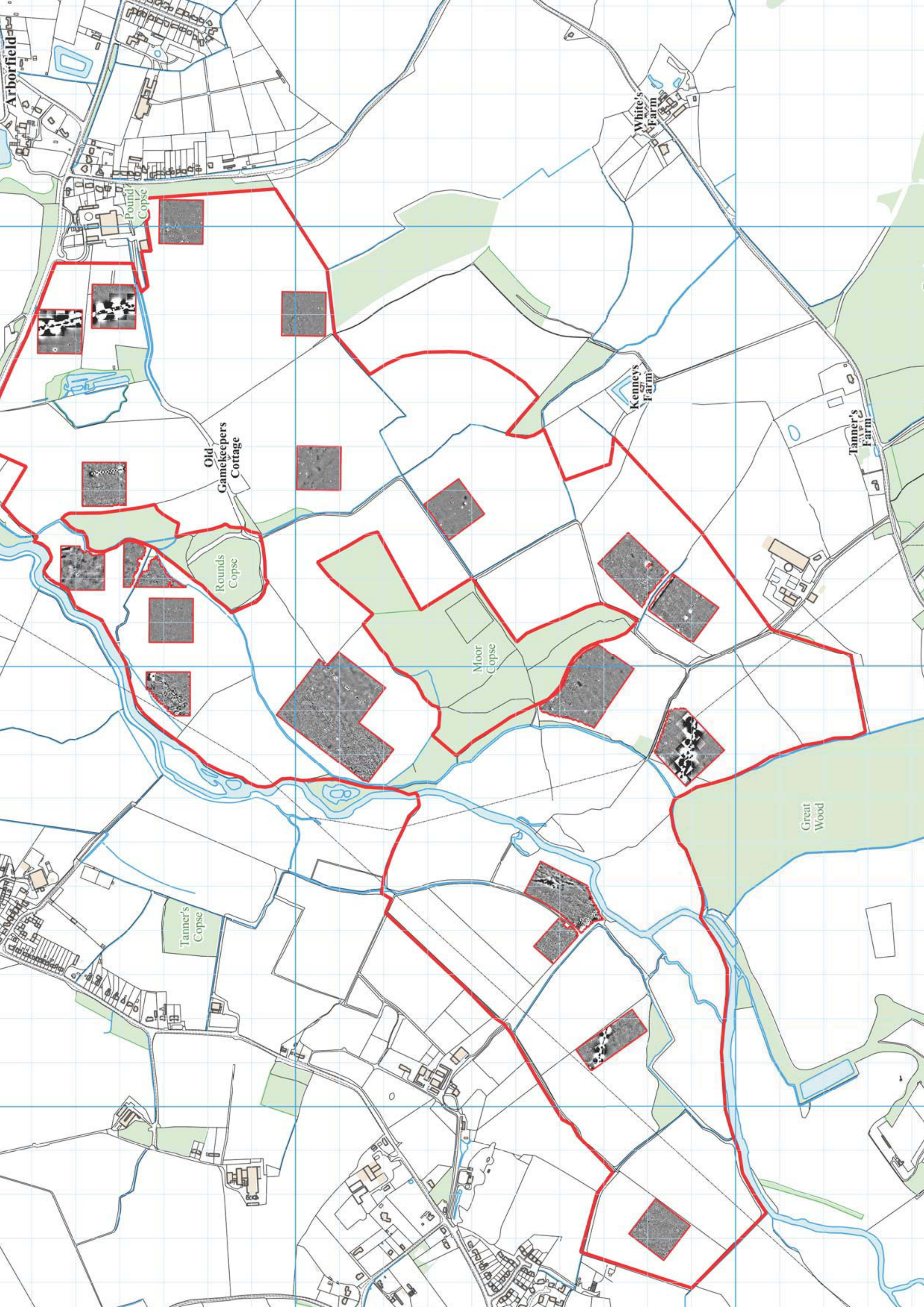
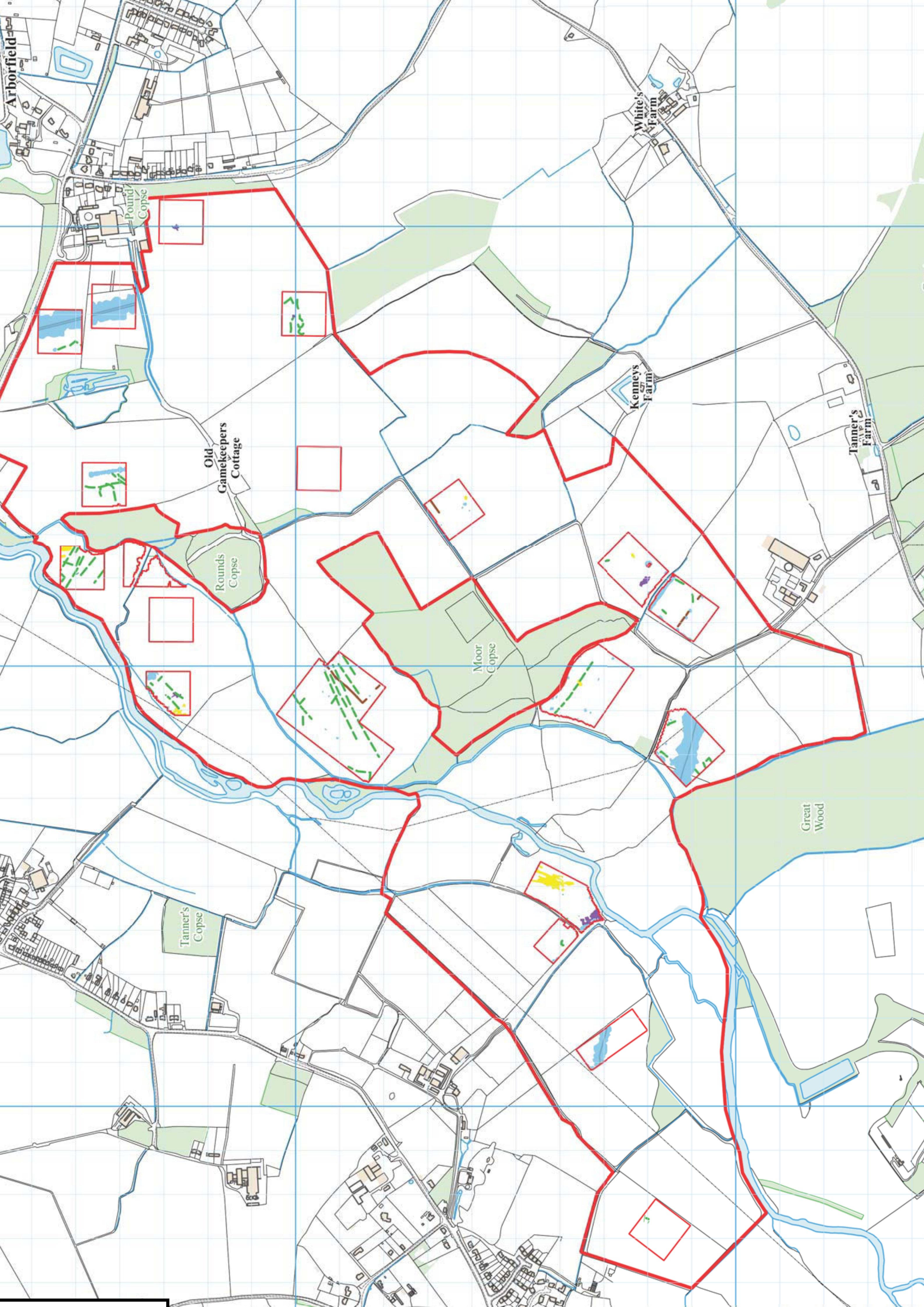
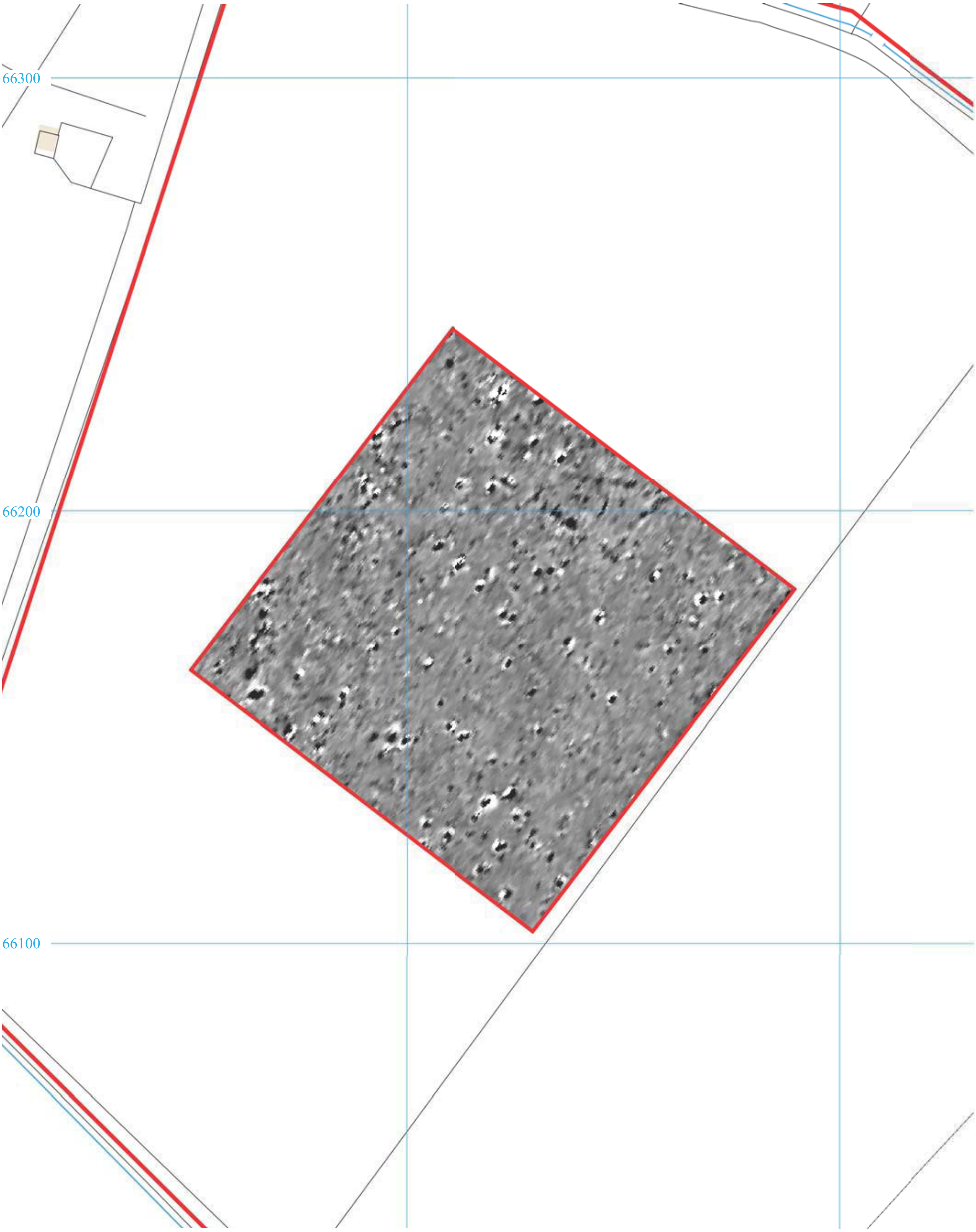

Arborfield
Home Field
AI
AI
Pound Copse
Gravel Pits
Back of Bridge
X
Y
X
X
X
Old Gamekeepers Cottage
Rounds Copse
Bridge Water Meadows
Anthills
Lovegroves
AE
W
Tanner's Copse
Ufield
Lawtons
Moor Copse
Moor Copse
G
G
L
M
N, O
Kenneys Farm
White's Farm
Tanners Hill
Tanners Right
J
Tanners Left
Back of Dairy
Hyde End Road Farm W
Hyde End Road Farm E
Great Wood
Tanners Twelve
Tanner's Farm


Arborfield
Pound Copse
White's Farm
Kenneys Farm
Tanner's Farm
Old Gamekeepers Cottage
Rounds Copse
Moor Copse
Great Wood
Tanner's Copse


Arborfield
Pound Copse
White's Farm
Kenneys Farm
Tanner's Farm
Old Gamekeepers Cottage
Rounds Copse
Moor Copse
Great Wood
Tanner's Copse



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Geophysical Survey (Magnetic)

Figure 5. Hyde End Road Farm west: plot of minimally processed gradiometer data.

0m 100m

+2.2 nT
-1.8 nT

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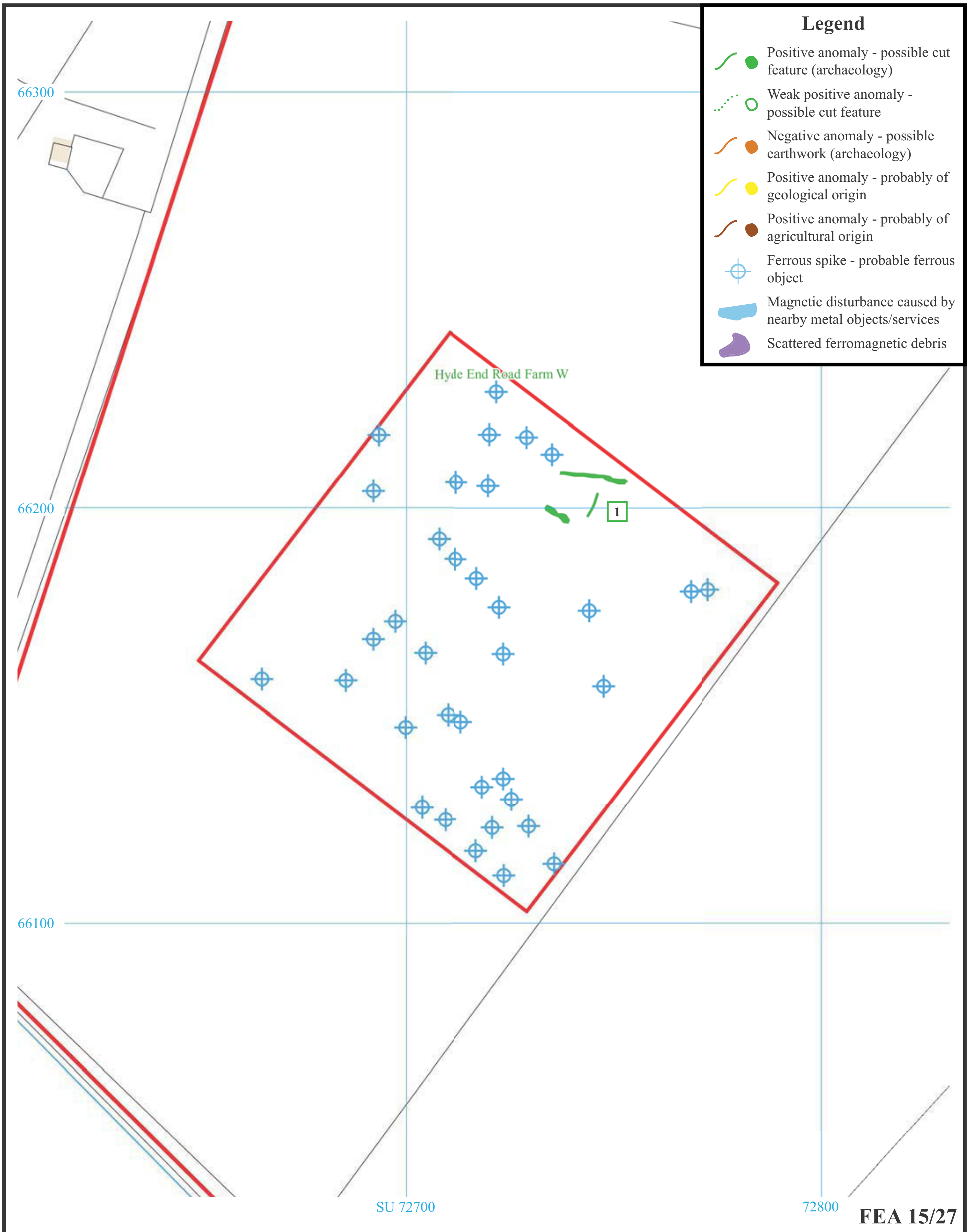

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N

0m
100m

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Geophysical Survey (Magnetic)

Figure 6. Hyde End Road Farm west: interpretation plot.

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Berkshire, 2015
Geophysical Survey (Magnetic)

Figure 7. Hyde End Road Farm east: plot of minimally processed gradiometer data.

0m 100m

+2.2 nT
-1.8 nT

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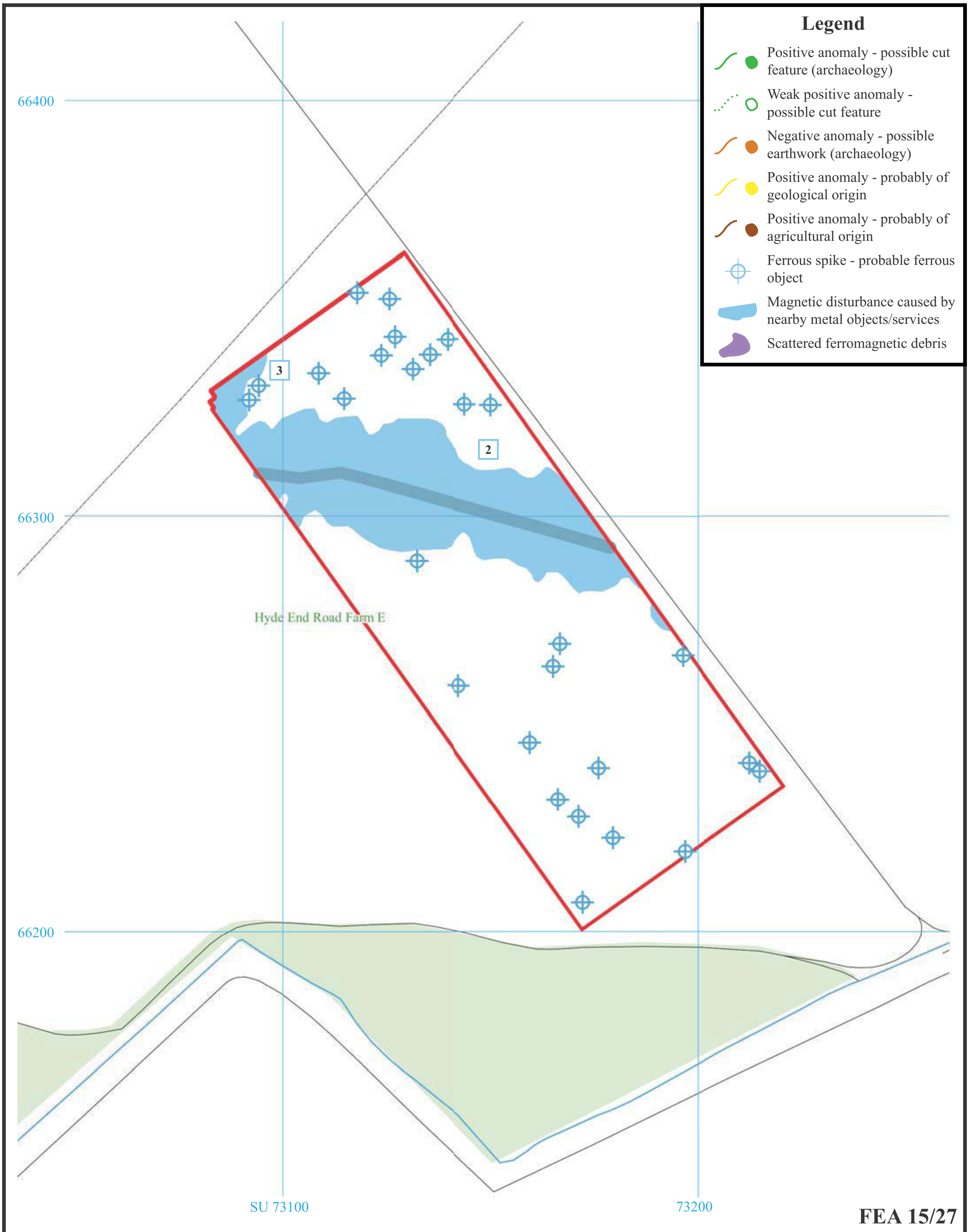

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Geophysical Survey (Magnetic)

Figure 8. Hyde End Road Farm east: interpretation plot.

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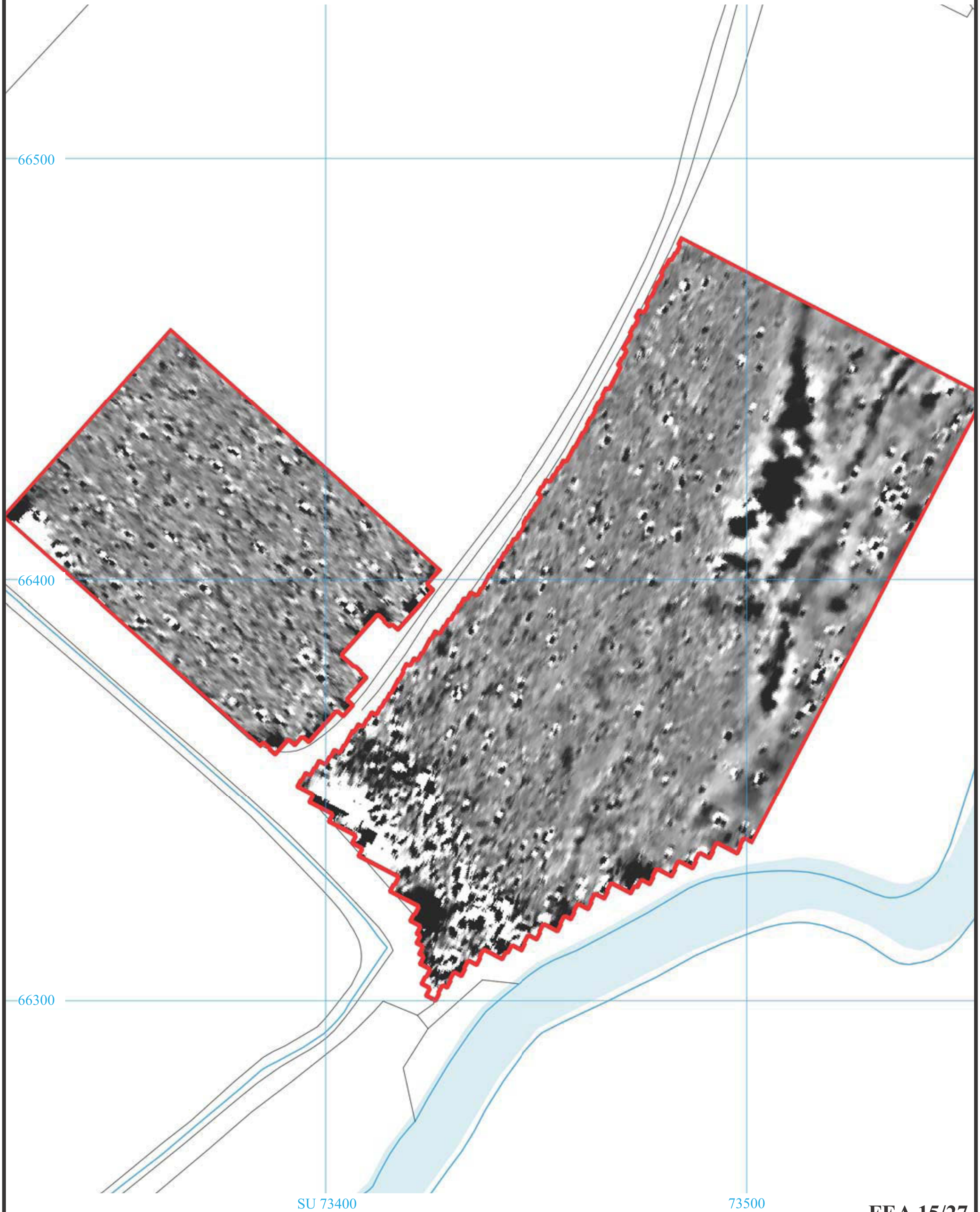

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Figure 9. Area G: plot of minimally processed gradiometer data.

0m 100m

+2.2 nT

-1.8 nT

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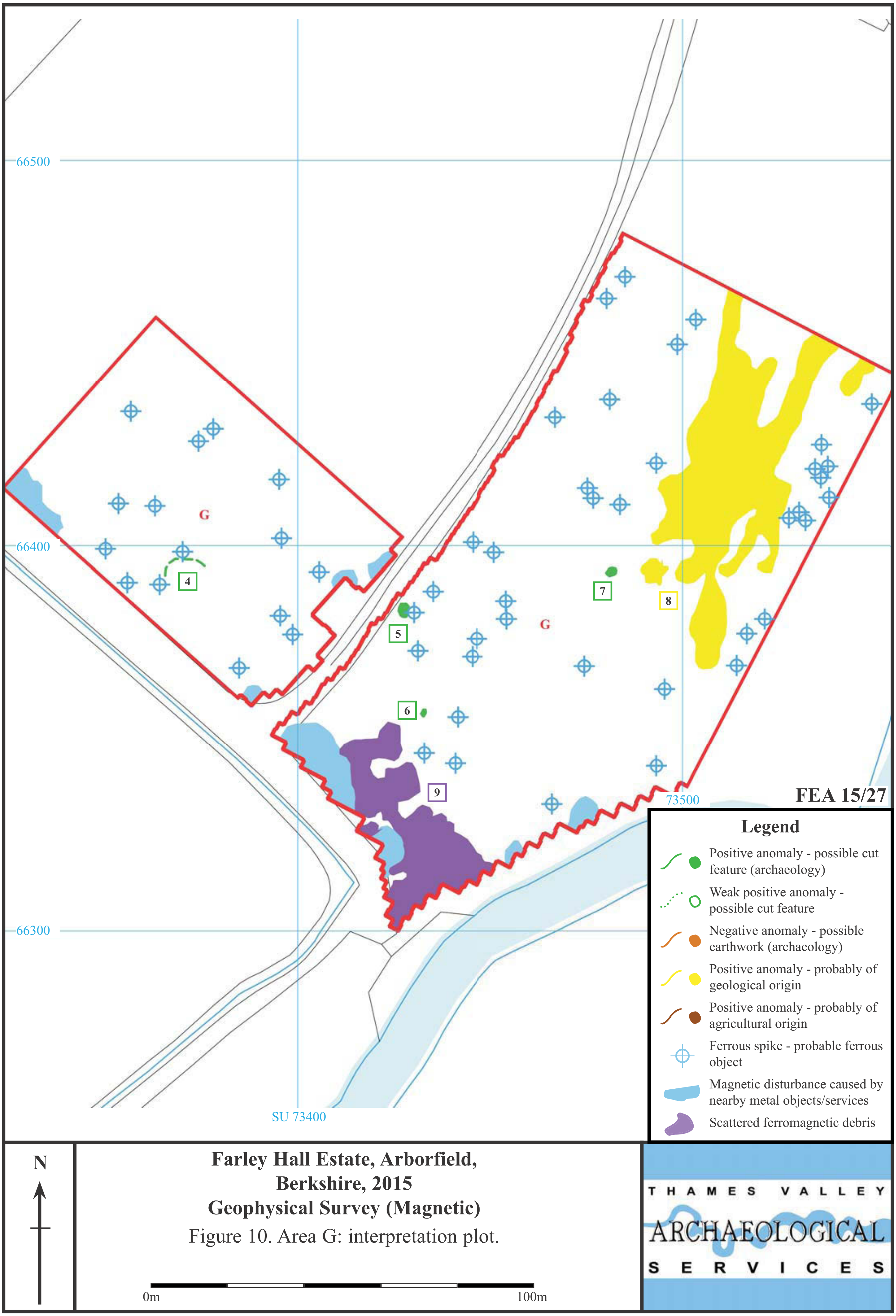

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Figure 10. Area G: interpretation plot.

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Figure 11. Area J: plot of minimally processed gradiometer data.

0m 100m

+2.2 nT
-1.8 nT

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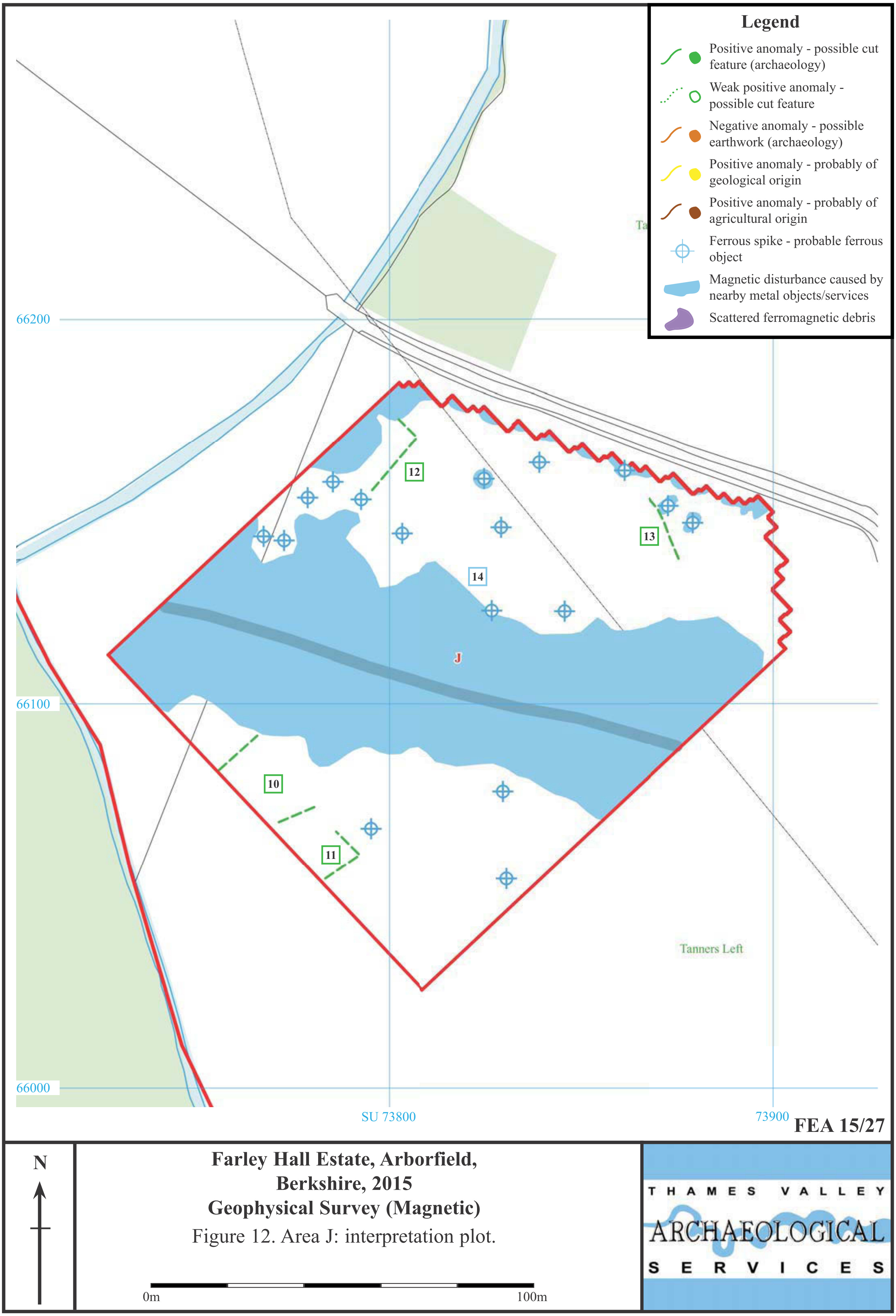

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Figure 12. Area J: interpretation plot.

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Figure 13. Area L: plot of minimally processed gradiometer data.

N

0m 100m

+2.2 nT
-1.8 nT

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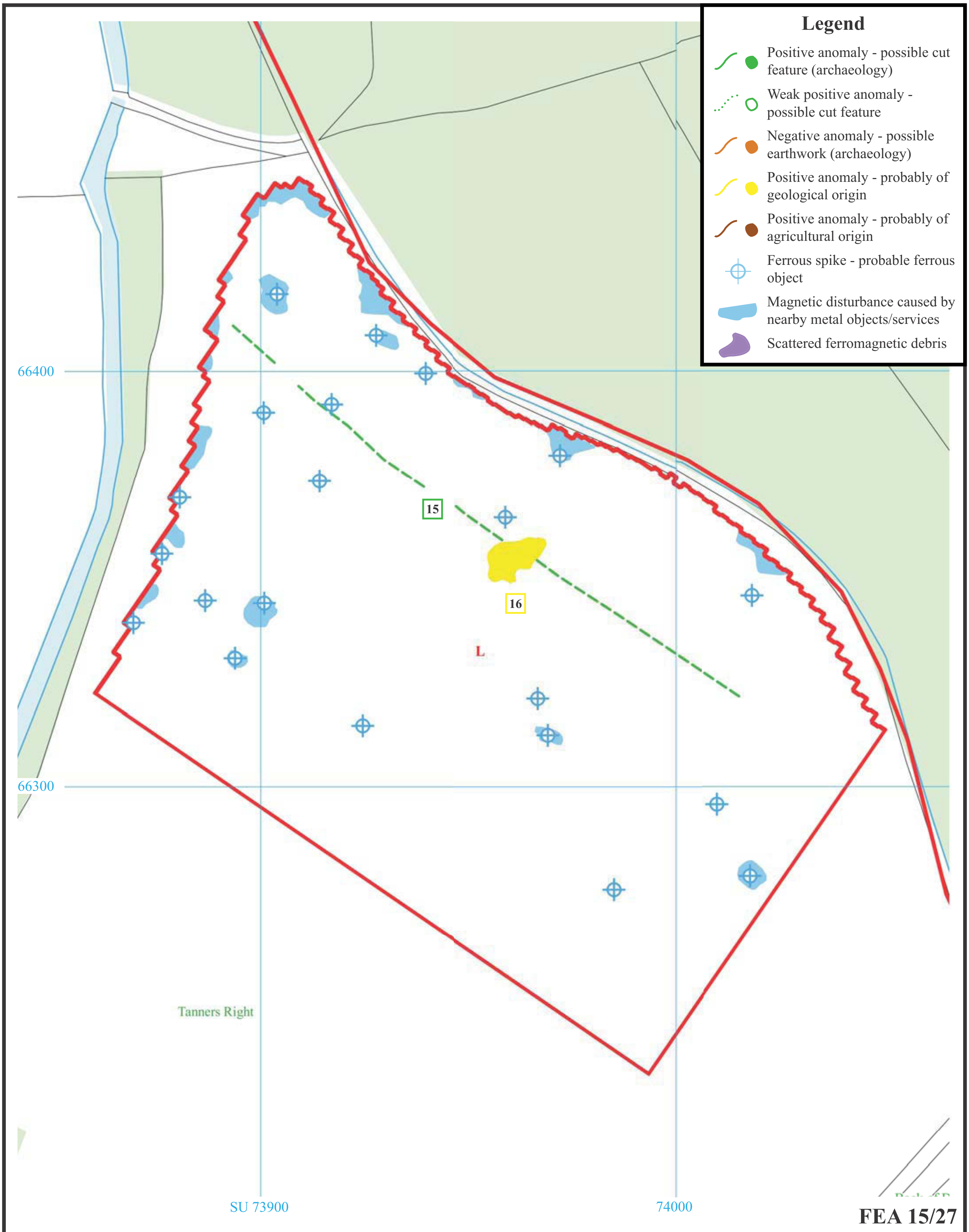

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Figure 14. Area L: interpretation plot.

0m 100m

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Figure 15. Areas M, N and O: plot of minimally processed gradiometer data.

0m 100m

+2.2 nT

-1.8 nT

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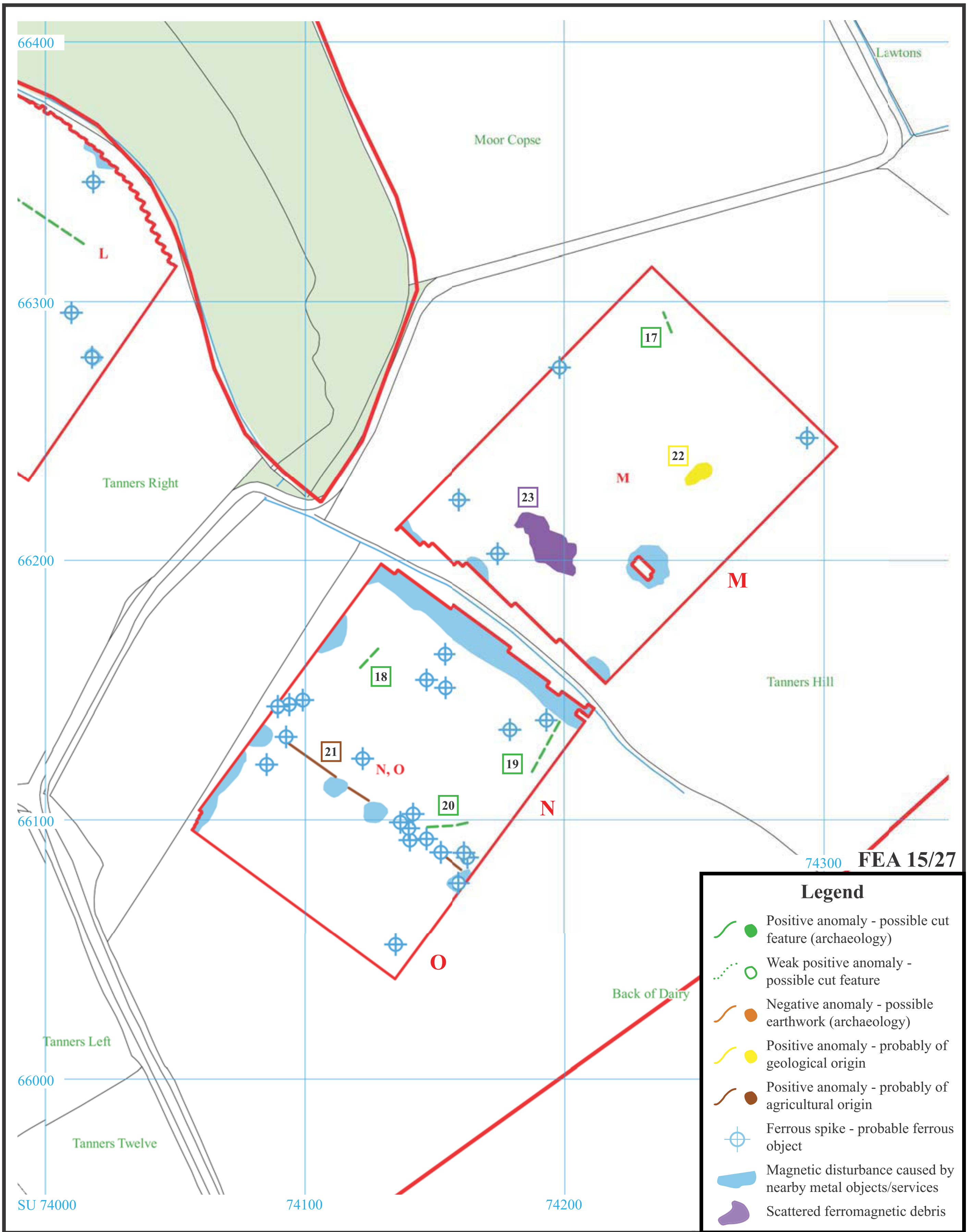

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Geophysical Survey (Magnetic)

Figure 16. Areas M, N and O: interpretation plot.

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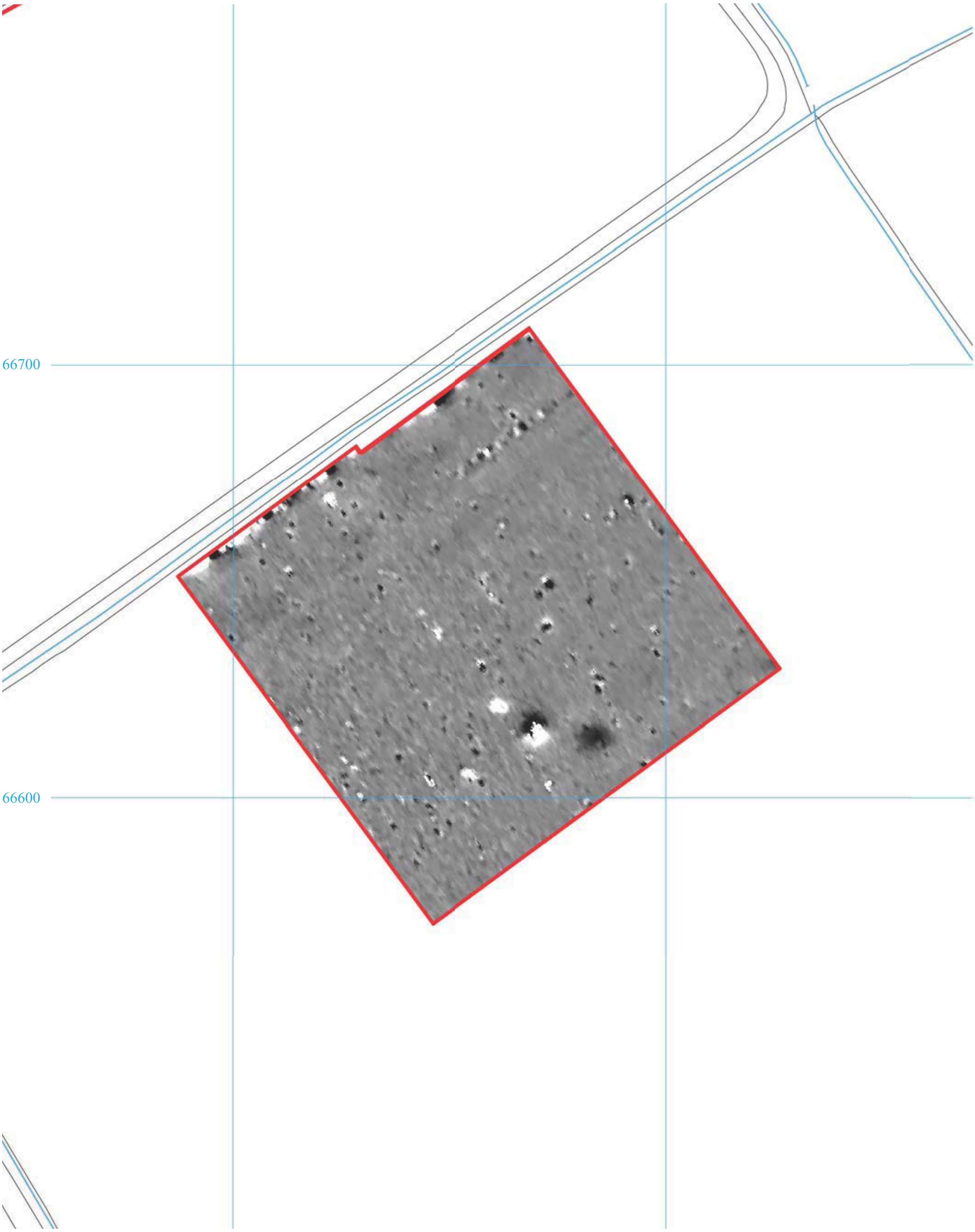

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Figure 17. Lawtons: plot of minimally processed gradiometer data.

0m 100m

+2.2 nT
-1.8 nT

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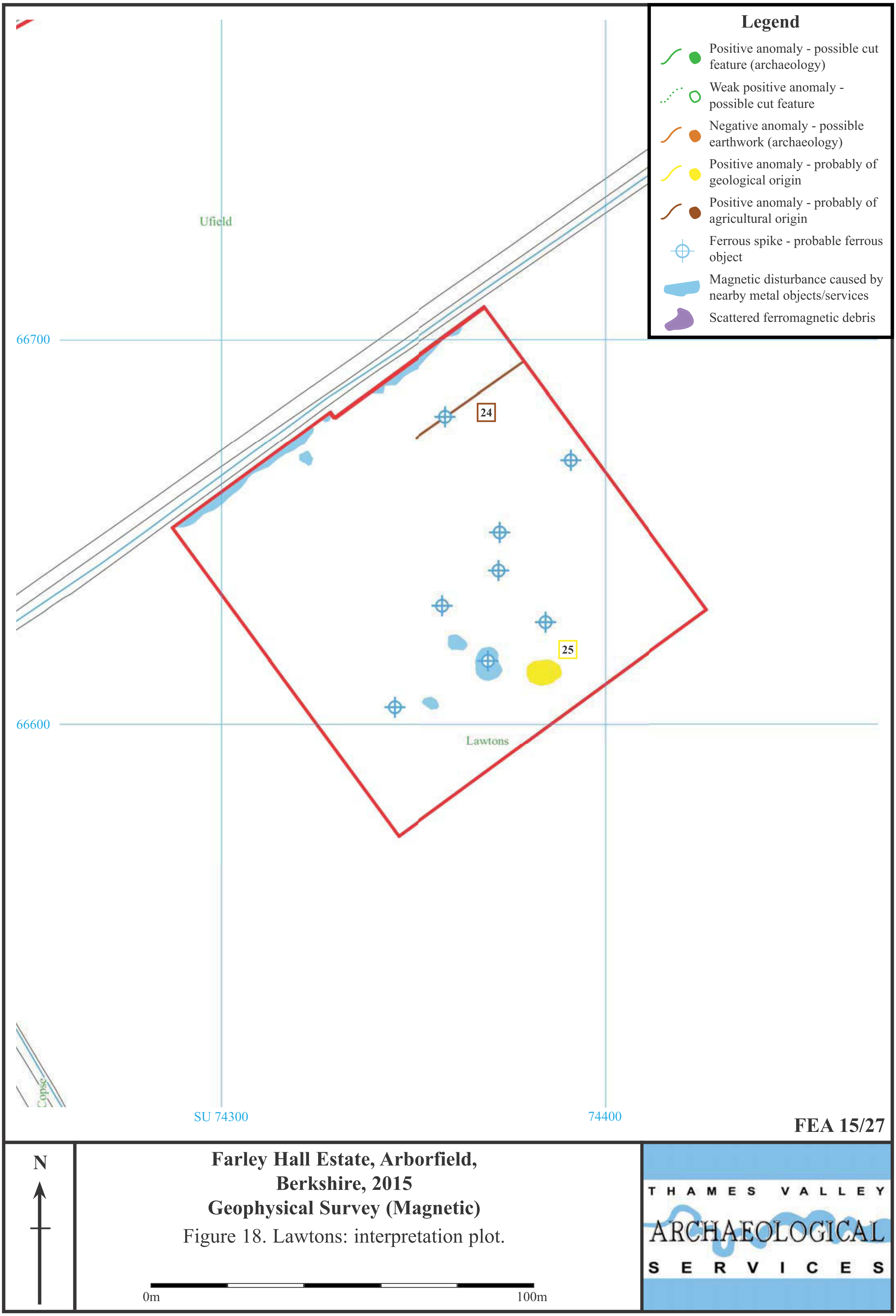

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Figure 18. Lawtons: interpretation plot.

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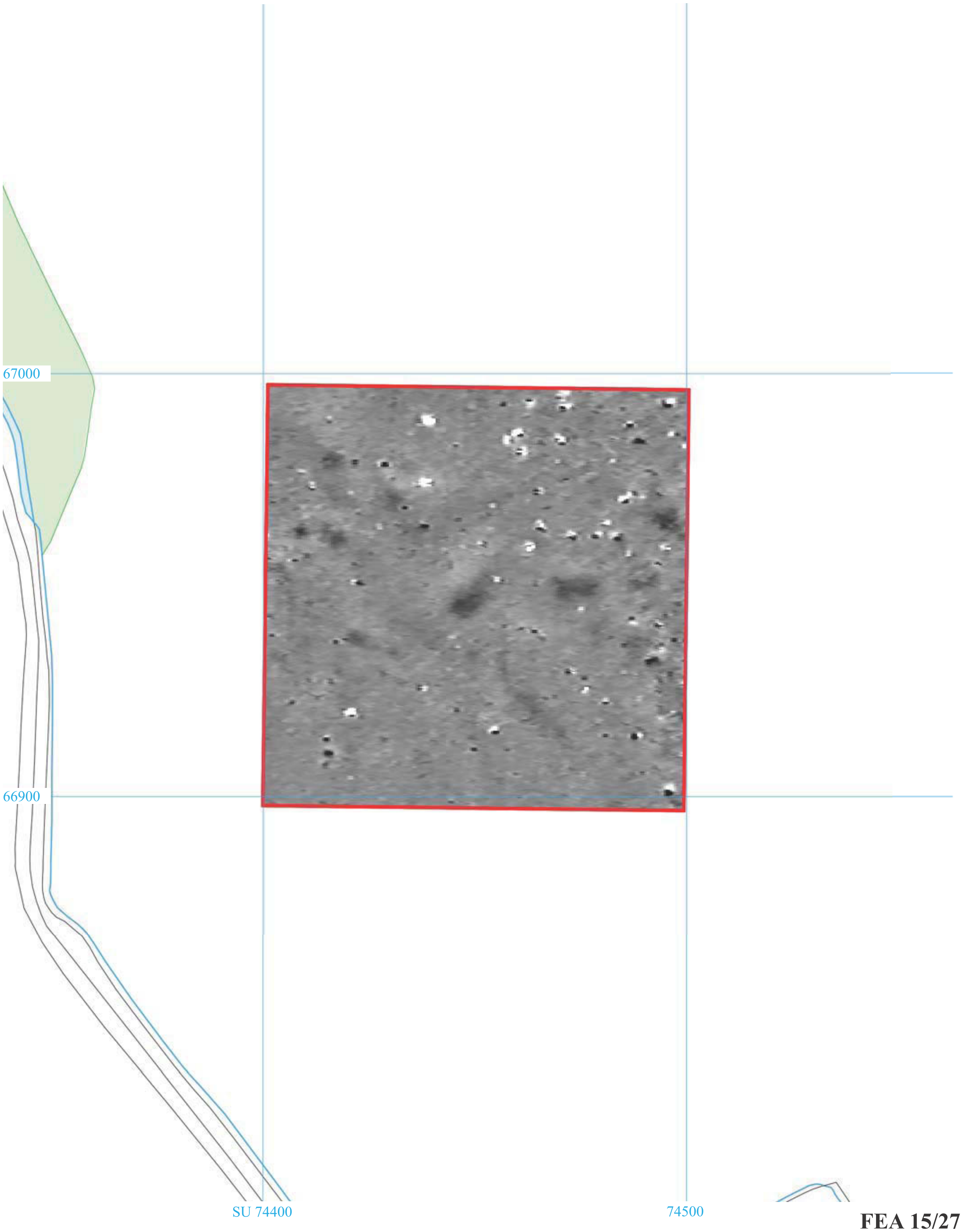

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Figure 19. Lovegroves: plot of minimally processed gradiometer data.

0m 100m

+2.2 nT

-1.8 nT

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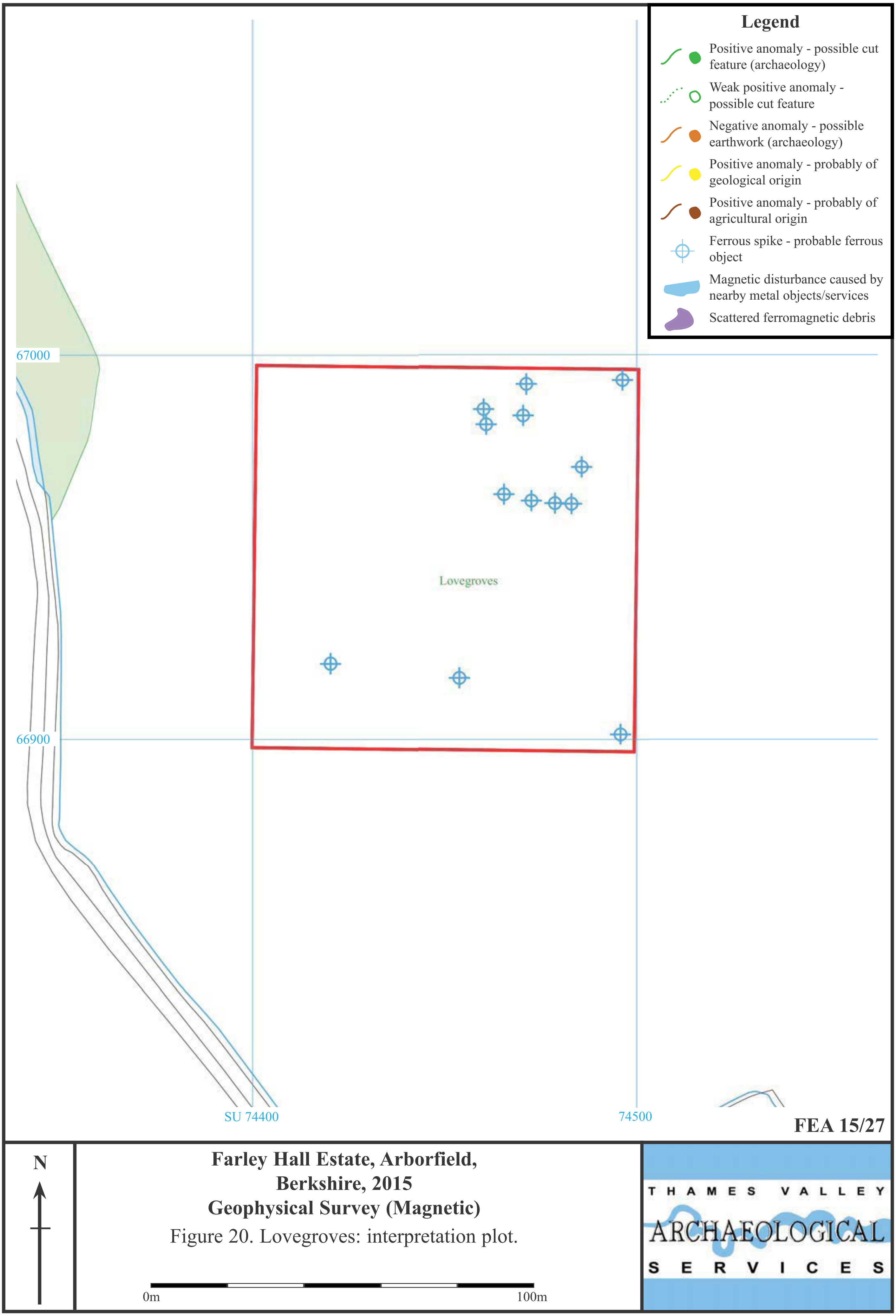

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Figure 20. Lovegroves: interpretation plot.

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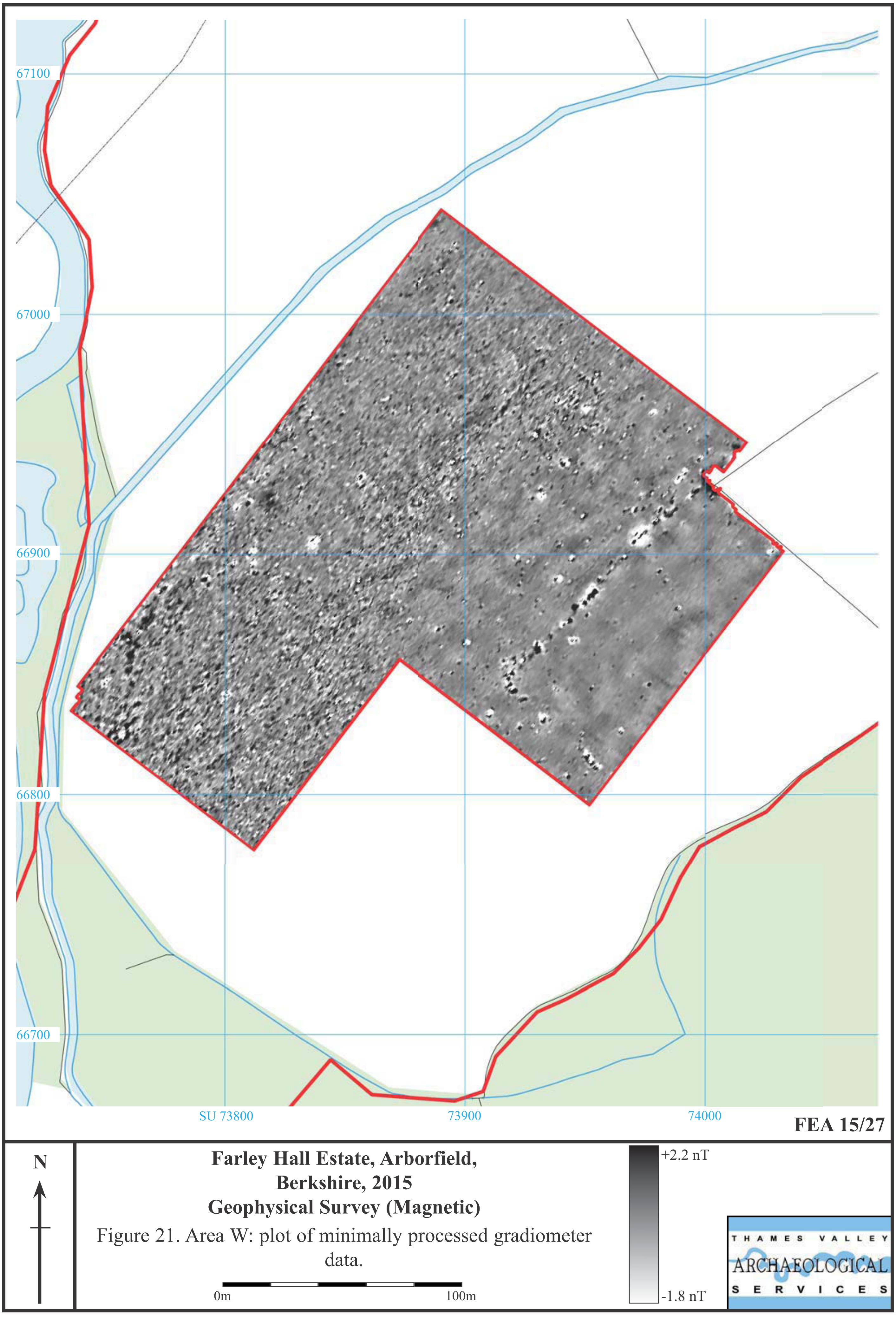

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Figure 21. Area W: plot of minimally processed gradiometer data.

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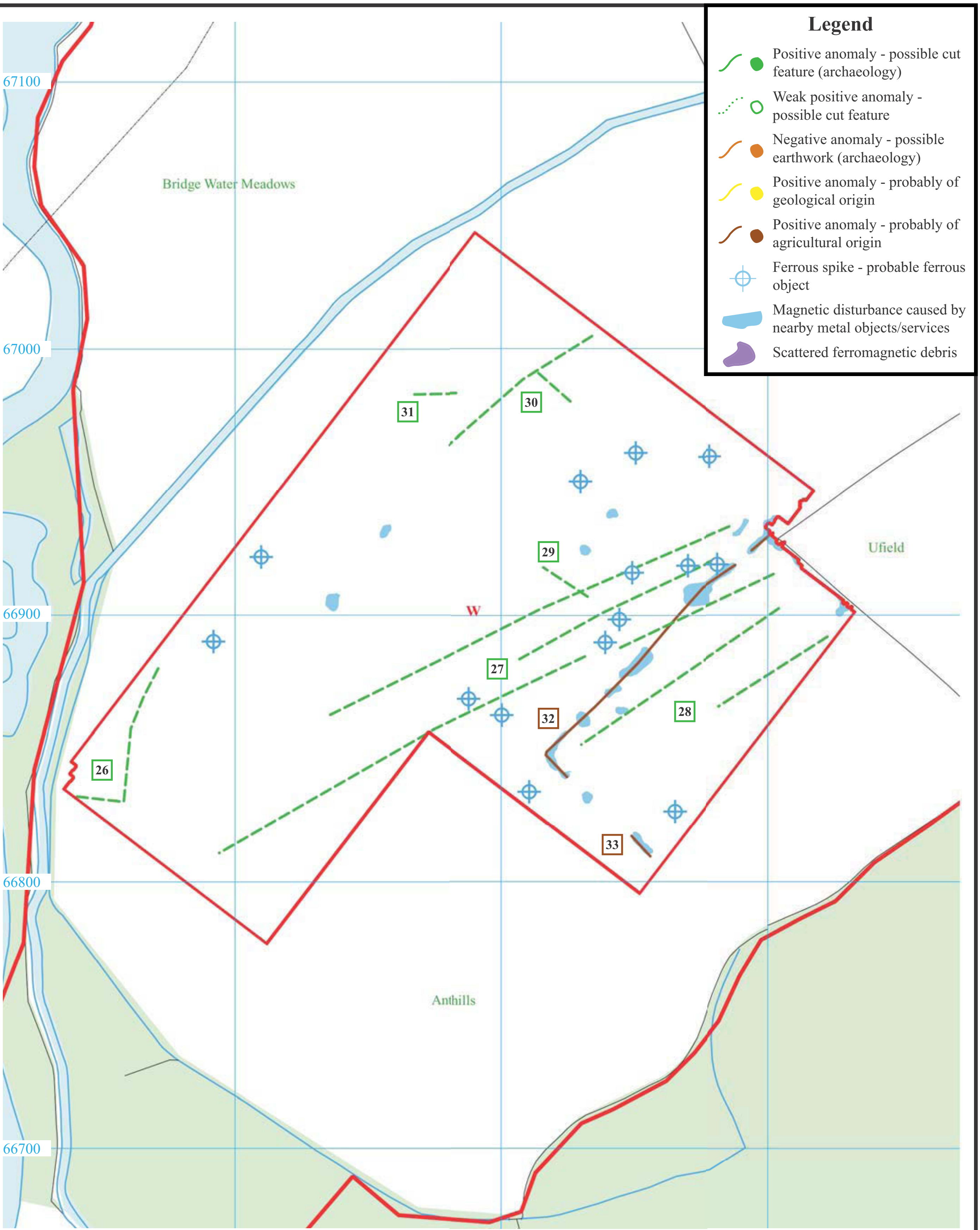

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Figure 22. Area W: interpretation plot.

0m 100m

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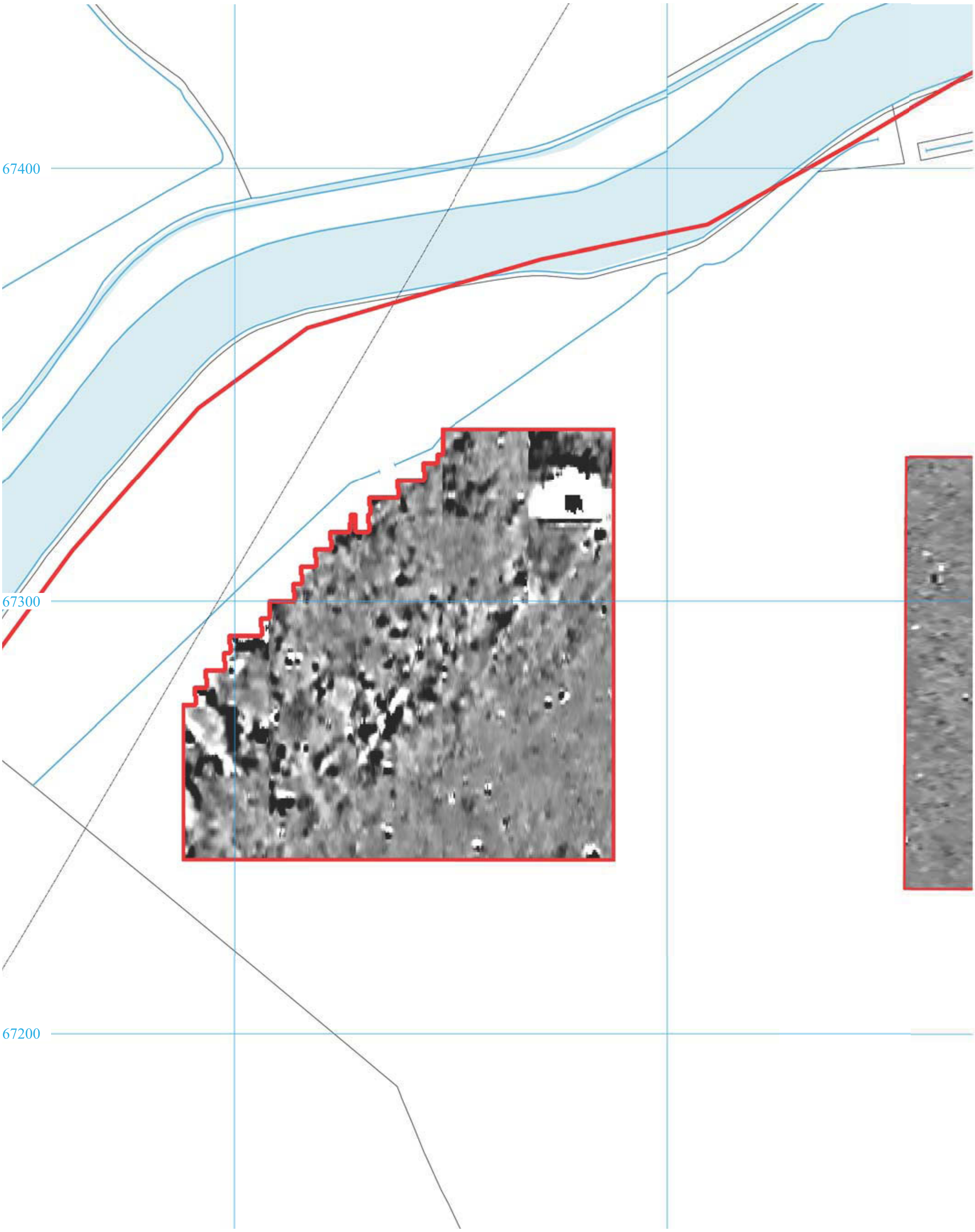

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Geophysical Survey (Magnetic)

Figure 23. Area X west: plot of minimally processed gradiometer data.

0m 100m

+2.2 nT
-1.8 nT

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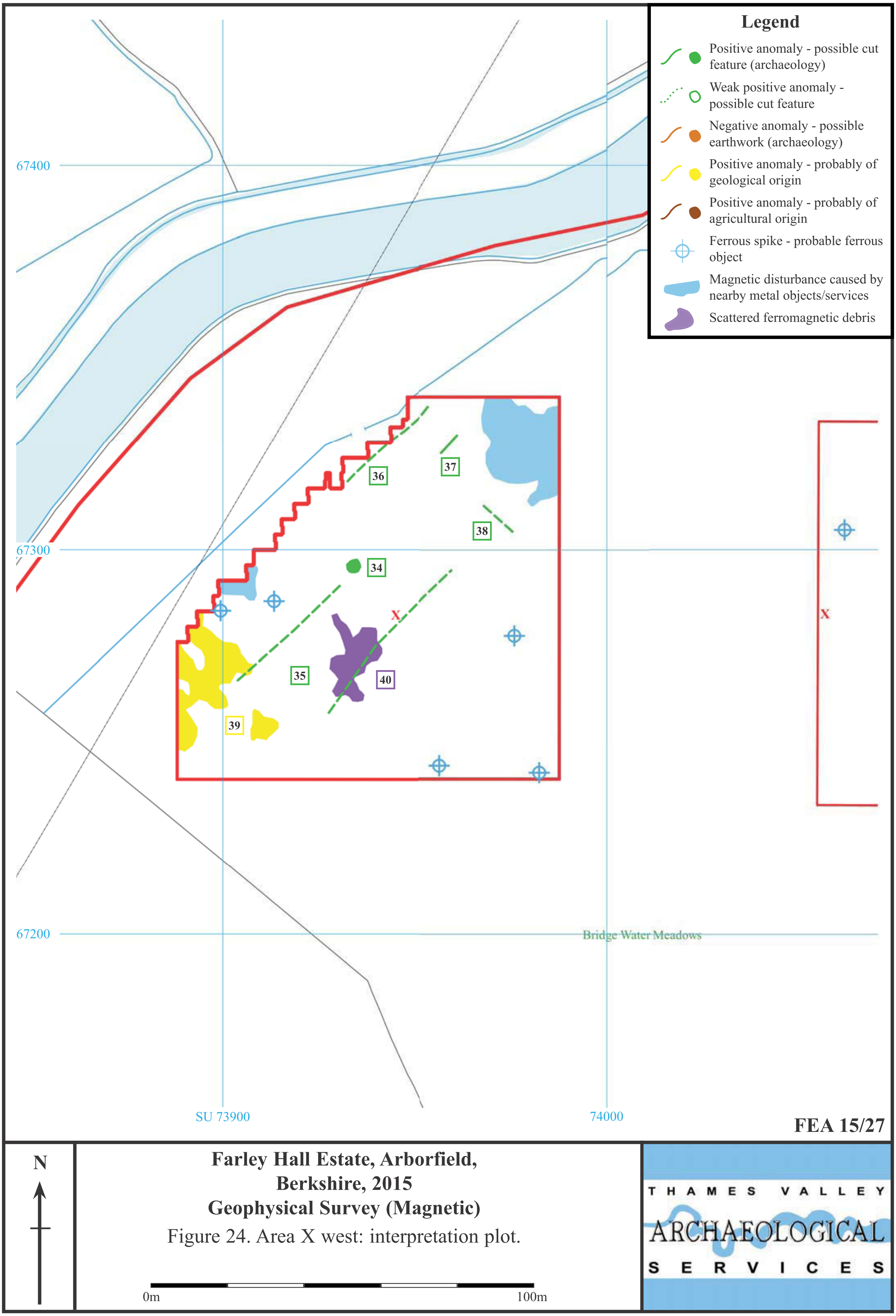

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Geophysical Survey (Magnetic)
Figure 24. Area X west: interpretation plot.

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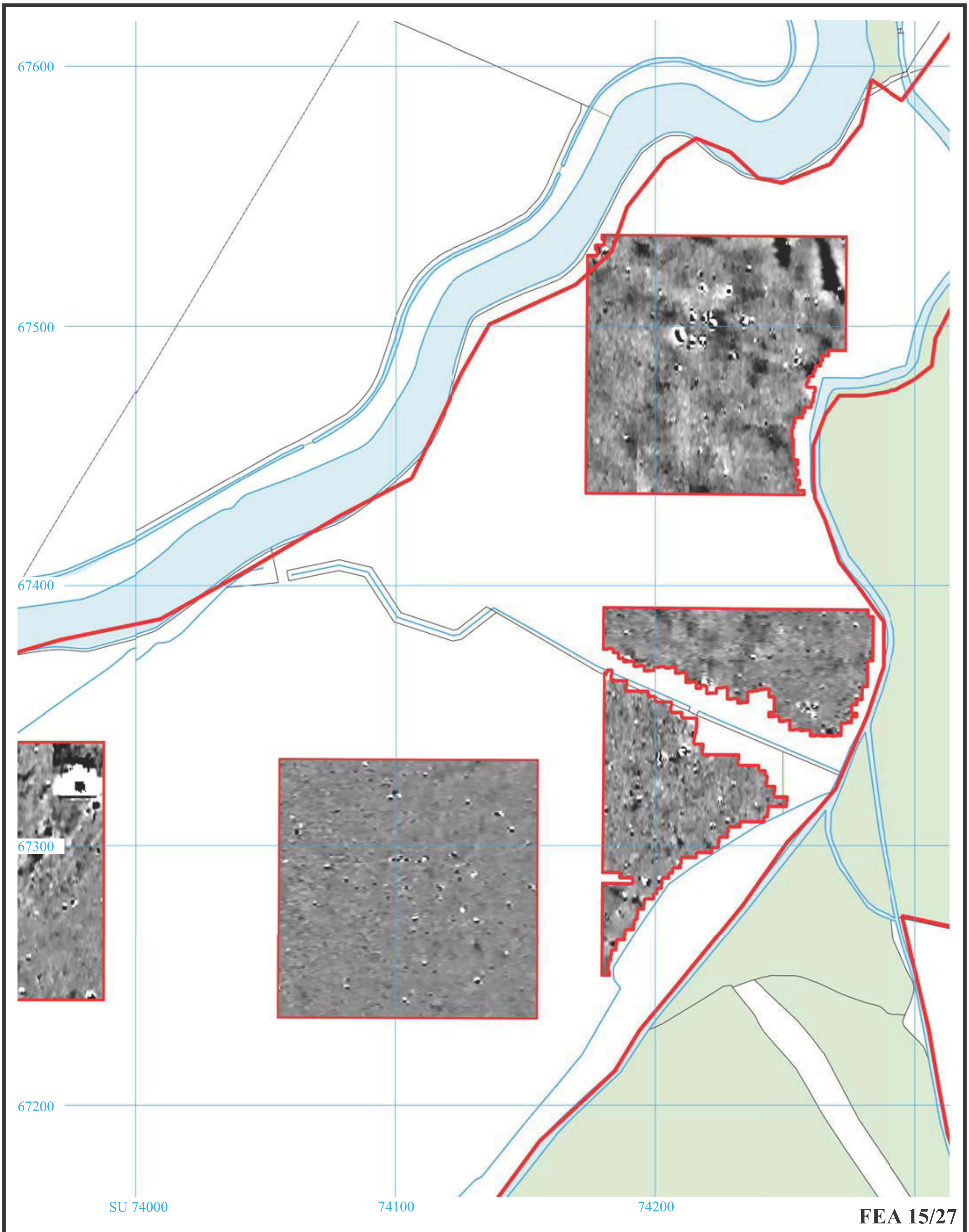

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Figure 25. Area X east: plot of minimally processed gradiometer data.

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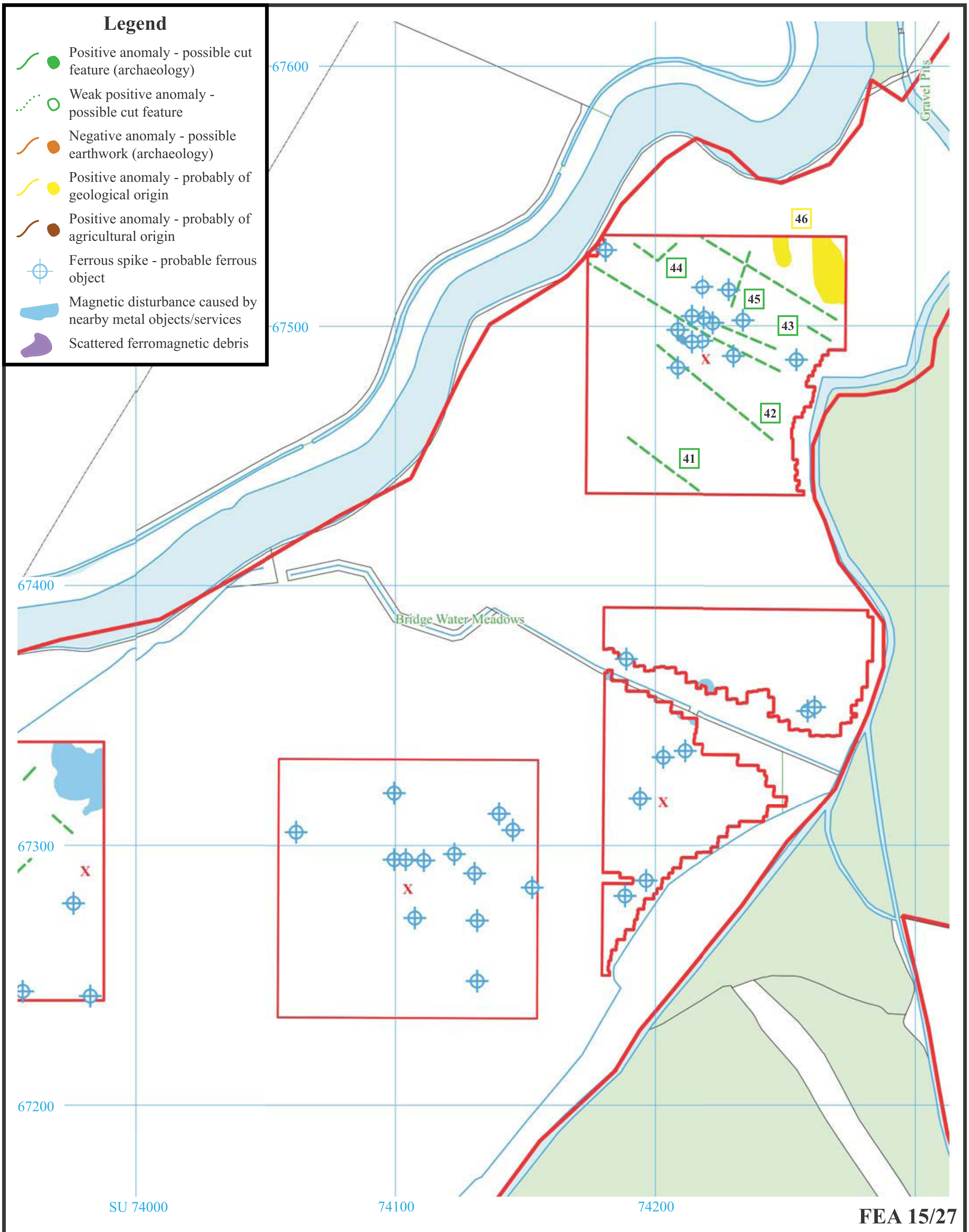

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Figure 26. Area X east: interpretation plot.

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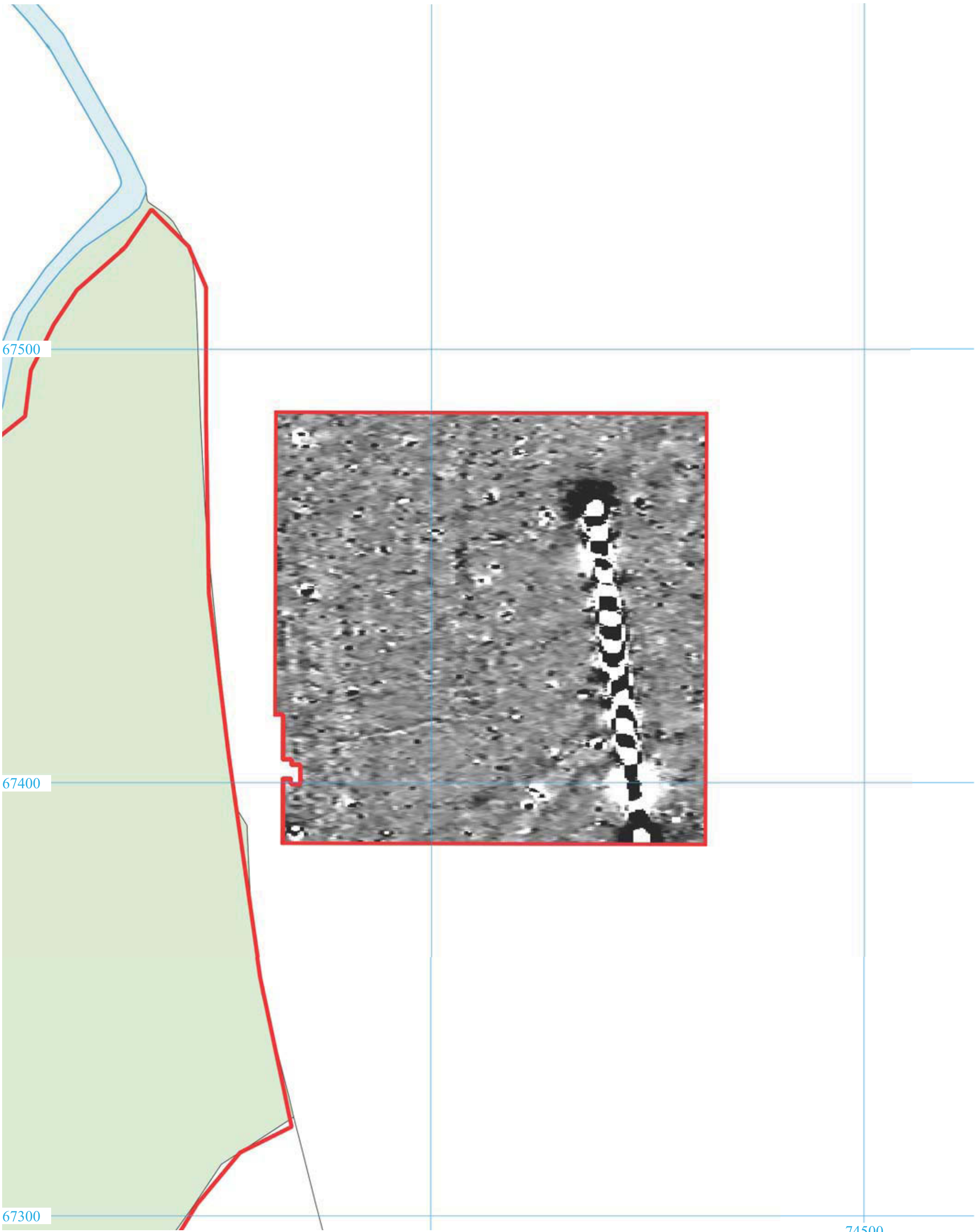

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Figure 27. Area Y: plot of minimally processed gradiometer data.

0m 100m

+2.2 nT
-1.8 nT

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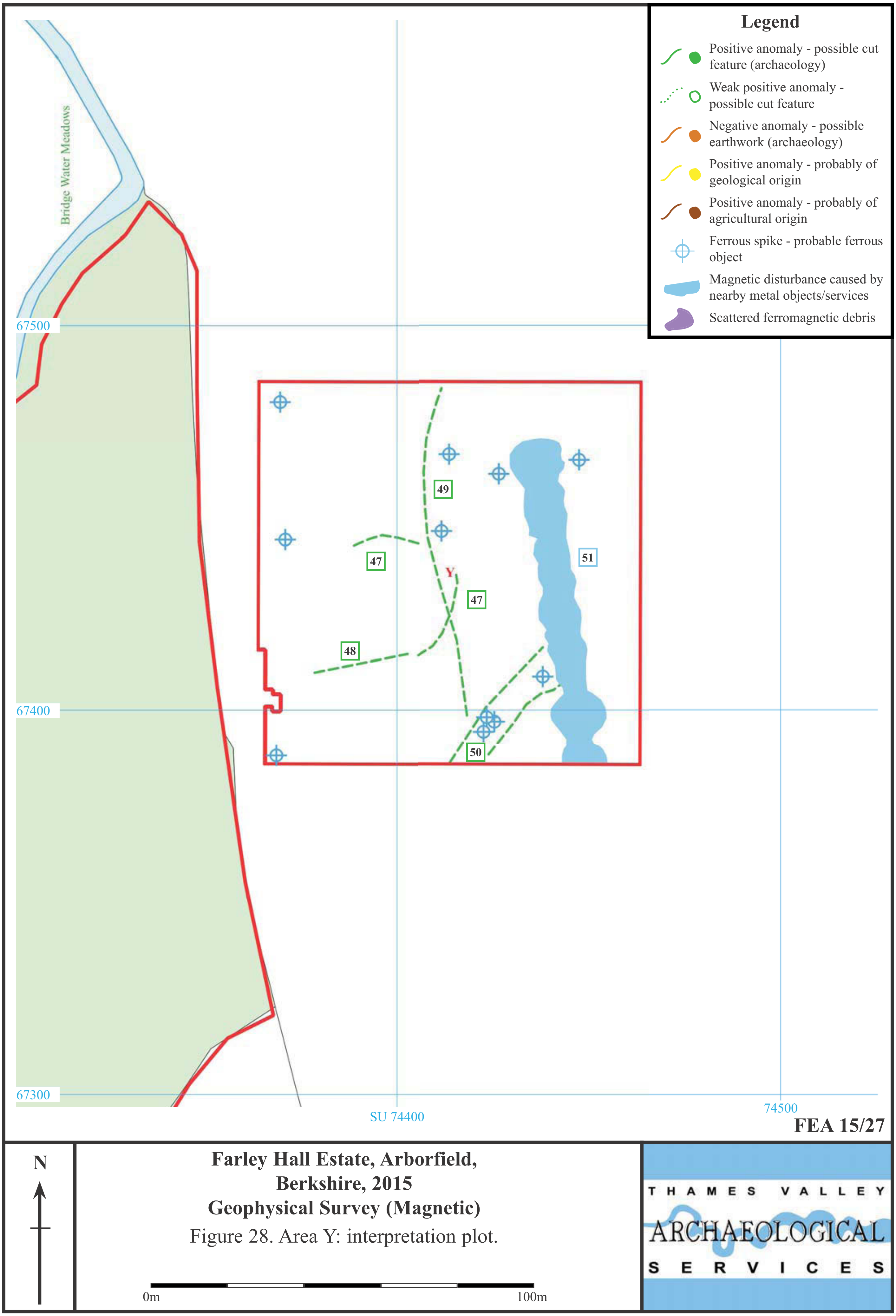

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Figure 28. Area Y: interpretation plot.

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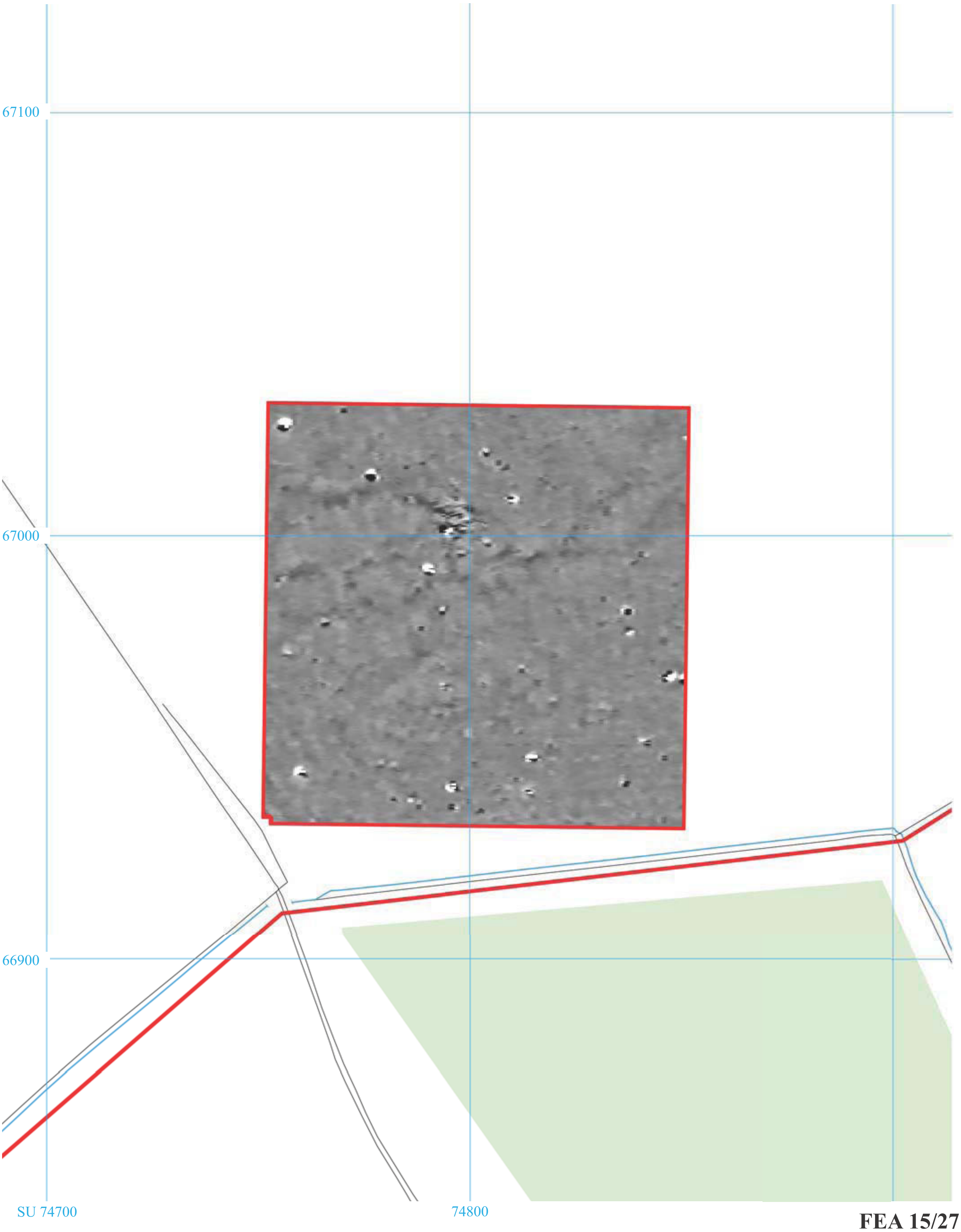

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Figure 29. Area AE: plot of minimally processed gradiometer data.

0m 100m

+2.2 nT
-1.8 nT

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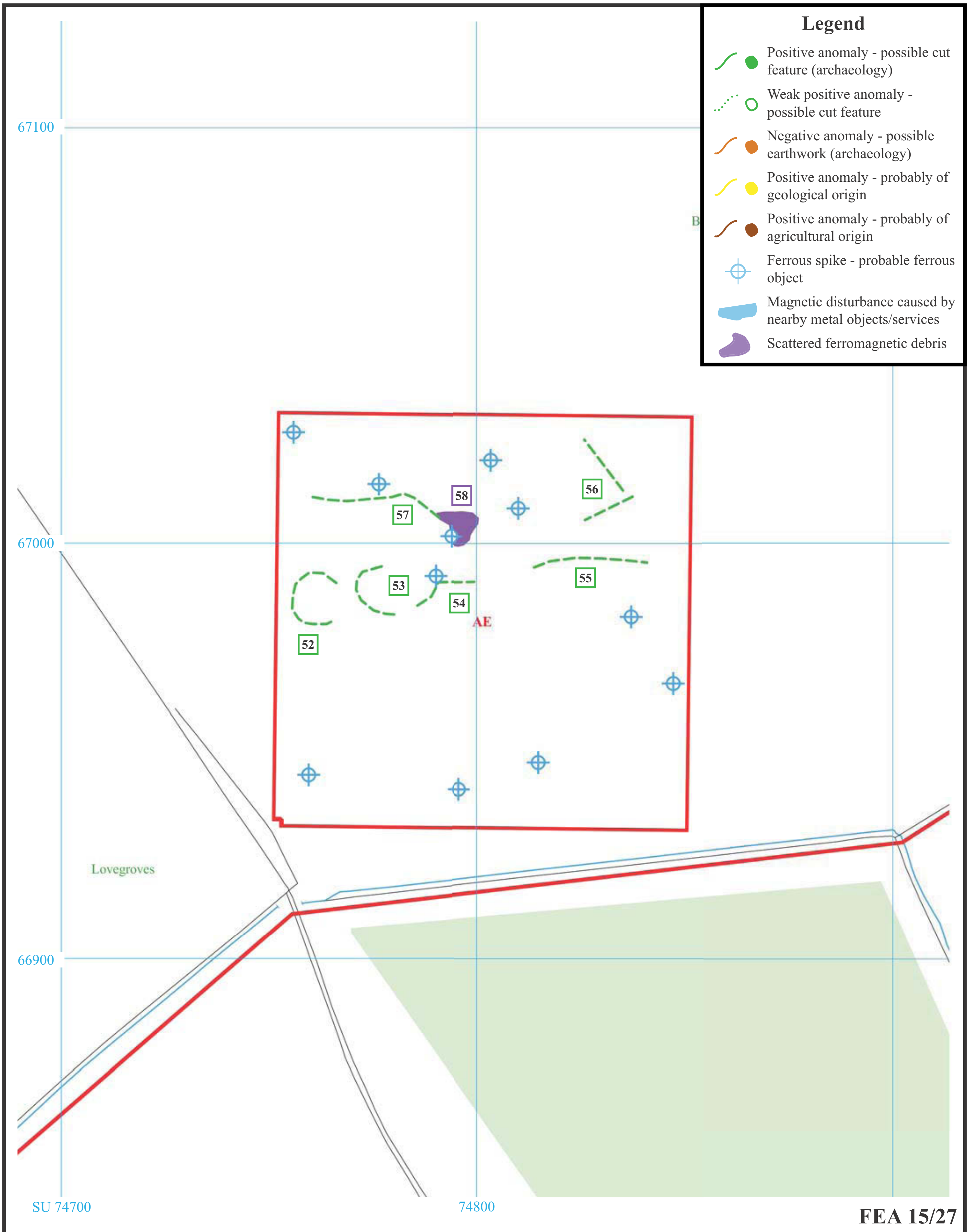

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Figure 30. Area AE: interpretation plot.

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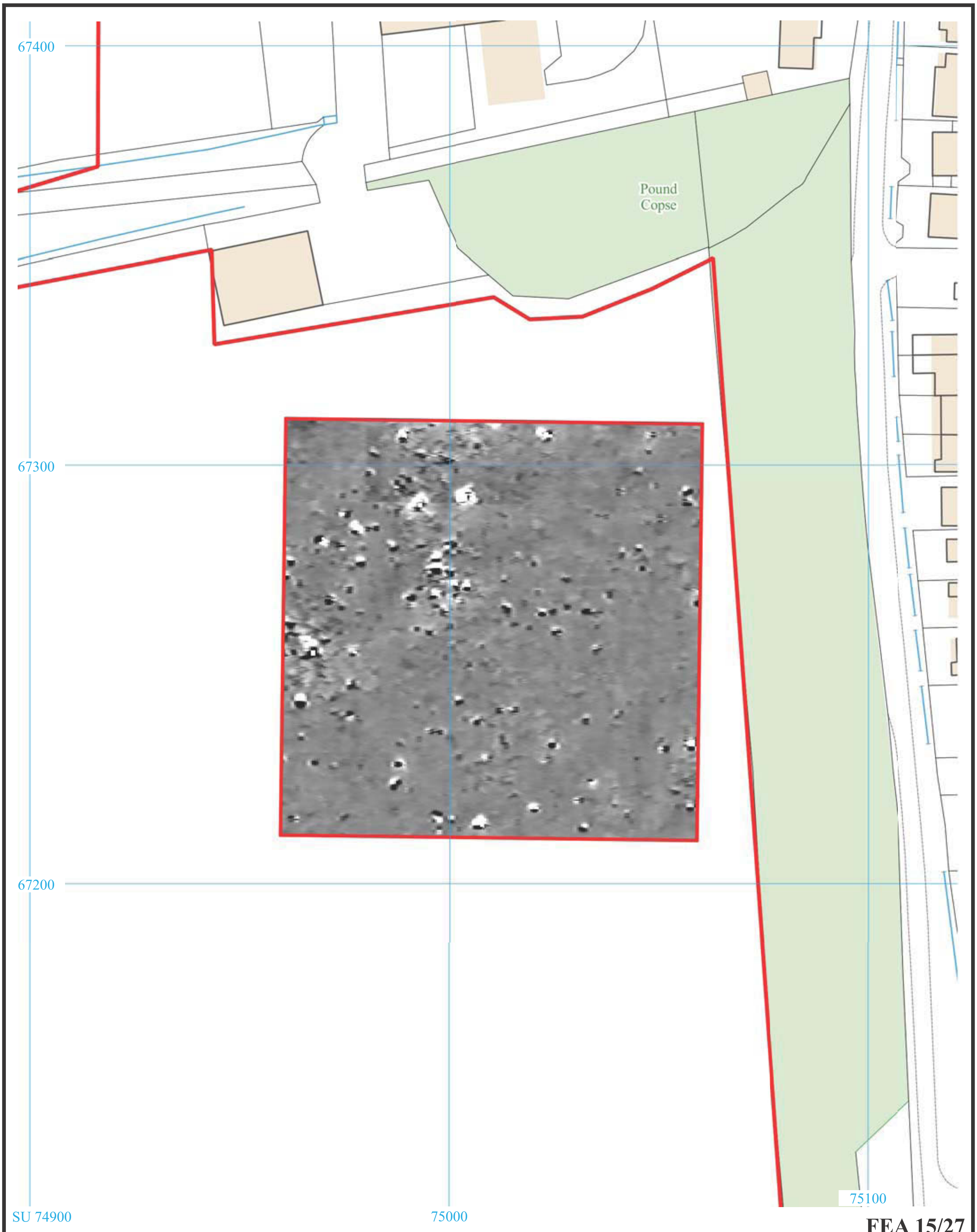

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Figure 31. Back of Bridge: plot of minimally processed gradiometer data.

0m 100m

+2.2 nT
-1.8 nT

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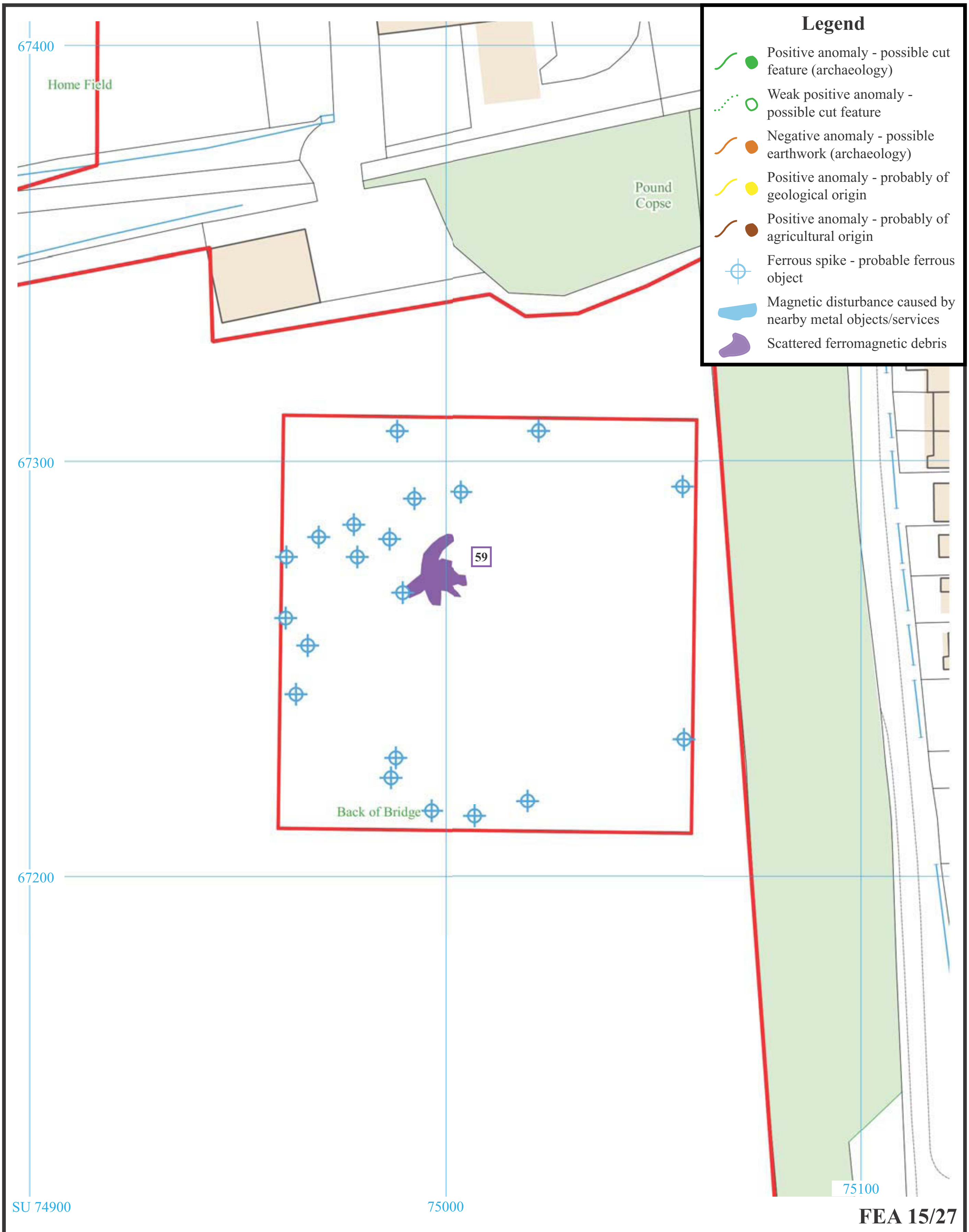

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Figure 32. Back of Bridge: interpretation plot.

0m 100m

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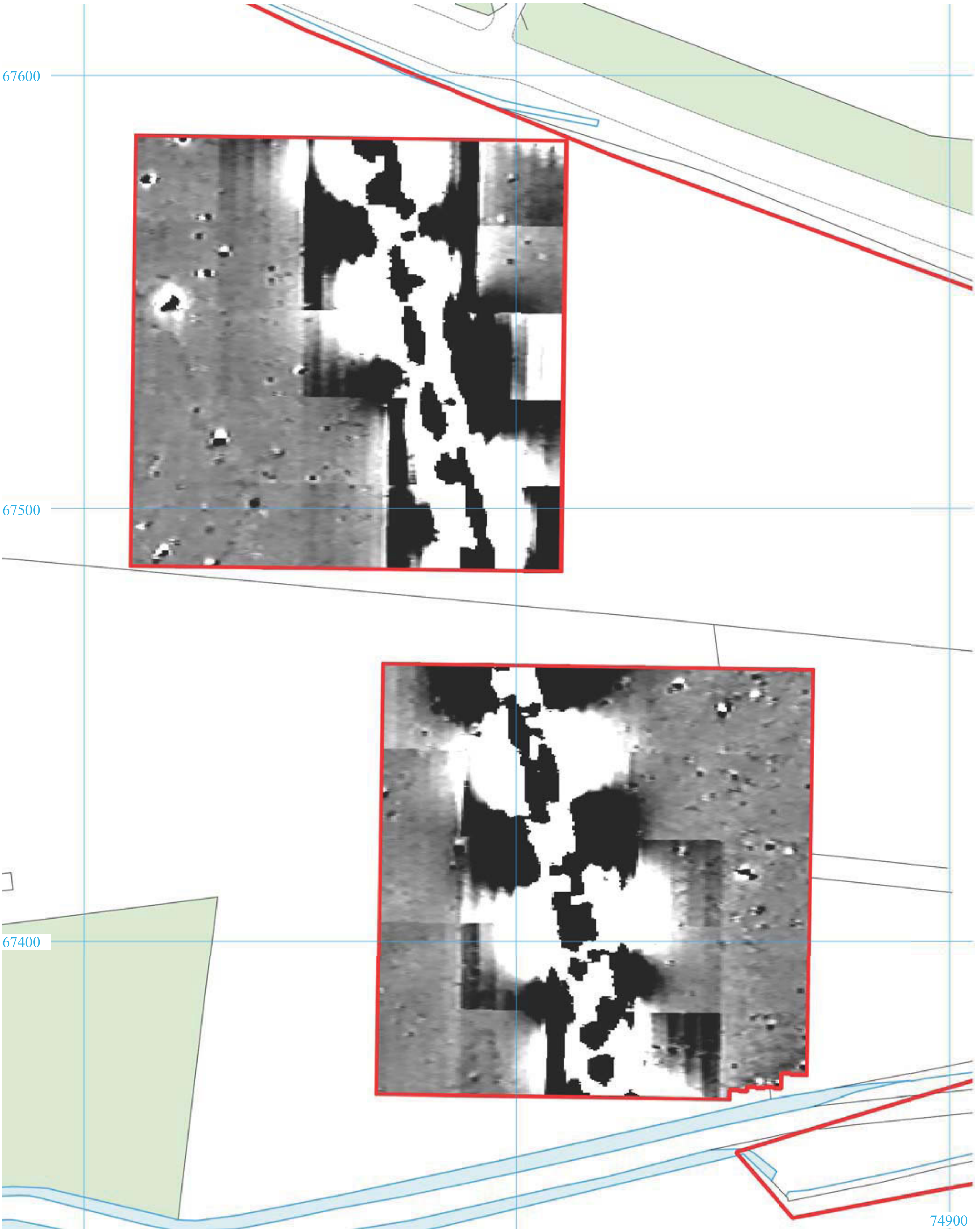

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Figure 33. Area AI: plot of minimally processed gradiometer data.

0m 100m

+2.2 nT
-1.8 nT

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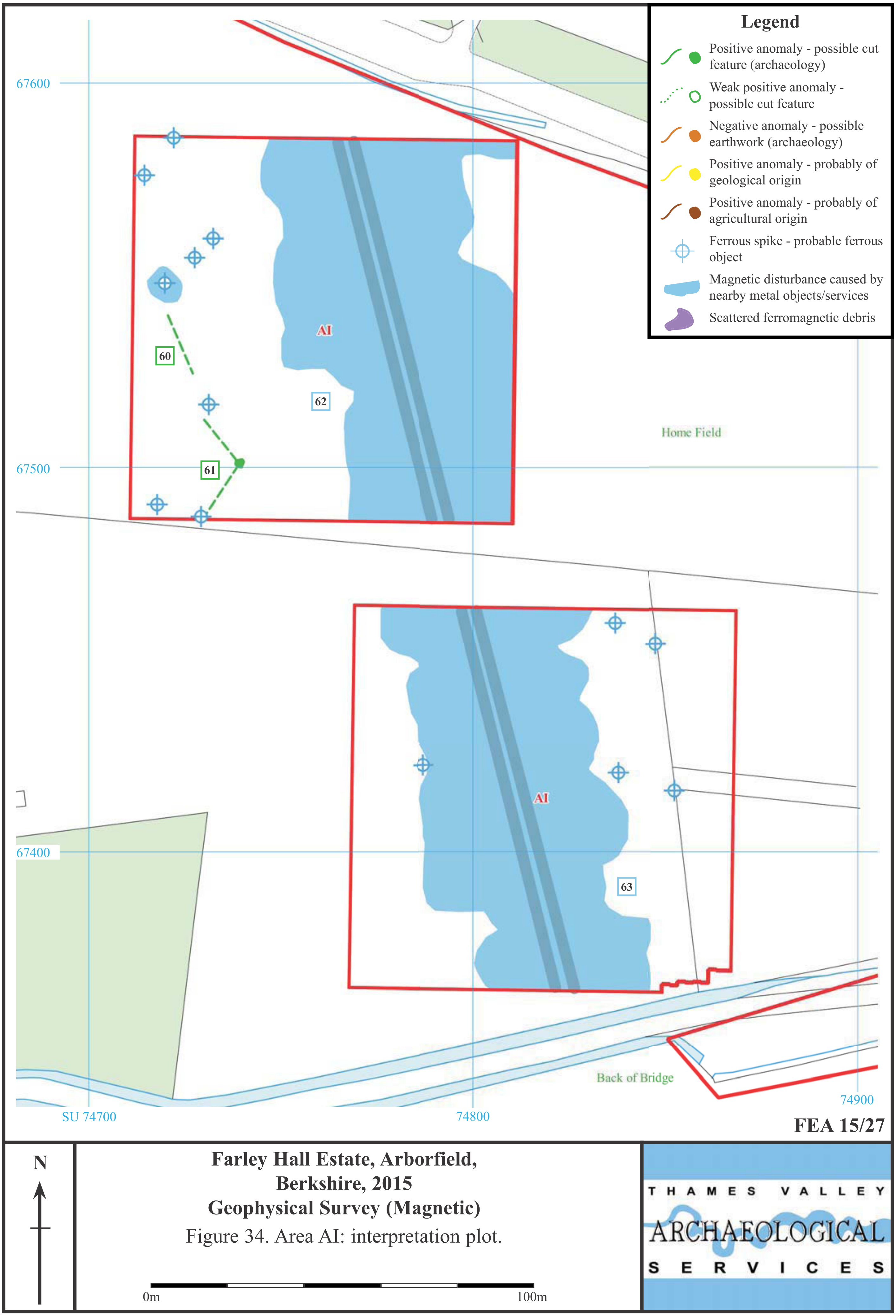

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Figure 34. Area AI: interpretation plot.

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Plate 1. Hyde End Road Farm west, looking south-west.

Plate 2. Hyde End Road Farm east, looking south.

Plate 3. Area G (main field), looking north-east.

Plate 4. Area J, looking south-east.

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Geophysical Survey (Magnetic)
Plates 1 - 4.

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Plate 5. Area L, looking north-west.

Plate 6. Area M, looking east.

Plate 7. Areas N and O, looking south.

Plate 8. Lawtons, looking south-west.

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Plates 5 - 8.

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Plate 9. Lovegroves, looking north.

Plate 10. Area W, looking south-west.

Plate 11. Area X (western grids), looking east.

Plate 12. Area X (north-eastern grids), looking north-west.

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Plates 9 - 12.

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Plate 13. Area Y, looking south.

Plate 14. Area AE, looking east.

Plate 15. Back of Bridge, looking south.

Plate 16. Area AI, looking east.

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Plates 13 - 16.

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TIME CHART

	Calendar Years
Modern	AD 1901
Victorian	AD 1837
Post Medieval	AD 1500
Medieval	AD 1066
Saxon	AD 410
Roman	AD 43
	BC/AD
Iron Age	750 BC
Bronze Age: Late	1300 BC
Bronze Age: Middle	1700 BC
Bronze Age: Early	2100 BC
Neolithic: Late	3300 BC
Neolithic: Early	4300 BC
Mesolithic: Late	6000 BC
Mesolithic: Early	10000 BC
Palaeolithic: Upper	30000 BC
Palaeolithic: Middle	70000 BC
Palaeolithic: Lower	2,000,000 BC

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Web: www.tvas.co.uk