Gate Burton
ENERGY PARK

Gate Burton Energy Park Environmental Statement

Volume 3, Appendix 7-D: Geophysical Survey Fieldwork Reports Part 2
Document Reference: EN010131/APP/3.3
January 2023

APFP Regulation 5(2)(m)
Planning Act 2008
Infrastrcuture Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Gate Burton Energy Park Limited

WYAS Archaeological Services

Gate Burton Energy Park

Gainsborough

Lincolnshire

Geophysical Survey

Report no. 3764
April 2022
Museum Accession no: LCNCC:2022.14

Client: low carbon

Gate Burton Energy Park, Gainsborough Lincolnshire

Geophysical Survey

Summary

A geophysical (magnetometer) survey was undertaken on approximately 280 hectares of land located to the south-east of Gainsborough, Lincolnshire. The majority of the anomalies recorded are agricultural including field drains, ridge and furrow cultivation, modern ploughing and former field boundaries. Archaeological anomalies have been recorded which show what appear to be a set of enclosures of a likely medieval date. Possible archaeological anomalies have also been recorded which may indicate further areas of activity. Based on the geophysical survey, the archaeological potential of the Site is deemed to be high in Field 45 and low elsewhere.

WYAS Archaeological Services

Report Information

Client:	Low Carbon
Address:	Oxygen House, Grenadier Road, Exeter Business Park, Exeter, EX1 3LH
Report Type:	Geophysical Survey
Location:	Gainsborough
County:	Lincolnshire
Grid Reference:	SK 8521 8434
Period(s) of activity:	medieval/post medieval to modern
Report Number:	3764
Project Number:	XE34
Site Code:	GABU22
Museum Accession Number:	LCNCC:2022.14
OASIS ID:	archaeol11-506352
Date of fieldwork:	March- - April 2022
Date of report:	April 2022
Project Management:	Emma Brunning BSc MCIfA
Fieldwork:	Alastair Trace BSc MSc
	Jake Freeman BA
	Amy Chatterton BSc MA
	Haydn Evans BA
	Chloe Scott MSc
Illustrations:	Emma Brunning
Photography:	Amy Chatterton
Research:	Emma Brunning
Report:	Emma Brunning

Authorisation for distribution: ----------

Nepshaw Lane South, Morley, Leeds LS27 7JQ
Telephone: 0113 535 0163
Email: admin@aswyas.com

Document Issue Record

Ver	Author(s)	Reviewer	Approver	Date
1.0	EB	DW	JR	Apr 2022

Contents

List of Figures

List of Plates

1 Introduction

Archaeological Services ASWYAS has been commissioned by AECOM Limited on behalf of Low Carbon to undertake a geophysical survey at land south of Gainsborough, Lincolnshire. This was undertaken in line with current best practice (CIfA 2020; Schmidt *et al.* 2016). The survey was carried out between 28th February and 6th April 2022 to provide additional information on the archaeological resource of the Site.

Site location, topography and land-use

The Site is located at SK 85218 84348 (approximate centre), comprising *c*. 280ha over three parcels of land, situated to the south of Gainsborough (see Fig. 1).

The site comprises Fields 35 – 68, split into 3 parcels of land, separated by landowner. Fields 35-52 (the Fox Land) are located towards the north of the site and are split down the middle by a railway line, with fields 35-41 located on the western side of the railway line and fields 42-52 located to the east. Field 52-62 (the Henson Land) are located towards the east of site, next to the village of Willingham by Stow. Fields 63-68 (the Marshall Land) are located towards the south east of site, bounded by Marton Road.

All the fields that were surveyed were under different stages of crop growth and were all used as arable fields (see plates 1-12).

Soils and geology

The recorded bedrock geology comprises Scunthorpe Mudstone Formation – Mudstone and Limestone, a sedimentary bedrock formed approximately 191 to 210 million years ago in te Jurassic and Triassic Periods. To the north-west of site superficial deposits have been recorded as Glaciofluvial deposits, Mid Pleistocene sand and gravel deposits formed up to 2 million years ago in the Quaternary Period (BGS 2020). Soils are Wickham 2 Association (711f) described as slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils (SSEW 1983).

2 Archaeological Background

The following archaeological background is taken from a WSI prepared by AECOM (Wilson 2021) of a study area of 1km from the study areas boundary.

There are four scheduled monuments recorded within the study area, these are: The site of Heynings Priory (1008685); Fleet Plantation moated site (1008594); Roman fort south of Littleborough Lane (1004935); and Roman town of Segelocum (1003669).

Assets recorded on the HER range in date from the Mesolithic (c.10000 – 3500 BC) to the modern period (1900 to present). Flint artefacts and a stone pounder found in a field close to

Lea Grange represent the earliest evidence of human activity within the study area. The later prehistoric period, through to the Iron Age (700 BD – AD43), is sparsely represented by individual recorded finds and no evidence of settlement or funerary practices have previously been recorded within the study area. There is significant evidence of the development of the area during the late Iron Age/Romano-British period. The study area is crossed by Till Bridge Lane, a Roman road linking Ermine Street north of Lincoln to a ford crossing the River Trent at Matron to Segelocum Roman town. Evidence of settlement, agricultural practices and a military presence in the form of forts, as well as multiple individual finds, contribute to the understanding of the significance of the Roman presence in this area.

There is evidence of development of the landscape through the early medieval (409AD – 1066) and medieval (1066 – 1500) periods. A number of the villages in the area have origins in the medieval period, and there is widespread evidence of ridge and furrow. Many of the extant settlements, such as the former village of Knaith and the extant village of Marton, have their origins during this time and remnants of these changes are preserved in the landscape. The remains of a moated site at Fleet plantation are scheduled and date to the medieval period. Heyning Priory was founded in 1135 and survives as scheduled earthworks. Many of the churches within the study area, such as St Margaret's Church in Marton, also have their origins in the medieval period.

The deserted settlement of Gate Burton, and the parkland associated with Gate Burton Hall, extends into the Site boundary and is a classic example of population dispersal caused by emparking (the enclosing of land to create parkland) in the 18th century. In the 17th and early 18th century the lordship of Gate Burton formed part of the Knaith estate of the Lords Willoughby of Parham. When the Hutton family purchased the estate, they built the present Gate Burton Hall and developed the surrounding landscaped parkland. It is speculated that the village was cleared at this time to accommodate the changes.

3 Aims, Methodology and Presentation

The aims and objectives of the programme of geophysical survey were to gather sufficient information to establish the presence/absence, character and extent, of any archaeological remains within the specific area and to inform an assessment of the archaeological potential of the site. To achieve this aim, a magnetometer survey covering all amenable parts of the Site was undertaken (see Fig. 2).

The general objectives of the geophysical survey were:

- to provide information about the nature and possible interpretation of any magnetic anomalies identified;
- to therefore determine the presence/absence and extent of any buried archaeological features; and

- to prepare a report summarising the results of the survey.

Magnetometer survey

The cart-based survey was undertaken using an eight channel SenSYS MX V3 system containing eight FGM650 sensors. Readings are taken every 20MHz (between 0.05 and 0.1m). Data were recorded onto a device, using a Carlson GNSS Smart antenna, for centimetre accuracy. These readings were stored in the memory of the instrument and downloaded for processing and interpretation. DLMGPS and MAGNETO software, alongside bespoke in-house software was used to process and present the data. Further details are given in Appendix 1.

Reporting

A general site location plan, incorporating the 1:50000 Ordnance Survey (OS) mapping, is shown in Figure 1. Figure 2 displays the location of the survey areas at a scale of 1:20000. Figure 3 shows the processed magnetometer data of the Fox land at a scale of 1:7500 whilst Figure 4 shows an overview of the interpretation of the Fox land at the same scale. Figure 5 shows the processed magnetometer data of the Henson and Marshall land at a scale of 1:7500 whilst Figure 6 shows an overview of the interpretations at the same scale. Processed and minimally processed data, together with interpretation of the survey results are presented in Figures 7 to 109 inclusive at a scale of 1:1250.

Technical information on the equipment used, data processing and survey methodologies are given in Appendix 1. Technical information on locating the survey area is provided in Appendix 2. Appendix 3 describes the composition and location of the archive. A copy of the completed OASIS form is included in Appendix 4.

The survey methodology, report and any recommendations comply with guidelines outlined by the European Archaeological Council (Schmidt *et al*. 2015) and by the Chartered Institute for Archaeologists (CIfA 2020). All figures reproduced from Ordnance Survey mapping are with the permission of the controller of Her Majesty's Stationery Office (© Crown copyright).

The figures in this report have been produced following analysis of the data in processed formats and over a range of different display levels. All figures are presented to most suitably display and interpret the data from this site based on the experience and knowledge of Archaeological Services staff.

4 Results and Discussion (see Figures 7 to 109)

Ferrous anomalies and magnetic disturbance

Ferrous anomalies, as individual ‘spikes’, or as large discrete areas are typically caused by ferrous (magnetic) material, either on the ground surface or in the plough-soil. Little importance is normally given to such anomalies, unless there is any supporting evidence for an archaeological interpretation, as modern ferrous debris or material is common on rural sites, often being present as a consequence of manuring or tipping/infilling. There is no obvious pattern or clustering to their distribution in this survey to suggest anything other than a random background scatter of ferrous debris in the plough-soil.

A large area of magnetic disturbance in the west of Field 36 (Sector 1) corresponds to a large pond marked on historic mapping dating from 1900 (NLS 2022). It is likely that the pond has been infilled with ferrous materials resulting in the magnetic response.

An oval shaped area of disturbance in the south of Field 48 (Sector 17) has been recorded which corresponds to a small pond on historic mapping.

A large area of disturbance in the north of Field 49 (Sector 18) corresponds to the location of Thurlby Farm, which was a 19th century farmstead (monument number MLI118135). The responses are likely to represent demolition rubble.

Circular areas of magnetic disturbance in Fields 45 and 46 (Sectors 13 and 15) correspond to electricity pylons which cross the eastern part of the Site.

Magnetic disturbance in the northwest of Field 58 (Sector 25) have been caused by the adjacent farm building.

Magnetic disturbance along the limits of the survey areas are due to be linked to metal fencing within the field boundaries and interference from the adjacent roads and railway line.

Linear dipolar trends have been recorded in Fields 39 (Sector 4), 49 (Sector 18) and 51 (Sector 19) which relate to service pipes.

Unusual scatters of spikes have also been detected in the survey which are concentrated in Fields 49 and 51 (Sector 19) but are also evident to a much lesser extent in Fields 37-39. The origin of these is not clear and while they may just be modern ferrous debris from recent agricultural practice, other sources could be considered. Sturgate Airfield is located towards the northeast and a modern military origin could be considered but this would not appear to fit with the history of the airfield which did not see active use during the Second World War.

Geological anomalies

The survey has detected anomalies within some of the areas that have been interpreted as geological in origin. It is thought that the responses have been detected because of the variation in the composition and depth of the deposits of superficial material in which they derive. These are particularly evident in Fields 40, 60, 64, 65, 66 and 68.

Field 40 contains the widest band of geological material and is located within the area of the Glaciofluvial superficial deposits and could well be the course of a former channel associated with a water course caused by the retreat of glaciers in the Quaternary period.

The geological anomalies towards the south of the site are no located within any superficial deposits and have a regularity to them especially the anomaly that passes through Fields 65, 66 and 68. This regularity would suggest it is not a fissure within the underlying geology but this regularity could also suggest they are some form of drain.

Agricultural anomalies

Former field boundaries have been recorded throughout most of which correspond to the First Edition Ordnance Survey mapping dating from 1900; these are boundaries **FB3** (Field 39, Sector 4), **FB4** and **FB6** (Field 42, Sectors 9 and 10), **FB7** and **FB8** (Field 44, Sectors 12 and 13), **FB12** (Field 46, Sector 15), **FB13** and **FB14** (Field 48 (Sectors 17 and 18), **FB15** and **FB16** (Field 49, Sector 18), **FB17** (Field 58, Sector 25), **FB18** and **FB19** (Field 59/60, Sectors 25 and 26), **FB20** (Field 61, Sector 26), **FB21** (Field 62, Sector 27), **FB23** (Field 63, Sector 29), **FB24** (Field 65, Sectors 30 and 31), **FB25** (Field 66, Sector 32), **FB26** and **FB27** (Field 68, (Sectors 32-34). All of these boundaries are still visible on the historic map published in 1956 (NLS 2022). Removal of these appears to have been undertake after this point to open up the fields into larger units.

Boundaries which do not correlate to the historic maps are **FB1** (Field 36, Sector 1), **FB2** (Field 38, Sector 3), **FB5** (Field 42, Sector 9), **FB9 - FB11** (Field 45, Sectors 13-15), **FB22** (Field 63, Sector 28). It is likely that these are boundaries which pre-date available mapping. Some of these may also be associated with headlands, particularly those in Field 45 which appear to contain ridge and furrow cultivation.

Field drains can be seen within most of the fields. They are of differing magnetic strength which is likely to be associated with the construction of the drains. Those that are particularly strong are likely to be of a fired clay construction.

Medieval or post-medieval ridge and furrow cultivation have been recorded throughout and can be seen despite the complex of drainage systems in place. The areas of ridge and furrow towards the east if Knaith (Fields 35-39) are likely to be associated with the other areas of

mapped ridge and furrow around the village and formed part of the land used by the village in the medieval period.

Other parallel linear trends can be seen within all areas and are associated with modern ploughing. Only a selection of these have been highlighted on the interpretation diagrams to show the direction of the plough lines.

Uncertain anomalies

Linear response (**U1**) in Field 35 (Sector 1) runs on a northwest to southeast alignment and appears to run to the centre of the former pond to the immediate east in Field 36. It is possible **U1** is a drainage channel feeding the pond or a former boundary which is not shown on historic mapping. A linear response to the south of **U1** running on a southwest to northeast alignment may also represent a former boundary.

A group of linear responses and pits (**U2**) in Field 39 (Sector 5) are on various alignments and an interpretation has proved difficult. The liner features are very straight and while there is no clear cause of them they are likely to be of a modern agricultural origin possible associated with drainage or land management.

Curving trend (**U3**) in Field 40 (Sector 6) corresponds with a cropmark on Google Earth imagery dated 2015 and the cropmarks recorded by Historic England (HE 2022a). It is likely to be a field boundary pre-dating the available historic mapping, although a boundary ditch is also possible.

A pair of linear trends (**U4**) in Field 41 (Sector 8) may be of some interest, possibly a trackway. However they may also represent field drains on a different alignment to the others within this field. The same could be said for trends **U5** in Field 43 (Sector 11), although weaker than those at **U4**.

Linear response (**U6**) in Field 45 (Sector 12) runs close to a change in the crop on Google Images and may be associated with a field boundary and informal trackway that is used for agricultural purposes. Due to the archaeology to the immediate east it may be something more significant such as a boundary ditch.

Linear response (**U7**) in Field 46 (Sector 14) corresponds with a cropmark on Google Earth imagery dated 2015 and although it is not shown on historic mapping it may relate to a former field boundary. It has also been noted that field drains to the east stop at this feature.

A curving response and three parallel trends have been recorded at **U8** in Field 48 (Sector 17). They are magnetically weak and an interpretation has been difficult. It is likely that they are agricultural.

Linear responses (**U9**) in Field 51 (Sector 19) have been difficult to interpret due to the ferrous halo caused by the service pipe in the area. The anomalies also have a fairly high magnetic response and would therefore suggest a modern origin.

Anomaly (**U10**) in Field 52 (Sector 19) has produced a strong magnetic response and may be of some archaeological interest. However, it is an isolated response and may be associated with geology or a deeply buried ferrous object.

Curving trends (**U11**) in Fields 57, 61 and 62 (Sectors 23 and 27) may be of some archaeological interest and show three responses running through the fields. It is uncertain as to what these responses represent.

Weak responses (**U12**) in Field 65 (Sector 30) may form part of a small enclosure although tentative.

Curving trend (**U13**) in Field 66 (Sector 32) is likely to be a former boundary as its western end abuts boundary **FB25**.

Possible and definite archaeological anomalies

Anomalies of both a definite and possible archaeological origin have been recorded within the dataset. The most prominent of these is a complex of linear ditches and trends in Field 45 (Sector 12) which appear to represent a set of enclosures that form part of the southern part of the extensive cropmarks recorded around Park Farm South. These have been suggested to be associated to the Heyning Priory site (HE 2022b).

While there may be no clear link between the anomalies detected in Field 45 and the priory site their close location and shared origination would suggest that they are medieval in date. The archaeological responses cover an area of approximately 166m by 130m. A number of possible archaeological and uncertain responses have been recorded surrounding the complex which are likely to be associated. It is possible that these are associated with leats and water management systems, perhaps even fish ponds.

Linear ditch response (**P1**) in Field 42 (Sector 9) may be of some archaeological interest. The responses have a stronger magnetic response that some of the surrounding features hence the possible archaeological origin. They may be associated with parts of an enclosure or former field systems.

Anomaly (**P2**) in Field 45 (Sector 12) lies to the west of the archaeological complex mentioned above. It measures at least 36m by 32m and may be of some interest. However, the response is similar to some of the geological anomalies within the dataset and caution has therefore be taken.

Anomalies (**P3**) in Field 68 (Sector 34) have been recorded which may be associated with archaeological activity. The responses are magnetically weak but consist of a number of ditches, linear and curvi-linear trends.

5 Conclusions

The geophysical survey has detected a number of magnetic anomalies associated mainly with an agricultural landscape including former field boundaries, medieval/post-medieval ridge and furrow cultivation, modern ploughing and land drains.

Archaeological and possible archaeological origins in the forms of a linear enclosure complex and areas of other activity including possible enclosures have also been recorded. Uncertain anomalies may also be of some interest but agricultural origins may account for these responses.

Geological anomalies within the dataset are likely to be due to variations within the soils and the topography. Service pipes have been recorded in the north of the survey area and large area of magnetic disturbance are associated with a former pond.

Based on the geophysical survey the archaeological potential of the Site is deemed to be high in Field 45 and low elsewhere.

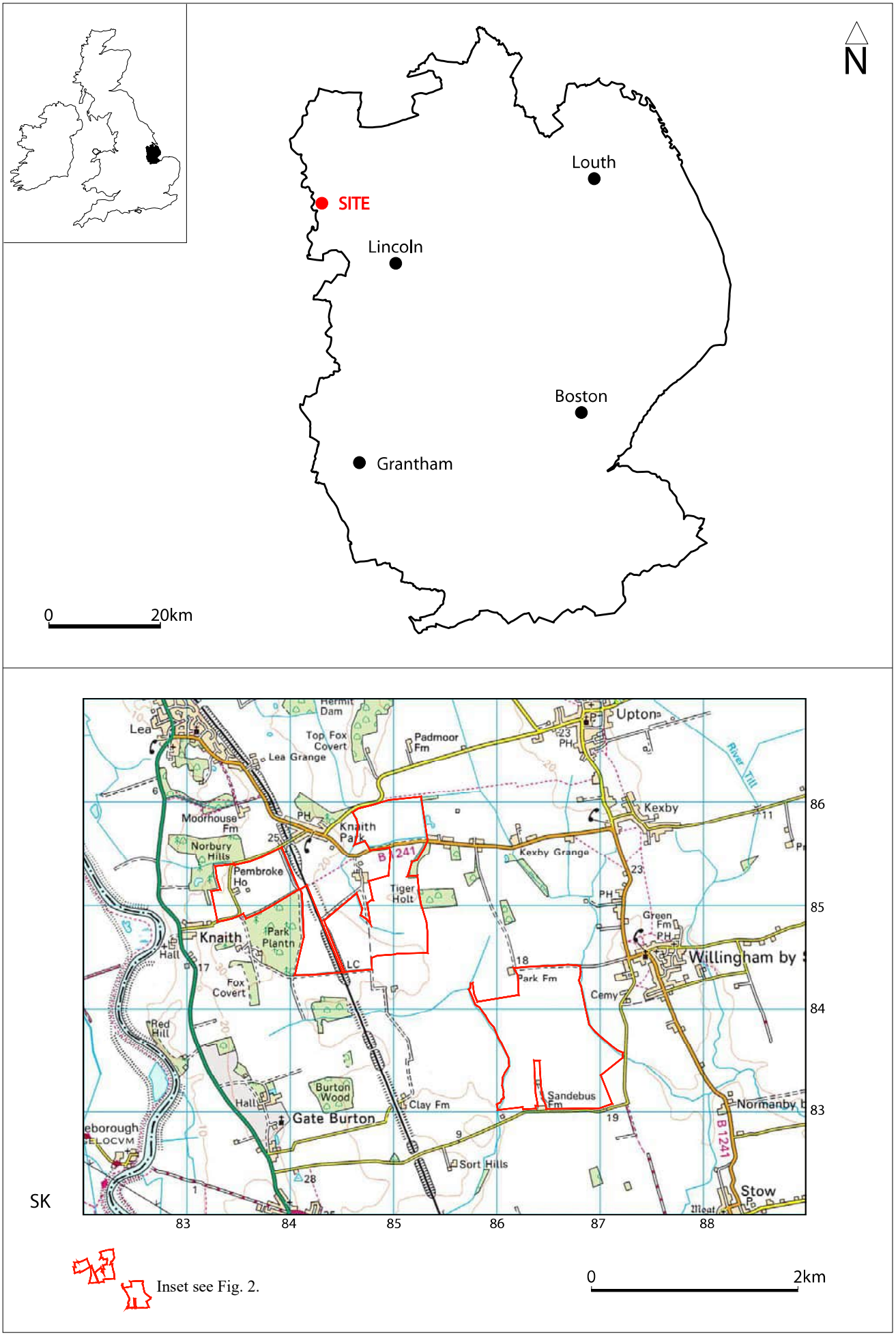
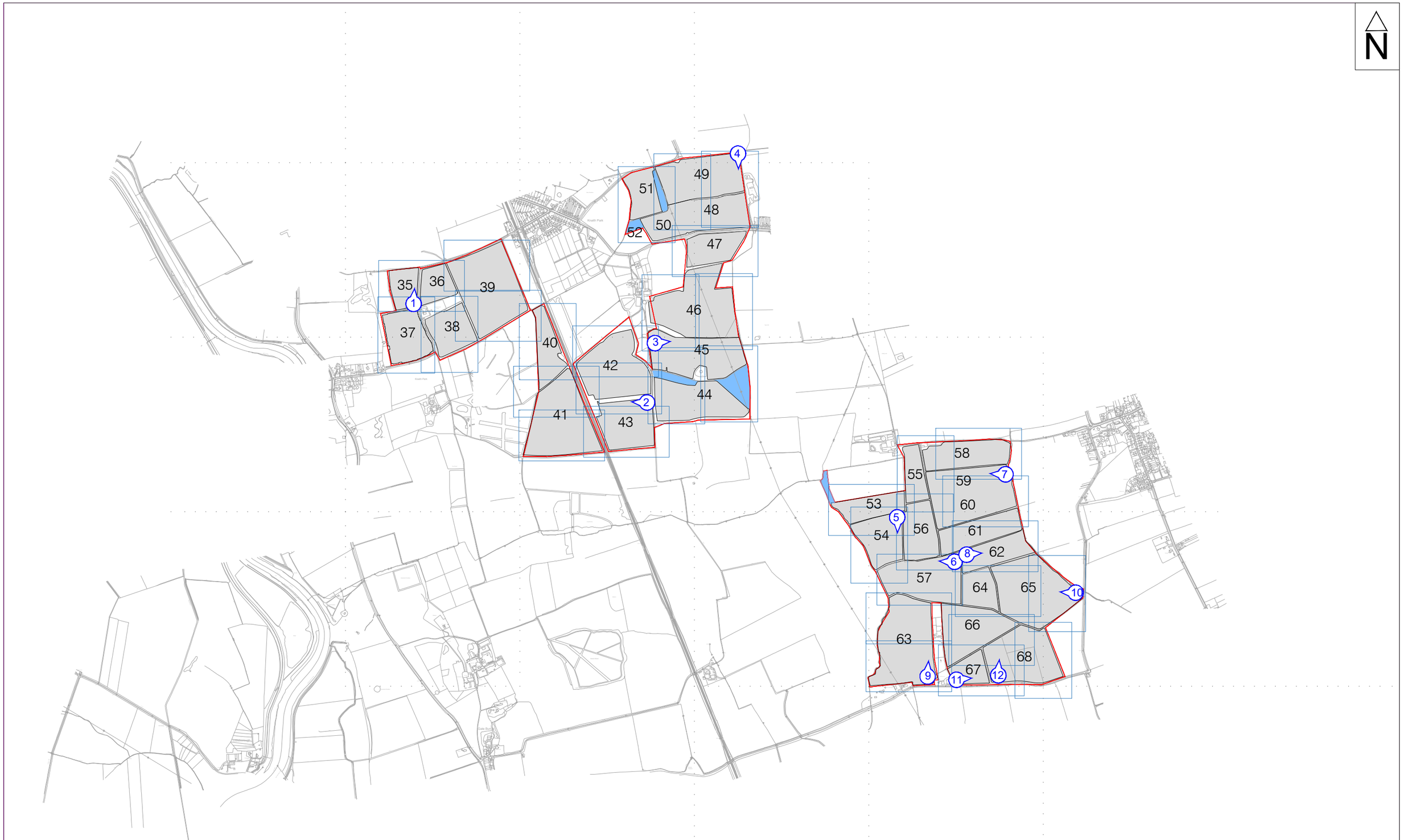


Fig. 1. Site location



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Location of survey areas

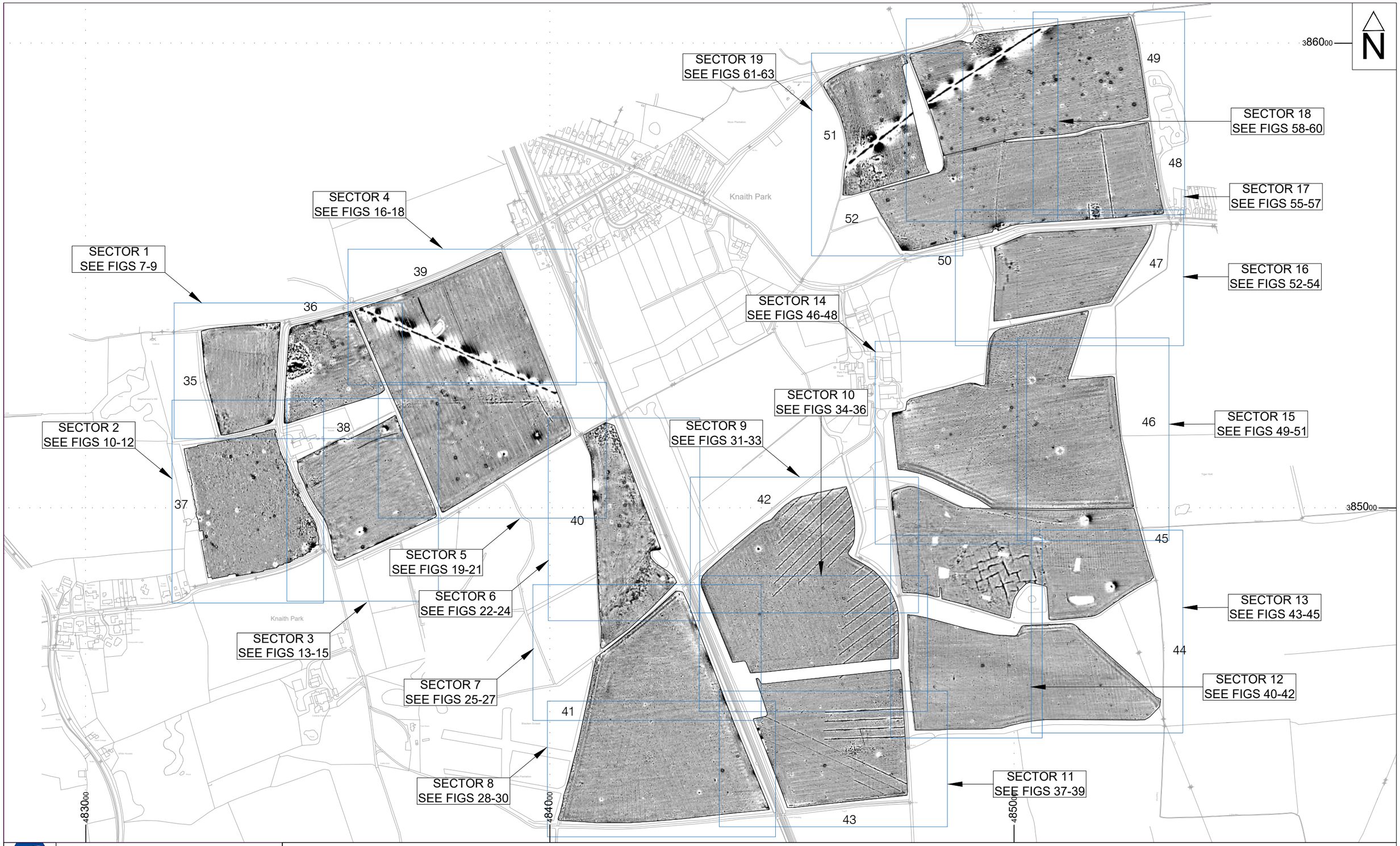
Fig. 2

Title

SURVEY AREA	UNSUITABLE FOR SURVEY
SECTOR BOUNDARY	1 PHOTO LOCATIONS

0 1000m

1:20000 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Location of 'Fox' land showing processed gradiometer greyscales

Fig. 3

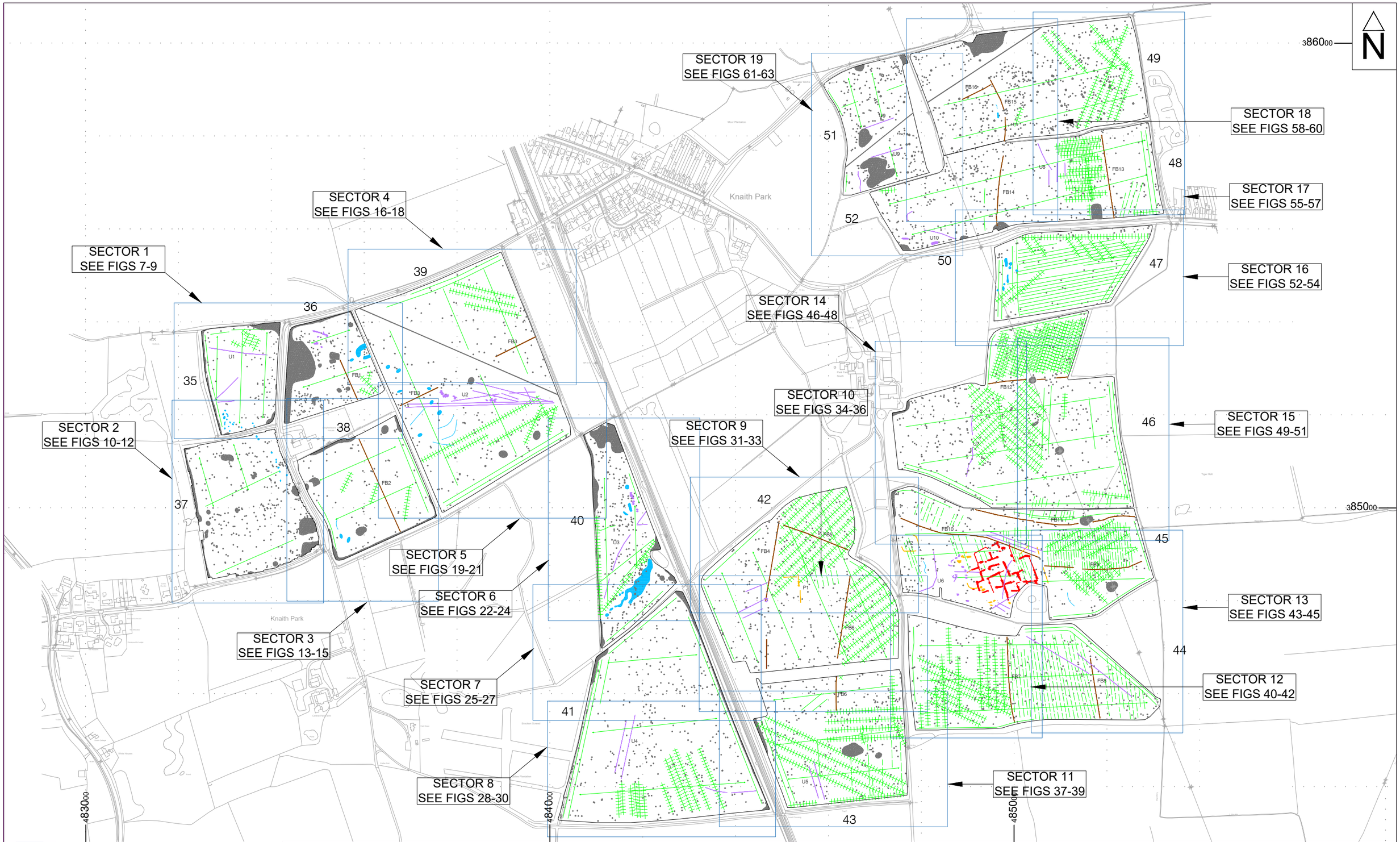
Title

SECTOR BOUNDARY

-1.0 2.0
nT

0 400m

1:7500 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Location of 'Fox' land showing interpretations

Fig. 4

Title

- SECTOR BOUNDARY

Interpretation

- FERROUS
- SERVICE PIPE
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE & FURROW
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- GEOLOGY
- UNCERTAIN
- ARCHAEOLOGY?
- ARCHAEOLOGY

0 400m

1:7500 @ A3

N

SECTOR 22
SEE FIGS 70-72

SECTOR 25
SEE FIGS 79-81

SECTOR 23
SEE FIGS 73-75

SECTOR 20
SEE FIGS 64-66

SECTOR 26
SEE FIGS 82-84

SECTOR 27
SEE FIGS 85-87

SECTOR 21
SEE FIGS 67-69

SECTOR 30
SEE FIGS 94-96

SECTOR 24
SEE FIGS 76-78

SECTOR 31
SEE FIGS 97-99

SECTOR 28
SEE FIGS 88-90

SECTOR 32
SEE FIGS 100-102

SECTOR 29
SEE FIGS 91-93

SECTOR 34
SEE FIGS 106-108

SECTOR 33
SEE FIGS 103-105

53 54 55 56 57 58 59 60 61 62 63 65 66 67 68

3840$_{00}$

3830$_{00}$

4850$_{00}$

4860$_{00}$

4870$_{00}$

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Location of 'Henson and Marshall' land showing processed gradiometer greyscales

Fig. 5

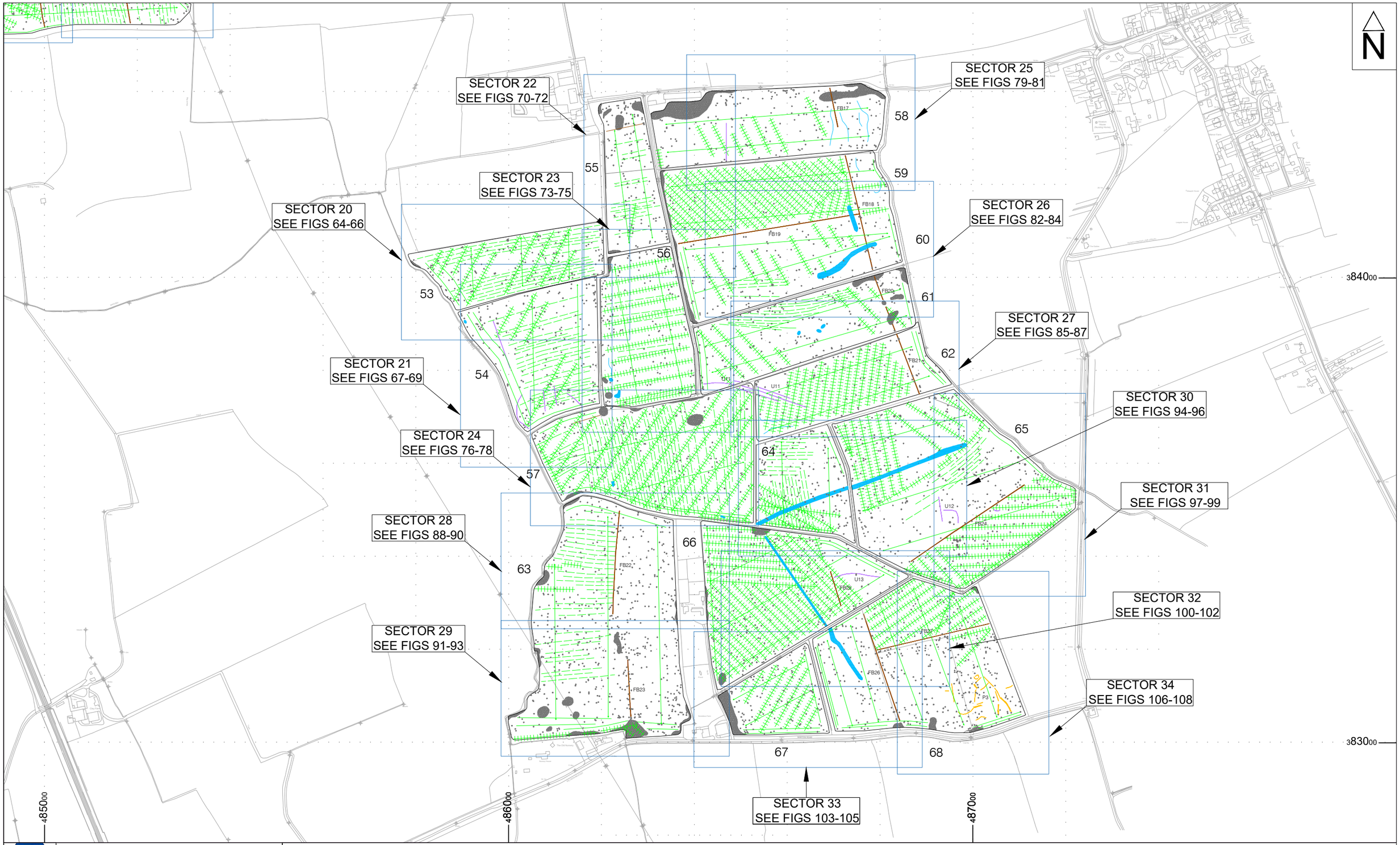
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 400m

1:7500 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Location of 'Henson and Marshall' land showing interpretations

Fig. 6

Title

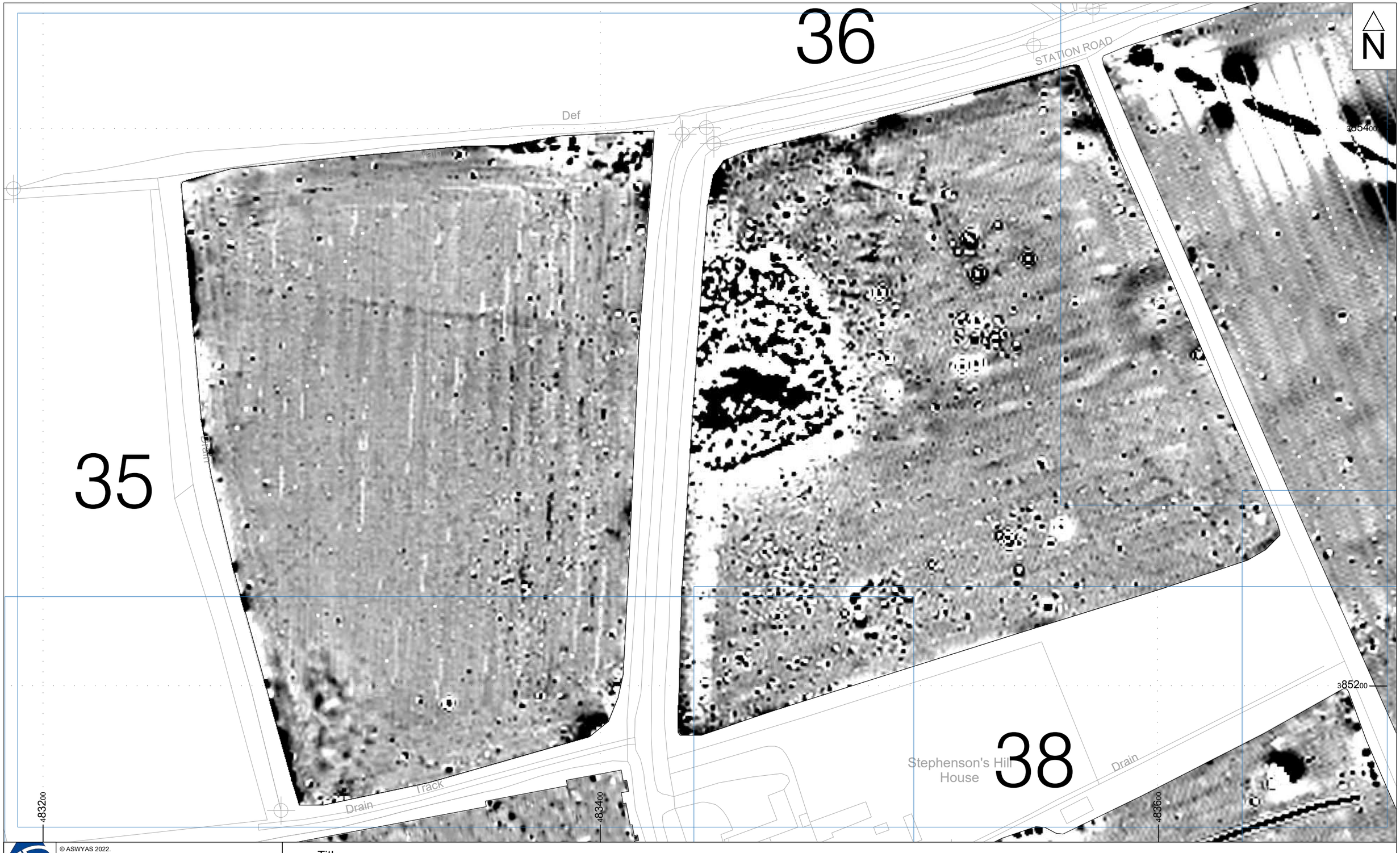
- SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE & FURROW
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- GEOLOGY
- UNCERTAIN
- ARCHAEOLOGY?

0 400m

1:7500 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 1

Fig. 7

Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3

36

35

38

STATION ROAD

Def

Track

Drain

Drain

Stephenson's Hill House

N

385400

385200

383600

383400

383200

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 1

Fig. 8

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

36

35

38

U1

FB1

Def

Drain

Drain

Drain

Track

STATION ROAD

22.9m

Stephenson's Hill House

N

385400

385200

483200

483400

483600

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 1

Fig. 9

Title

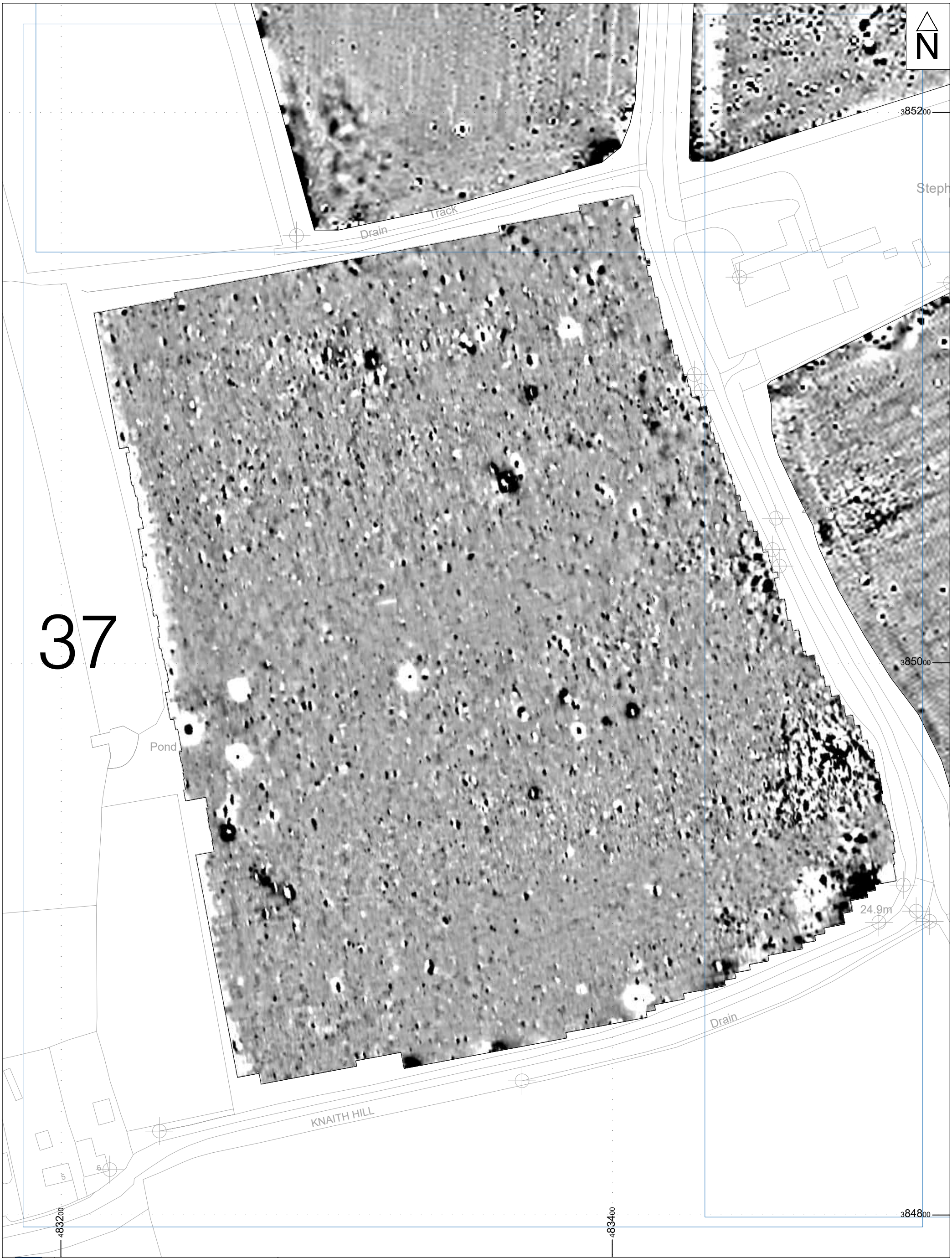
SECTOR BOUNDARY

Interpretation

FERROUS	FIELD DRAIN	GEOLOGY
SERVICE PIPE	AGRICULTURAL	UNCERTAIN
MAGNETIC DISTURBANCE	FORMER FIELD BOUNDARY	

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 2

Fig. 10

Title

SECTOR BOUNDARY

-1.0 2.0
nT

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 2

Fig. 11

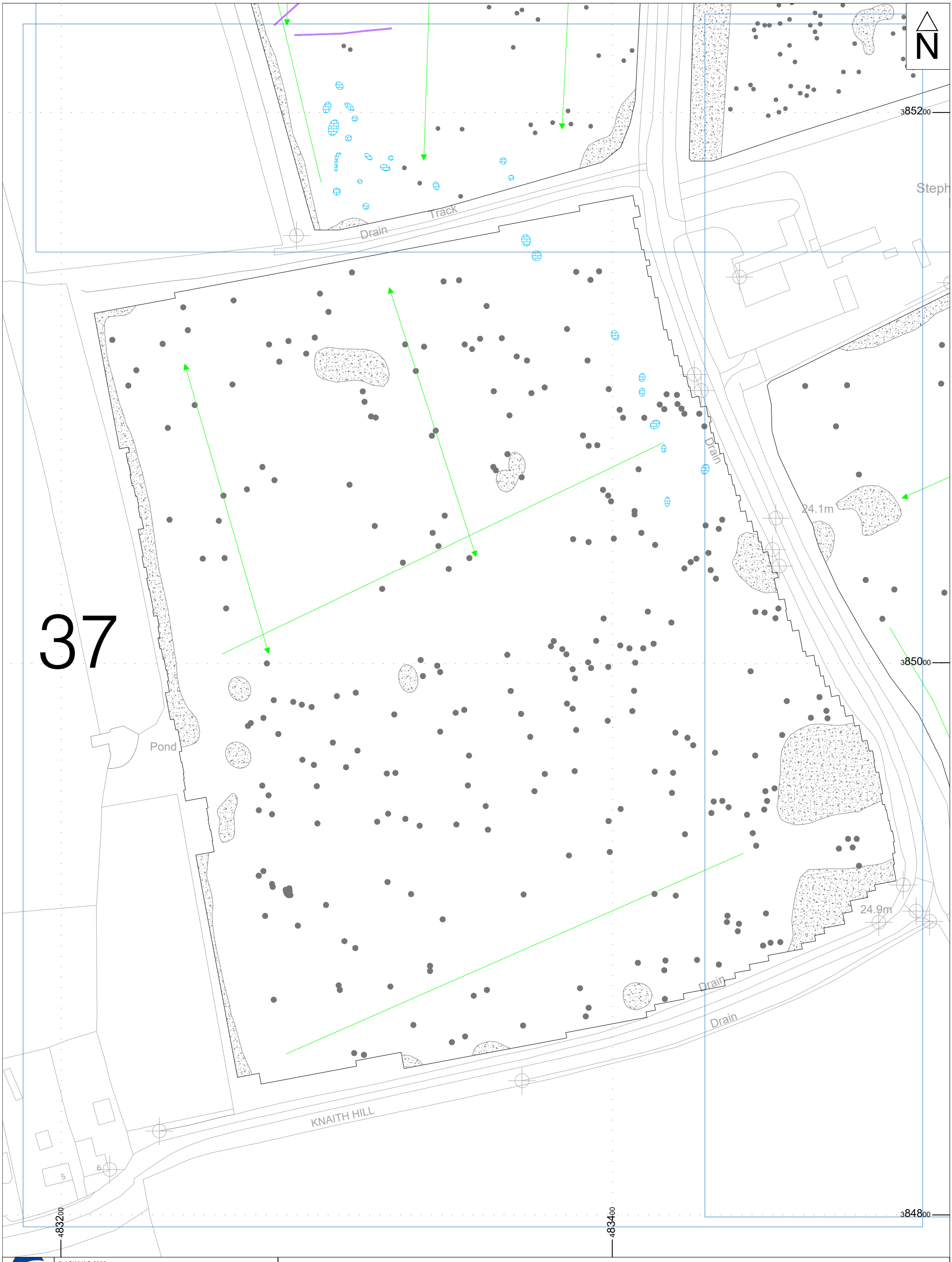
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 2

Fig. 12

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- AGRICULTURAL
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 3

Fig. 13

Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 3

Fig. 14

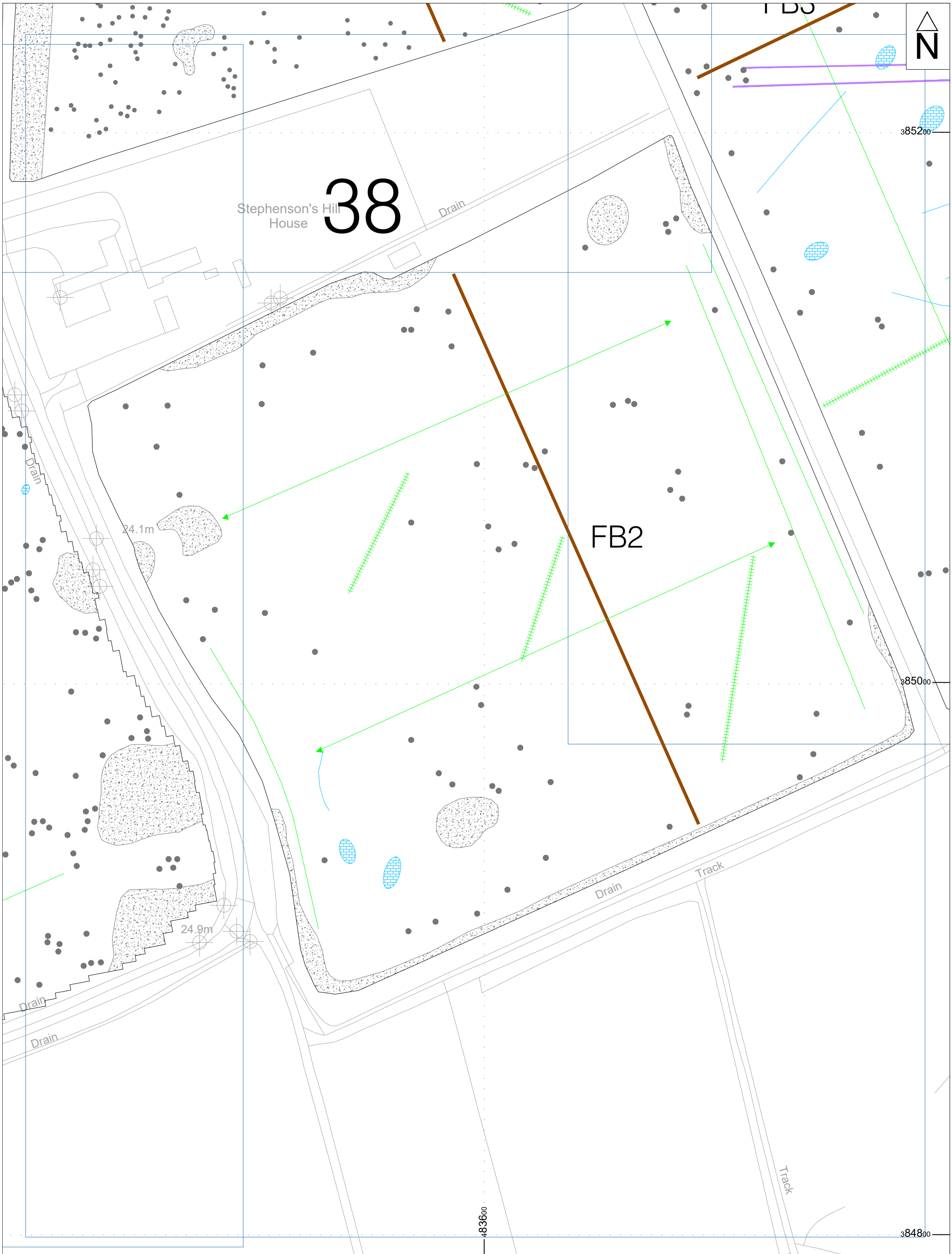
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 3

Fig. 15

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3

39

25.6m

Station House

ATION ROAD

Ley-ho
2[illegible] m

N

385400

483600

483800

484000

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 4

Fig. 16

Title

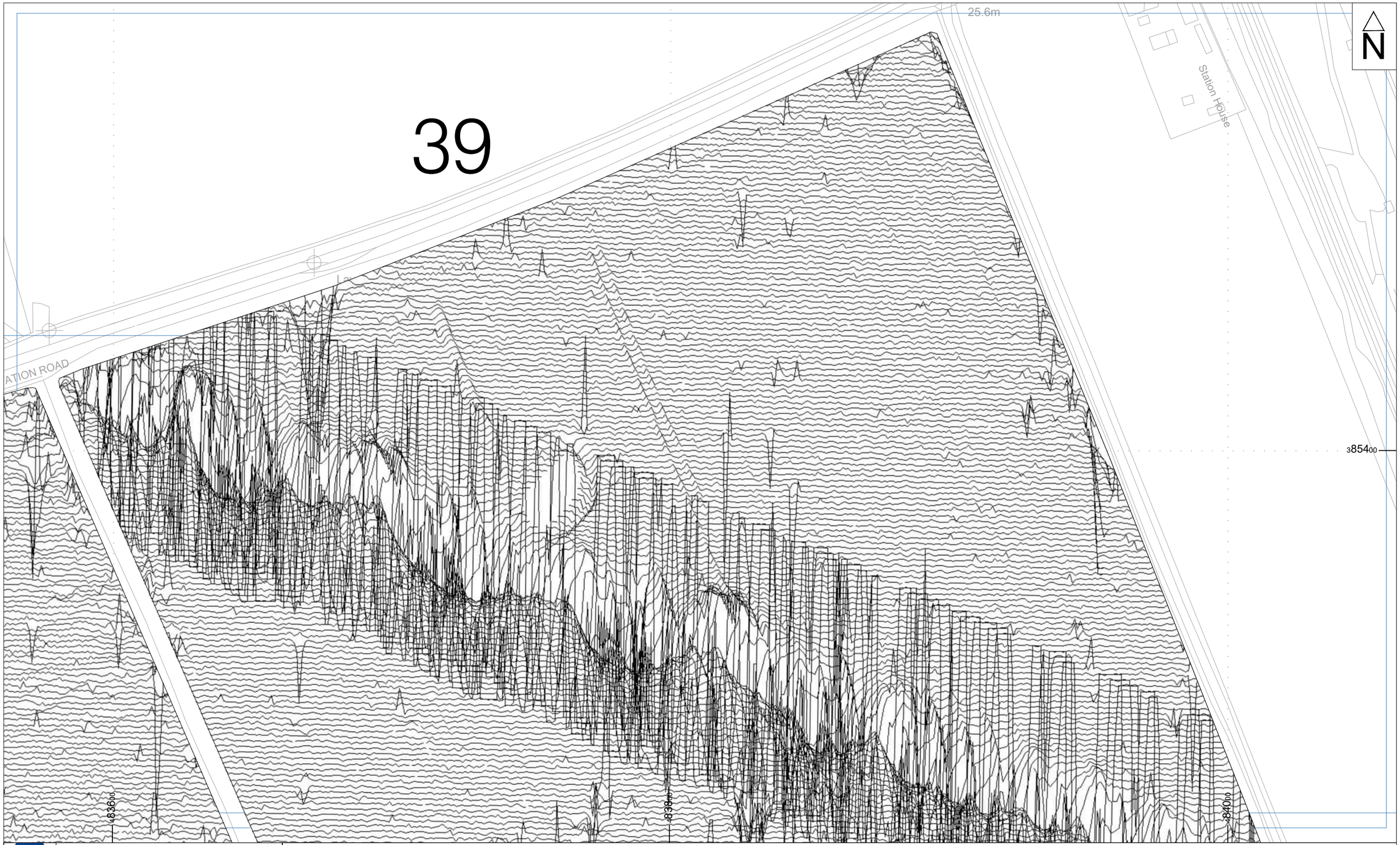
SECTOR BOUNDARY

-1.0 2.0
nT

0 50m

1:1250 @ A3

39



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 4

Fig. 17

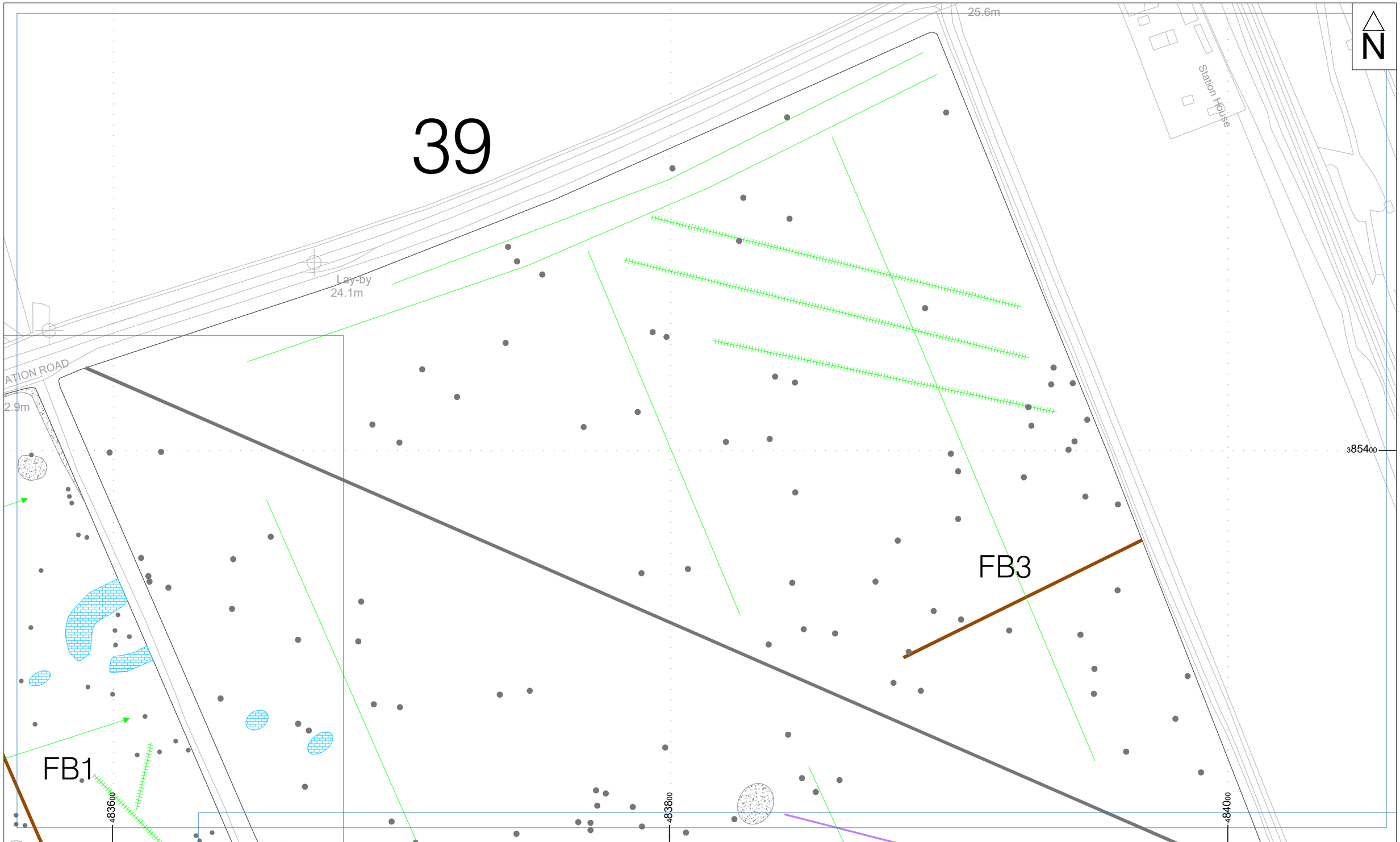
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 4

Fig. 18

Title

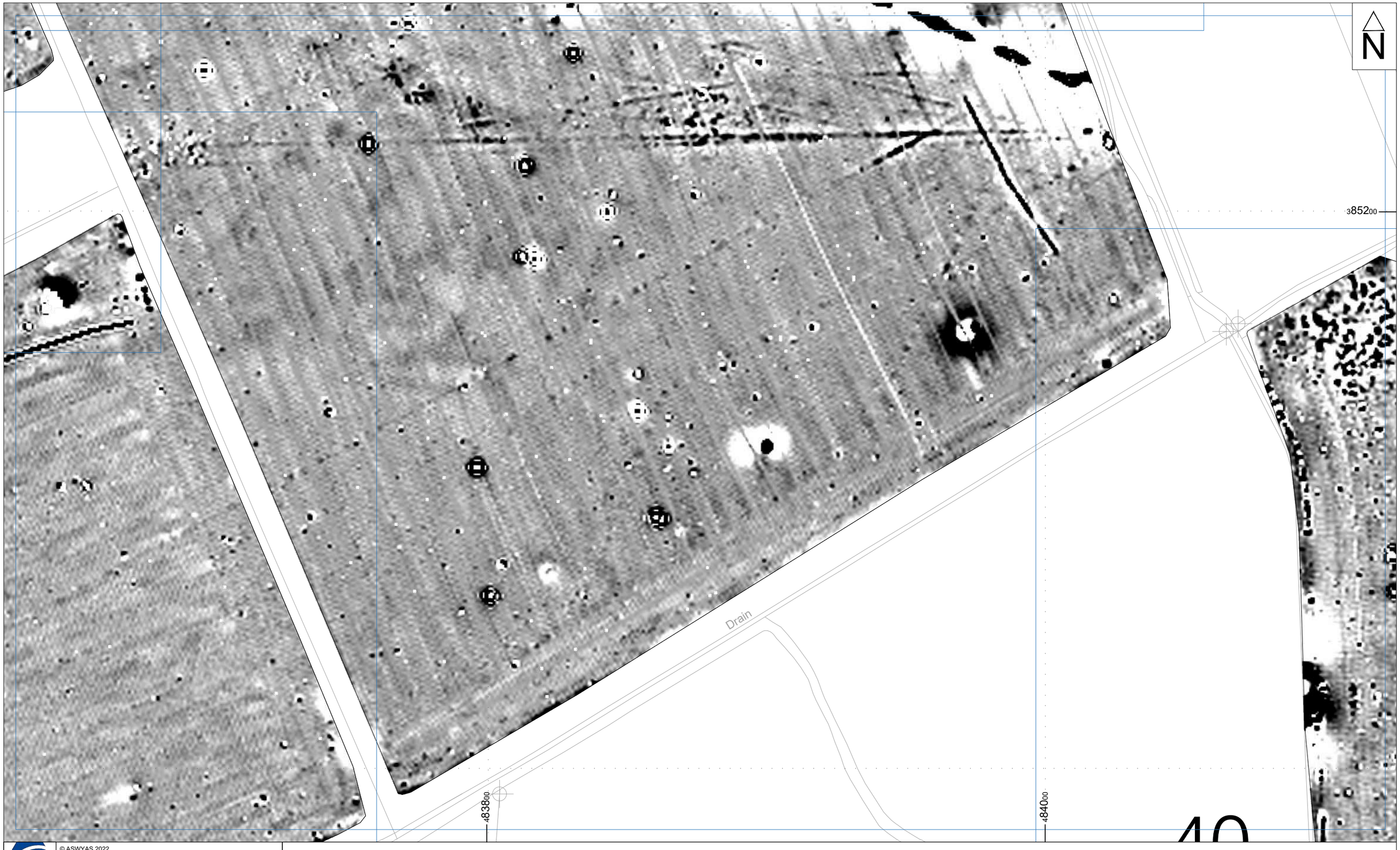
- SECTOR BOUNDARY

Interpretation

- FERROUS
- SERVICE PIPE
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 5

Fig. 19

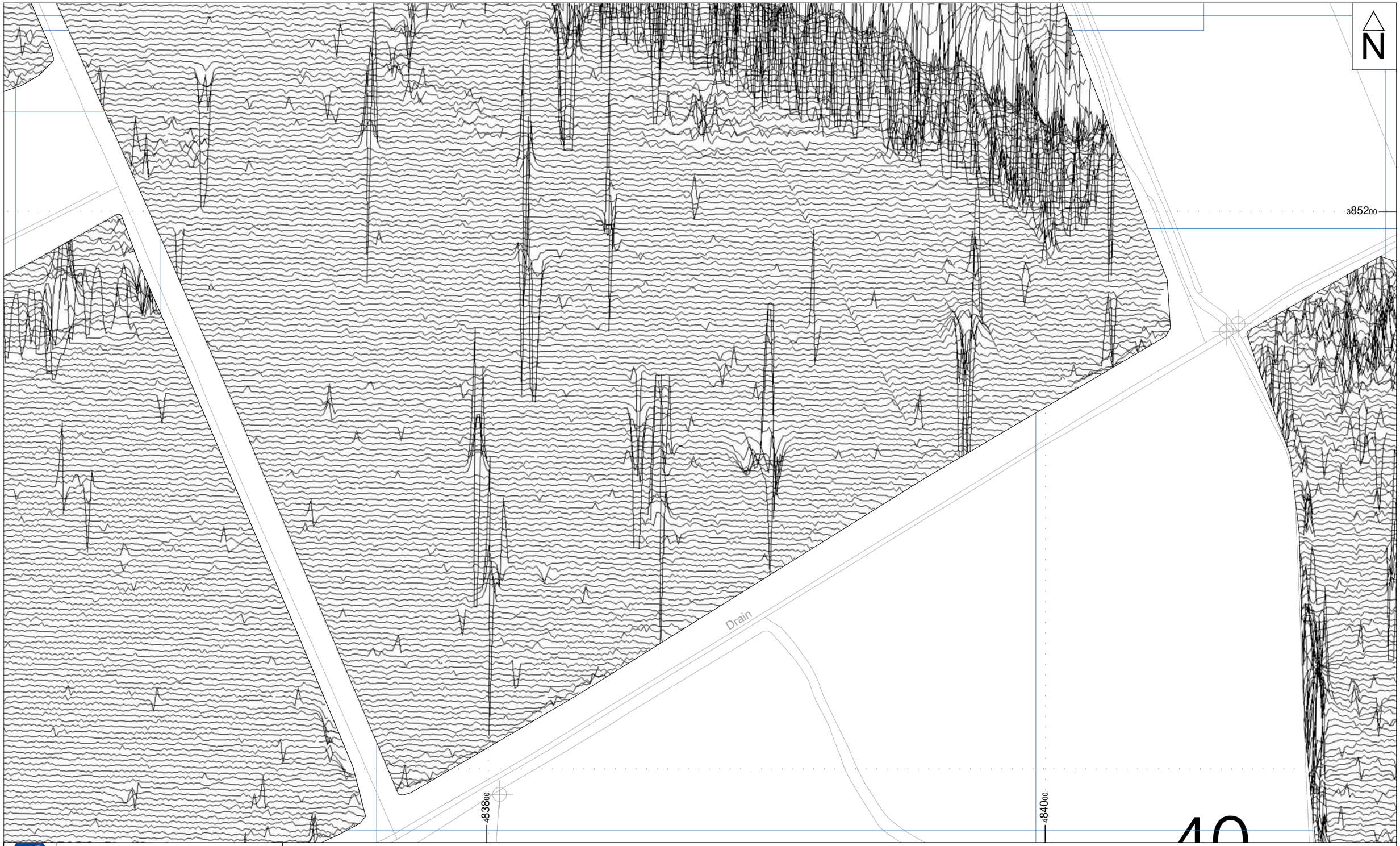
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 5

Fig. 20

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

FB3

U2

FB2

Drain

3852 00

4838 00

4840 00

N

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 5

Fig. 21

Title

SECTOR BOUNDARY

Interpretation

FERROUS	FIELD DRAIN	GEOLOGY
SERVICE PIPE	AGRICULTURAL	UNCERTAIN
MAGNETIC DISTURBANCE	FORMER FIELD BOUNDARY	

0 50m

1:1250 @ A3

N

40

MP 0.5

LC

384000

384800

384200

484000

© ASWYAS 2022.
Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 6

Fig. 22

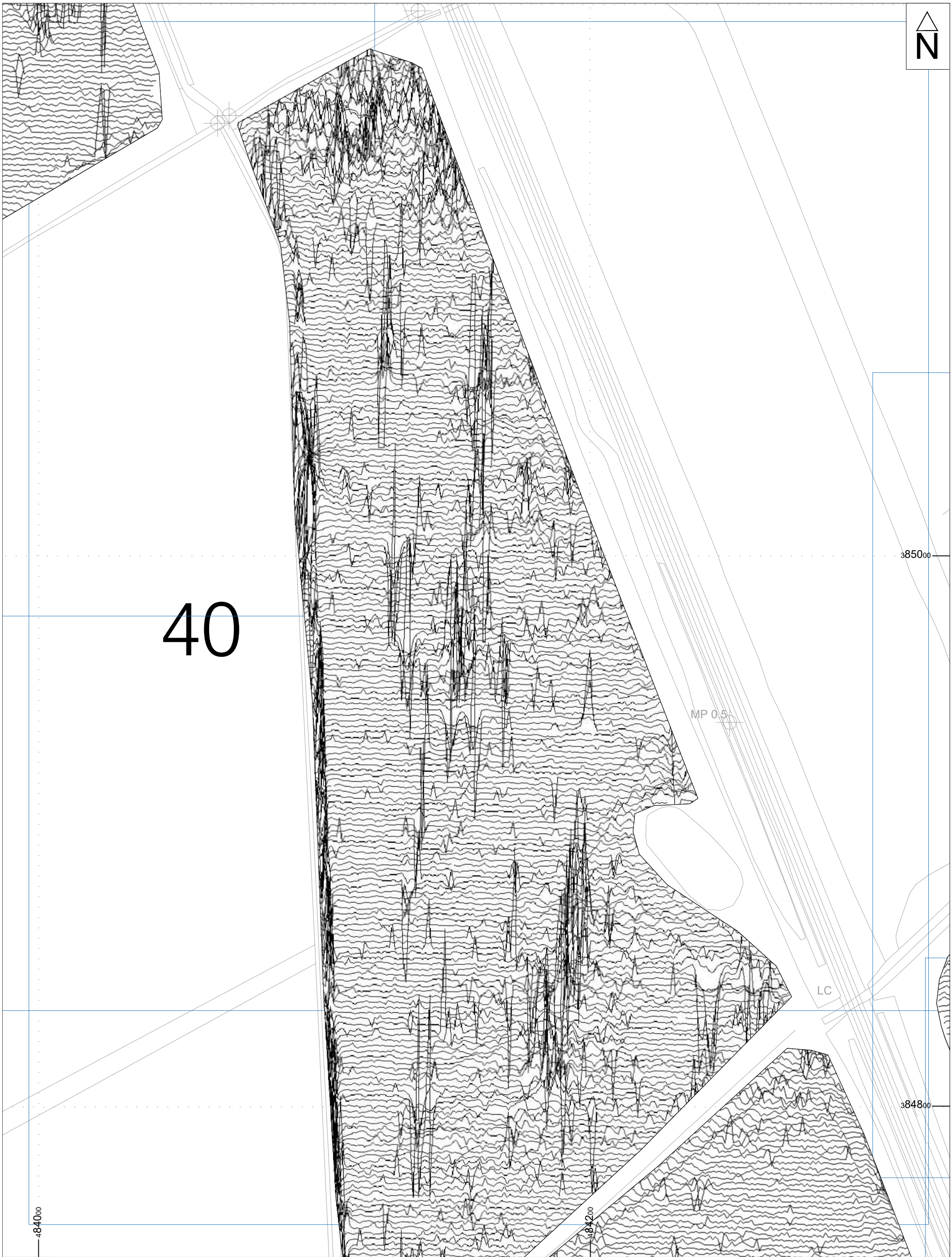
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 6

Fig. 23

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

N

40

SPRUCE WALK (TRACK)

U3

MP 0.5

LC

3850 00

3848 00

4840 00

4842 00

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 6

Fig. 24

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- AGRICULTURAL
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 7

Fig. 25

Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3

N

384800

384600

41

484000

484200

484400

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 7

Fig. 26

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

N

Drain

3848$_{00}$

3846$_{00}$

4840$_{00}$

4842$_{00}$

4844$_{00}$

MP 0035

41

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 7

Fig. 27

Title

- SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- AGRICULTURAL
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3

41

N

3844 00

4840 00

4842 00

4844 00

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 8

Fig. 28

Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3

41

N

3844 00

4840 00

4842 00

4844 00

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 8

Fig. 29

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

41

U4

SPRUCE WALK (TRACK)

MP 0.25

N

3844 00

4840 00

4842 00

4844 00

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 8

Fig. 30

Title

SECTOR BOUNDARY

Interpretation

FERROUS

MAGNETIC DISTURBANCE

FIELD DRAIN

AGRICULTURAL

UNCERTAIN

0 50m

1:1250 @ A3

42

Track

Drain

17.0m

N

3850 00

3848 00

4844 00

4846 00

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 9

Fig. 31

Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3

42

N

Track

Drain

17.0m

3850 00

3848 00

4844 00

4846 00

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 9

Fig. 32

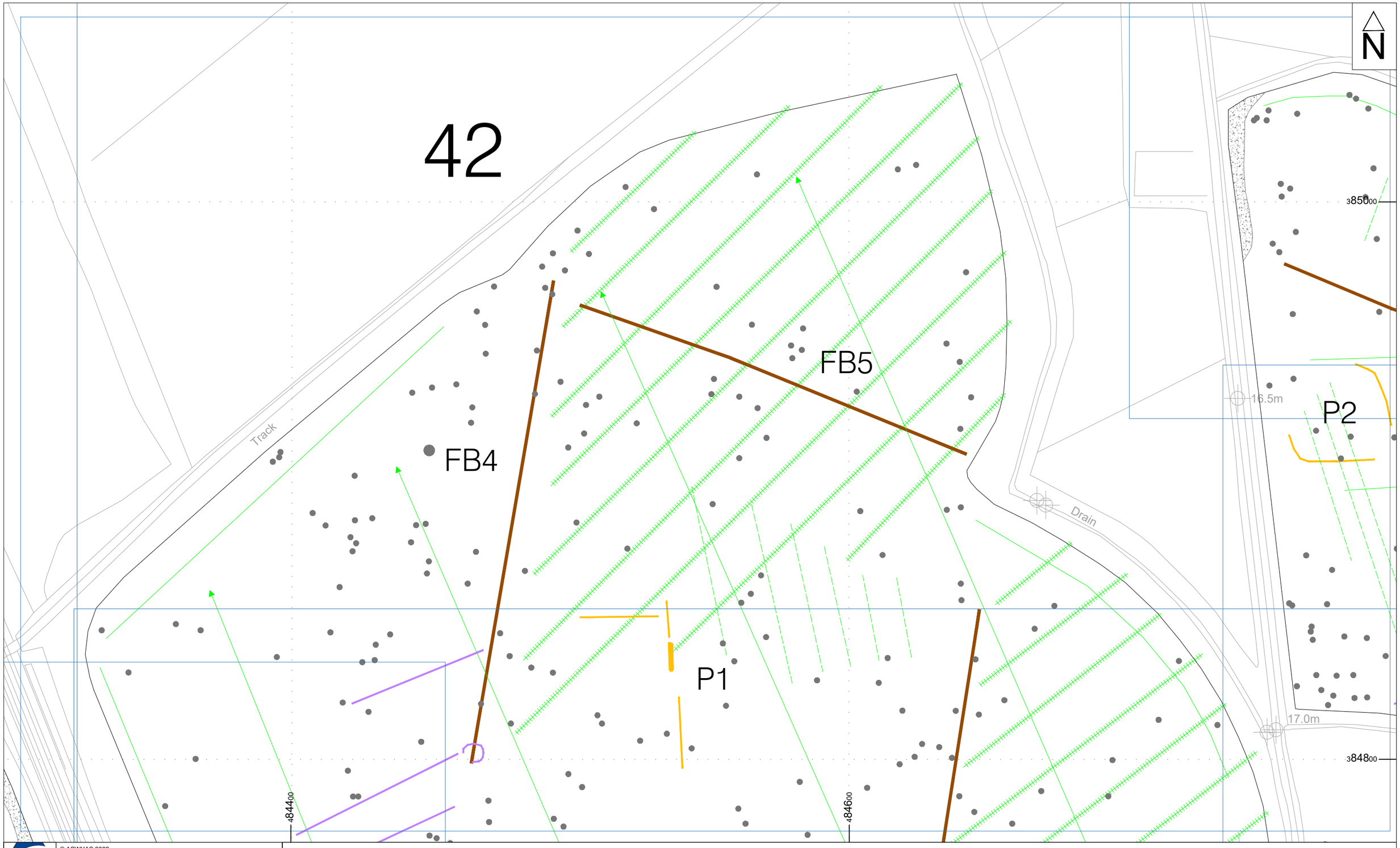
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 9

Fig. 33

Title

- SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- UNCERTAIN
- ARCHAEOLOGY?

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 10

Fig. 34

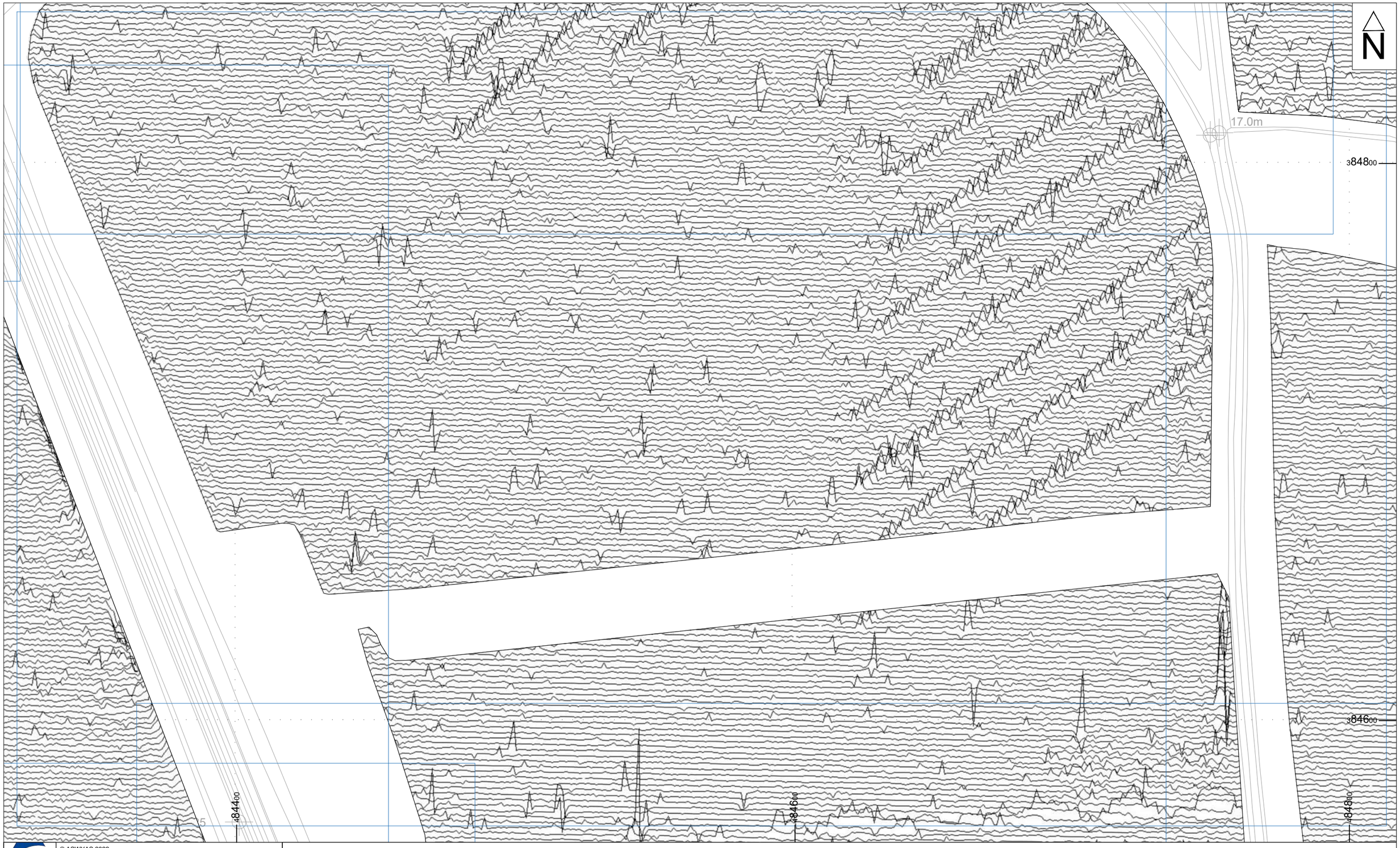
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 10

Fig. 35

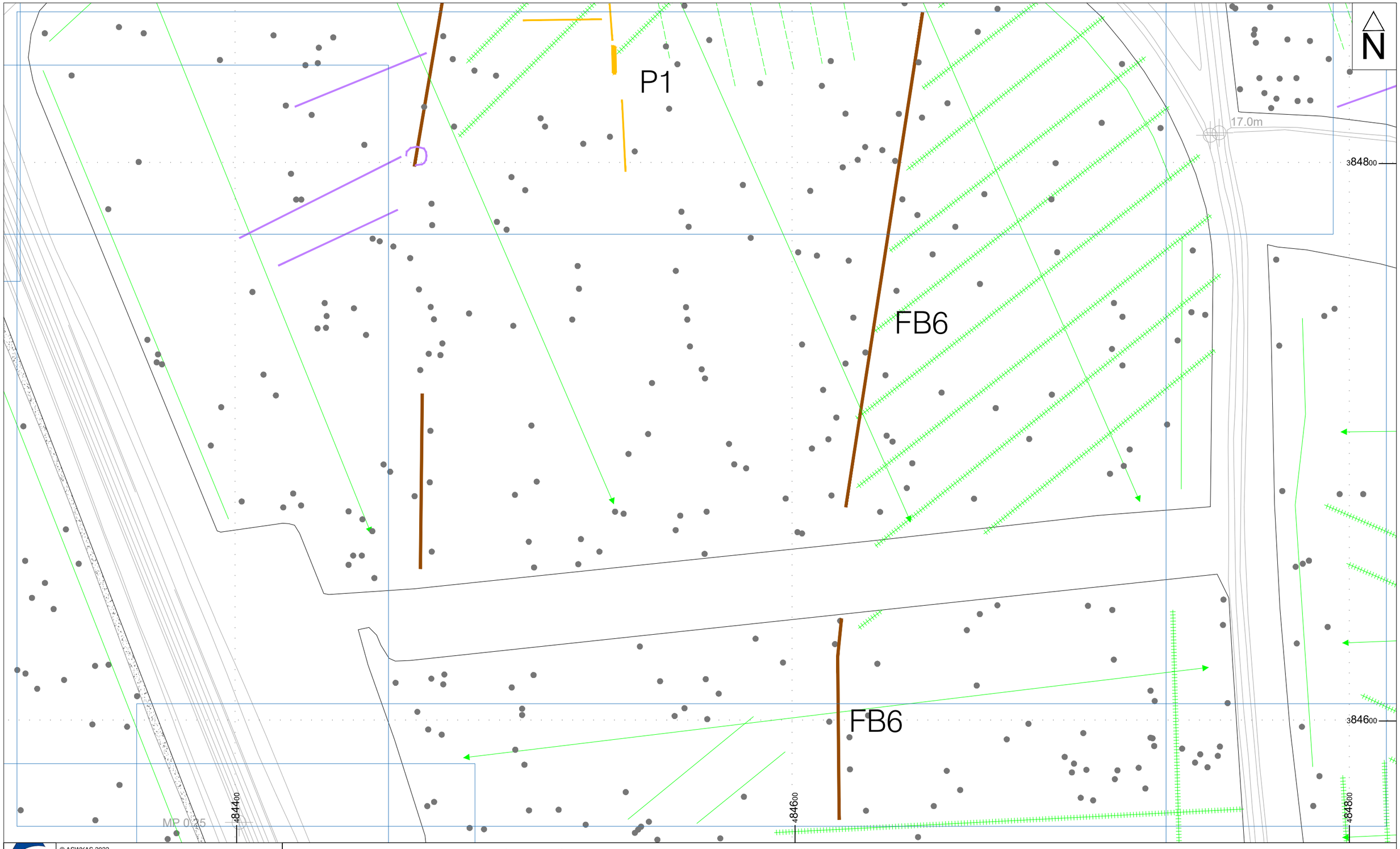
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 10

Fig. 36

Title

- SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- UNCERTAIN
- ARCHAEOLOGY?

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 11

Fig. 37

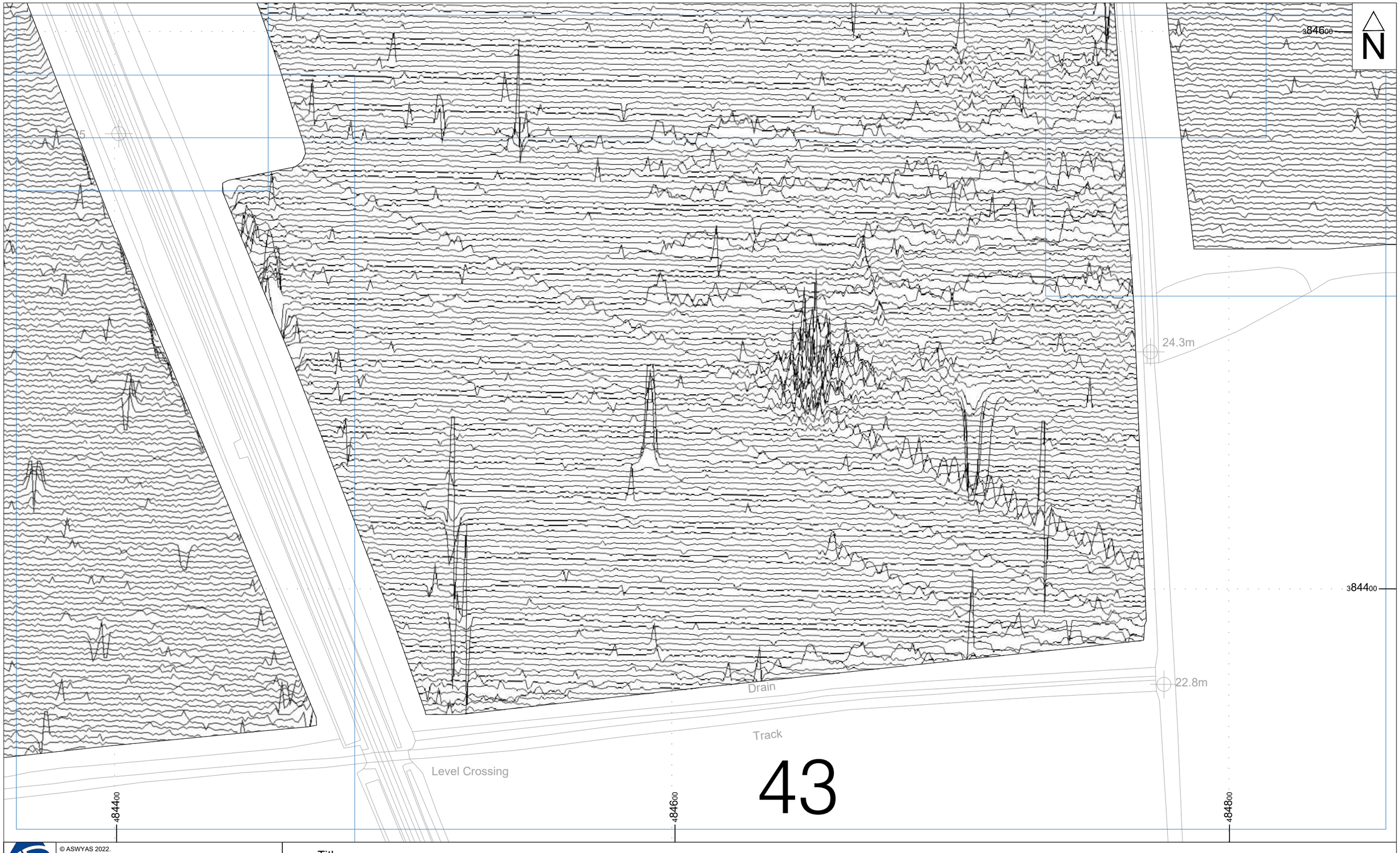
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 11

Fig. 38

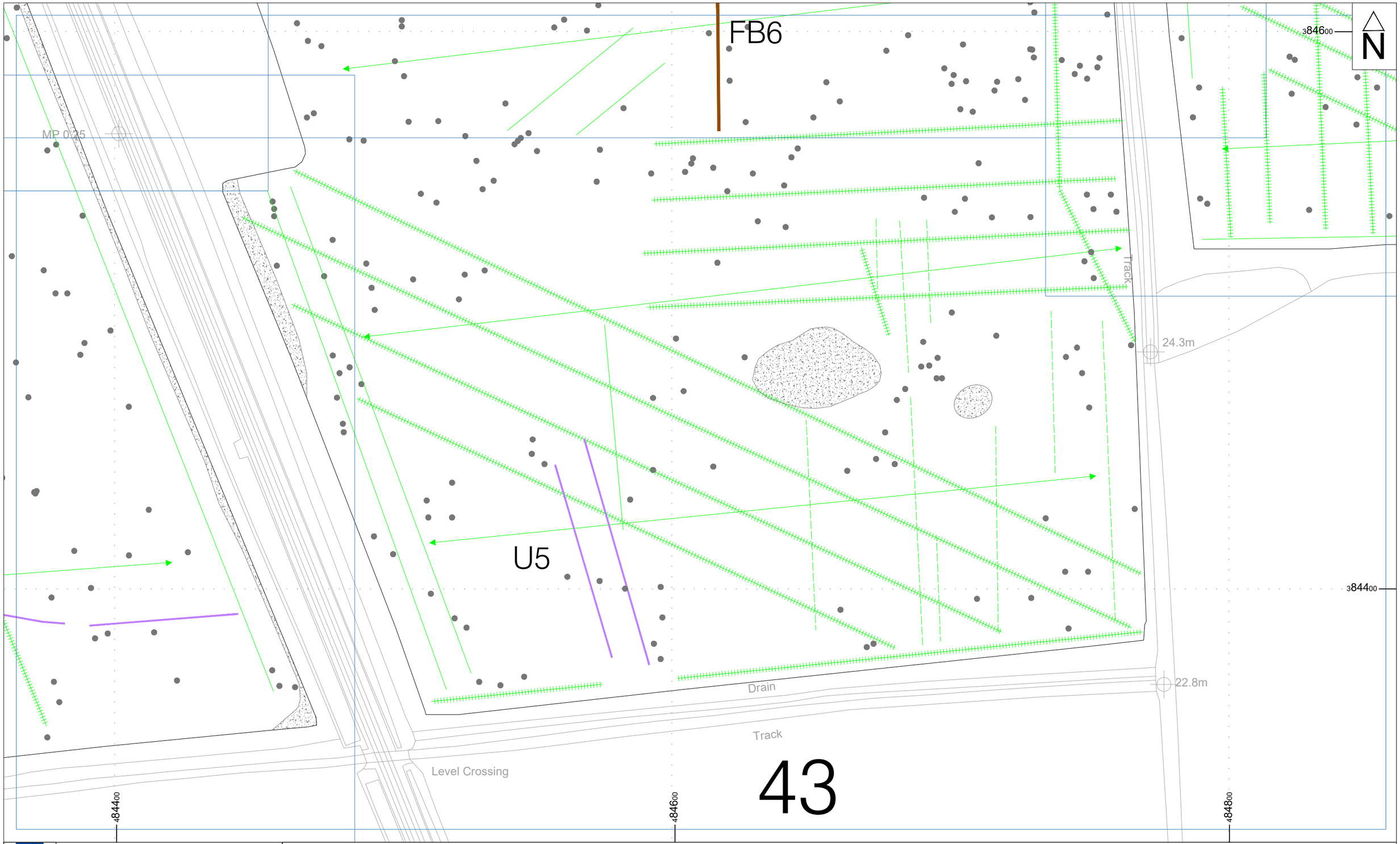
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 11

Fig. 39

Title

- SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE & FURROW
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- UNCERTAIN

0 50m

1:1250 @ A3

N

17.0m

Drain

Pond

3848^{00}

3846^{00}

4858^{00}

4850^{00}

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 12

Fig. 40

Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 12

Fig. 41

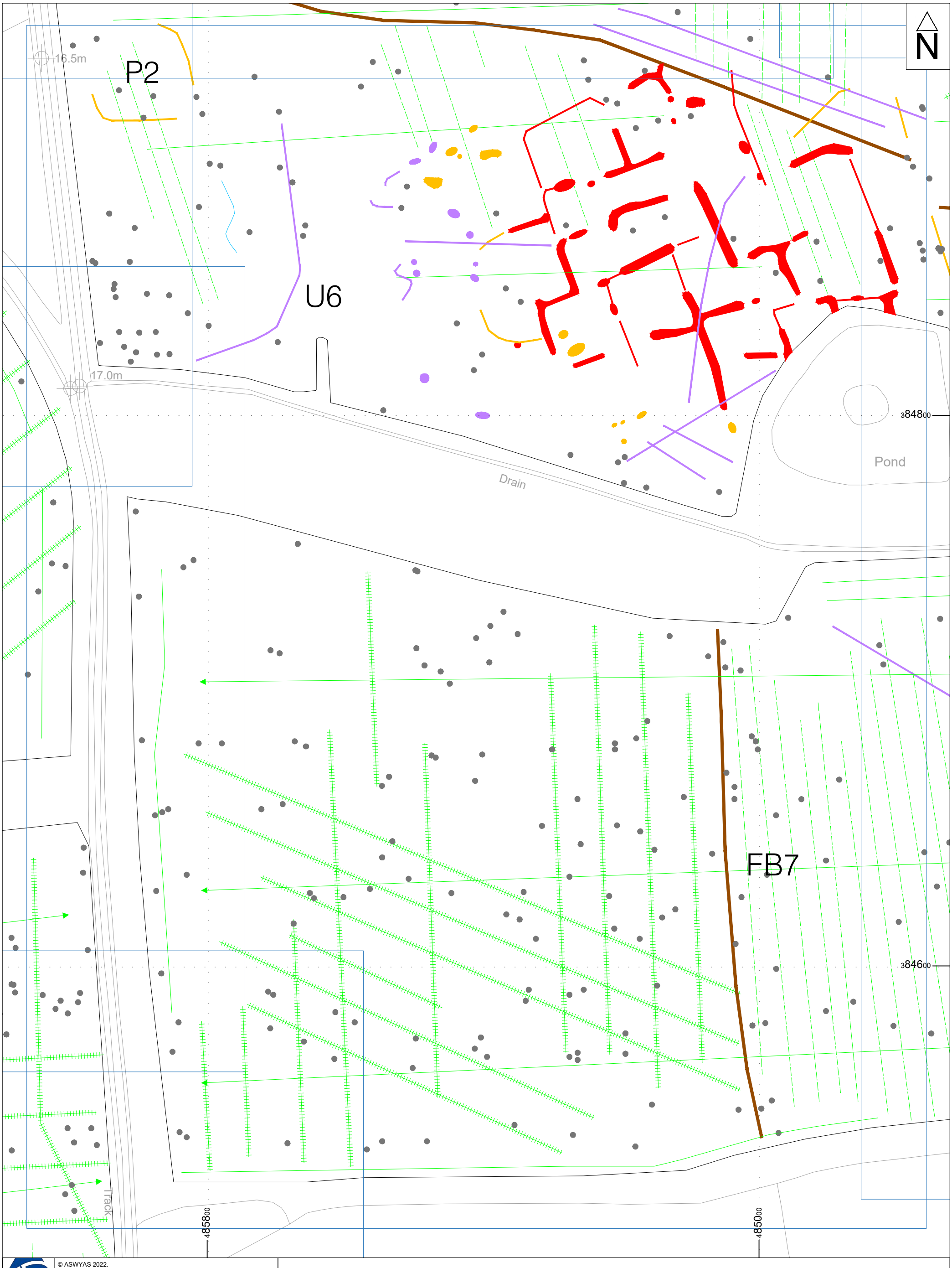
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 12

Fig. 42

Interpretation

FERROUS	RIDGE AND FURROW	UNCERTAIN
MAGNETIC DISTURBANCE	AGRICULTURAL	ARCHAEOLOGY?
FIELD DRAIN	FORMER FIELD BOUNDARY	ARCHAEOLOGY

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 13

Fig. 43

Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 13

Fig. 44

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

45

44

N

FB9

FB8

1.22m RH

1.22m Tk H

Pond

384800

384600

385200

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 13

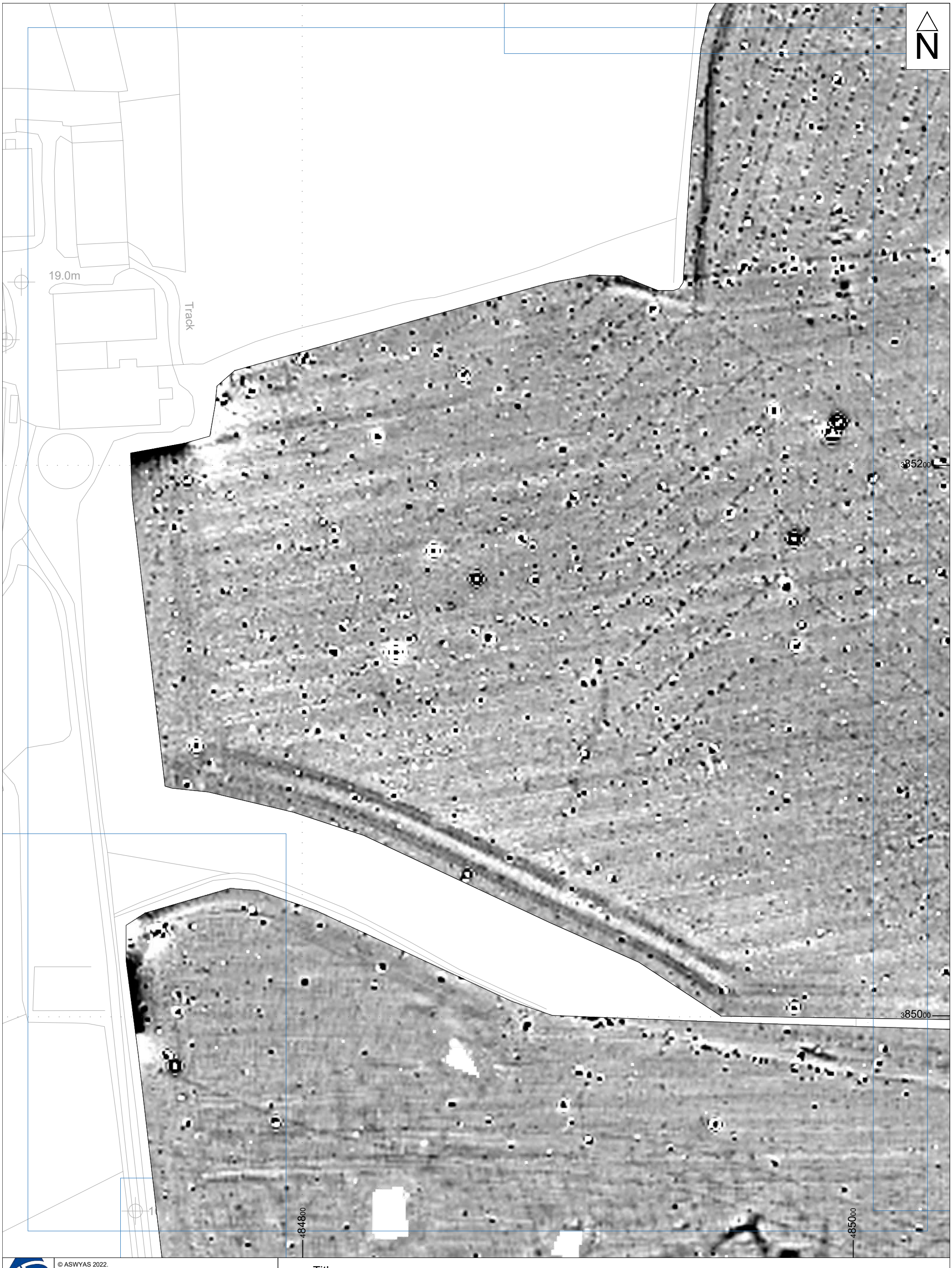
Fig. 45

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE AND FURROW
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- UNCERTAIN
- ARCHAEOLOGY?
- ARCHAEOLOGY

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 14

Fig. 46

Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 14

Fig. 47

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

N

19.0m

Track

FB12

U7

3852 00

Drain

3850 00

FB10

16.5m

P2

4848 00

4850 00

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 14

Fig. 48

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE AND FURROW
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- UNCERTAIN
- ARCHAEOLOGY?
- ARCHAEOLOGY

0 50m

1:1250 @ A3

N

46

45

3852 00

3850 00

4850 00

4852 00

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 15

Fig. 49

Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3

N

3852 00

46

3850 00

45

4850 00

4852 00

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 15

Fig. 50

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

N

3852$_{00}$

46

ETL

FB11

3850$_{00}$

4850$_{00}$

4852$_{00}$

45

© ASWYAS 2022.
Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 15

Fig. 51

Interpretation

FERROUS	RIDGE AND FURROW
MAGNETIC DISTURBANCE	AGRICULTURAL
FIELD DRAIN	FORMER FIELD BOUNDARY

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 16

Fig. 52

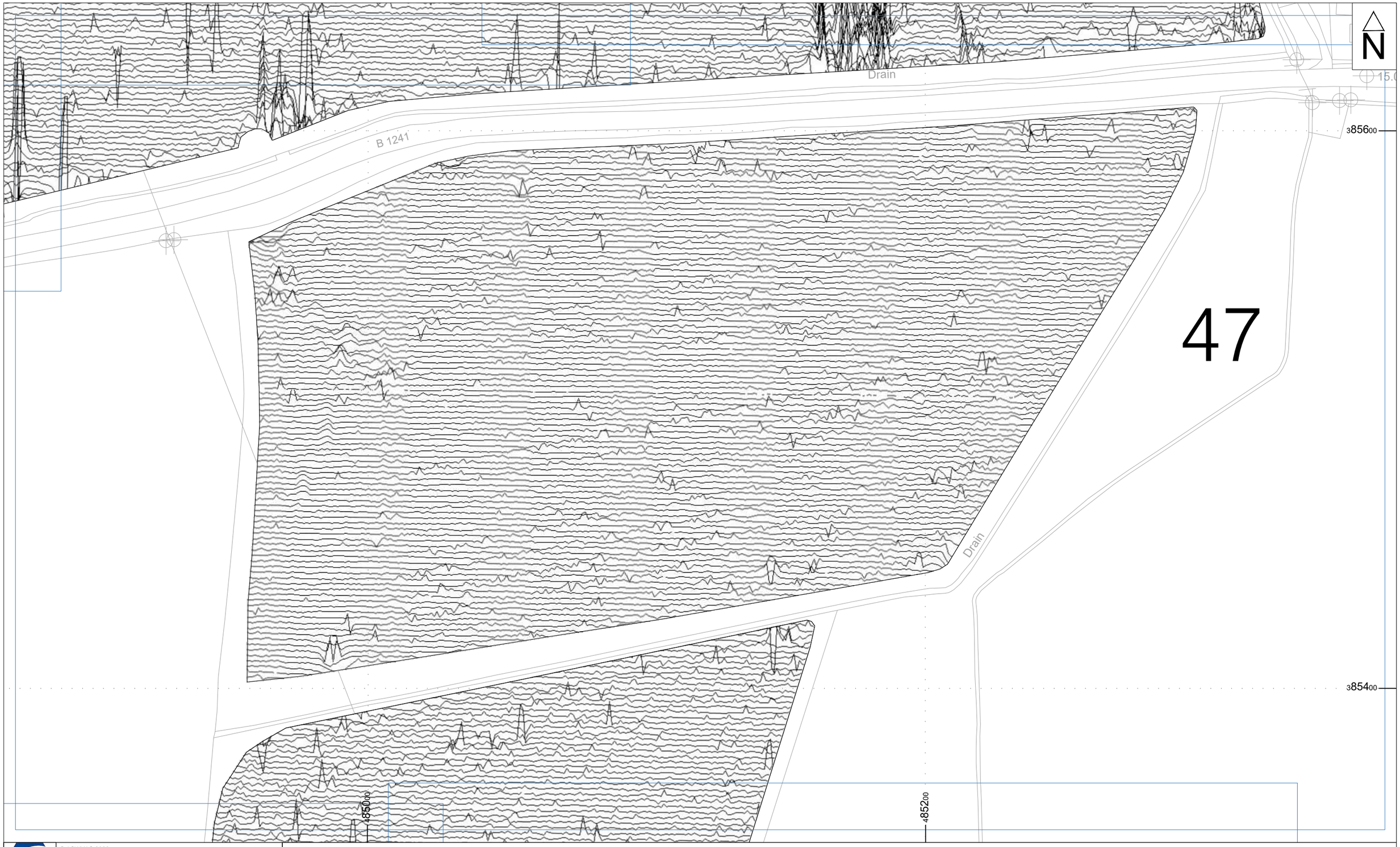
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 16

Fig. 53

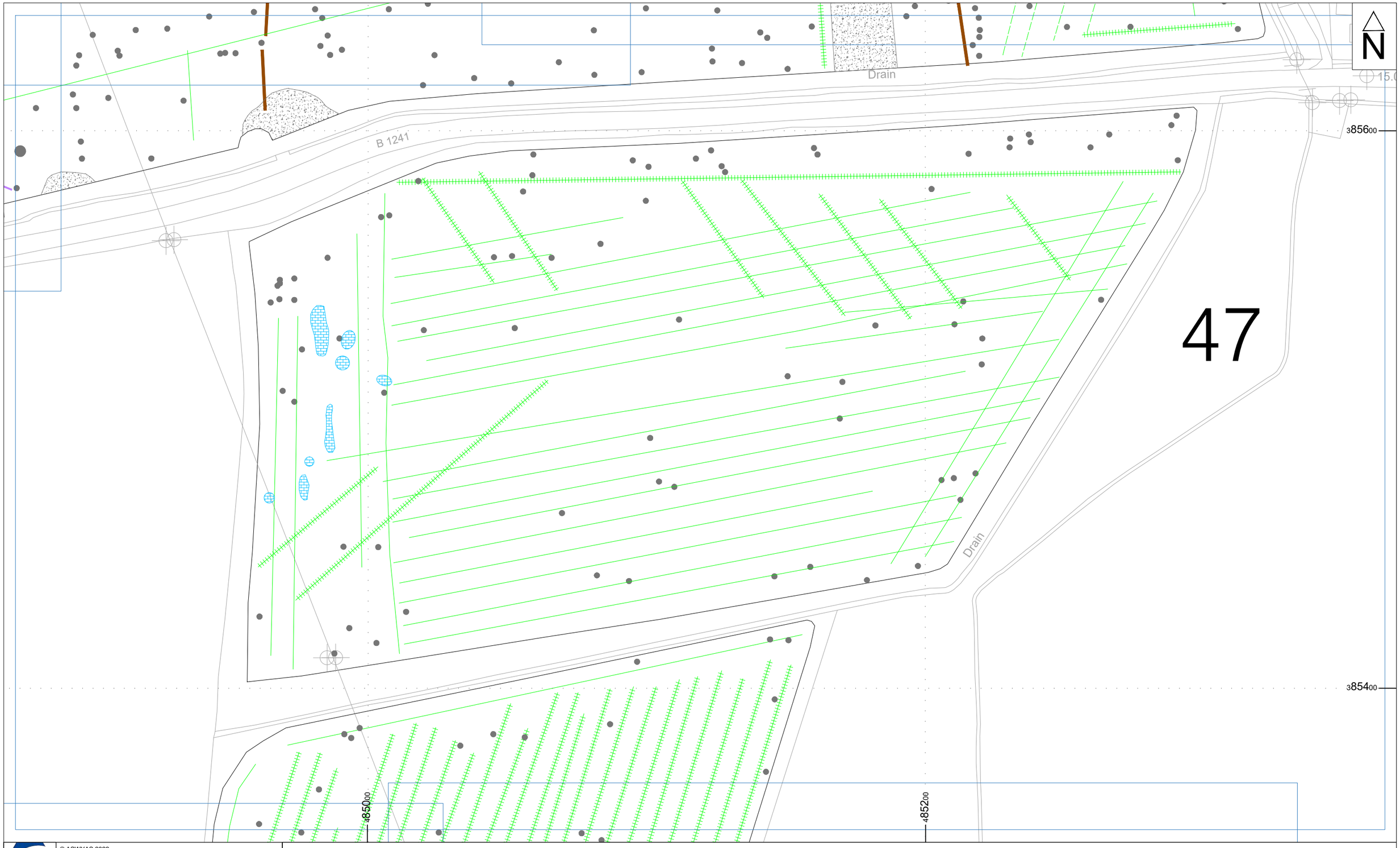
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 16

Fig. 54

Title

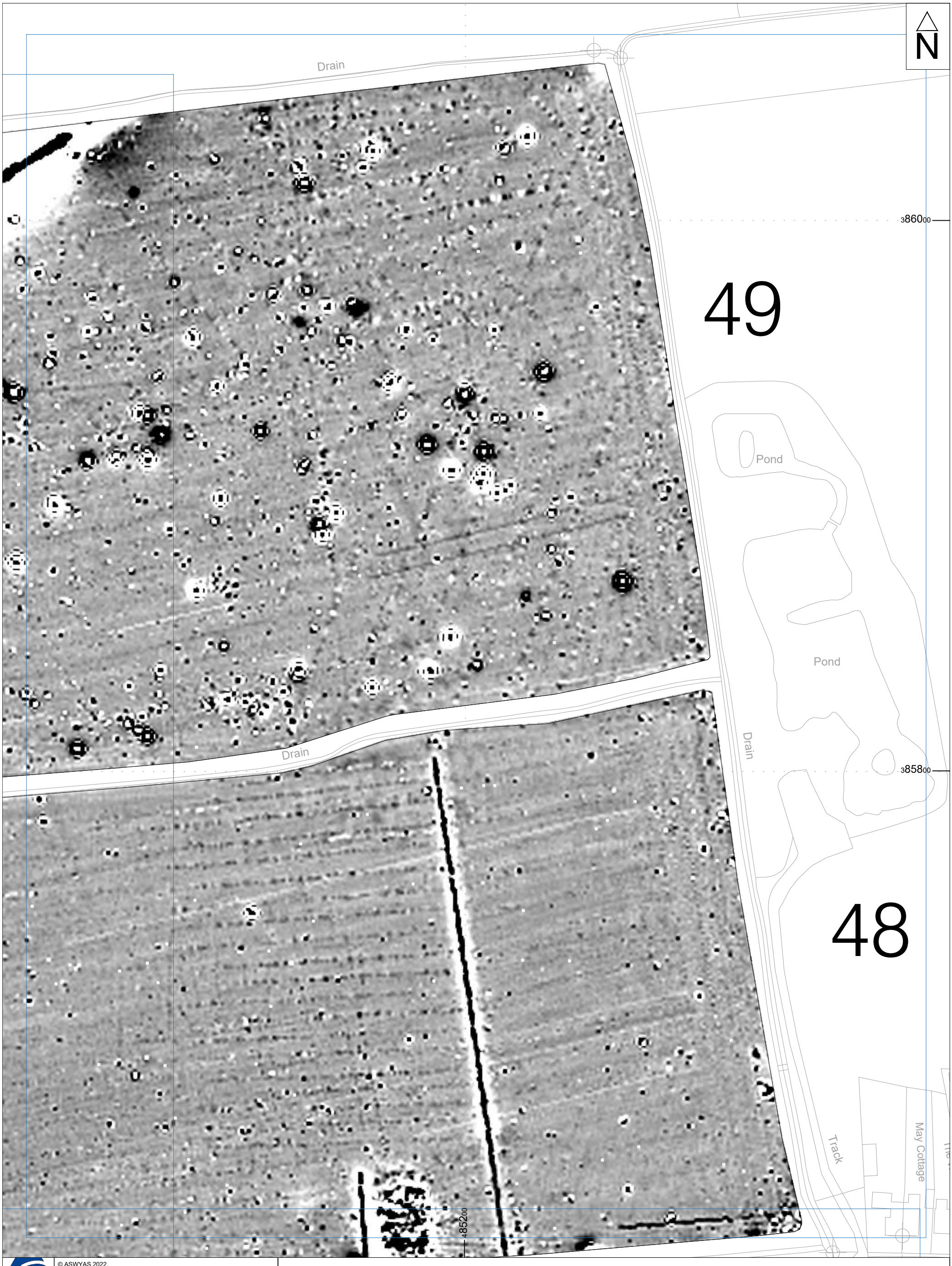
- SECTOR BOUNDARY

Interpretation

- FERROUS
- AGRICULTURAL
- MAGNETIC DISTURBANCE
- FORMER FIELD BOUNDARY
- FIELD DRAIN
- GEOLOGY

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 17

Fig. 55

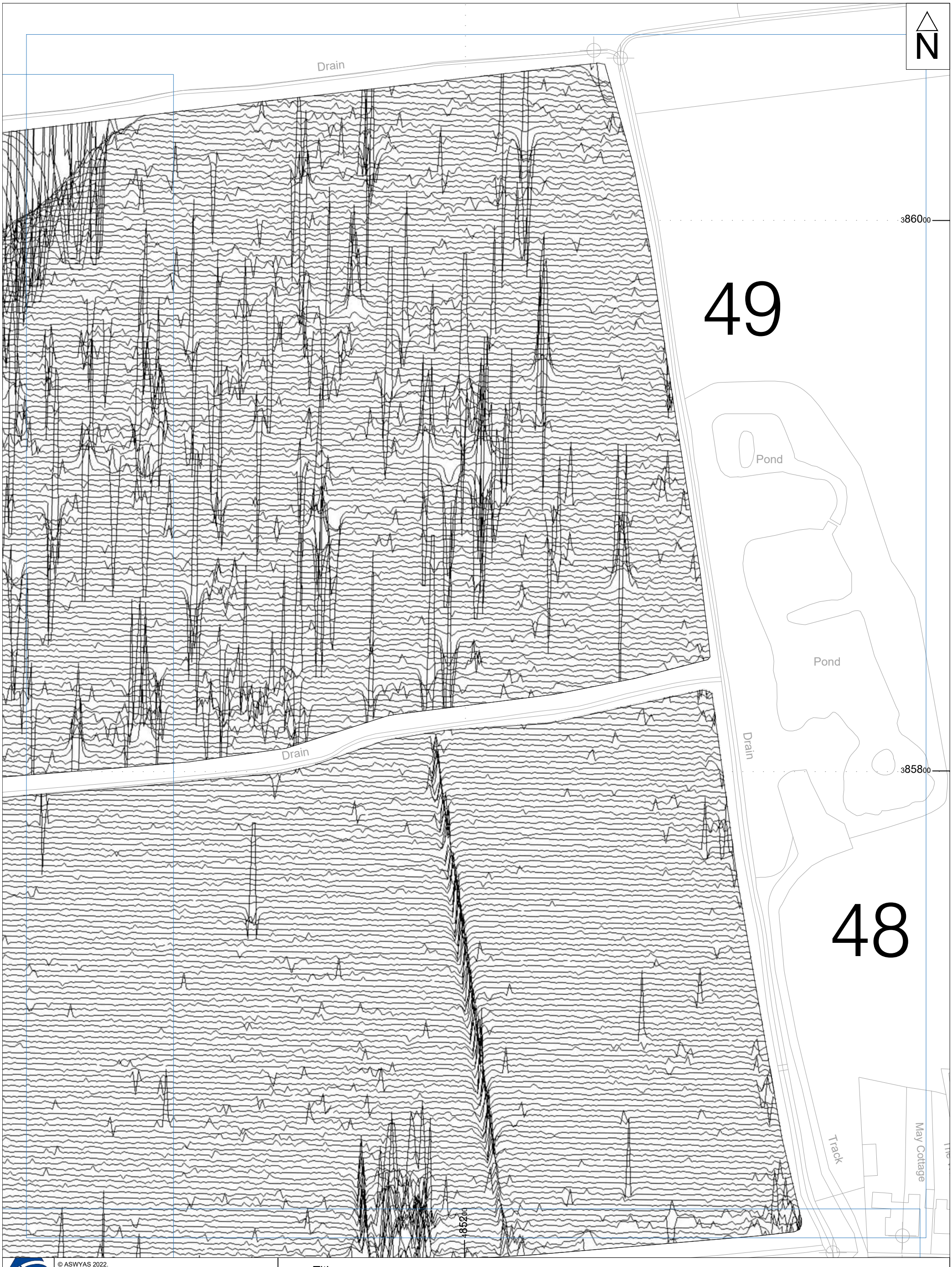
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 17

Fig. 56

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

N

Drain

3860 00

49

Pond

Pond

Drain

Drain

3858 00

U8

FB13

48

Track

May Cottage

4852 00

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 17

Fig. 57

Interpretation

- FERROUS
- SERVICE PIPE
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE AND FURROW
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- UNCERTAIN

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 18

Fig. 58

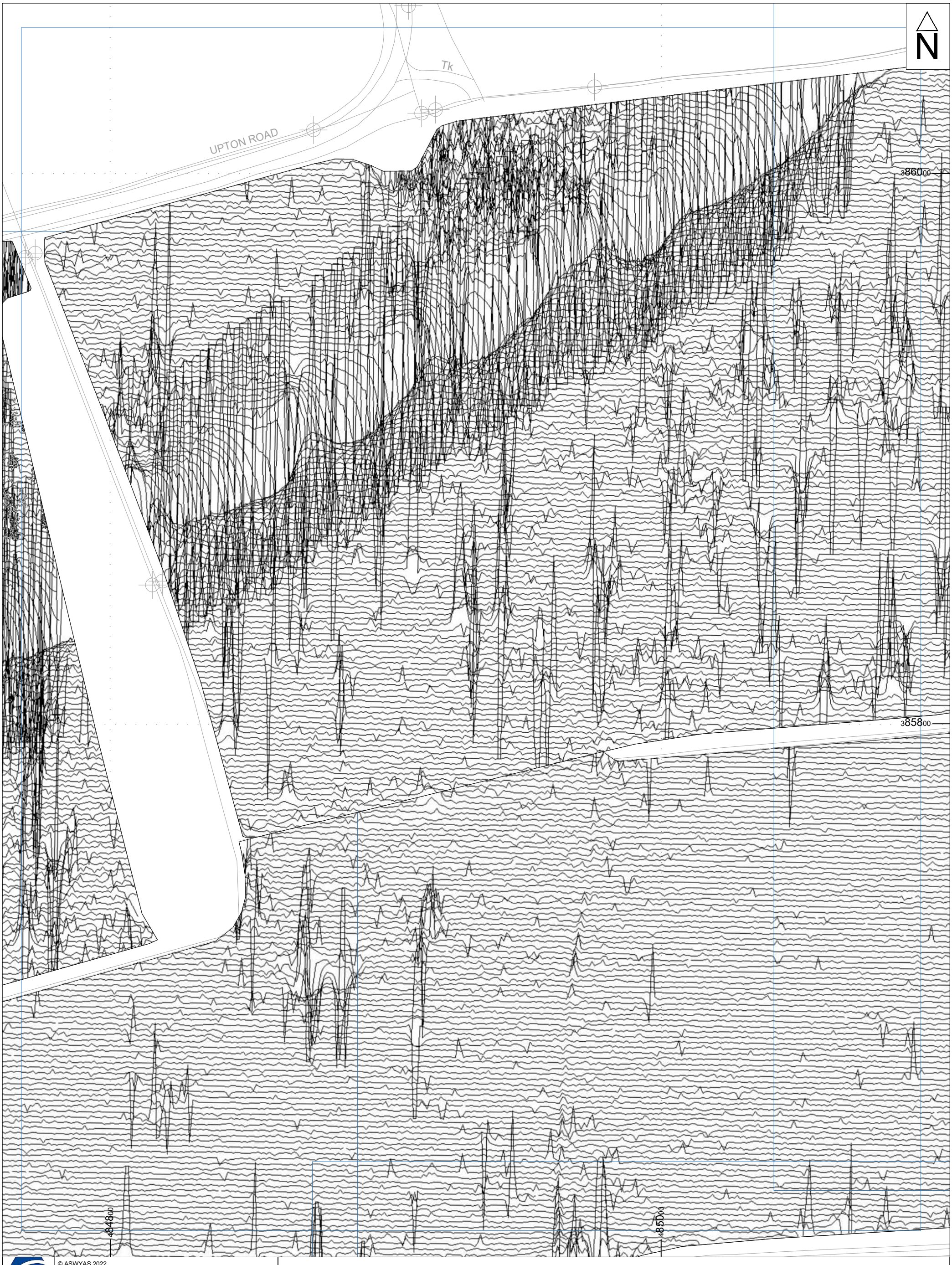
Title

SECTOR BOUNDARY

-1.0 2.0
nT

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 18

Fig. 59

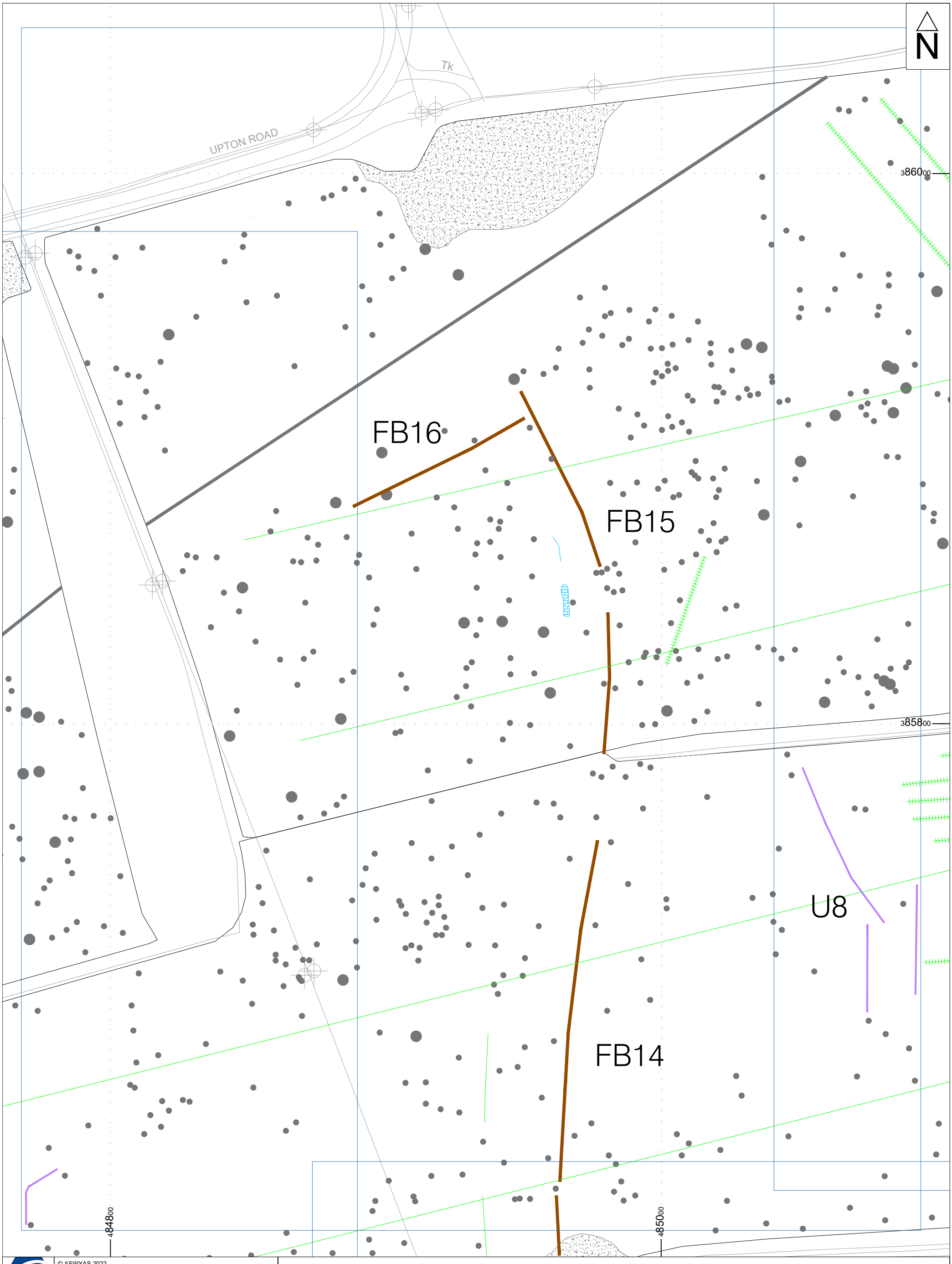
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 18

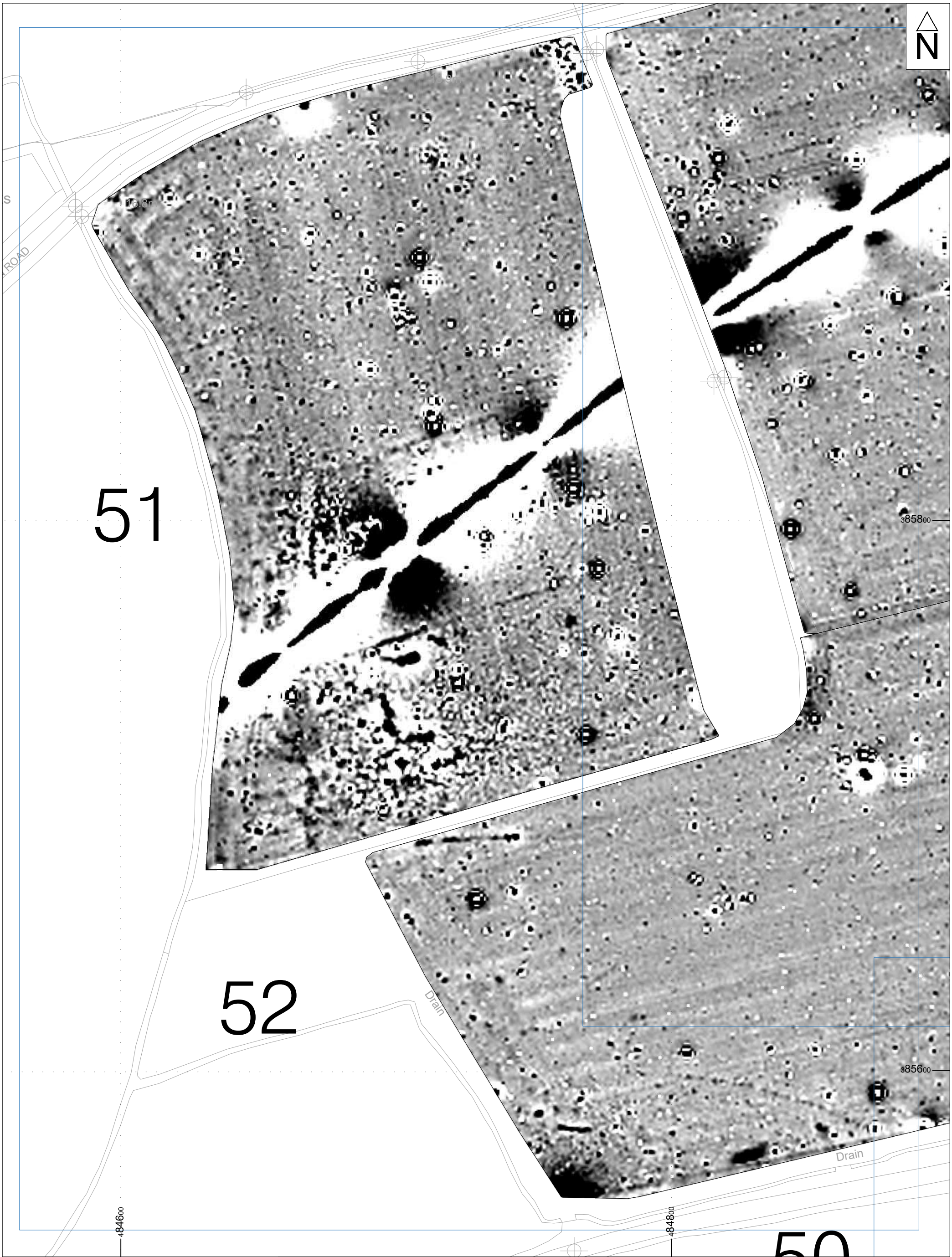
Fig. 60

Interpretation

- FERROUS
- SERVICE PIPE
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 19

Fig. 61

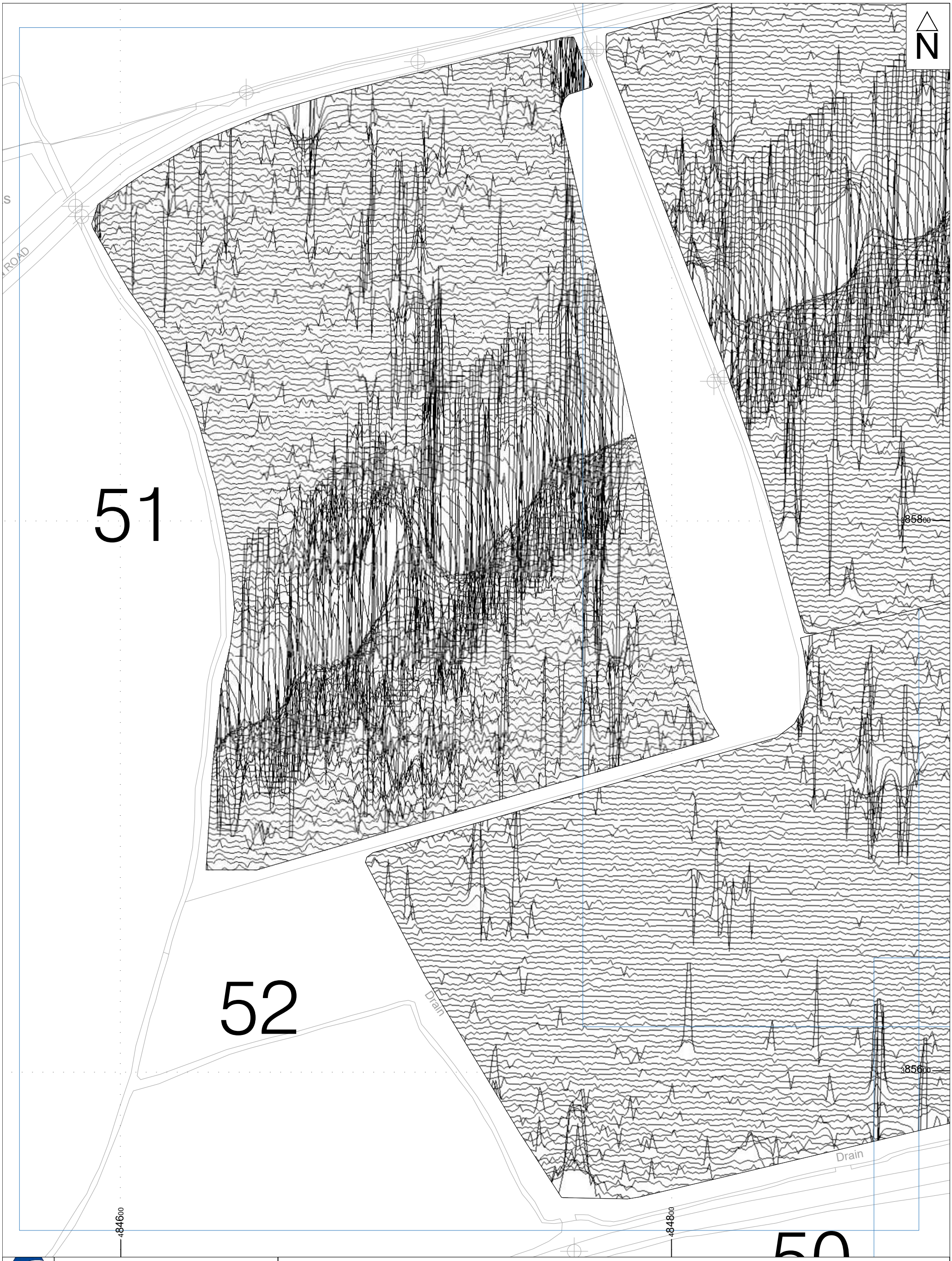
Title

SECTOR BOUNDARY

-1.0 2.0
nT

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 19

Fig. 62

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

N

18.9m

16.8m

S

ROAD

51

U9

U9

52

Drain

U10

Drain

3858 00

3856 00

4846 00

4848 00

50

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 19

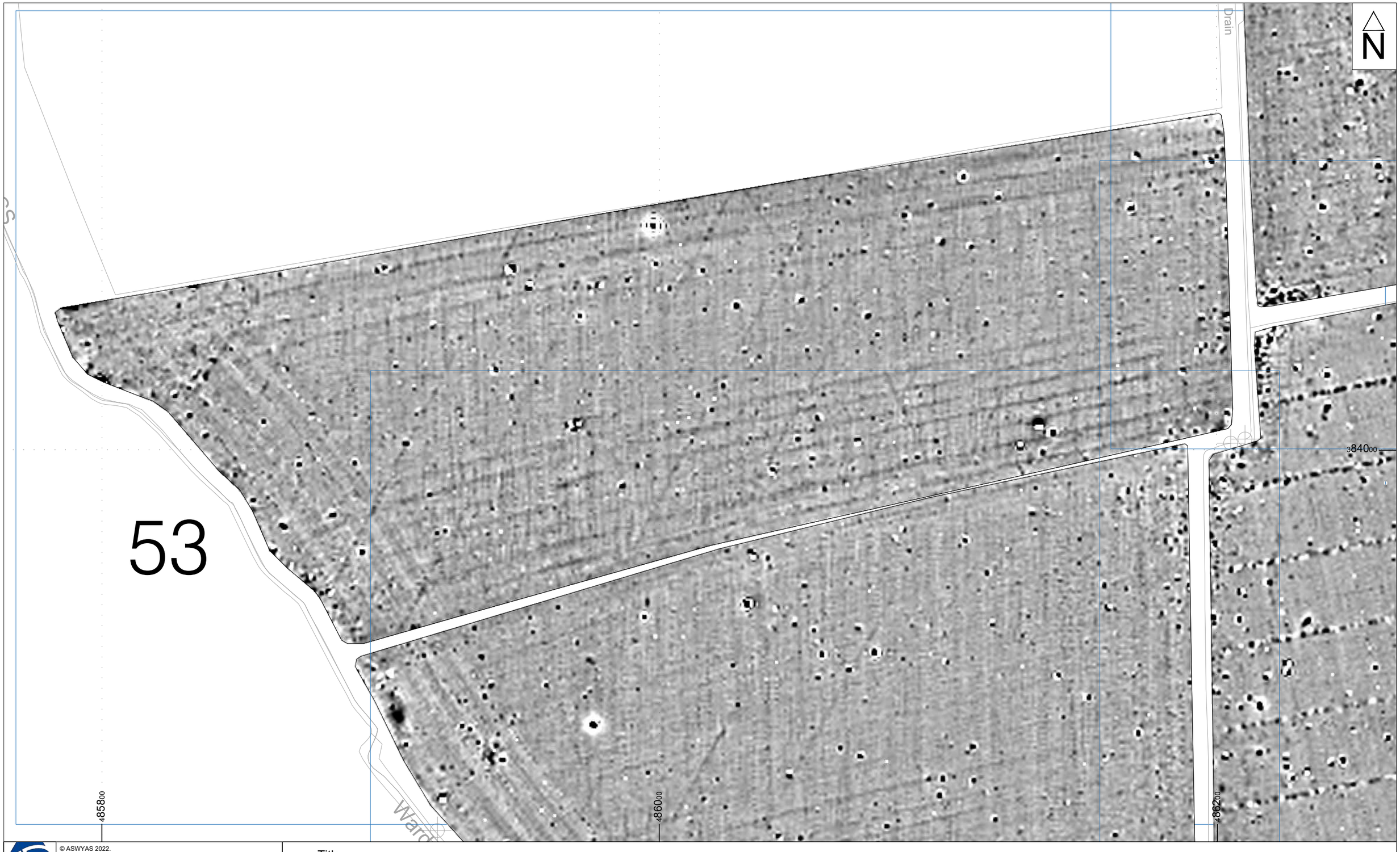
Fig. 63

Interpretation

FERROUS	FIELD DRAIN
SERVICE PIPE	AGRICULTURAL
MAGNETIC DISTURBANCE	UNCERTAIN

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 20

Fig. 64

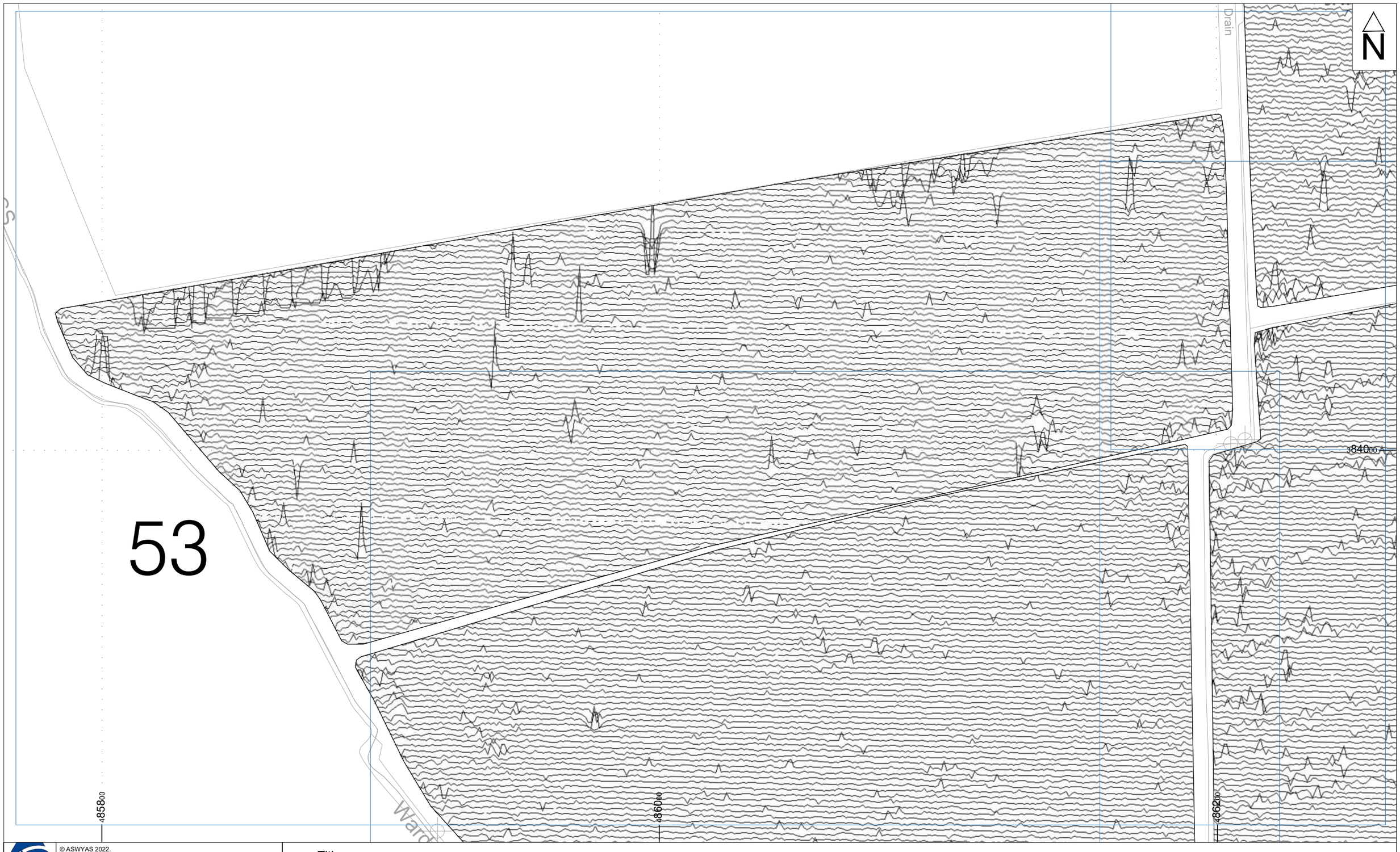
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 20

Fig. 65

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

53

Drain

N

384000

858000

860000

862000

Ward

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 20

Fig. 66

Title

SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE & FURROW
- AGRICULTURAL
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 21

Fig. 67

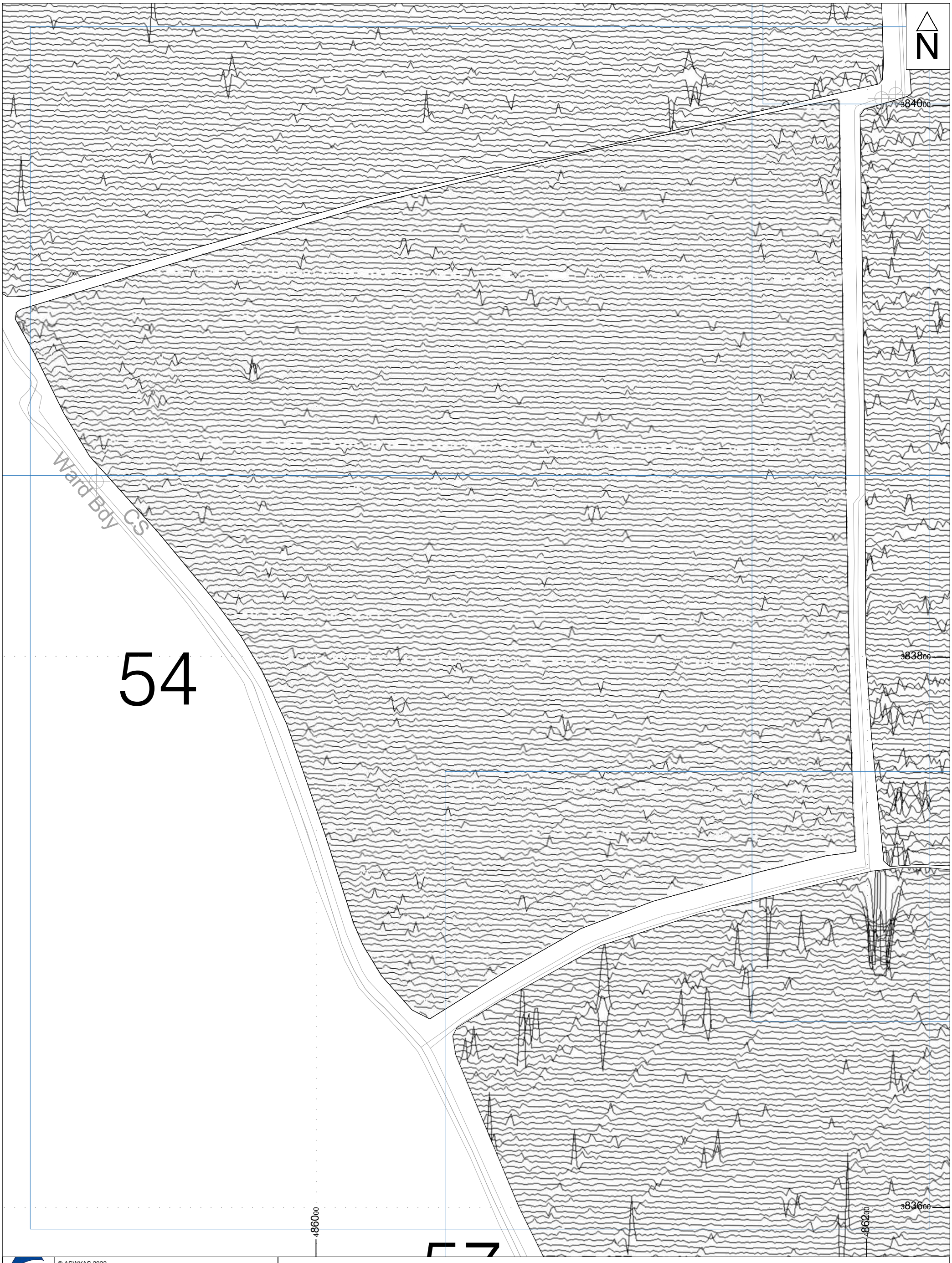
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 21

Fig. 68

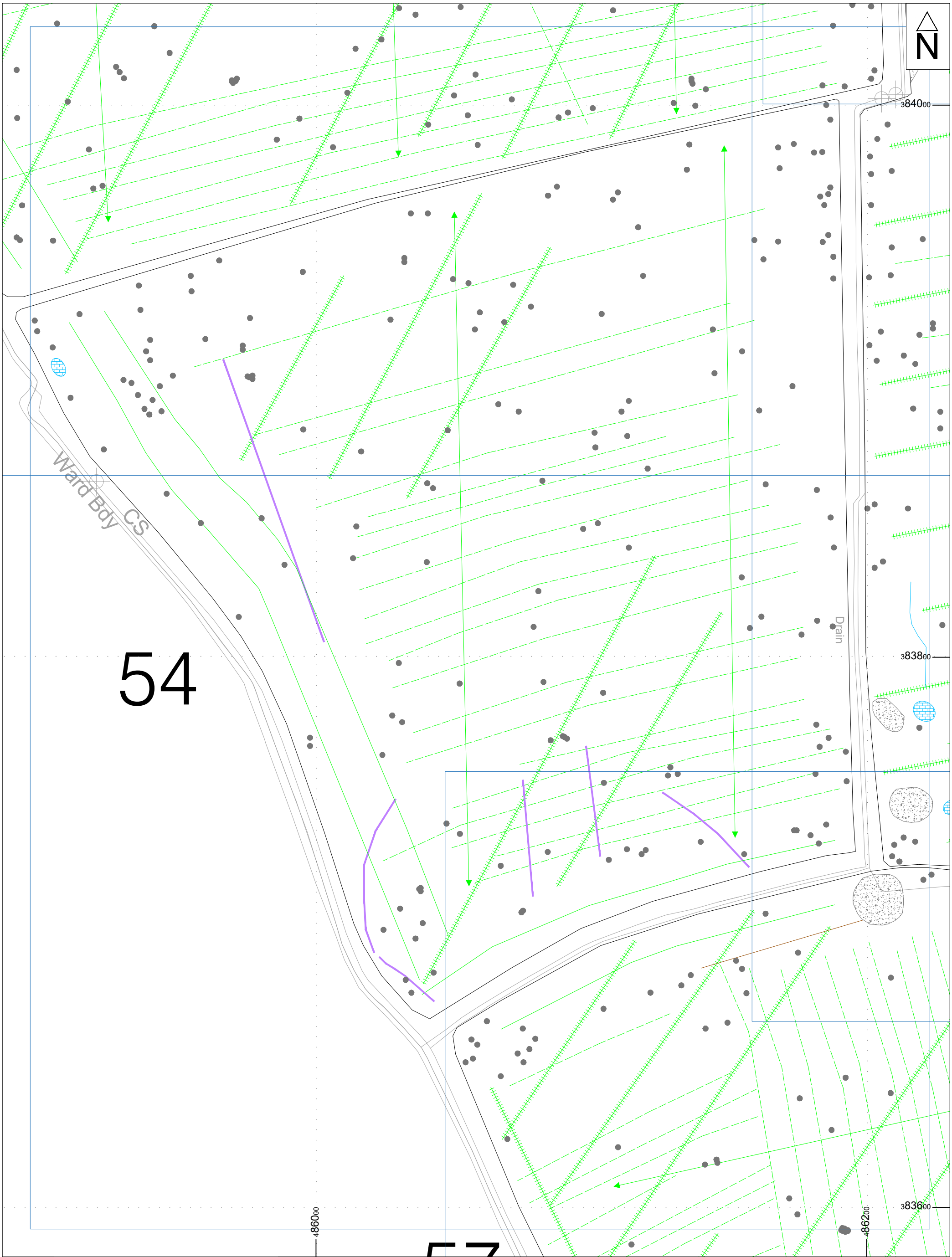
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 21

Fig. 69

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE AND FURROW
- AGRICULTURAL
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 22

Fig. 70

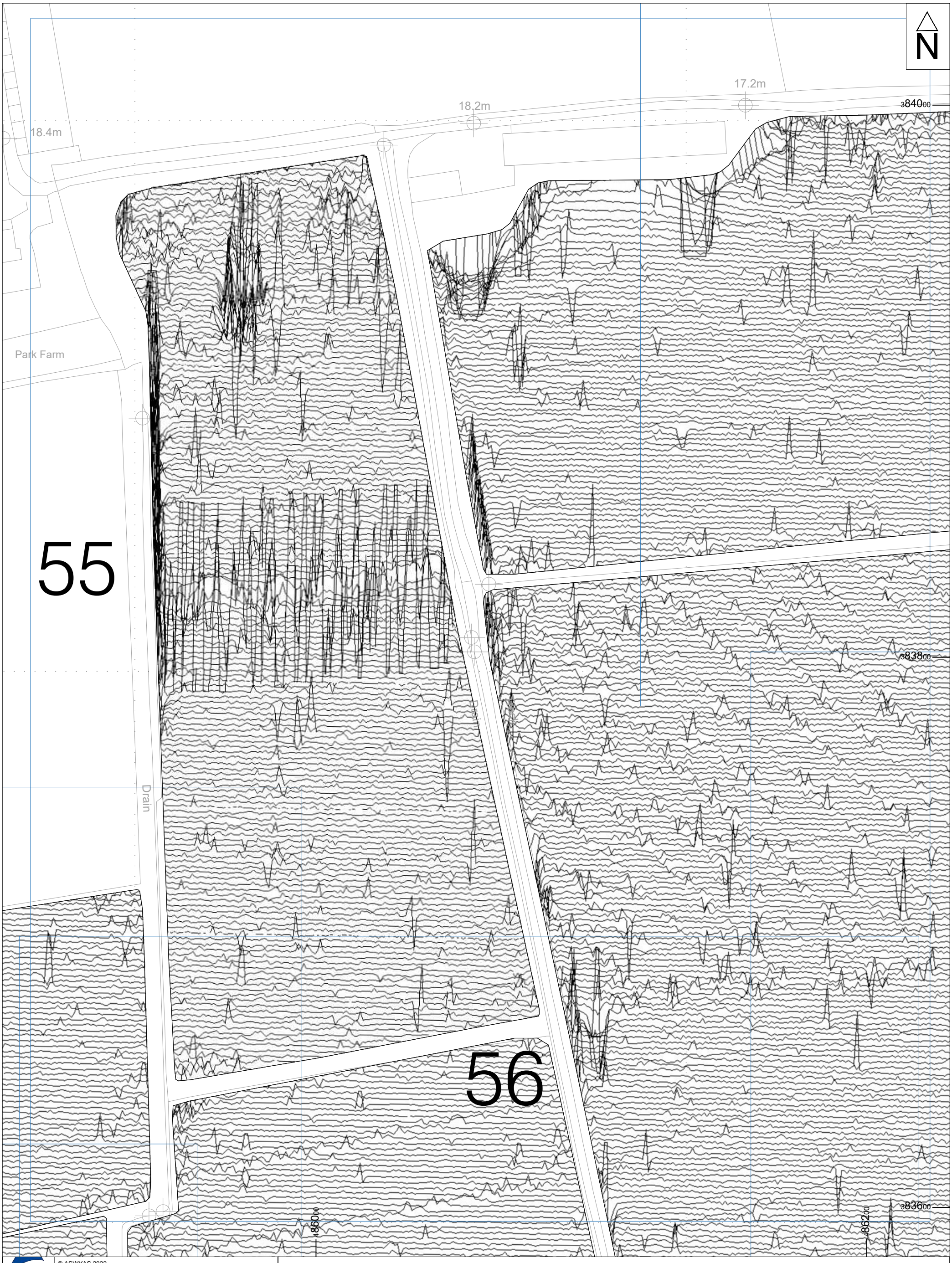
Title

SECTOR BOUNDARY

-1.0 2.0
nT

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 22

Fig. 71

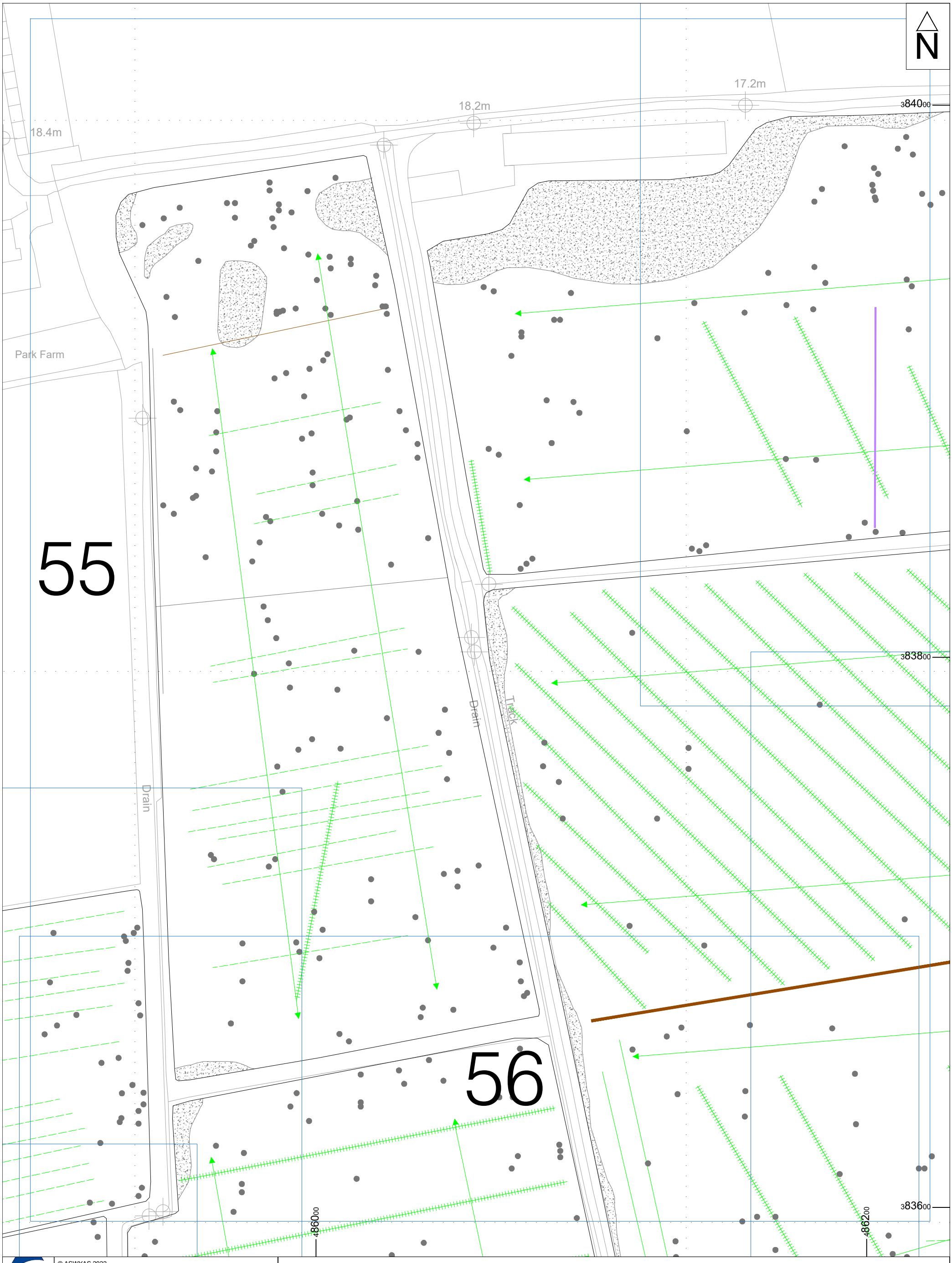
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 22

Fig. 72

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE AND FURROW
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- UNCERTAIN

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 23

Fig. 73

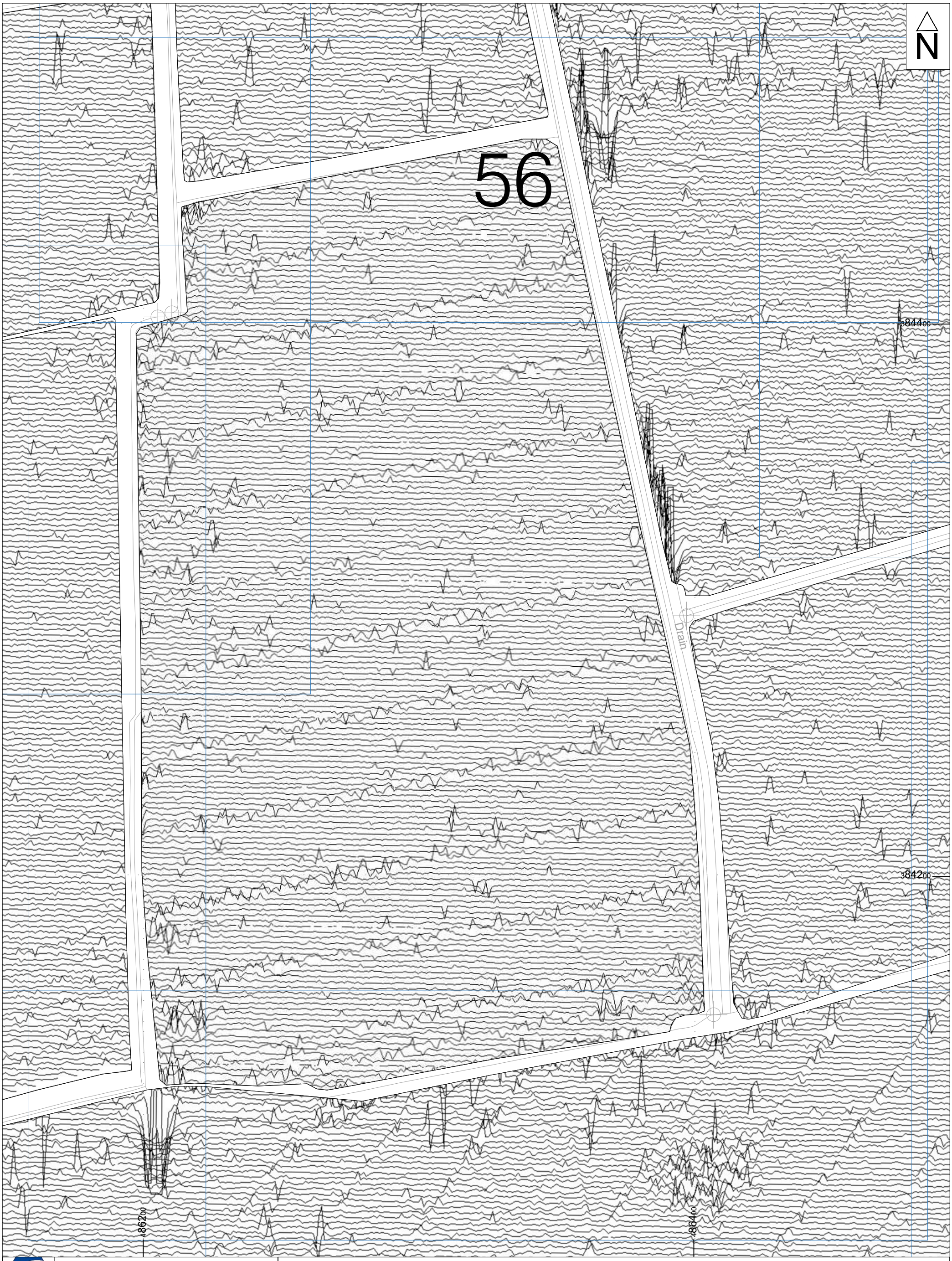
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 23

Fig. 74

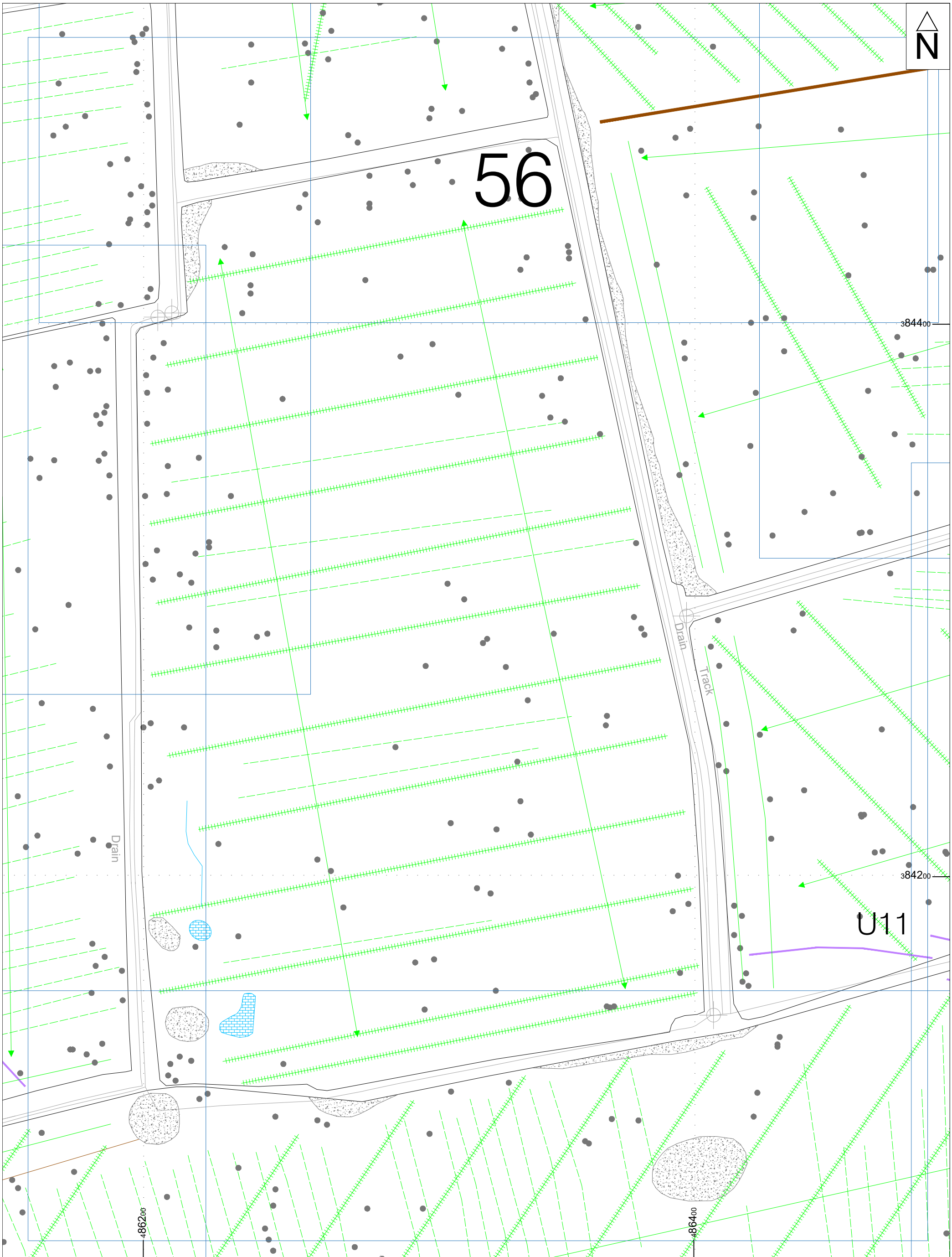
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 23

Fig. 75

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE AND FURROW
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 24

Fig. 76

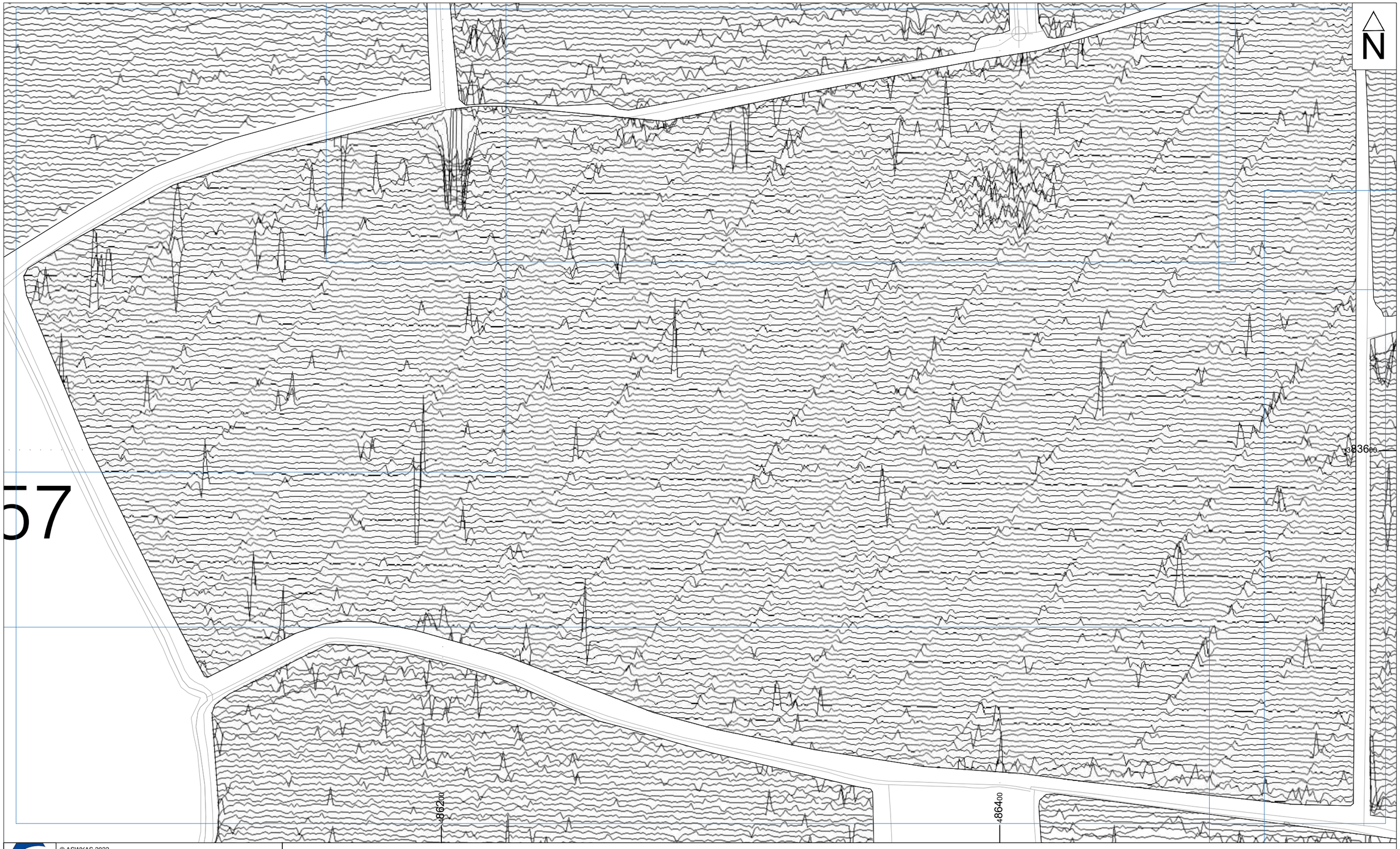
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 24

Fig. 77

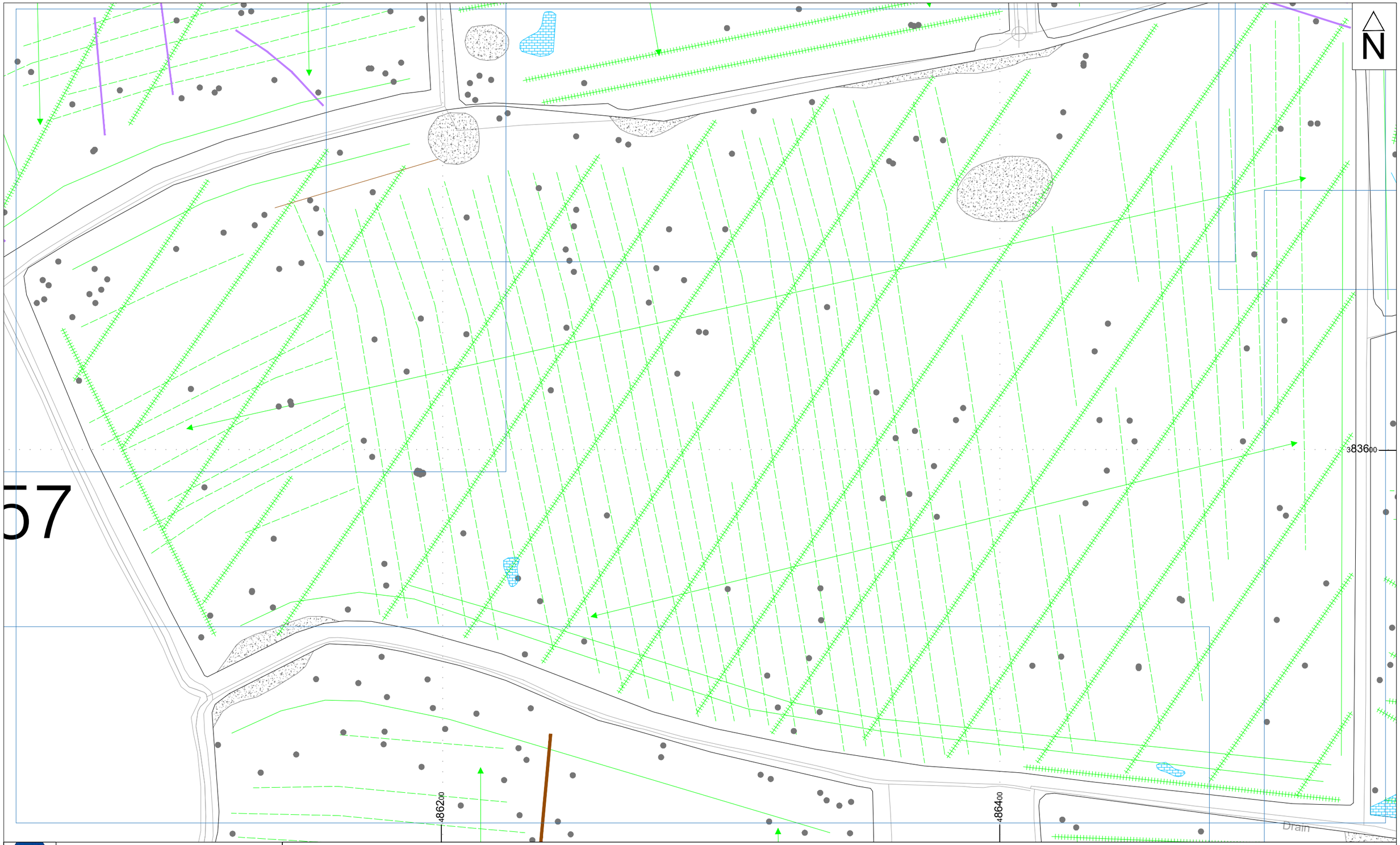
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 24

Fig. 78

Title

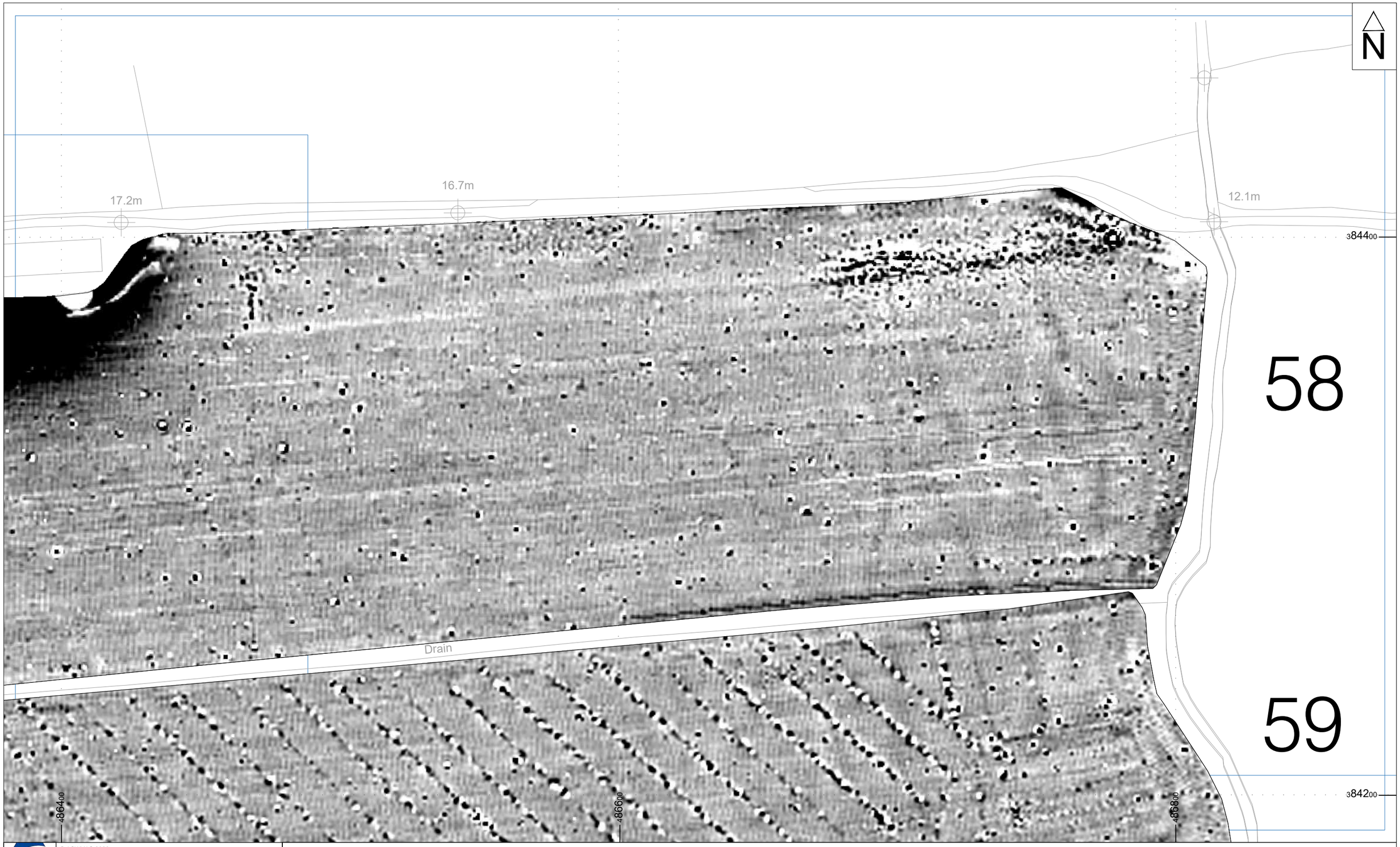
- SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE & FURROW
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 25

Fig. 79

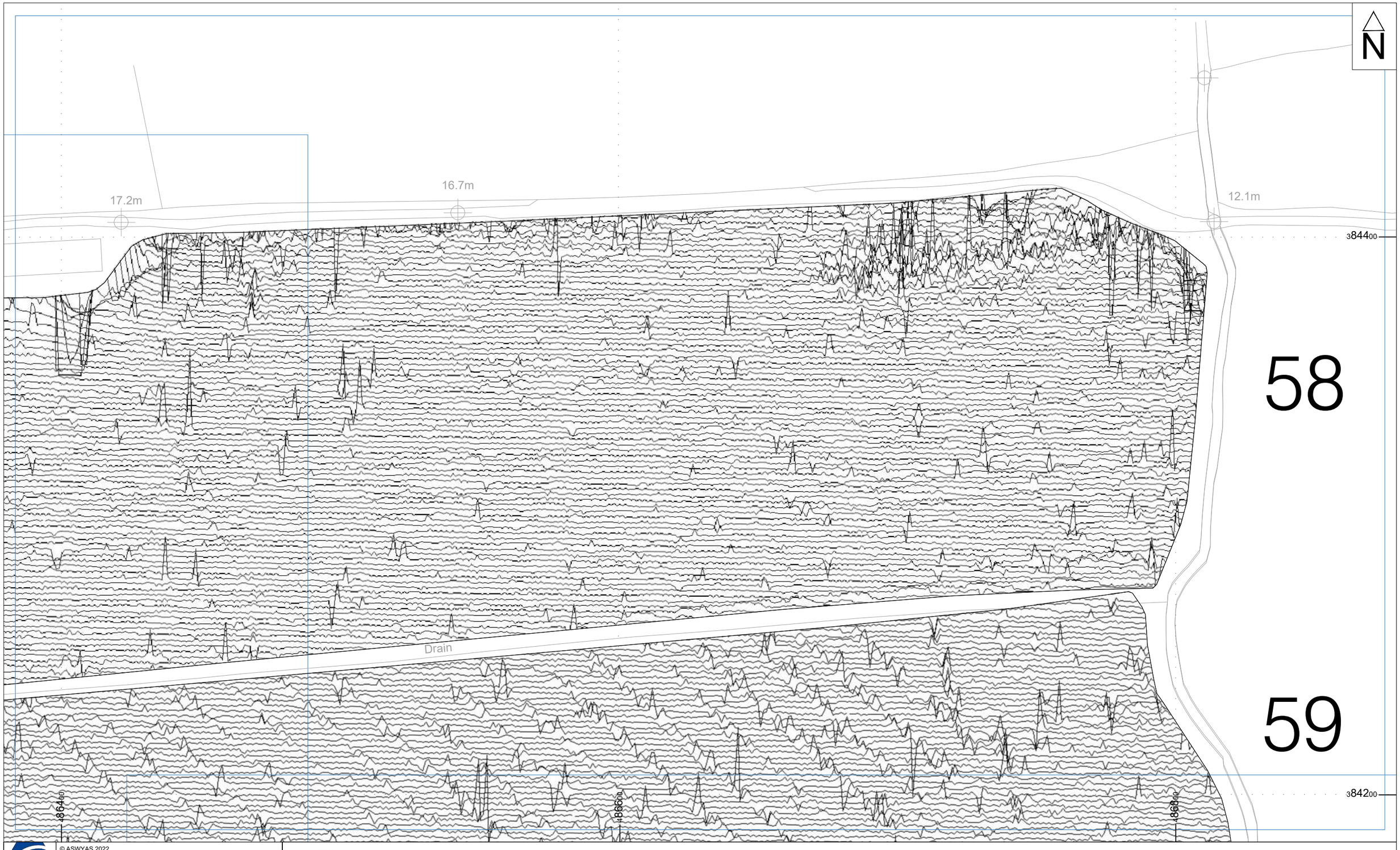
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 25

Fig. 80

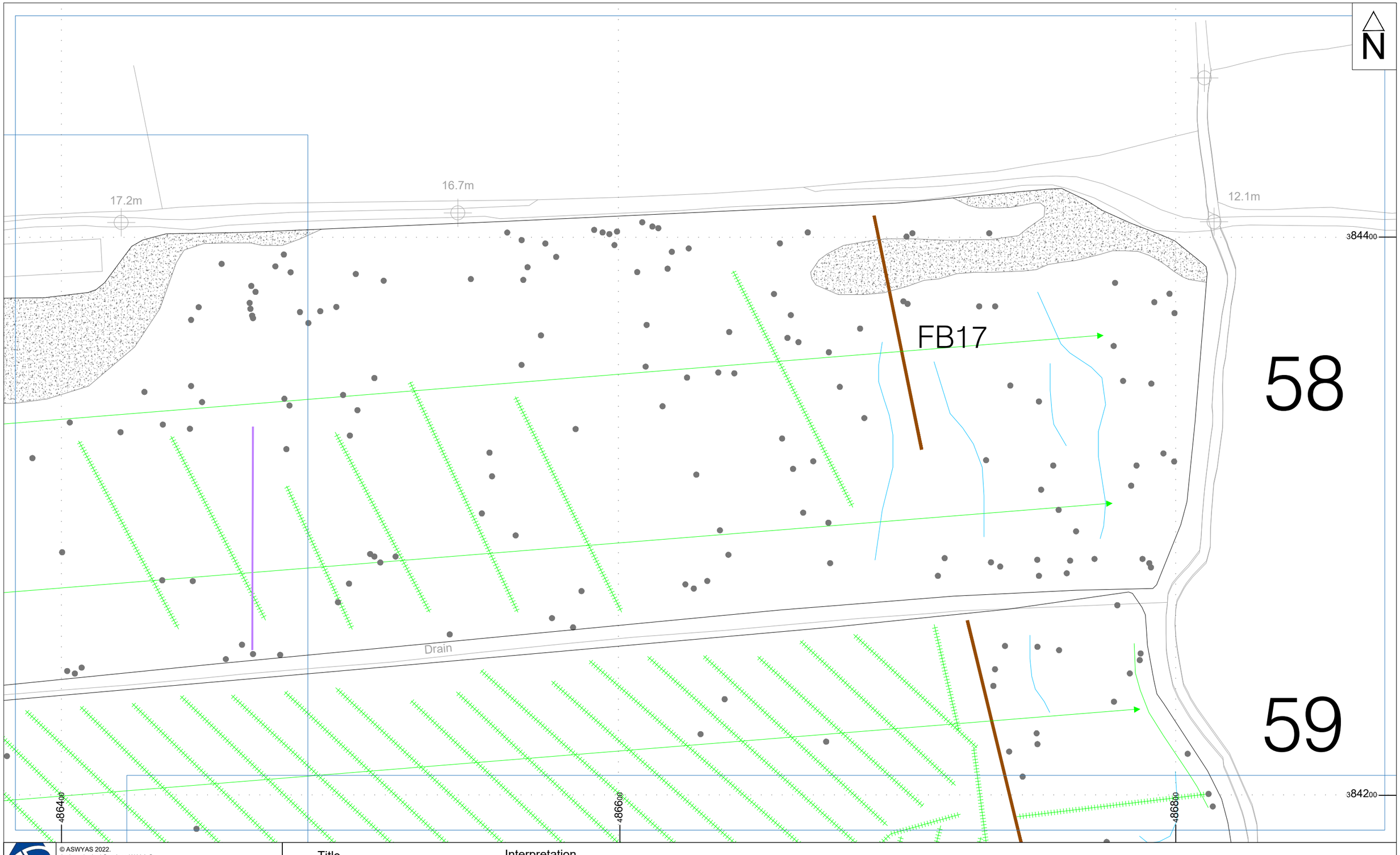
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 25

Fig. 81

Title

- SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 26

Fig. 82

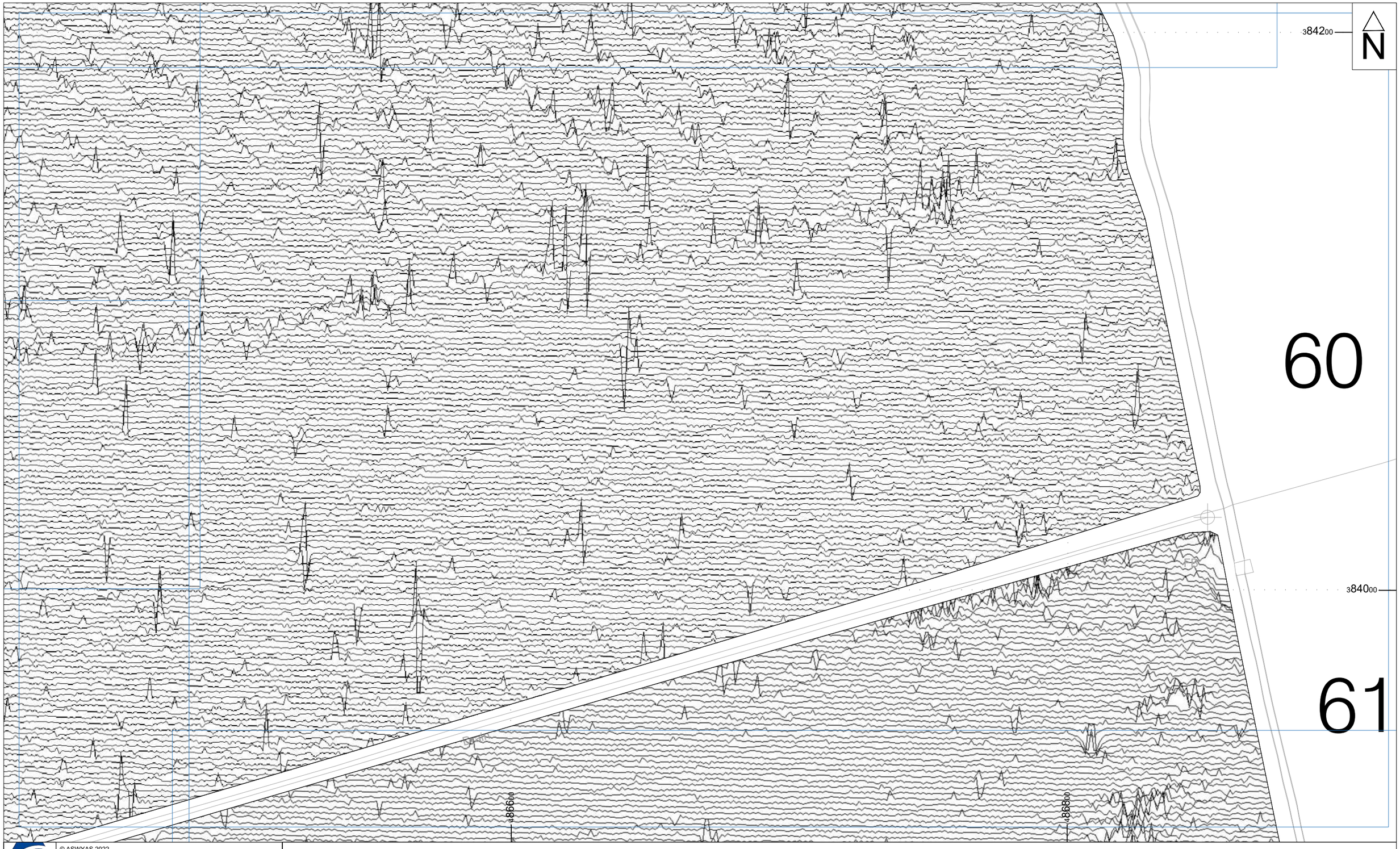
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 26

Fig. 83

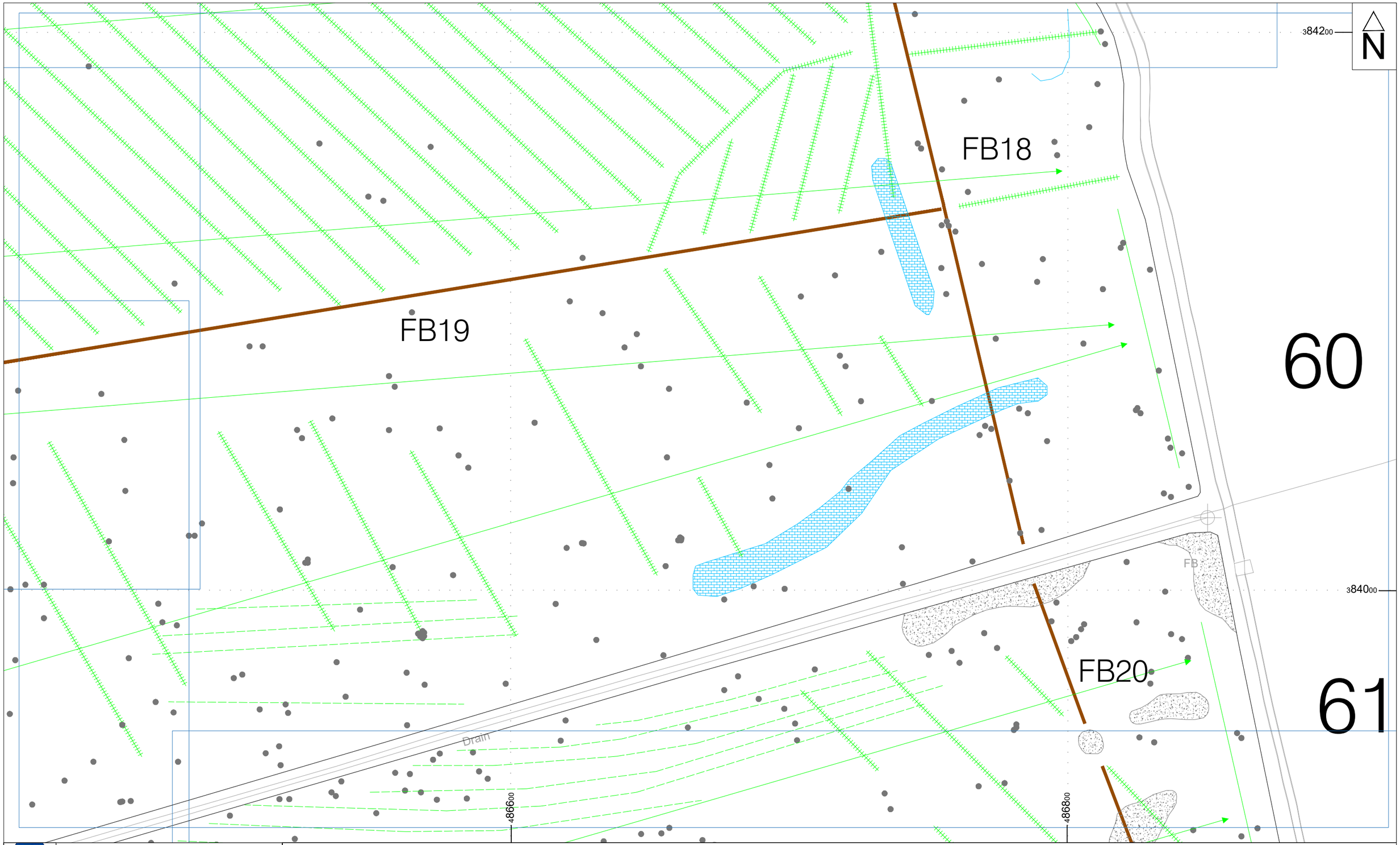
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 26

Fig. 84

Title

- SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE AND FURROW
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- GEOLOGY

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 27

Fig. 85

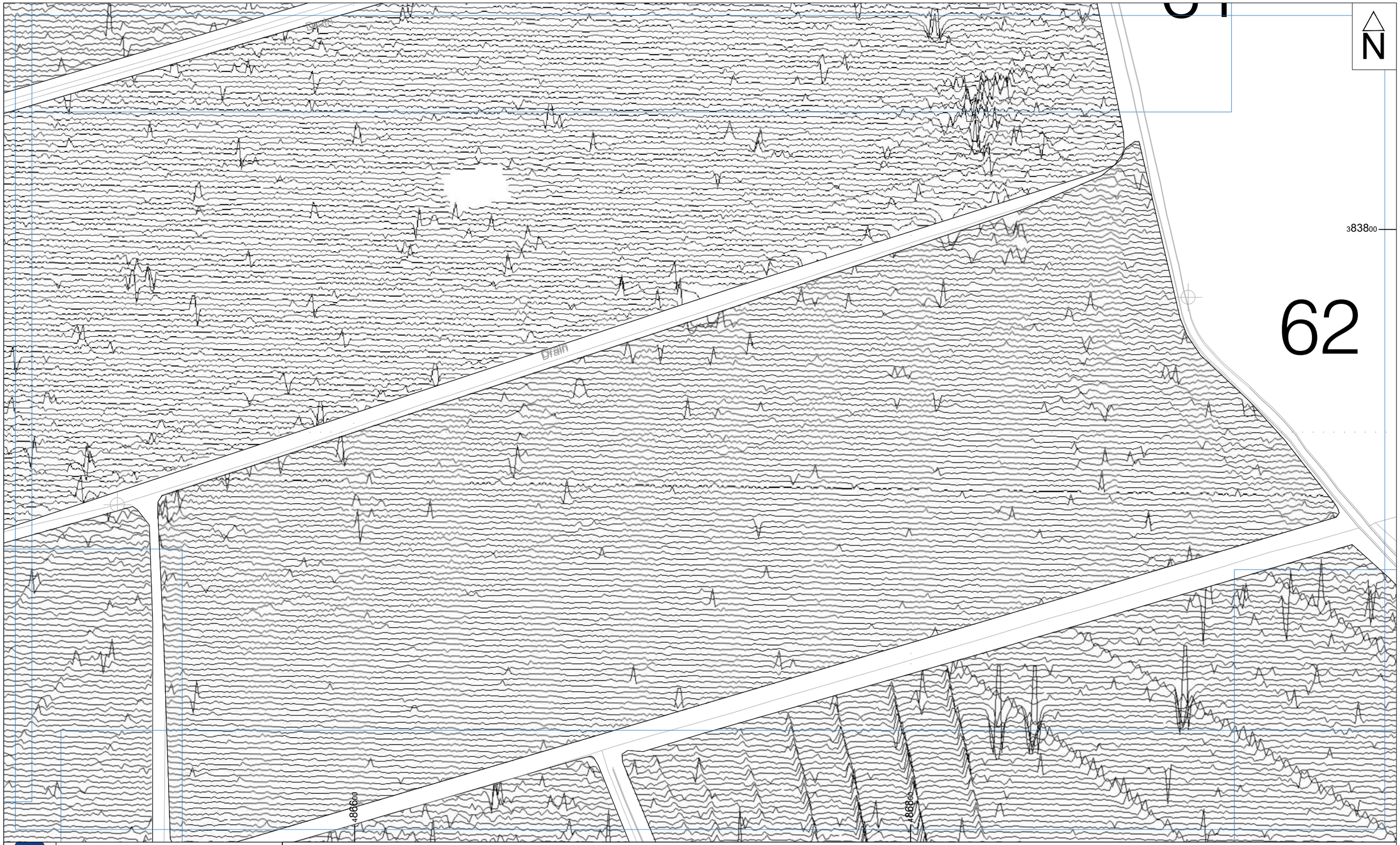
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 27

Fig. 86

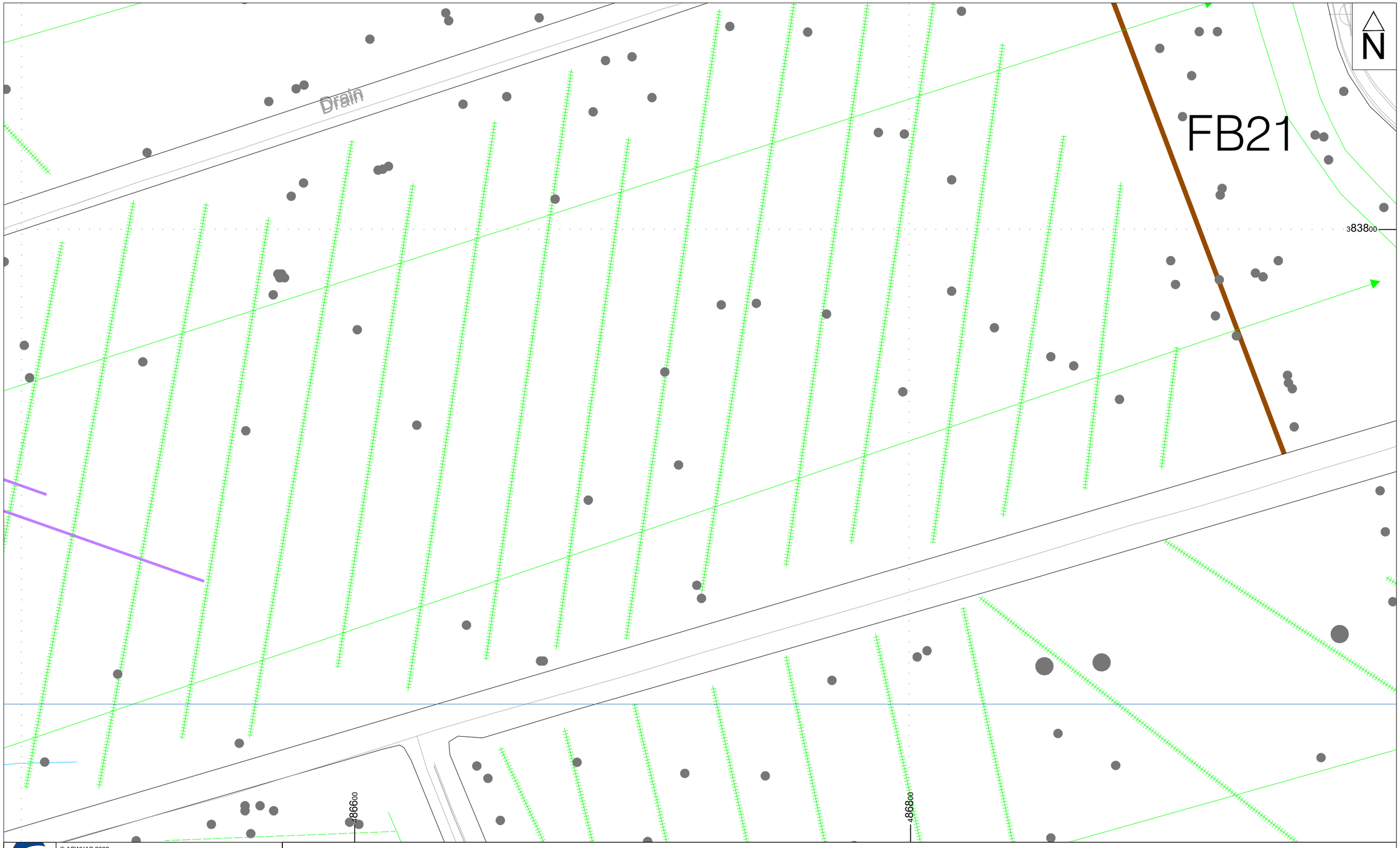
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 27

Fig. 87

Title

- SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE AND FURROW
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 28

Fig. 88

Title

SECTOR BOUNDARY

-1.0 2.0
nT

0 50m

1:1250 @ A3

N

63

66

Ward Bdy

Sandy Barr

3834$_{00}$

4860$_{00}$

4862$_{00}$

4864$_{00}$

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 28

Fig. 89

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

N

63

66

FB22

Ward Bdy

Sandy Barr

383400

860000

862000

864000

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 28

Fig. 90

Title

- SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE AND FURROW
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- GEOLOGY

0 50m

1:1250 @ A3

N

3832$_{00}$

Track

Pond

Sandebus Farm

13.5m

Ward Bay

1.22m RH

The Old Nursery

11.9m

3830$_{00}$

4860$_{00}$

4862$_{00}$

4864$_{00}$

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 29

Fig. 91

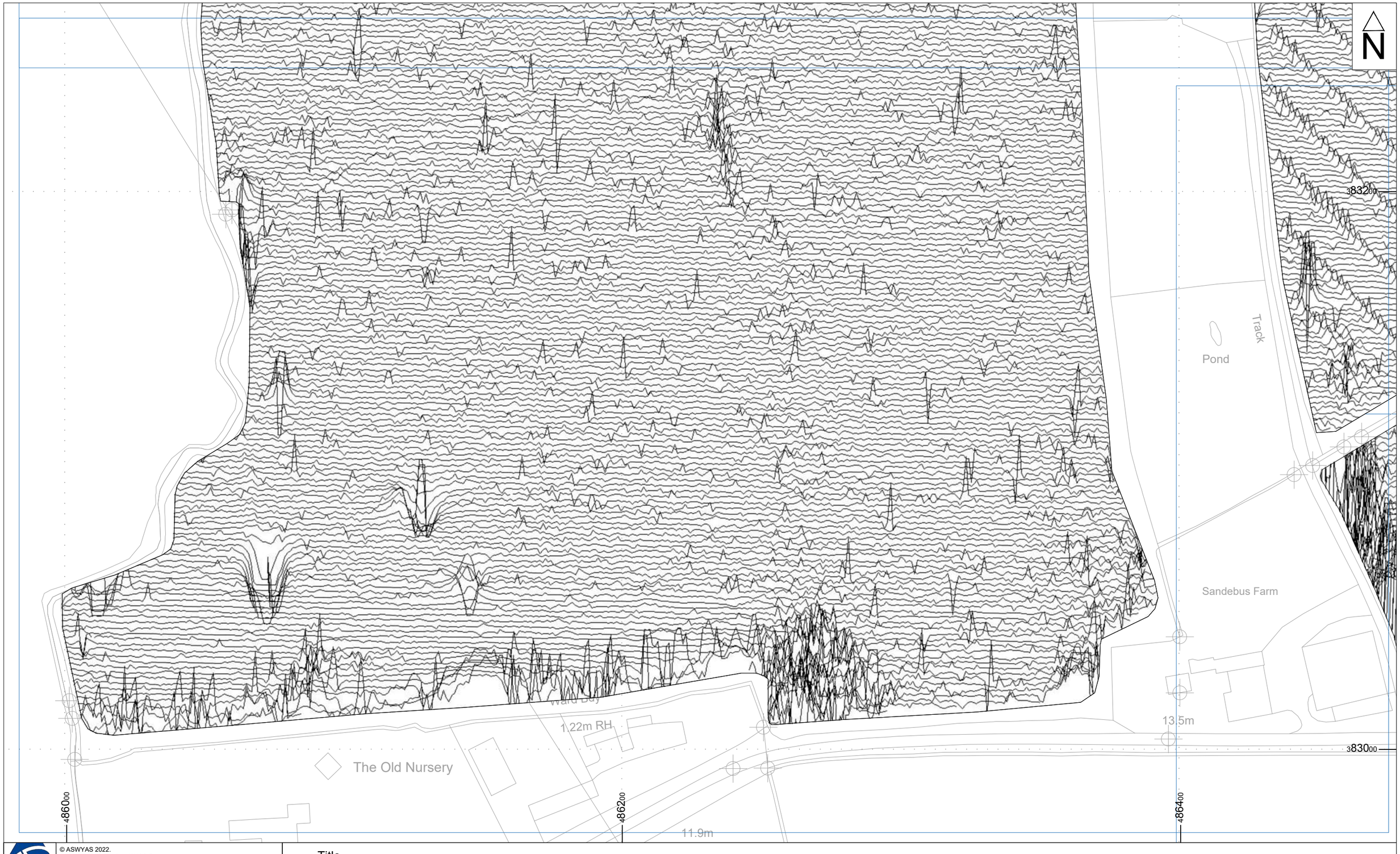
Title

SECTOR BOUNDARY

-1.0 2.0
nT

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 29

Fig. 92

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 29

Fig. 93

Title

- SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE AND FURROW
- AGRICULTURAL
- FORMER FIELD BOUNDARY

0 50m

1:1250 @ A3

N

3836 00

3834 00

4866 00

4868 00

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 30

Fig. 94

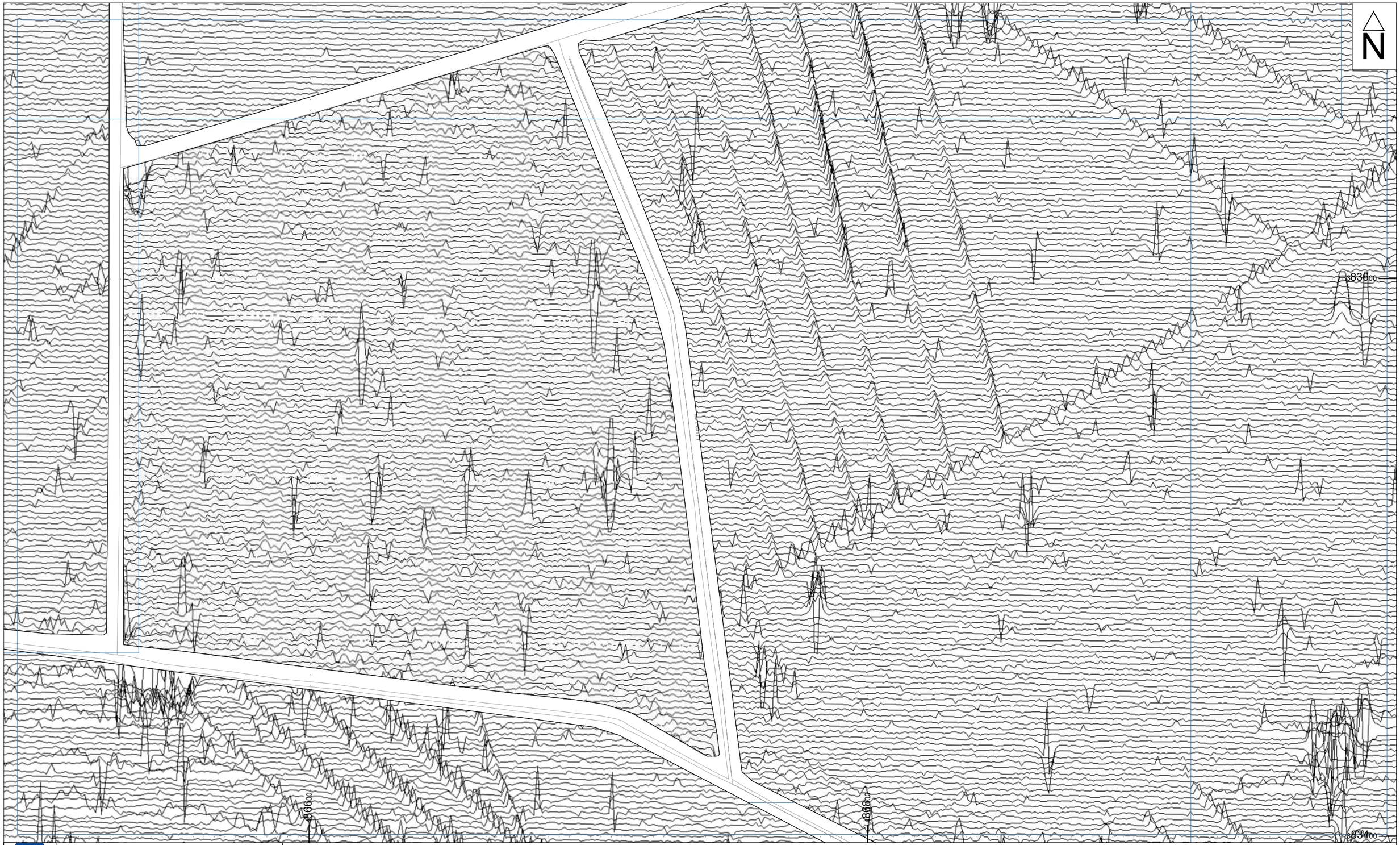
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 30

Fig. 95

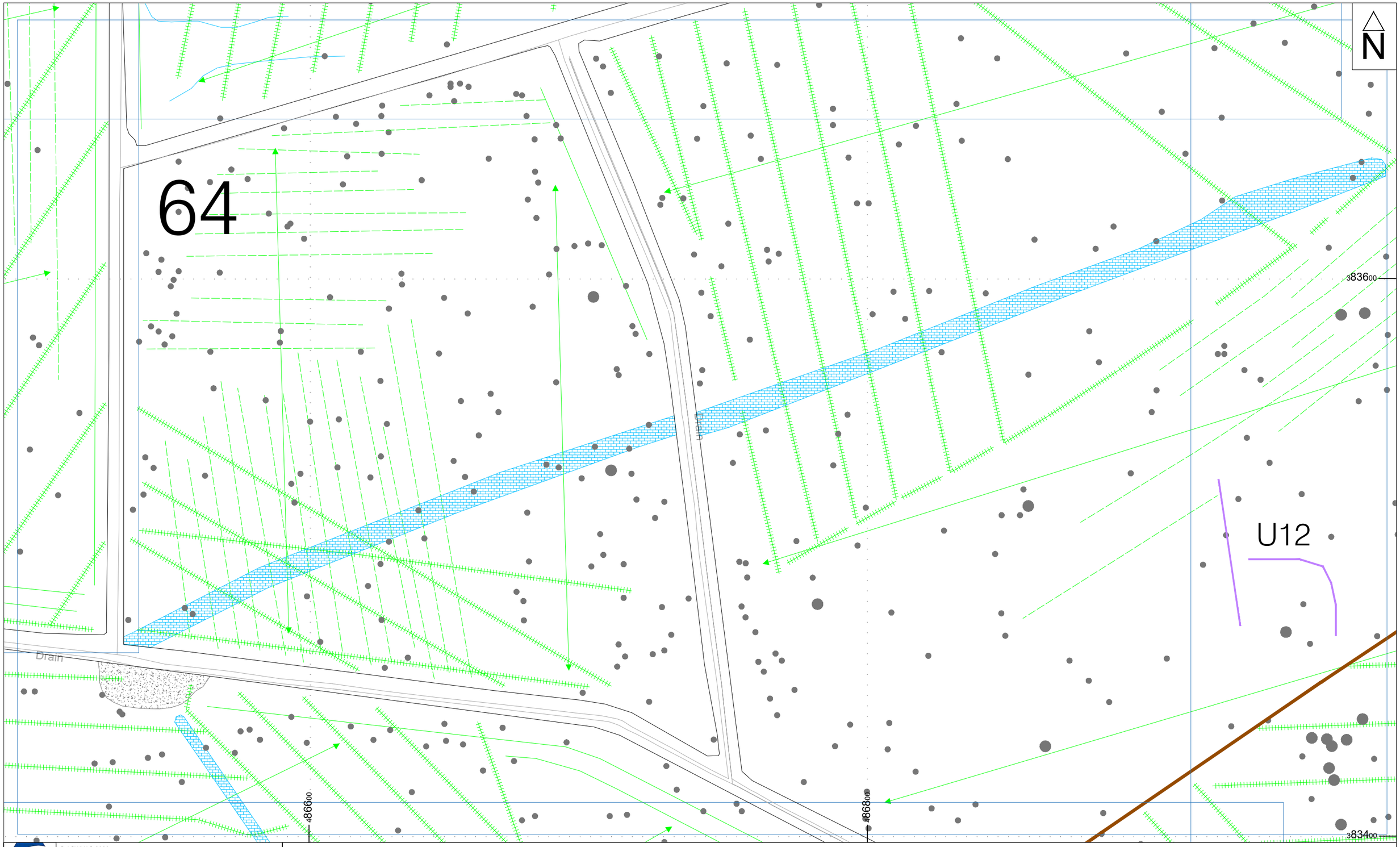
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 30

Fig. 96

Title

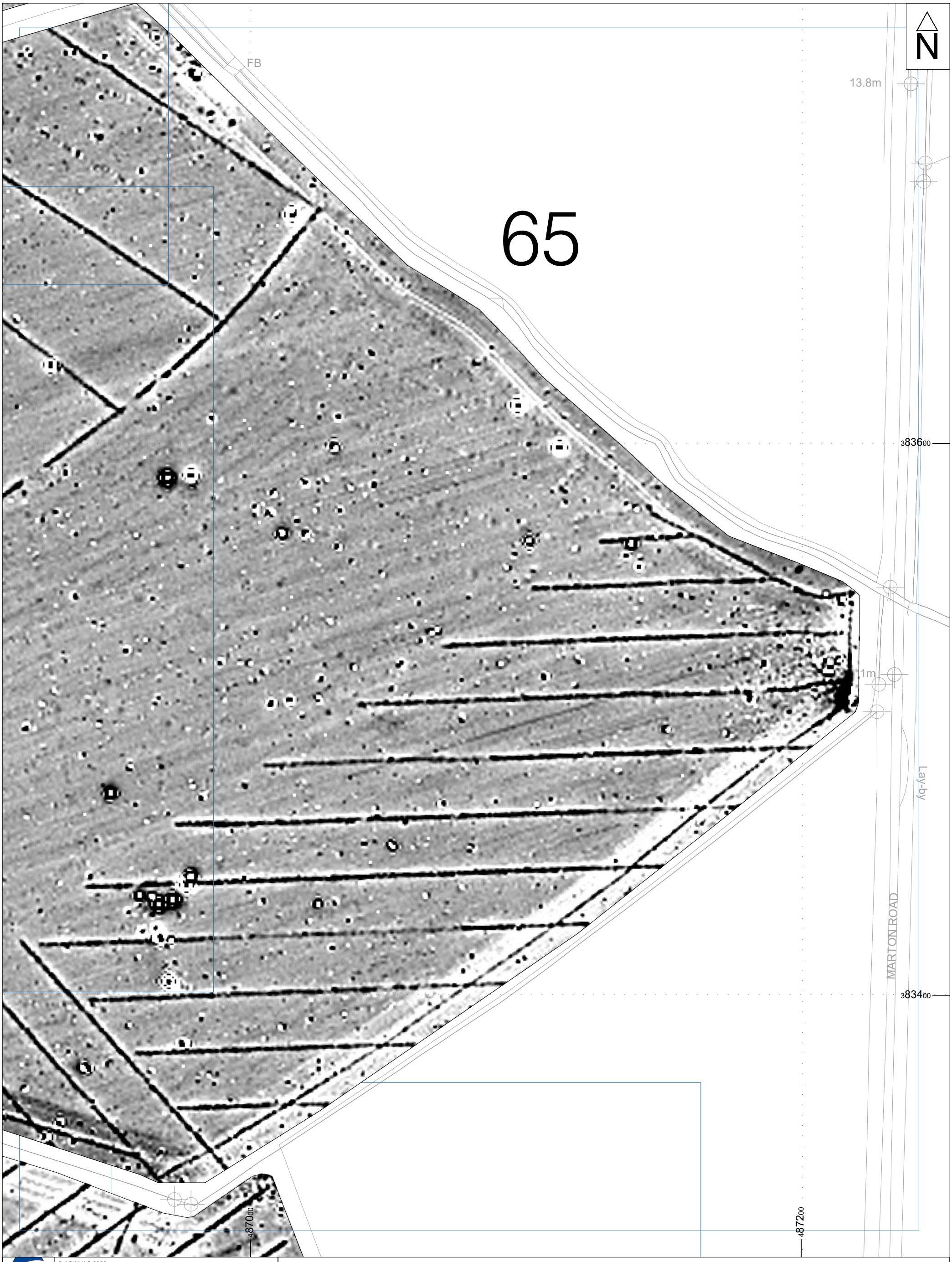
- SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE AND FURROW
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 31

Fig. 97

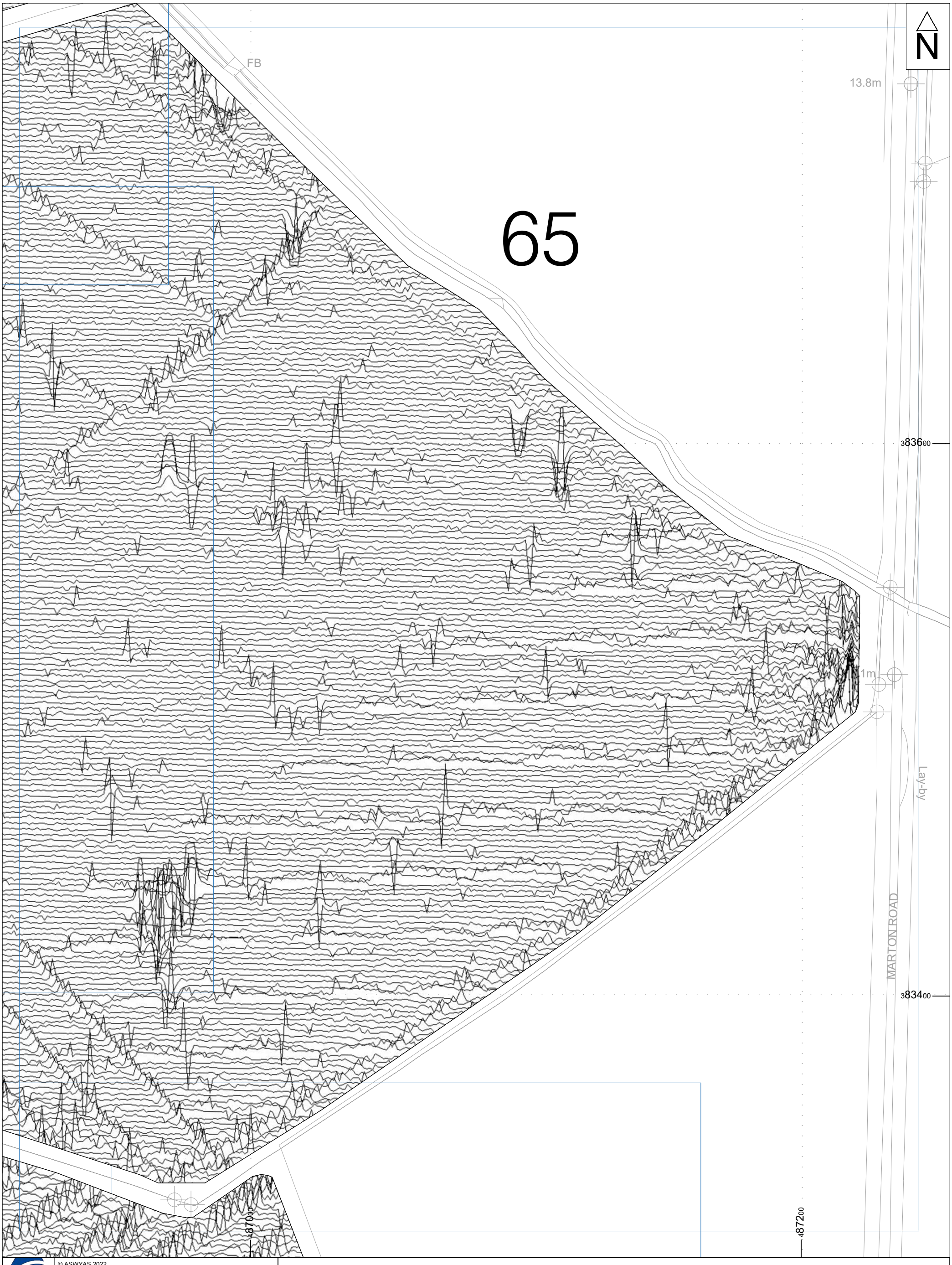
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 31

Fig. 98

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

N

65

FB

13.8m

11.1m

U12

FB24

Lay-by

MARTON ROAD

3836 00

3834 00

4870 00

4872 00

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 31

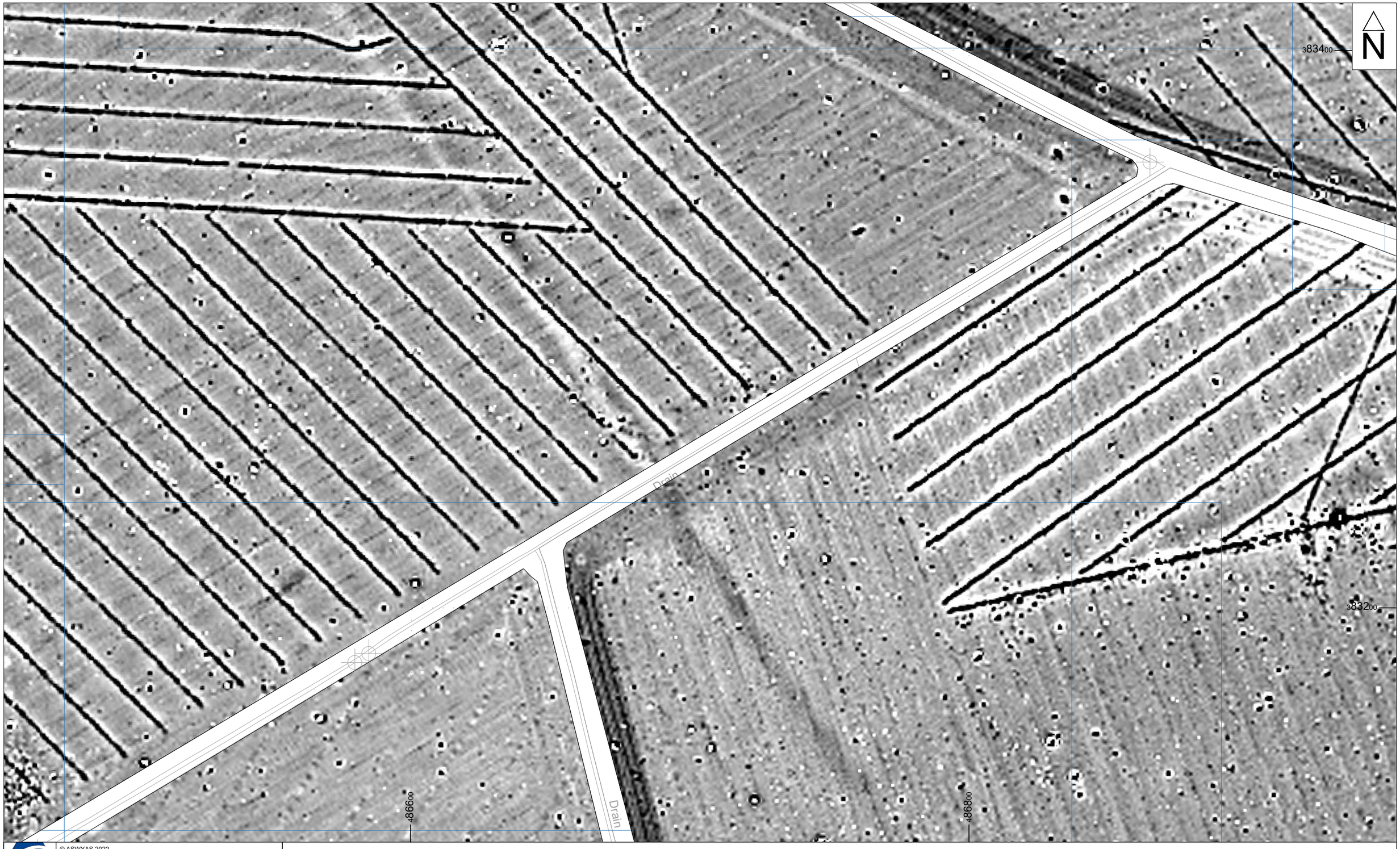
Fig. 99

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- RIDGE AND FURROW
- AGRICULTURAL
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 32

Fig. 100

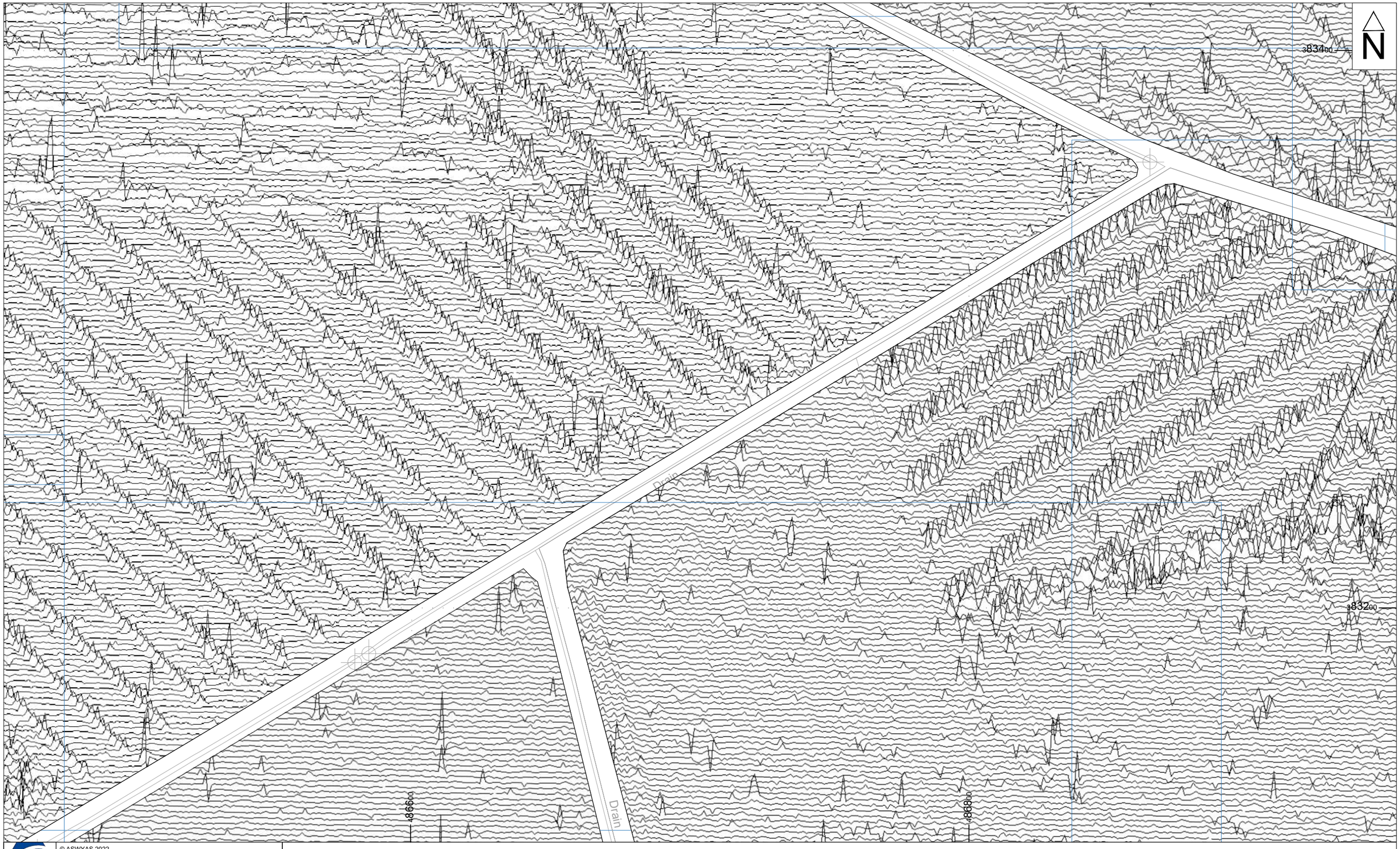
Title

SECTOR BOUNDARY

-1.0 2.0
nT

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 32

Fig. 101

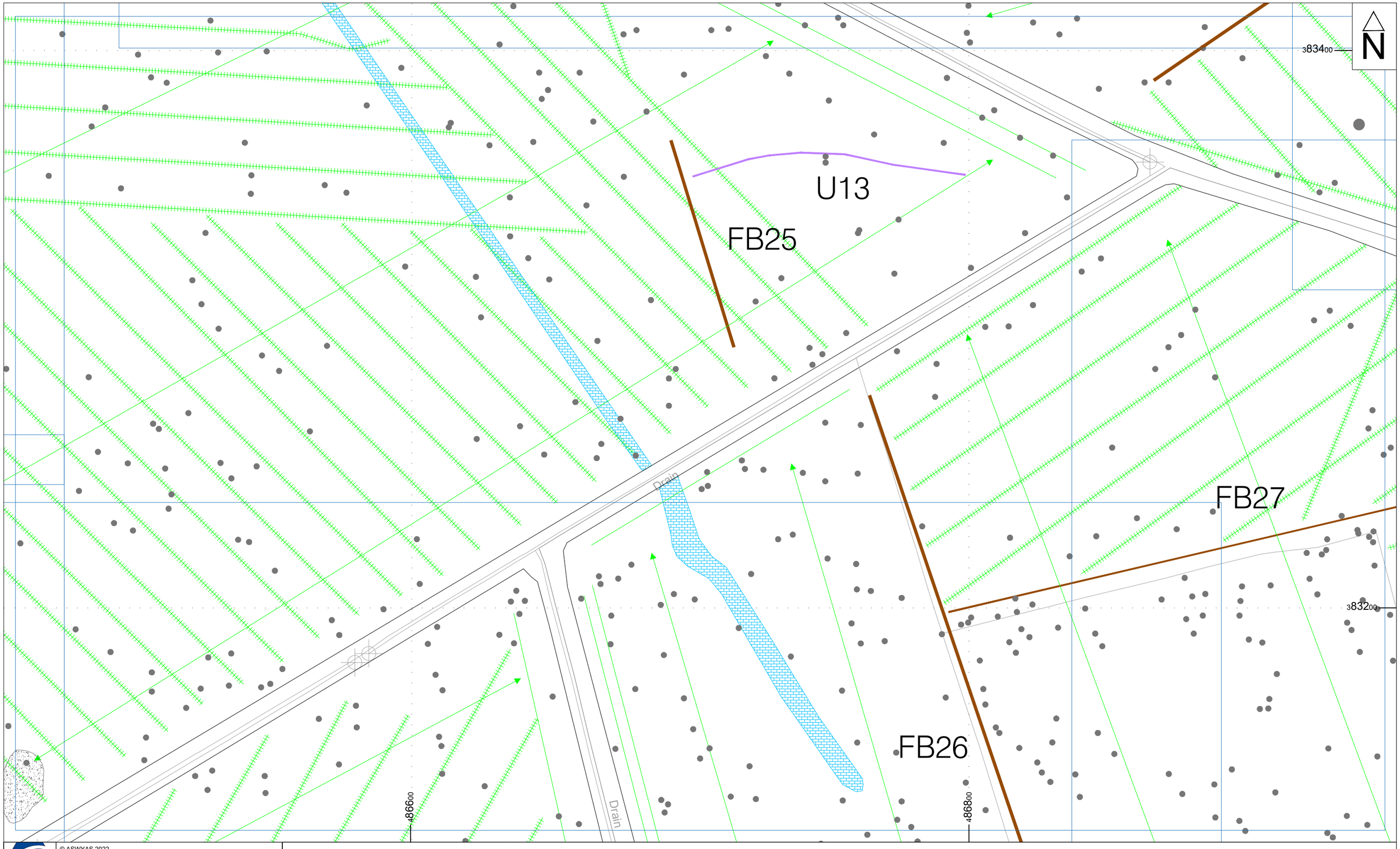
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 32

Fig. 102

Title

- SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- GEOLOGY
- UNCERTAIN

0 50m

1:1250 @ A3

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 33

Fig. 103

Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3

N

3832$_{00}$

Track

Pond

Drain

Sandebus Farm

3.5m

15.6m

MARTON ROAD

15.4m

1.22m RH

18.8m

3830$_{00}$

67

4866$_{00}$

4868$_{00}$

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 33

Fig. 104

Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3

N

FB26

67

Track

Pond

Drain

Sandebus Farm

3.5m

15.6m

MARTON ROAD

15.4m

1.22m RH

18.8m

3832 00

3830 00

4866 00

4868 00

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 33

Fig. 105

Title

- SECTOR BOUNDARY

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- AGRICULTURAL
- FORMER FIELD BOUNDARY
- GEOLOGY

0 50m

1:1250 @ A3

N

3832$_{00}$

1.22m RH

18.8m

20.6m

Lay-by

3830$_{00}$

68

4870$_{00}$

Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Processed greyscale magnetometer data; Sector 34

Fig. 106

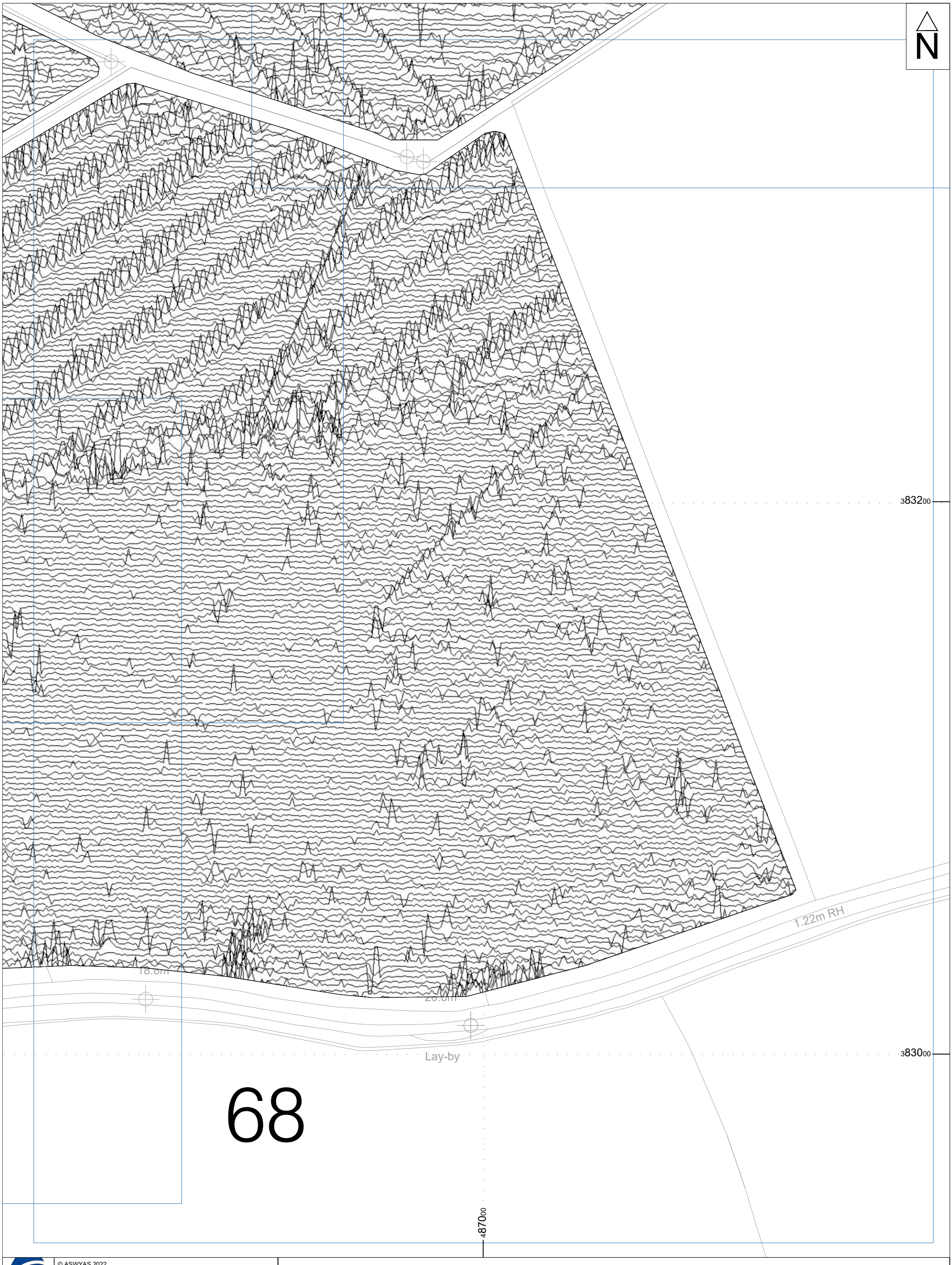
Title

SECTOR BOUNDARY

nT -1.0 2.0

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

XY trace plot of minimally processed magnetometer data; Sector 34

Fig. 107

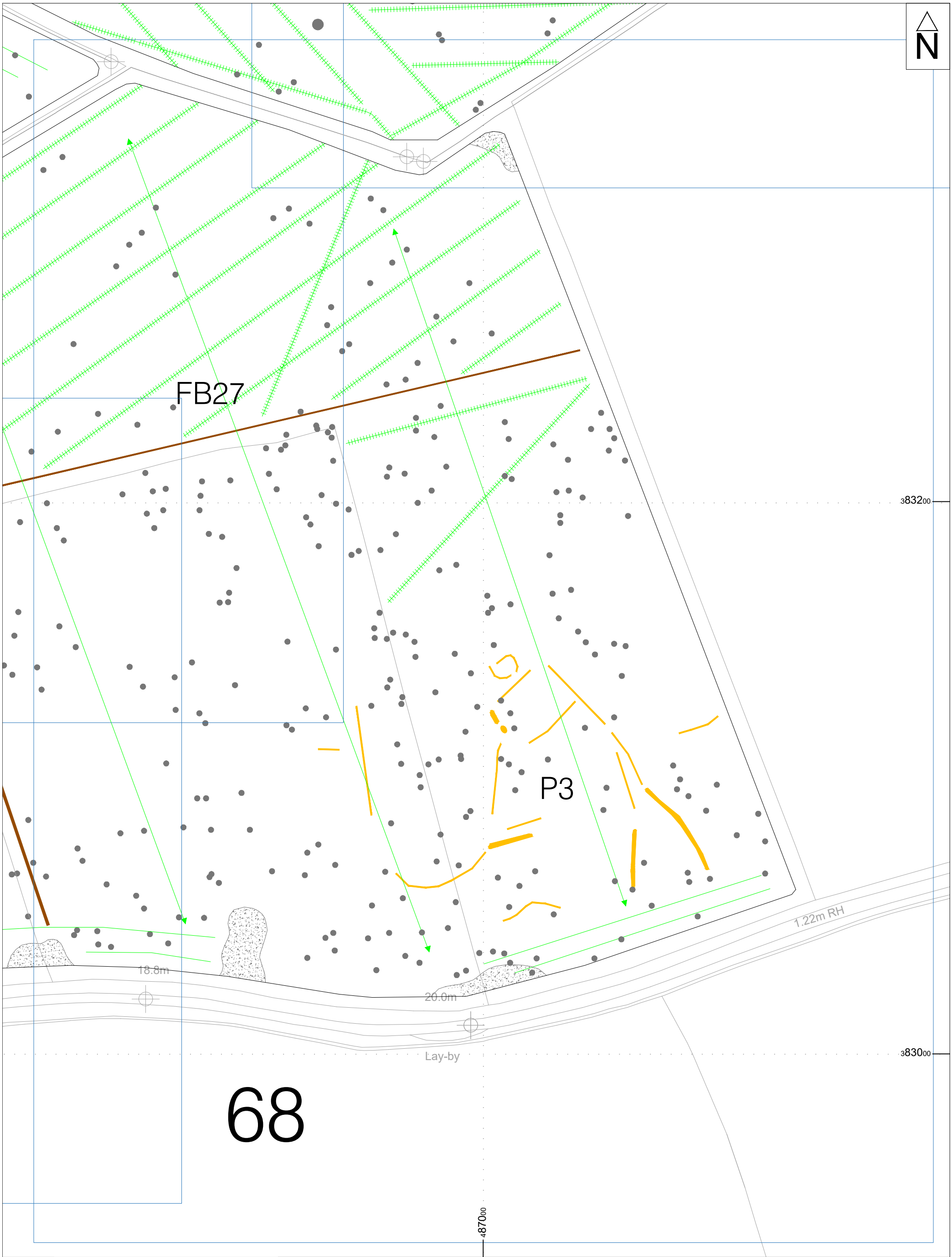
Title

SECTOR BOUNDARY

15.0 nT/cm

0 50m

1:1250 @ A3



Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ

Tel: 0113 535 0163 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XE34_GABU22

Interpretation of magnetometer data; Sector 34

Fig. 108

Interpretation

- FERROUS
- MAGNETIC DISTURBANCE
- FIELD DRAIN
- AGRICULTURAL
- GEOLOGY
- UNCERTAIN
- ARCHAEOLOGY?

0 50m

1:1250 @ A3

Plate 1. General view of Field 35, looking north

Plate 2. General view of Field 43, looking west

Plate 3. General view of Field 45, looking east

Plate 4. General view of Field 49, looking south

Plate 5. General view of Field 54, looking south

Plate 6. General view of Field 57, looking west

Plate 7. General view of Field 59, looking west

Plate 8. General view of Field 62, looking east

Plate 9. General view of Field 63, looking north

Plate 10. General view of Field 65, looking west

Plate 11. General view of Field 67, looking east

Plate 12. General view of Field 68, looking north

Appendix 1: Magnetic survey - technical information

Magnetic Susceptibility and Soil Magnetism

Iron makes up about 6% of the Earth's crust and is mostly present in soils and rocks as minerals such as maghaemite and haemetite. These minerals have a weak, measurable magnetic property termed magnetic susceptibility. Human activities can redistribute these minerals and change (enhance) others into more magnetic forms. Areas of human occupation or settlement can then be identified by measuring the magnetic susceptibility of the topsoil because of the attendant increase (enhancement) in magnetic susceptibility. If the enhanced material subsequently comes to fill features, such as ditches or pits, localised isolated and linear magnetic anomalies can result whose presence can be detected by a magnetometer (fluxgate gradiometer).

In general, it is the contrast between the magnetic susceptibility of deposits filling cut features, such as ditches or pits, and the magnetic susceptibility of topsoils, subsoils and rocks into which these features have been cut, which causes the most recognisable responses. This is primarily because there is a tendency for magnetic ferrous compounds to become concentrated in the topsoil, thereby making it more magnetic than the subsoil or the bedrock. Linear features cut into the subsoil or geology, such as ditches, that have been silted up or have been backfilled with topsoil will therefore usually produce a positive magnetic response relative to the background soil levels. Discrete feature, such as pits, can also be detected. The magnetic susceptibility of a soil can also be enhanced by the application of heat and the fermentation and bacterial effects associated with rubbish decomposition. The area of enhancement is usually quite large, mainly due to the tendency of discard areas to extend beyond the limit of the occupation site itself, and spreading by the plough.

Types of Magnetic Anomaly

In the majority of instances anomalies are termed 'positive'. This means that they have a positive magnetic value relative to the magnetic background on any given site. However some features can manifest themselves as 'negative' anomalies that, conversely, means that the response is negative relative to the mean magnetic background.

Where it is not possible to give a probable cause of an observed anomaly a '?' is appended.

It should be noted that anomalies interpreted as modern in origin might be caused by features that are present in the topsoil or upper layers of the subsoil. Removal of soil to an archaeological or natural layer can therefore remove the feature causing the anomaly.

The types of response mentioned above can be divided into five main categories that are used in the graphical interpretation of the magnetic data:

Isolated dipolar anomalies (iron spikes)

These responses are typically caused by ferrous material either on the surface or in the topsoil. They cause a rapid variation in the magnetic response giving a characteristic 'spiky' trace. Although ferrous archaeological artefacts could produce this type of response, unless there is supporting evidence for an archaeological interpretation, little emphasis is normally given to such anomalies, as modern ferrous objects are common on rural sites, often being present as a consequence of manuring.

Areas of magnetic disturbance

These responses can have several causes often being associated with burnt material, such as slag waste or brick rubble or other strongly magnetised/fired material. Ferrous structures such as pylons, mesh or barbed wire fencing and buried pipes can also cause the same disturbed response. A modern origin is usually assumed unless there is other supporting information.

Linear trend

This is usually a weak or broad linear anomaly of unknown cause or date. These anomalies are often caused by agricultural activity, either ploughing or land drains being a common cause.

Areas of magnetic enhancement/positive isolated anomalies

Areas of enhanced response are characterised by a general increase in the magnetic background over a localised area whilst discrete anomalies are manifest by an increased response on two or three successive traverses. In neither instance is there the intense dipolar response characteristic exhibited by an area of magnetic disturbance or of an 'iron spike' anomaly (see above). These anomalies can be caused by infilled discrete archaeological features such as pits or post-holes or by kilns. They can also be caused by pedological variations or by natural infilled features on certain geologies. Ferrous material in the subsoil can also give a similar response. It can often therefore be very difficult to establish an anthropogenic origin without intrusive investigation or other supporting information.

Linear and curvilinear anomalies

Such anomalies have a variety of origins. They may be caused by agricultural practice (recent ploughing trends, earlier ridge and furrow regimes or land drains), natural geomorphological features such as palaeochannels or by infilled archaeological ditches.

Methodology: Gradiometer Survey

The main method of using the fluxgate gradiometer for commercial evaluations is referred to as ***detailed survey*** and requires the surveyor to walk at an even pace carrying the instrument within a grid system. A sample trigger automatically takes readings at predetermined points, typically at 0.25m intervals, on traverses 1m apart. These readings are stored in the memory of the instrument and are later dumped to computer for processing and interpretation.

During this survey an eight channel Sensys MX V3 system containing eight FGM650 sensors was used which was towed across the area using an ATV. Readings were taken every 20MHz (between 0.05 and 0.1m). Data was be recorded onto a device, using a Carlson GNSS Smart antenna, for centimetre accuracy. These readings were stored in the memory of the instrument and downloaded for processing and interpretation

Field 37 was collected using a Bartington Grad601 magnetic gradiometer with readings being recorded at 0.25m intervals on zig-zag traverses 0.5m apart within 30m by 30m square grids. The instrument was checked for electronic and mechanical drift at a common point and calibrated as necessary. The drift from zero was not logged.

The gradiometer data have been presented in this report in processed greyscale format. The data in the greyscale images have been interpolated and selectively filtered to remove the effects of drift in instrument calibration and other artificial data constructs and to maximise the clarity and interpretability of the archaeological anomalies.

Appendix 2: Survey location information

An initial survey station was established using a Trimble VRS differential Global Positioning System (Trimble R6 model). The data was geo-referenced using the geo-referenced survey station with a Trimble RTK differential Global Positioning System (Trimble R6 model). The accuracy of this equipment is better than 0.01m. The survey grids were then super-imposed onto a base map provided by the client to produce the displayed block locations. However, it should be noted that Ordnance Survey positional accuracy for digital map data has an error of 0.5m for urban and floodplain areas, 1.0m for rural areas and 2.5m for mountain and moorland areas. This potential error must be considered if co-ordinates are measured off hard copies of the mapping rather than using the digital co-ordinates.

Archaeological Services WYAS cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party.

Appendix 3: Geophysical archive and metadata

The geophysical archive comprises:-

- an archive disk containing compressed (WinZip 8) files of the raw data, report text (Microsoft Word 2003), and graphics files (Adobe Illustrator CS6 and AutoCAD 2017) files; and
- a full copy of the report.

At present the archive is held by Archaeological Services WYAS although it is anticipated that it may eventually be lodged with the Archaeology Data Service (ADS). Brief details may also be forwarded for inclusion on the English Heritage Geophysical Survey Database after the contents of the report are deemed to be in the public domain (i.e. available for consultation in the Lincolnshire Historic Environment Record).

Field 35

filename	XE34_35.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	483243.239, 385155.480
dummy value	2047.5
source GPS points	2347322
survey size	175 m x 249 m
x and y interval	1m
stats:	
max	505.90
min	-293.16
std dev	7.21
mean	-0.06
median	-0.06
composite area	4.3575 ha
surveyed area	3.4399 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 36

filename	XE34_36.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	483425.403, 385179.302
dummy value	2047.5
source GPS points	2737286
survey size	221 m x 249 m
x and y interval	1m
stats:	
max	689.41
min	-695.87
std dev	26.26
mean	-0.01
median	-0.06
composite area	5.5029 ha
surveyed area	3.6678 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 37

filename	XE34_37.cmp
instrument	Bartington Grad 601-2
units	nT
survey coordinates:	
SW	483265.518, 384842.0242
dummy value	2047.5
survey size	270m x 300m
x and y interval	1m
stats:	
max	2337.9
min	-3000
std dev	12.2034
mean	0.49
program	Geoplot 4
processes	ZMT Grid=All LMS=On ZM=Mean Pos.Thresh. = 5 Neg.Thresh. = -5
	LPF X=2 Y=1 Wt=G Applications=1

Field 38

filename	XE34_38.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	483450.698, 384886.563
dummy value	2047.5
source GPS points	4083548
survey size	308 m x 319 m
x and y interval	1m
stats:	
max	381.86
min	-965.36
std dev	7.76
mean	-0.10
median	-0.07
composite area	9.8252 ha
surveyed area	5.6884 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 39

filename	XE34_39.cmp
instrument	Bartington Grad 601-2
units	nT
survey coordinates:	
SW	483571.534, 384991.028
dummy value	2047.5
source GPS points	8930747
survey size	475 m x 569 m
x and y interval	1m
stats:	
max	1593.32
min	-809.31
std dev	35.66
mean	-0.03
median	0.00
composite area	27.028 ha
surveyed area	15.144 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 40

filename	XE34_40.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	484060.645, 384695.615
dummy value	2047.5
source GPS points	3705316
survey size	214 m x 497 m
x and y interval	1m
stats:	
max	848.81
min	-848.11
std dev	12.21
mean	0.01
median	-0.07
composite area	10.636 ha
surveyed area	5.2181 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 41

filename	XE34_41.cmp
instrument	Bartington Grad 601-2
units	nT
survey coordinates:	
SW	484014.139, 384323.394
dummy value	2047.5
source GPS points	8334536
survey size	461 m x 509 m
x and y interval	1m
stats:	
max	595.03
min	-234.86
std dev	3.04
mean	-0.03
median	-0.06
composite area	23.465 ha
surveyed area	14.281 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 42

filename	XE34_42.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	484319.846, 384644.94
dummy value	2047.5
source GPS points	6469957
survey size	433 m x 411 m
x and y interval	1m
stats:	
max	669.42
min	-102.59
std dev	2.52
mean	0.04
median	-0.04
composite area	17.796 ha
surveyed area	11.843 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 43

filename	XE34_43.cmp
instrument	Bartington Grad 601-2
units	nT
survey coordinates:	
SW	484432.692, 384354.534
dummy value	2047.5
source GPS points	4215583
survey size	340 m x 307 m
x and y interval	1m
stats:	
max	641.72
min	-1882.50
std dev	11.45
mean	-0.12
median	-0.06
composite area	10.438 ha
surveyed area	8.2009 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 44

filename	XE34_44.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	484763.985, 384520.023
dummy value	2047.5
source GPS points	5613973
survey size	557 m x 256 m
x and y interval	1m
stats:	
max	104.95
min	-434.78
std dev	1.95
mean	-0.04
median	-0.06
composite area	14.259 ha
surveyed area	10.197 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 45

filename	XE34_45.cmp
instrument	Bartington Grad 601-2
units	nT
survey coordinates:	
SW	484728.225, 384761.504
dummy value	2047.5
source GPS points	6788472
survey size	574 m x 290 m
x and y interval	1m
stats:	
max	334.48
min	-386.45
std dev	3.99
mean	-0.09
median	-0.06
composite area	16.646 ha
surveyed area	11.248 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 46

filename	XE34_46.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	484731.730, 385000.270
dummy value	2047.5
source GPS points	7147970
survey size	530 m x 435 m
x and y interval	1m
stats:	
max	761.34
min	-665.10
std dev	4.56
mean	-0.04
median	-0.02
composite area	23.055 ha
surveyed area	14.863 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 47

filename	XE34_47.cmp
instrument	Bartington Grad 601-2
units	nT
survey coordinates:	
SW	484952.017, 385397.896
dummy value	2047.5
source GPS points	2898188
survey size	346 m x 218 m
x and y interval	1m
stats:	
max	71.35
min	-69.77
std dev	1.25
mean	-0.03
median	-0.04
composite area	7.5428 ha
surveyed area	5.1687 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 48/50

filename	XE34_48.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	484683.655, 385552.3513
dummy value	2047.5
source GPS points	5655184
survey size	641 m x 291 m
x and y interval	1m
stats:	
max	965.61
min	-1766.50
std dev	10.88
mean	-0.06
median	-0.04
composite area	18.653 ha
surveyed area	10.763 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 49

filename	XE34_49.cmp
instrument	Bartington Grad 601-2
units	nT
survey coordinates:	
SW	484767.551, 385757.673
dummy value	2047.5
source GPS points	5547711
survey size	523 m x 310 m
x and y interval	1m
stats:	
max	1196.34
min	-884.53
std dev	25.86
mean	-0.01
median	-0.05
composite area	16.213 ha
surveyed area	11.035 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 51

filename	XE34_51.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	484582.357, 385671.278
dummy value	2047.5
source GPS points	2416371
survey size	236 m x 309 m
x and y interval	1m
stats:	
max	1039.31
min	-1383.06
std dev	39.74
mean	0.18
median	0.00
composite area	7.2924 ha
surveyed area	4.4744 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 53

filename	XE34_53.cmp
instrument	Bartington Grad 601-2
units	nT
survey coordinates:	
SW	485777.154, 383930.421
dummy value	2047.5
source GPS points	3279987
survey size	432 m x 202 m
x and y interval	1m
stats:	
max	1055.18
min	-150.59
std dev	5.75
mean	-0.05
median	-0.04
composite area	8.7264 ha
surveyed area	4.9253 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 54

filename	XE34_54.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	485882.678, 383667.763
dummy value	2047.5
source GPS points	4718288
survey size	316 m x 343 m
x and y interval	1m
stats:	
max	131.74
min	-44.42
std dev	0.96
mean	-0.02
median	-0.05
composite area	10.839 ha
surveyed area	6.7038 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 55

filename	XE34_55.cmp
instrument	Bartington Grad 601-2
units	nT
survey coordinates:	
SW	486184.643, 384049.015
dummy value	2047.5
source GPS points	2400371
survey size	164 m x 344 m
x and y interval	1m
stats:	
max	316.72
min	-346.62
std dev	11.38
mean	-0.01
median	-0.04
composite area	5.6416 ha
surveyed area	3.6721 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 56

filename	XE34_56.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	486189.652, 383719.888
dummy value	2047.5
source GPS points	4578828
survey size	216 m x 353 m
x and y interval	1m
stats:	
max	115.03
min	-70.65
std dev	1.61
mean	0.01
median	-0.04
composite area	7.6248 ha
surveyed area	6.1598 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 57

filename	XE34_57.cmp
instrument	Bartington Grad 601-2
units	nT
survey coordinates:	
SW	486042.892, 383475.050
dummy value	2047.5
source GPS points	8130237
survey size	487 m x 310 m
x and y interval	1m
stats:	
max	1793.57
min	-898.67
std dev	8.92
mean	0.03
median	-0.02
composite area	15.097 ha
surveyed area	10.575 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 58

filename	XE34_58.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	486301.158, 384233.199
dummy value	2047.5
source GPS points	5040193
survey size	511 m x 195 m
x and y interval	1m
stats:	
max	604.06
min	-368.29
std dev	9.25
mean	0.34
median	-0.07
composite area	9.9645 ha
surveyed area	7.3117 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 59/60

filename	XE34_59.cmp
instrument	Bartington Grad 601-2
units	nT
survey coordinates:	
SW	486318.038, 383900.015
dummy value	2047.5
source GPS points	8827671
survey size	532 m x 384 m
x and y interval	1m
stats:	
max	1545.92
min	-1897.82
std dev	7.83
mean	-0.05
median	-0.08
composite area	20.429 ha
surveyed area	14.035 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 61

filename	XE34_61.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	486390.800, 383744.864
dummy value	2047.5
source GPS points	4382703
survey size	490 m x 286 m
x and y interval	1m
stats:	
max	168.45
min	-70.80
std dev	1.91
mean	-0.10
median	-0.08
composite area	14.014 ha
surveyed area	6.7736 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 62

filename	XE34_62.cmp
instrument	Bartington Grad 601-2
units	nT
survey coordinates:	
SW	486522.922, 383645.921
dummy value	2047.5
source GPS points	3748685
survey size	434 m x 269 m
x and y interval	1m
stats:	
max	219.75
min	-87.83
std dev	1.90
mean	-0.04
median	-0.05
composite area	11.675 ha
surveyed area	5.5341 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 63

filename	XE34_63.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	485994.403, 383002.1862
dummy value	2047.5
source GPS points	7832842
survey size	401 m x 536 m
x and y interval	1m
stats:	
max	314.88
min	-412.90
std dev	4.67
mean	-0.09
median	-0.08
composite area	21.494 ha
surveyed area	15.269 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 64

filename	XE34_64.cmp
instrument	Bartington Grad 601-2
units	nT
survey coordinates:	
SW	486527.926, 383429.8898
dummy value	2047.5
source GPS points	2233734
survey size	221 m x 260 m
x and y interval	1m
stats:	
max	795.37
min	-561.19
std dev	6.41
mean	-0.01
median	-0.05
composite area	5.746 ha
surveyed area	4.1839 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 65

filename	XE34_65.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	486686.309, 383332.616
dummy value	2047.5
source GPS points	7898419
survey size	538 m x 437 m
x and y interval	1m
stats:	
max	590.39
min	-756.51
std dev	5.23
mean	0.01
median	-0.03
composite area	23.511 ha
surveyed area	14.499 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 66

filename	XE34_66.cmp
instrument	Bartington Grad 601-2
units	nT
survey coordinates:	
SW	486406.781, 383111.4108
dummy value	2047.5
source GPS points	4752908
survey size	454 m x 369 m
x and y interval	1m
stats:	
max	779.75
min	-802.22
std dev	6.54
mean	0.19
median	0.00
composite area	16.753 ha
surveyed area	9.3599 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 67

filename	XE34_67.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	486446.504, 383014.609
dummy value	2047.5
source GPS points	1797843
survey size	249 m x 208 m
x and y interval	1m
stats:	
max	492.52
min	-939.05
std dev	12.76
mean	0.15
median	-0.04
composite area	5.1792 ha
surveyed area	3.2399 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Field 68

filename	XE34_67.xcp
instrument	Sensys DLMGPS
units	nT
survey coordinates:	
SW	486644.826, 383019.673
dummy value	2047.5
source GPS points	6381936
survey size	473 m x 341 m
x and y interval	1m
stats:	
max	300.39
min	-207.55
std dev	2.85
mean	0.09
median	0.00
composite area	16.129 ha
surveyed area	11.626 ha
program	TerraSurveyorPre Version:3.0.37.12
GPS based processes	Base Layer
	Interpolate: X & Y Doubled.

Appendix 4: Oasis form

Summary for archaeol11-506352

OASIS ID (UID)	archaeol11-506352
Project Name	Geophysical Survey at Gate Burton Energy Park
Sitename	
Activity type	Geophysical Survey, MAGNETOMETRY SURVEY
Project Identifier(s)	
Planning Id	
Reason For Investigation	Planning: Pre application
Organisation Responsible for work	Archaeological Services WYAS
Project Dates	28-Feb-2022 - 06-Apr-2022
Location	Gate Burton Energy Park NGR : SK 85210 84340 LL : 53.3490954870551, -0.721422354594082 12 Fig : 485210,384340
Administrative Areas	Country : England County : Lincolnshire District : West Lindsey Parish : Knaith
Project Methodology	The cart-based survey was undertaken using an eight channel SenSYS MX V3 system containing eight FGM650 sensors. Readings are taken every 20MHz (between 0.05 and 0.1m). Data were recorded onto a device, using a Carlson GNSS Smart antenna, for centimetre accuracy. These readings were stored in the memory of the instrument and downloaded for processing and interpretation. DLMGPS and MAGNETO software, alongside bespoke in-house software was used to process and present the data.
Project Results	A geophysical (magnetometer) survey was undertaken on approximately 280 hectares of land located to the south-east of Gainsborough, Lincolnshire. The majority of the anomalies recorded are agricultural including field drains, ridge and furrow cultivation, modern ploughing and former field boundaries. Archaeological anomalies have been recorded which show what appear to be a set of enclosures of a likely medieval date. Possible archaeological anomalies have also been recorded which may indicate further areas of activity. Based on the geophysical survey, the archaeological potential of the Site is deemed to be high in Field 45 and low elsewhere.
Keywords	Ditched Enclosure - MEDIEVAL - FISH Thesaurus of Monument Types
Funder	
HER	Lincolnshire HER - unRev - STANDARD
Person Responsible for work	Emma, Brunning
HER Identifiers	
Archives	Digital Archive - to be deposited with The Collection: Art and Archaeology in Lincolnshire

Bibliography

BGS, 2022. [redacted] British Geological Survey (viewed April 2022)

CIfA, 2020. *Standard and Guidance for Archaeological Geophysical Survey*. Chartered Institute for Archaeologists

CIfA, 2014. *Standard and Guidance for Archaeological Geophysical Survey*. Chartered Institute for Archaeologists

HE, 2022a. [redacted] Historic England Aerial Archaeology Mapping Explorer

HE, 2022b. https://heritage-explorer.lincolnshire.gov.uk/Monument/MLI50244

MHCLG, 2019. *National Planning Policy Framework*. Ministry of Housing, Communities and Local Government.

NLS, 2022. [redacted] National Library of Scotland (viewed April 2022)

Schmidt, A. Linford, P., Linford, N., David, A., Gaffney, C., Sarris, A, and Fassbinder, J. 2016. *EAC Guidelines for the Use of Geophysics in Archaeology*. English Heritage

Wilson, J, 2021. Gate Burton Energy Park. Written Scheme of Investigation for Geophysical Survey. AECOM. November 2021