



Land at Aviator Way
Manchester Business Park
Greater Manchester

Geophysical Survey

Report no. 4435

February 2026

Client: Ask Real Estate MBP Limited



Land at Aviator Way Manchester Business Park Greater Manchester

Geophysical Survey

Summary

A geophysical (magnetometer) survey was undertaken on approximately 3 hectares of land located to the north of Aviator Way, Wythenshawe, Greater Manchester. Anomalies associated with post-medieval and modern agricultural and industrial activity have been detected in the form of a network of former field boundaries, linear dipolar responses which correlate with buried services, and magnetic disturbance relating to a former commercial nursery and modern construction activity. Based on the results of the geophysical survey, the archaeological potential of the Site is deemed to be low.



Report Information

Client:	Ask Real Estate MBP Ltd.
Report Type:	Geophysical Survey
Location:	Aviator Way, Manchester Business Park
County:	Greater Manchester
Grid Reference:	SJ 82634 85619
Period(s) of activity:	Post-medieval/modern
Report Number:	4435
Project Number:	XV21
Site Code:	MCH26
OASIS ID:	archaeol11-540477
Date of fieldwork:	January 2026
Date of report:	February 2026
Project Management:	Emma Brunning BSc MCIfA
Fieldwork:	Amy Chatterton BSc MA Cameron Whitley BA Oliver Hemmingway
Illustrations:	Jake Freeman BA
Photography:	Amy Chatterton
Research:	Jake Freeman
Report:	Jake Freeman



© Archaeological Services WYAS 2026
Nepshaw Lane South, Morley, Leeds LS27 7JQ
Telephone: 0113 535 3007
Email: admin@aswyas.com



Document Issue Record

Ver	Author(s)	Reviewer	Approver	Date
1.0	JF	EB	JR	Feb 2026

Contents

Report Information	ii
Document Issue Record	iii
Contents.....	iii
List of Figures	iv
List of Plates	iv
1 Introduction	1
Site location, topography and land-use	1
Soils and geology	1
2 Archaeological Background.....	1
Prehistoric and Roman Periods (c. 9500 BC – c. AD 410).....	1
Medieval Period (c. AD 410 - c. 1540).....	2
Post-Medieval and Modern Periods (c. 1540 - present)	2
3 Aims, Methodology and Presentation	3
Magnetometer survey	3
Reporting	3
4 Results and Discussion.....	4
Ferrous anomalies and magnetic disturbance	4
Agricultural anomalies.....	5
5 Conclusions.....	5

Figures

Plates

Appendices

Appendix 1: Magnetic survey - technical information

Appendix 2: Survey location information

Appendix 3: Geophysical archive and metadata

Appendix 4: Oasis form

Bibliography

List of Figures

- 1 Site location (1:50000)
- 2 Survey location showing processed greyscale magnetometer data (1:3000 @ A3)
- 3 Processed greyscale magnetometer data (1:1000 @ A3)
- 4 XY trace plot of minimally processed magnetometer data (1:1000 @ A3)
- 5 Interpretation of magnetometer data; (1:1000 @ A3)

List of Plates

- 1 General view of survey area, facing southeast
- 2 General view of survey area, facing south

1 Introduction

Archaeological Services WYAS (ASWYAS) has been commissioned by Lanpro Services on behalf of Ask Real Estate MBP Limited to undertake a geophysical survey at land at Aviator way, Manchester Business Park, Greater Manchester. This was undertaken in line with current best practice (CIfA 2020; Schmidt *et al.* 2015). The survey was carried out on the 23rd of January 2026 to provide additional information on the archaeological resource of the Site.

Site location, topography and land-use

The Site comprises approximately 3ha of open field, located directly to the south of Wythenshawe, Greater Manchester, centred at SJ 82634 85619 (see Fig 1 and Fig 2).

The Site is bounded by Aviator Way to the south, by Manchester Business Park to the west, and a mixture of residential and commercial properties to the north and east. The Site is enclosed by hedgerows and fencing. The Site is consistently between 72m and 74m above Ordnance Datum (aOD) across its entirety. The Site can be understood as being relatively level with no particular elevation trends.

Soils and Geology

Bedrock geology at the Site comprises Bollin Mudstone Member (Mudstone), a sedimentary bedrock of fluvial, lacustrine and marine origin which formed between 247.1 and 241.5 million years ago during the Triassic period. Superficial deposits have been recorded as Till, Devensian (Diamoicton), a sedimentary superficial deposit of glacial origin formed between 166 and 11.8 thousand years ago during the Quaternary period (BGS 2026).

Soils at the Site are described as slowly permeable, seasonally wet, slightly acid but base-rich loamy and clayey soils (CSAI 2026).

2 Archaeological Background

The following archaeological background is derived from a Desk-Based Assessment (DBA) conducted by Lanpro Services in advance of the project (Lanpro 2025). This section is not intended as an exhaustive compendium and only entries relevant to the geophysical survey has been included.

Prehistoric and Roman Periods (c. 9500 BC – c. AD 410)

Extensive archaeological investigations have previously been undertaken on the ‘Airport City’ site to immediate west of the Site, but these did not identify any remains of a prehistoric

or Roman period date. However, archaeological investigation undertaken during the construction of the A6 Manchester Airport Relief Road (EGM5177) to the east of the Site identified two pits, one containing Bronze Age pottery and the other containing Middle-Late Bronze Age cremated human remains. A Bronze Age spearhead (MGM10770) was also discovered c. 455m to the north of the Site.

Medieval Period (c. AD 410 - c. 1540)

The Site lays to the south of the medieval settlement of Northenden but appears to have remained in agricultural use throughout the medieval period and was located outside of the focus of any medieval settlement. Therefore, it is considered that any remains of a medieval date surviving in the Site would likely relate to agricultural activity, such as ploughing or drainage.

Post-Medieval and Modern Periods (c. 1540 - present)

Within the surrounding search area, there are 14 HER records for the post-medieval and modern periods. These are characterised by heritage assets relating to buildings or monuments of a well-defined extent that do not contribute to the understanding of the Site's archaeological potential. The understanding of settlement, land-use and the utilisation of the landscape is enhanced by cartographic and documentary sources which can give additional detail to data contained within the HER and, notably to the Site.

The 1841 tithe map of Etchells depicts the Site as eight parcels of predominantly undeveloped land, with two buildings located at its north-western and south-western corners, fronting on to Woodhouse Lane. The accompanying apportionment records three parcels in arable use, one parcel of pasture at the southern end of the Site, and meadows to the east. The two buildings are described as cottages with associated gardens.

The OS map of 1960 shows substantial changes within the study site, which has been cleared and whose former field boundaries have been replaced by drains along the west and south. The buildings in the north-west and south-west have been further extended and are now labelled Yew Tree Cottages (north-west) and Oaklea and Peartree Cottage (south-west). By this time the majority of the study site was being used as a nursery, and a range of greenhouses and access tracks had been constructed across the site's centre and south-eastern sides.

The OS map of 1986 shows that Yew Tree Cottages, in the north-western corner of the study site, had been demolished by this time, while further greenhouses, had been constructed across the centre of the site. The OS map of 1992 shows minimal changes, although a further building has been added within the nursery area.

The 2000 aerial view of the study site shows disturbance caused by greenhouses in the southern and central parts of the study site, as well as evidence of construction and demolition works associated with the formation of Aviator Way to the south.

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 aims 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 site grid was laid out using a Trimble VRS differential Global Positioning System (Trimble R6 model). The survey was undertaken using Bartington Grad601 magnetic gradiometers. These were employed taking readings at 0.25m intervals on zig-zag traverses 1.0m apart within 30m by 30m grids, so that 3600 readings were recorded in each grid. These readings were stored in the memory of the instrument and later downloaded to computer for processing and interpretation. 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 processed magnetometer data at a scale of 1:3000. Processed and minimally processed data, together with interpretation of the survey results are presented in Figures 3 to 5 inclusive at a scale of 1:1000.

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 His 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 3 to 5)

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 topsoil. 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 undeveloped sites, often being present as a consequence of manuring or tipping/infilling. There is no obvious pattern or clustering to the distribution of individual spikes within in this survey to suggest anything other than a random background scatter of ferrous debris in the plough-soil.

Rectilinear areas (F1 and F2) which include linear dipolar anomalies have been detected within the north and northeast of the survey area. These responses correlate with the location of a former commercial nursery and associated greenhouses and yards which are visible on OS mapping dating from 1992 and satellite mapping dating from 2000 (Lanpro 2026) (GE 2026). It is likely that these responses represent either a network of services and/or possibly foundations that have been left in situ.

Large areas of magnetic disturbance within the southeast of the Site likely correlate with modern construction activity which can also been seen on the 2000 satellite mapping (GE 2026).

Due to the widespread disturbance across the Site, any weaker anomalies, if present, that may be of an archaeological origin may have been masked.

Agricultural anomalies

A network of former field boundaries has been recorded within the survey area which are all recorded on Ordnance Survey (OS) mapping published 1882 and remain extant through to the 1960 mapping (NLS 2026). The two boundaries within the west of the survey area have been removed by the time of the earliest satellite mapping dating from 2000, with all remaining boundaries removed by the next available satellite mapping dating 2003 (GE 2026).

5 Conclusions

The geophysical survey has detected magnetic anomalies primarily associated with post-medieval and modern agricultural and industrial activity.

A network of former field boundaries is visible within the dataset. Magnetic disturbance within the south of the Site is associated with modern construction activity whilst linear dipolar features represent buried services likely associated with the former commercial nursery. Based on the results of the geophysical survey, the archaeological potential of the Site is deemed to be low.

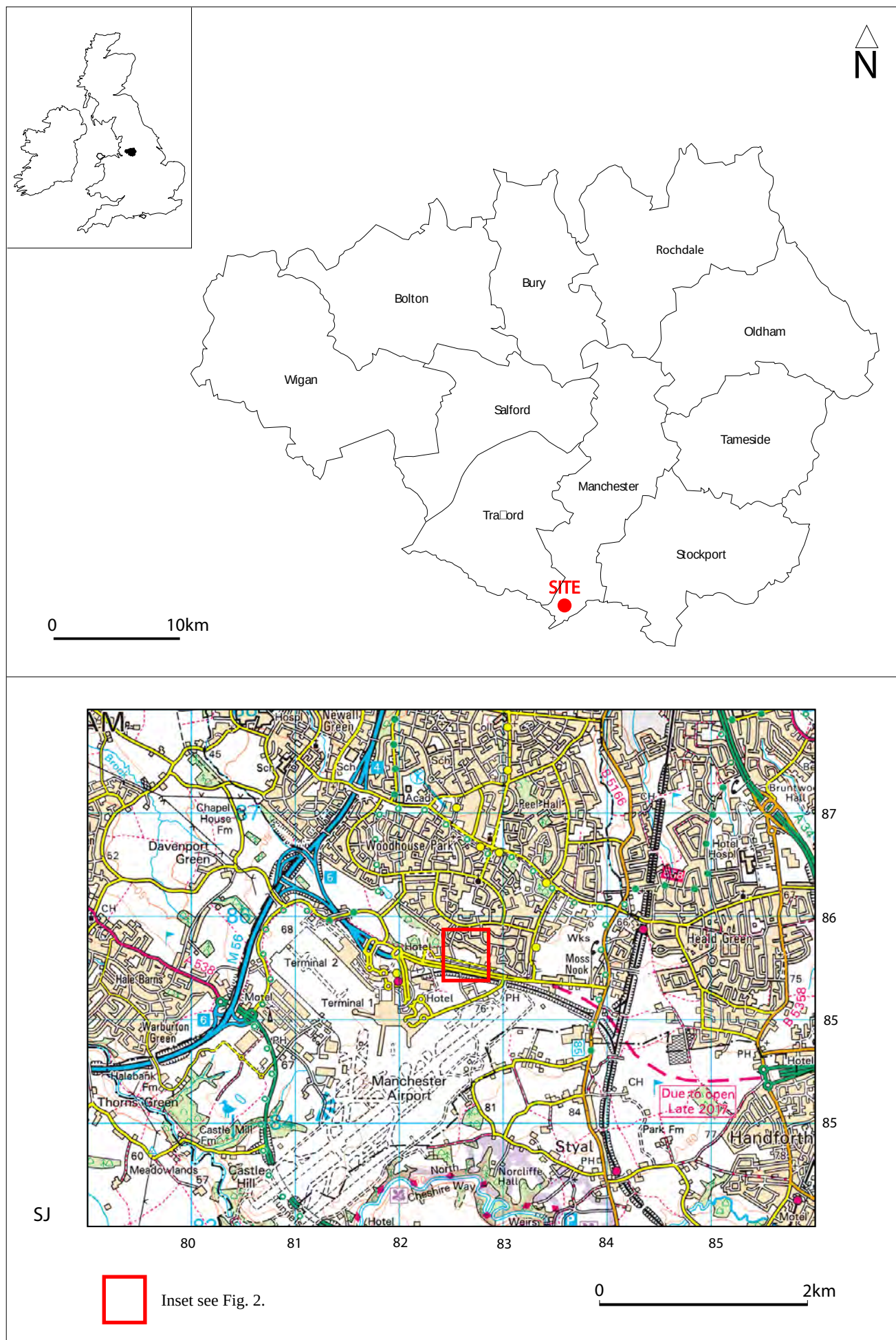
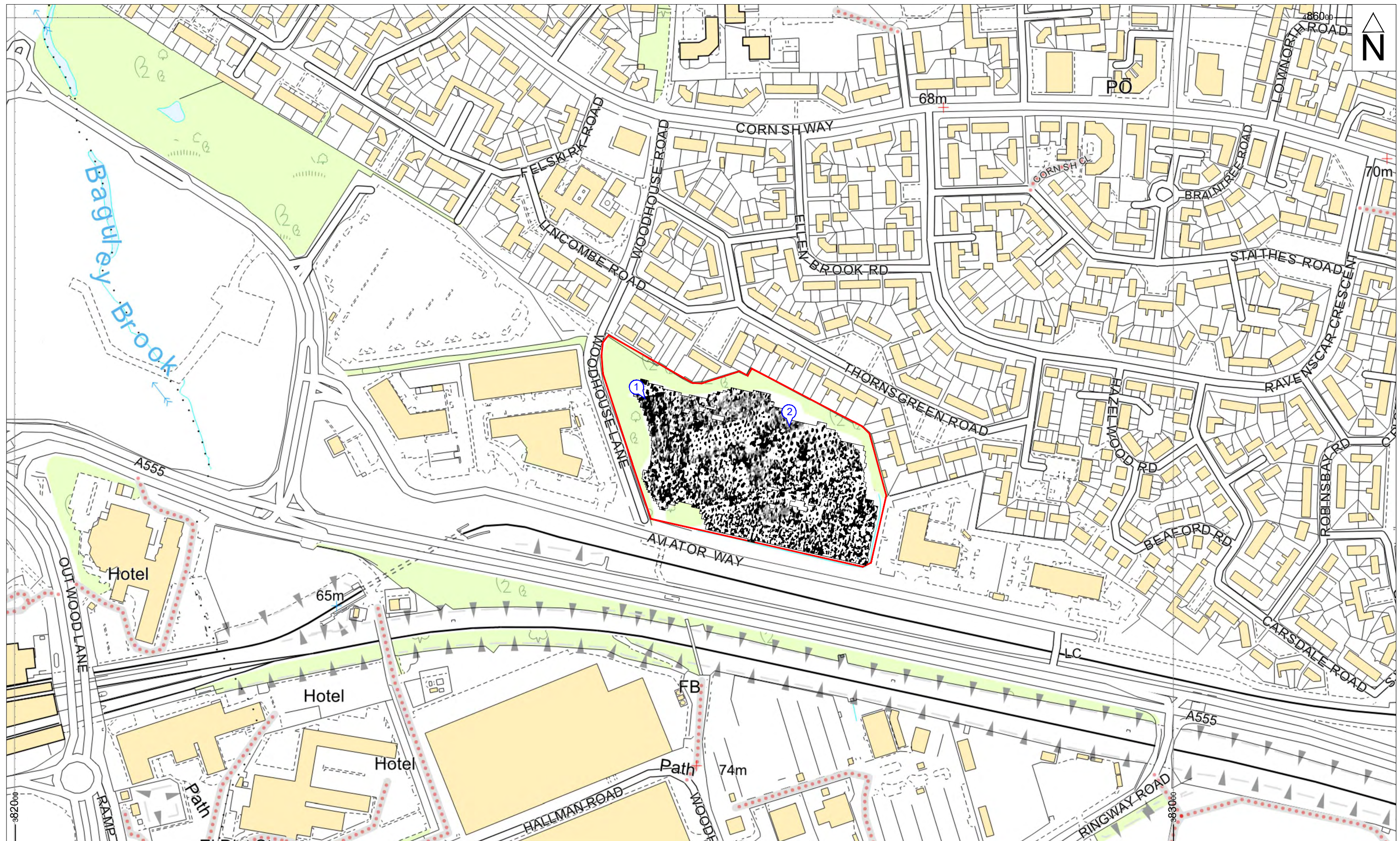


Fig. 1. Site location

Reproduced with the permission of the controller of His Majesty's Stationery Office © Crown Copyright. Archaeological Services WYAS: licence LA076406, 2026.



Title

	SURVEY AREA
	PHOTO LOCATIONS



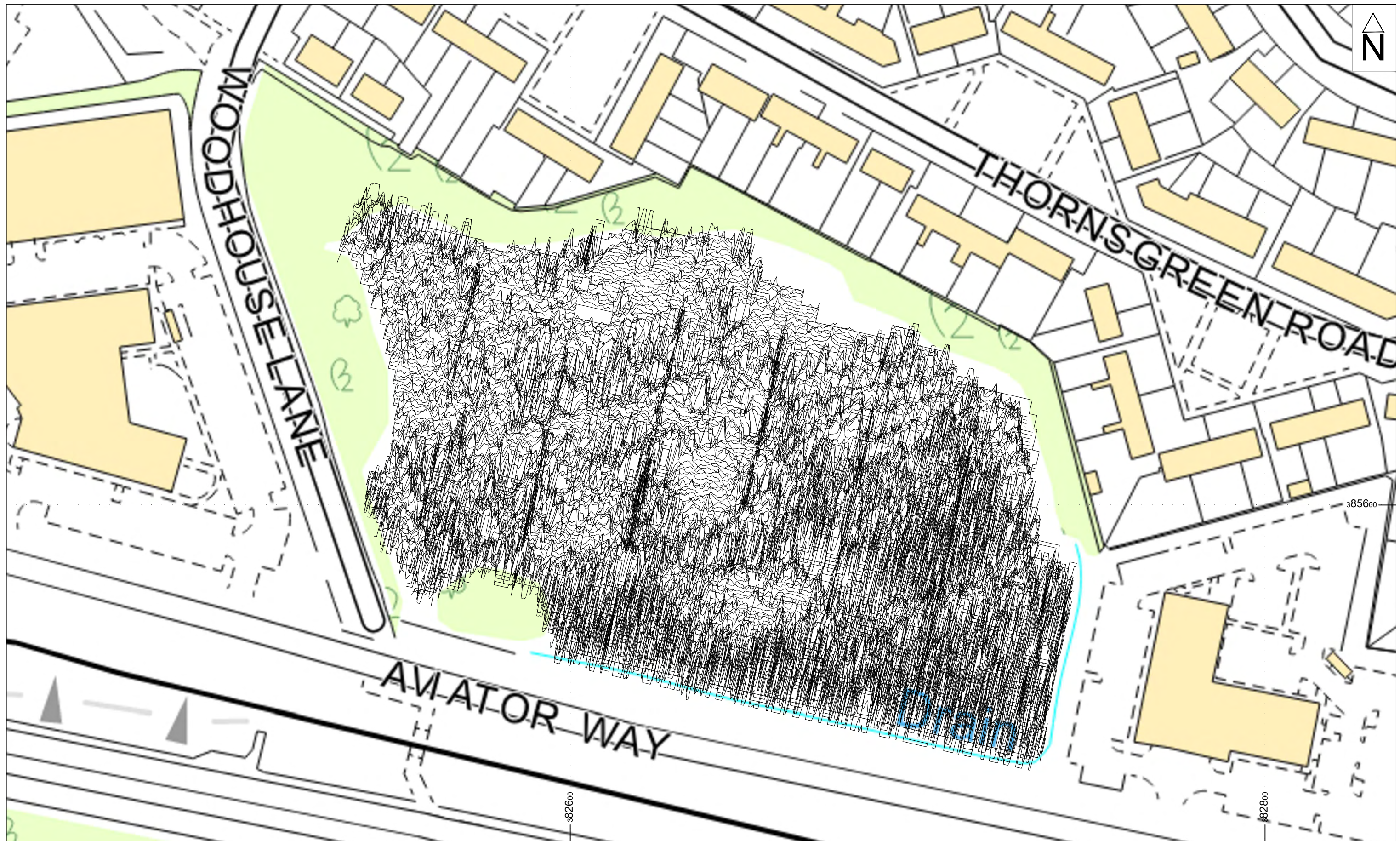


© ASWYAS 2026.
Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 3007 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XV21_MCH26

Processed greyscale magnetometer data

Reproduced from the Ordnance Survey mapping with the permission of the Controller of His Majesty's Stationery Office.
© Crown Copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings.
Wakefield Metropolitan District Council licence 100019574, 2026.

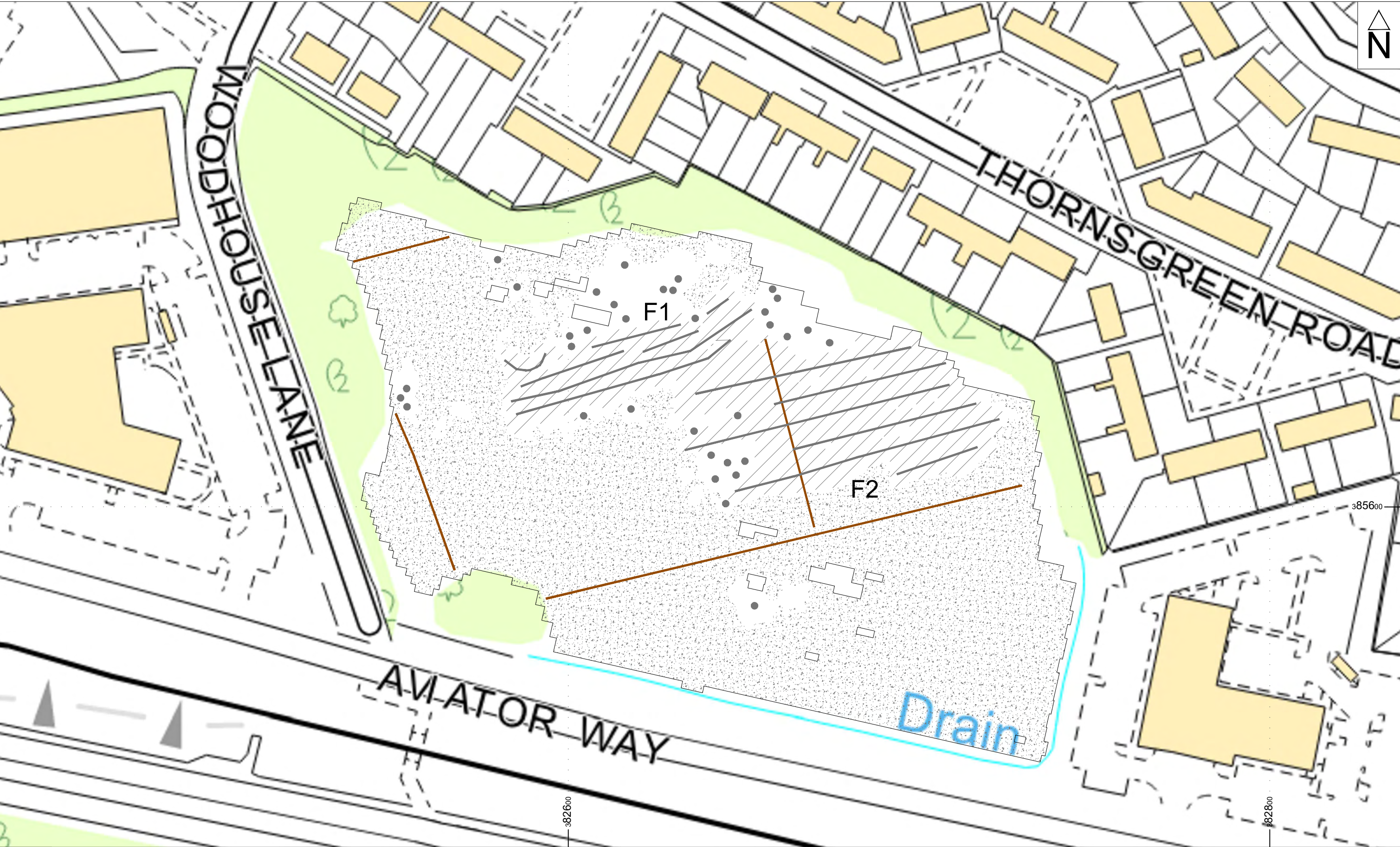


© ASWYAS 2026.
Archaeological Services W Y A S,
Nepshaw Lane South, Morley, LS27 7JQ
Tel: 0113 535 3007 Email: archaeology@wyjs.org.uk www.aswyas.com

Project ID: XV21_MCH26

XY trace plot of minimally processed greyscale magnetometer data

Reproduced from the Ordnance Survey mapping with the permission of the Controller of His Majesty's Stationery Office.
© Crown Copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings.
Wakefield Metropolitan District Council licence 100019574, 2026.



Interpretation	
	FERROUS
	SERVICE PIPE
	MAGNETIC DISTURBANCE
	FORMER FIELD BOUNDARY



Plate 1. General view of survey area, facing southeast



Plate 2. General view of survey area, facing south

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 a Bartington Grad601 magnetic gradiometer was used taking readings on the 0.1nT range, 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 Greater Manchester Historic Environment Record).

Appendix 4: Oasis form

OASIS Summary for archaeol11-540477

OASIS ID (UID)	archaeol11-540477
Project Name	Land at Aviator Way, Manchester Business Park, Greater Manchester: Geophysical Survey
Sitename	Land at Aviator Way, Manchester Business Park, Greater Manchester
Sitecode	MCH26
Project Identifier(s)	XV21 Aviator Way, Manchester Business Park, Greater Manchester
Activity type	Magnetometry Survey, Geophysical Survey, MAGNETOMETRY SURVEY
Planning Id	
Reason For Investigation	Planning requirement
Organisation Responsible for work	Archaeological Services WYAS
Project Dates	23-Jan-2026 - 23-Jan-2026
Location	Land at Aviator Way, Manchester Business Park, Greater Manchester NGR : SJ 82634 85619 LL : 53.367148932417585, -2.262443153645505 12 Fig : 382634,385619
Administrative Areas	Country : England County/Local Authority : Manchester Local Authority District : Manchester Parish : Manchester, unparished area
Project Methodology	A geophysical (magnetometer) survey was undertaken on approximately 3 hectares of land located to the north of Aviator Way, Wythenshawe, Greater Manchester. The site grid was laid out using a Trimble VRS differential Global Positioning System (Trimble R6 model). The survey was undertaken using Bartington Grad601 magnetic gradiometers. These were employed taking readings at 0.25m intervals on zig-zag traverses 1.0m apart within 30m by 30m grids, so that 3600 readings were recorded in each grid. These readings were stored in the memory of the instrument and later downloaded to computer for processing and interpretation. Bespoke in-house software was used to process and present the data.
Project Results	Anomalies associated with post-medieval agricultural and industrial activity have been detected in the form of a network of former field boundaries, linear dipolar responses which correlate with buried services, and magnetic disturbance relating to a former commercial nursery and modern construction activity. Based on the results of the geophysical survey, the archaeological potential of the Site is deemed to be low.
Keywords	
Funder	Private or public corporation Ask Real Estate MBP Ltd.
HER	Greater Manchester HER - unRev - STANDARD
Person Responsible for work	Emma Brunning
HER Identifiers	
Archives	

Bibliography

- BGS, 2026. <https://geologyviewer.bgs.ac.uk> British Geological Survey (viewed February 2026)
- CIfA, 2020. *Standard and Guidance for Archaeological Geophysical Survey*. Chartered Institute for Archaeologists
- CSAI, 2026. <http://www.landis.org.uk/soilscapes/> Cranfield Soil and Agrifood Institute (viewed February 2026)
- GE, 2026. Google Earth Pro 7.3.3.7786
- Lanpro, 2025. *Land at Aviator Way, Manchester Business Park, Greater Manchester: Archaeological Desk-Based Assessment*. Lanpro Services. Project no.6393
- NLS, 2026. <https://maps.nls.uk/index.html>. National Library of Scotland (viewed February 2026)
- Schmidt, A. Linford, P., Linford, N., David, A., Gaffney, C., Sarris, A, and Fassbinder, J. 2015. *EAC Guidelines for the Use of Geophysics in Archaeology*. English Heritage