



**HISTORIC LANDSCAPE
ASSESSMENT AND DETAILED
MAGNETOMETER SURVEY**

**LAND WEST OF
HEMEL HEMPSTEAD
HERTFORDSHIRE**

November 2013

Planning • Heritage

Specialist & Independent Advisors to the Property Industry

Abstract

Archaeology South-East was commissioned by CgMs Consulting on behalf of their client to conduct an Historic Landscape Assessment and Magnetometer survey on a site totalling approximately 54 hectares of land west of Hemel Hempstead, Hertfordshire.

Evidence of potential archaeological features was detected throughout the magnetic survey, particularly in Areas 4, 5 and 8. These were mostly represented by discrete and linear positive anomalies, possibly representative of cut features. Other anomalies identified consisted of possible geological and agricultural activity. Areas of magnetic disturbance may mask underlying features with a weaker magnetic signature.

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1.0 INTRODUCTION

1.1 Site background

1.1.1 Archaeology South-East (ASE), the contracting division of The Centre for Applied Archaeology (CAA) at the Institute of Archaeology (IoA), University College London (UCL) was commissioned by CgMs Consulting on behalf of their client to conduct an Historic Landscape Assessment and Magnetometer survey on a site totalling approximately 54 hectares of land west of Hemel Hempstead, Hertfordshire (NGR.TL 0304 0729; Figure 1).

1.2 Geology and topography

1.2.1 The British Geological survey records the site geology as clay with flints, with Lewes and Seaford Chalk to the south (BGS. 2013).

1.2.2 The surveys took place over open farmland to the west of the Chaulden suburb of Hemel Hempstead. The fields in the north were under cultivation and those in the south consisted of short grass and clover pasture. The site is bounded to the east by Pouchen End Lane, to the south by Chaulden Lane and to the north by Fields End Lane.

1.3 Aims of the historic landscape assessment

- To identify and record any historic landscape features surviving within the study area, particularly any features relating to the possible Roman road (Akeman Street) that is thought to run along the southern boundary of the site (along the line of Chaulden Lane).

1.4 Aims of the geophysical investigation

- To determine, as far as reasonably practicable, the location, extent and character of any archaeological remains which are detectable by the geophysical instrumentation used.

1.4 Scope of report

1.4.1 The scope of this document is to report on the findings of both surveys. The historic landscape assessment was carried out by Richard James, the geophysics fieldwork was conducted by John Cook and Chris Russel with the on-site assistance of Susan Chandler, Rachel Cruse, Lauren Gibson, John Hirst and Steve Price. The work was project managed by Darryl Palmer (fieldwork) and by Jim Stevenson and Dan Swift (post-excavation).

2.0 ARCHAEOLOGICAL BACKGROUND

- 2.1 A comprehensive Archaeological Desk Based Assessment (DBA) of the site has been undertaken (CgMs 2012). The full historical background for the site is presented therein and summarised below.
- 2.2 Prehistoric activity in the area of the site is represented by several struck flints of Late Neolithic or Early Bronze Age date which were recovered c. 750m to the south-east of the survey area.
- 2.3 During the Roman period the site is supposed to have been part of the estate of a villa situated to the south-east at Boxmoor. It has been suggested that Chaulden Lane follows the course of a major Roman road linking St Albans and Cirencester and several objects dating to this period were recovered during metal detector surveys on the site.
- 2.4 Evidence of activity in the study area relating to the Saxon and medieval periods is suggested by local place names and several items relating to this period were recovered during metal detector surveys which took place on the study area.
- 2.5 Pouchen End Hall to the west of the site appears to be early post-medieval in date and there are several landscape features recorded relating to agricultural activity at the site which are attributed to this period.

3.0 SURVEY METHODOLOGY

3.1 Landscape Assessment

3.1.1 The adopted methodology was based on standard historic landscape methodologies used by Archaeology South-East, which are in turn based on published guidelines for historic landscape survey (English Heritage 2007). The work was to conform to the recommendations set out in *Standards and Guidance for Archaeological Desk-Based Assessments* (Institute for Archaeologists, 2011). The survey was designed to broadly conform to a Level 2 landscape survey as defined by English Heritage (2007).

3.1.2 The methodology involved a walkover survey of the site to identify any surviving historic landscape features.

3.2 Geophysical survey

3.2.1 A fluxgate gradiometer (magnetometry) survey was undertaken in the area depicted in Figure 4 (TL 0304 0729).

3.2.2 The fieldwork was undertaken between the 16th of September and the 8th of November 2013 when the weather was cool and showery.

3.3 Applied geophysical instrumentation

3.3.1 The Fluxgate Gradiometer employed was the Bartington Instrumentation Grad 601-2. The Grad 601-2 has an internal memory and a data logger that store the survey data. This data is downloaded into a PC and is then processed in a suitable software package.

3.3.2 30m x 30m grids were set out using a GPS (see below). Each grid was surveyed with 1m traverses; samples were taken every 0.125m.

3.3.3 Data was collected along north-south traverses in a zigzag pattern beginning in the south-west corner of each grid.

3.4 Instrumentation used for setting out the survey grid

3.4.1 The survey grid for the site was geo-referenced using a Leica Viva Smartrover. The GPS receiver collects satellite data to determine its position and uses the mobile phone networks to receive corrections, transmitting them to the RTK Rover via Bluetooth to provide a sub centimetre Ordnance Survey position and height. Each surveyed grid point has an Ordnance Survey position; therefore the geophysical survey can be directly referenced to the Ordnance Survey National Grid.

3.5 Data processing

- 3.5.1 All of the geophysical data processing was carried out using TerraSurveyor published by DW Consulting. Minimally processed data was produced using the following schedule of processing. Due to the very high positive readings of some of the magnetic disturbance the values were replaced with a dummy value so as to avoid detrimentally affecting the dataset when further processed. The first process carried out upon the data was to apply a DESPIKE to the data set which removes the random 'iron spikes' that occur within fluxgate gradiometer survey data. A ZERO MEAN TRAVERSE was then applied to survey data. This removes stripe effects within grids and ensures that the survey grid edges match. Figures 8, 11, 14, 17, 20, 23, 26, 29 and 32 display the processed survey data.

3.6 Data presentation

- 3.6.1 Data is presented using images exported from Geoplot into Autocad software and inserted into the geo-referenced site grid. Data is presented (Figures (Area 1) 3-5, (Area 2) 7-9, (Area 3) 11-13 (Area 4) 15-17) as raw data, processed data and interpolated data greyscale plots.

4.0 SURVEY RESULTS

4.1 LANDSCAPE ASSESSMENT (Figure 2)

4.1.1 The purpose of the survey was to identify and record any historic landscape features surviving within it, particularly any features relating to the possible Roman road (Akeman Street) that is thought to run along the southern boundary of the site (along the line of Chaulden Lane).

4.1.2 Roman features associated with Akeman Street

Chaulden Lane has been identified as a possible line of Akeman Street, the Roman road linking the two major towns of Verulamium (St Albans) and Corinium (Cirencester). This identification was put forward in the 1960s by The Viatores, a group dedicated to researching Roman roads. They claimed that the terrace now occupied by Chaulden Lane, a sinuous lane of probable medieval origin, occupies the line of the earlier Roman road, although there is no specific evidence to support this (Hertfordshire HER reference 4582). This interpretation is plausible as the lane runs parallel to the river, contouring along the base of the valley side, following the approximate boundary between arable lands to the north and valley bottom meadows to the south.

4.1.3 The southern edge of the site adjacent to the lane is currently under pasture, bounded by a hedgerow and fence. At its western end, it is situated c. 2m above the lane, gradually descending in height towards the east until it reaches the separate rectangular field at the south-eastern corner of the site. This field lies at a level just above the lane at its eastern end and has clearly been terraced at some point in the recent past to form a rectangular platform (possibly associated with the former school that lay to the east), cut into the slope at the rear and terraced out to a height of 1-1.5m above the lane at its western end (Plate 1). The remainder of the area above the lane to the west is featureless.

4.1.4 In conclusion, the assessment found no evidence to either confirm or deny the interpretation of a Roman road in this location. The height of the land within the site above the present line of Chaulden Lane would suggest that there is little likelihood of finding roadside settlements or other evidence within the site; any argument that the Roman and medieval levels of Chaulden Lane have been eroded down by centuries of traffic is weakened by the fact that the lane runs on a terrace and not within an eroded hollow-way. An exception may possibly exist within the south-eastern corner of the site where the ground level may have been built up in modern times, opening the possibility of original ground levels surviving at approximately the level of the current lane.

4.1.5 Other historic landscape features

The site is divided into two parts. The north-eastern part comprises two large arable fields, with a small amount of pasture and a small wooded hanger at the southern end. The north-western and southern part comprises pasture. The two parts are separated by a wide and dense hedgerow with

additional planting and self-seeded trees producing an impenetrable barrier between the two sides of the field. Although all the existing hedgerows on the site follow the line of boundaries marked on the historic mapping, no significant historic earthwork components (banks and ditches) were evident in any of them – a prominent ditch flanking the internal hedgerow in the north-eastern corner of the site appears to have been graded by machine. The small rectangular wooded area in the north-eastern area of the site appears to be the remnant of a hanger on this sloping site – it could not be accessed due to scrub and barbed-wire fencing, but did not appear to contain any significant earthworks.

- 4.1.6 Despite a thorough walkover survey of the entire site (barring inaccessible scrub along the external and internal boundaries), only seven archaeological features were identified, all of which were of only minor (local) significance. The features were all recorded on record sheets, plotted by hand-held GPS on a base map and photographed digitally.

Site 1

NGR 503187 207605 – 503097 207562 – 503168 207438

Two ephemeral ploughed-out former field boundaries, predating 1877. They form the northern and western boundaries of a former enclosure within the existing field, the interior of which is visible as a level platform. The northern boundary forms a low bank, c.6m wide, running across the ploughed field. The eastern boundary meets it at a right-angle and runs along the valley side as a low break-of-slope, c.0.4m high and c.5-6m wide. It appears to continue into the pasture field to the south following a slight kick to the east (Plates 2 & 3).

Interpretation: former field boundary of post-medieval date.

Site 2

NGR 503187 207439

Circular hollow, c.7m diameter and c.0.7m deep, cut into the grassy slope (Plate 4).

Interpretation: former chalk pit.

Site 3

NGR 503254 207400

Series of three terraced platforms partly cut into the slope (and partly terraced above it) next to the eastern side boundary. The northern terrace is rectangular, measuring 20m x 15, and cut 0.5m in the slope. It is flanked to the south by a 7m diameter circular terrace, with a smaller sub-rectangular terrace, 17m x 10m, to the south (Plate 5).

Interpretation: possibly platforms for temporary buildings of relatively modern date, either agricultural or (more likely) military – the HER records an army camp existed at Chaulden during the Second World War.

Site 4

NGR 503300 207355

Circular grassy hollow, c.6-7m diameter and 0.5m deep, in the corner of the field. Predates 1877 (Plate 6).

Interpretation: former chalk pit.

Site 5

NGR 503102 207481 – 203039 207444

Ephemeral ploughed-out field boundary, extending out into the arable field from the existing hedgerow, across the head of a dry valley, merging with the far slope. It is only really visible from a distance and comprises a 10m wide low linear rise or bank forming the northern boundary of a former field still in existence in 1981, but of much greater age - the sinuous outline retains the classic outline of a field enclosed from former open arable strips. The former western boundary does not survive as an earthwork, but may be fossilised by a linear strip of reddish clay visible in the soil (Plate 7).

Interpretation: former field boundary, representing late medieval or early post-medieval piecemeal enclosure of earlier medieval open fields.

Site 6

NGR 502752 207273 – 502892 207305

Low break of slope running across the pasture field. Visible as a low scarp, c.0.6m high and 8m wide, covered in clover (Plate 8).

Interpretation: former field boundary removed between 1844 and 1877.

Site 7

NGR 503065 206909

Large grassy hollow cut into the slope in the corner of a pasture field (Plate 9).

Interpretation: former chalk pit.

4.2 Geophysical Survey

Survey limitations

Physical obstructions encountered on site included trees, scrub, fences and farm equipment. Obstructions for each area are noted in the results. In addition, the effectiveness of magnetometer surveys depends on a contrast between the absolute magnetic susceptibility of the topsoil to the underlying subsoil (Clark 1996). Features may also be difficult to detect where there has been significant primary silting and development of significant overburden. Areas where physical obstructions form a barrier to survey, or a health and safety issue, have been omitted.

4.2.1 Introduction to results

The results should be read in conjunction with the figures at the end of this report. The types of features likely to be identified are discussed below.

Positive Magnetic Anomalies

Positive anomalies generally represent cut features that have been in-filled with magnetically enhanced material.

Negative Magnetic anomalies

Negative anomalies generally represent buried features such as banks that have a lower magnetic signature in comparison to the background geology

Magnetic Disturbance

Magnetic disturbance is generally associated with interference caused by modern ferrous features such as fences and service pipes or cables.

Magnetic Debris

Low amplitude magnetic debris consists of a number of dipolar responses spread over an area and is indicative of ground disturbance.

Dipolar Anomalies

Dipolar anomalies are positive anomalies with an associated negative response. These anomalies are usually associated with discreet ferrous objects or may represent buried kilns or ovens.

Bipolar Anomalies

Bipolar anomalies consist of alternating responses of positive and negative magnetic signatures. Interpretation will depend on the strength of these responses; modern pipelines and cables typically produce strong bipolar responses.

Thermoremanence

Thermoremanence is most commonly encountered through the magnetizing of clay through the firing process although stones and soils can also acquire thermoremanence.

4.2.2 Interpretation of fluxgate gradiometer (magnetometry) results (Figures 9, 12, 15, 18, 21, 24, 27, 30 and 33)

The survey has been divided into eleven areas based on the areas designated for geophysical survey. Areas 9 and 11 were not surveyed due to obstructions or limited access. Other areas omitted are noted below.

Magnetometry results

Area 1 (Figure 9)

- 4.4.2 Area 1 was situated in the north of the survey area in an area currently under cultivation for wheat.
- 4.4.3 Limited evidence for archaeological activity is indicated throughout Area 1 by a number of anomalies.
- 4.4.4 A number of discrete moderate positive anomalies in the central part of the area may represent cut features such as pits, and weak positive linear anomalies in the southern two thirds of the area may indicate ditches. However these may also relate to former agricultural activity.
- 4.4.5 Areas of magnetic debris may indicate ground disturbance or made ground.
- 4.4.6 Moderate and weak positive amorphous anomalies may represent cut features of an archaeological origin such as quarrying activity. However, these anomalies are as likely to relate to geological features.
- 4.4.7 A thin scattering of dipolar anomalies may represent archaeological features such as kilns or ovens, but more likely they indicate discrete ferrous objects such as parts dropped from farm machinery.

Area 2 (Figure 12)

- 4.4.8 Area 2 was situated in the east of the site in a field currently under rough grass. A patch of brambles obstructed a small area on the eastern perimeter of the area. Survey was otherwise unobstructed.
- 4.4.9 Evidence of possible archaeological features was limited to a number of linear weak positive anomalies, and two discrete moderate anomalies that may represent cut features such as pits and ditches. However, these anomalies may also relate to infilled natural features or more modern agricultural activity. In addition, areas of magnetic debris may indicate ground disturbance or made ground.
- 4.4.10 A single dipolar anomaly may represent an archaeological feature such as a kiln or oven, but more likely indicates discrete ferrous objects such as parts dropped from farm machinery.

Area 3 (Figure 12)

- 4.4.11 Area 3 was a square shaped enclosure used for grazing horses. A large quantity of magnetic debris related to the stables was identified in the north corner of the area.
- 4.4.12 Area three was dominated by magnetic debris and disturbance likely to be due to modern ground works.

Area 4 (Figures 15 and 18)

- 4.4.13 Area 4 was the largest single area surveyed, consisting of an enclosure currently under cultivation for wheat and sloping to the south. The western and southern periphery of the area had been closely planted with a variety of trees and could not be surveyed.
- 4.4.14 The most significant and widespread anomalies noted in Area 4 are moderate and weak positive amorphous anomalies. These anomalies may represent cut features of an archaeological origin such as quarrying activity. However, these anomalies are as likely to relate to geological features due to their size and irregular shape.
- 4.4.15 Possible archaeological features were identified across the area but with a concentration noted in the west (A1) in the form of a number of discrete moderate and weak positive anomalies and weak positive linear anomalies which may represent cut features such as pits and ditches. However, these anomalies may also relate to in filled natural features or more modern agricultural activity. A single weak negative linear anomaly in the north of the area (A2) may represent a remnant bank or earthwork. However, this anomaly may also relate to former agricultural activity. Negative anomalies may also stem from the dipolar effect of certain magnetic anomalies.
- 4.4.16 Regions of magnetic debris within Area 4 are indicative of ground disturbance or areas of made ground. Linear areas of magnetic debris observed (A3) are probably associated with former field boundaries.
- 4.4.17 A possible thermoremanent anomaly is marked in the south of Area 4 (A4). A possible kiln, oven or other industrial activity may be represented.
- 4.4.18 A scattering of dipolar anomalies is discerned across Area 4. Due to the number observed, only the more significant are highlighted. These anomalies correspond to near surface ferrous objects.
- 4.4.19 A number of weak positive linear anomalies may relate to former agricultural activity.

Area 5 (Figures 21 and 24)

- 4.4.20 Area 5 was situated in the north-west of the site in an area currently under grass for horse grazing. An area in the west of the area contained old farm machinery and other general rubbish and was omitted from the survey.
- 4.4.21 As with Area 4 the most significant and widespread anomalies noted in Area 5 are moderate and weak positive amorphous anomalies. However, these were observed in two main clusters (A5 and A6). These anomalies may represent cut features of an archaeological origin such as quarrying activity. However, these anomalies are as likely to relate to geological features due to their size and irregular shape.
- 4.4.22 Limited evidence for archaeological features was identified across the area in the form of a number of discrete moderate and weak positive anomalies and weak positive linear anomalies which may represent cut features such as pits and ditches. However, these anomalies may also relate to in filled natural features or more modern agricultural activity. Two of these anomalies (A7 and A8) align with known former field boundaries. Weak negative anomalies in the north of the area (A9) may represent remnant earthworks or up cast from excavated features. However, negative anomalies may also stem from the dipolar effect of certain magnetic anomalies.
- 4.4.23 A bipolar anomaly with associated magnetic disturbance is observed in the north west of Area 5. This anomaly corresponds to a below ground service such as a pipe.
- 4.4.24 A number of weak positive linear anomalies may relate to former agricultural activity.

Area 6 (Figure 27)

- 4.4.25 Area 6 consisted of a level area of clover pasture in the north and an area of scrub and uneven ground to the south. The southern area was omitted on grounds of health and safety.
- 4.4.26 A cluster of moderate and weak positive amorphous anomalies was noted in Area 6. These anomalies may represent cut features of an archaeological origin such as quarrying activity. However, these anomalies are as likely to relate to geological features due to their size and irregular shape.
- 4.4.27 Three discrete moderate positive anomalies were noted in the north-east of Area 6 which may represent cut features such as pits and ditches. However, these anomalies may also relate to in filled natural features.
- 4.4.28 Regions of magnetic debris within Area 6 are indicative of ground disturbance or areas of made ground.
- 4.4.29 A number of weak positive linear anomalies may relate to former agricultural

activity.

Area 7 (Figure 24)

- 4.4.30 Area 7 was a small fenced off area of pasture. No physical obstructions to survey were observed. A mobile telephone mast was noted to the south of the enclosure.
- 4.4.31 Possible archaeological features were limited to a couple of discrete moderate positive anomalies and a weak positive linear anomaly which may represent cut features such as pits and ditches. However, these anomalies may also relate to in filled natural features or more modern agricultural activity.
- 4.4.32 A couple of dipolar anomalies are discerned in Area 4. These anomalies correspond to near surface ferrous objects. A bipolar anomaly with associated magnetic disturbance is observed in the north west of Area 5. This anomaly corresponds to a below ground service such as a pipe.

Area 8 (Figures 30 and 33)

- 4.4.33 Area 8 was an area of pasture split into to two enclosures for horse grazing.
- 4.4.34 Moderate positive amorphous anomalies were restricted to a linear grouping in the north of Area 8 (A10). These anomalies may represent cut features of an archaeological origin such as quarrying activity. However, these anomalies are as likely to relate to geological features due to their size and irregular shape. Large areas of weak positive amorphous anomalies are observed in a trend running north-west to south-east across Area 8 (A11) along with a further linear area in the south (A12). These anomalies may indicate geological features such as palaeochannels although an anthropogenic cause is also possible.
- 4.4.35 Possible archaeological features were identified across the area but with a concentration noted in the north, forming a possible enclosure (A13), in the form of a number of discrete moderate and weak positive anomalies and weak positive linear anomalies which may represent cut features such as pits and ditches. However, these anomalies may also relate to in filled natural features or more modern agricultural activity.
- 4.4.36 Regions of magnetic debris within Area 8 are indicative of ground disturbance or areas of made ground.
- 4.4.37 A scattering of dipolar anomalies is discerned across Area 8. Due to the number observed, only the more significant are highlighted. These anomalies correspond to near surface ferrous objects.
- 4.4.38 A number of moderate and weak positive linear anomalies may relate to former agricultural activity.

Area 10 (Figure 33)

- 4.4.39 Area 10 consisted of a narrow enclosure currently under grass. The northern portion of Area 10 contained farm trailers and other metal objects and was therefore deemed unfit for survey and omitted.
- 4.4.40 An area of weak positive amorphous anomalies was observed in a trend running east-west across Area 10 (A14). These anomalies may indicate geological features such as palaeochannels although an anthropogenic cause is also possible.
- 4.4.41 Possible archaeological features were identified across the area in the form of a number of discrete moderate and weak positive anomalies and weak positive linear anomalies which may represent cut features such as pits and ditches. However, these anomalies may also relate to in-filled natural features or more modern agricultural activity.
- 4.4.42 Regions of magnetic debris within Area 10 are indicative of ground disturbance or areas of made ground.

5.0 CONCLUSIONS

5.1 Discussion

Area 1

5.1.1 The geophysical survey in Area 1 provided some limited evidence for archaeological activity indicated by a number of discrete and linear anomalies suggestive of cut features. Some potential geological features were also identified. Some of the magnetic debris noted may relate to features recorded as Site 1, two former field boundaries, in the walkover survey.

Area 2

5.1.2 Limited evidence for archaeological activity was observed in Area 2. A number of possible linear anomalies and two discrete possible pits were noted. Possible ground disturbance or made ground was observed that corresponds to Site 3, a series of terraced platforms, and Site 4, a circular grassy hollow interpreted as a former chalk pit.

Area 3

5.1.3 Area 3 evidenced the least potential archaeological activity in the survey area.

Area 4

5.1.4 The most significant and widespread features noted in Area 4 were possibly geological in nature, with a number of anomalies appearing to correspond with the underlying geology (Figure 34). However, the features are relatively consistent in form and magnetic strength over both the predominant geologies of the site. These features may also be evidence of a former industrial process such as quarrying. The main evidence for archaeological features was a number of possible cut features along with a thermoremanent anomaly indicative of a heat process such as a small furnace, kiln or oven. Linear areas of magnetic debris corresponded with Site 5 of the walkover survey and former field boundaries seen in the historic mapping (CgMs 2012). In addition, a number of struck flints were noted by the field teams during survey.

Area 5

5.1.4 As with Area 4 possible geological features were observed in Area 5. Although in two clusters they were of a similar form to those found in Area 4. As such the same factors discussed above are relevant. Evidence of archaeological features was predominantly in the form of possible cut features. Two of these may relate to former field boundaries and Site 6 from the walkover survey.

Area 6

- 5.1.4 Limited evidence for archaeological activity was observed in Area 6 in the form of cut features. A number of possible geological features similar to those in Areas 4 and 5 were also noted.

Area 7

- 5.1.4 Little evidence for archaeological activity was observed in Area 7. However, the presence of a probable service and its associated magnetic disturbance may have obscured possible features.

Area 8

- 5.1.4 A linear group of possible geological features were observed in Area 8. Area 8 also contained the most evidence for archaeological features, the most significant forming a possible enclosure in the north of the area. A number of possible earthworks and cut features appear to correspond with the potential north-west to south-east geological features. The possible geological features to the south may relate to Chaulden Lane.

Area 10

- 5.1.4 Area 10 contained evidence for cut features. Alongside this, possible geological features may relate to those nearby in Area 8.

5.2 Summary

- 5.2.1 Evidence of potential archaeological features was successfully detected throughout the magnetic survey, particularly in Areas 4, 5 and 8. Possible archaeological features were mostly represented by discrete and linear positive anomalies which are potentially representative of cut features. Other anomalies identified consisted of possible geological and agricultural activity. Areas of magnetic disturbance may mask underlying features with a weaker magnetic signature.
- 5.2.2 In general the linear anomalies identified within the survey are ephemeral. This may be due to the features themselves being ephemeral, overburden between the magnetometer and the feature, the result of more recent agricultural activity, infilling of natural features, or a combination of these.

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ACKNOWLEDGEMENTS

Archaeology South – East would like to thank CgMs Consulting for commissioning the investigation.

HER Summary Form

Site Code	-					
Identification Name and Address	Land West of Hemel Hempstead					
County, District &/or Borough	Hertfordshire					
OS Grid Refs.	TL 0304 0729					
Geology	Clay With Flints					
Arch. South-East Project Number	5980					
Type of Fieldwork					Survey	
Type of Site	Green Field					
Dates of Fieldwork				16 th September- 8 th November 2013		
Sponsor/Client	CgMs					
Project Manager	Darryl Palmer					
Project Supervisor	John Cook, Richard James, Chris Russel					
Period Summary						
<p>Summary</p> <p>Archaeology South-East was commissioned by CgMs Consulting Ltd on behalf of their client to conduct an Historic Landscape Assessment and Magnetometer survey on a site totalling approximately 54 hectares of land west of Hemel Hempstead, Hertfordshire.</p> <p>Evidence of potential archaeological features was detected throughout the magnetic survey, particularly in Areas 4, 5 and 8. These were mostly represented by discrete and linear positive anomalies, possibly representative of cut features. Other anomalies identified consisted of possible geological and agricultural activity. Areas of magnetic disturbance may mask underlying features with a weaker magnetic signature.</p>						

OASIS FORM

OASIS ID: archaeo16-164140

Project details

Project name	Historic Landscape Assessment and Detailed Magnetometer Survey on Land West of Hemel Hempstead, Hertfordshire
Short description of the project	Archaeology South-East was commissioned by CgMs Consulting Ltd on behalf of their client to conduct an Historic Landscape Assessment and Magnetometer survey on a site totalling approximately 54 hectares of land west of Hemel Hempstead, Hertfordshire. Evidence of potential archaeological features was detected throughout the magnetic survey, particularly in Areas 4, 5 and 8. These were mostly represented by discrete and linear positive anomalies, possibly representative of cut features. Other anomalies identified consisted of possible geological and agricultural activity. Areas of magnetic disturbance may mask underlying features with a weaker magnetic signature.
Project dates	Start: 16-09-2013 End: 08-11-2013
Previous/future work	Not known / Not known
Any associated project reference codes	5980 - Contracting Unit No.
Type of project	Field evaluation
Site status	None
Methods & techniques	"Geophysical Survey"
Development type	Not recorded
Solid geology	CHALK (INCLUDING RED CHALK)
Drift geology	CLAY WITH FLINTS
Techniques	Magnetometry

Project location

Country	England
Site location	HERTFORDSHIRE DACORUM HEMEL HEMPSTEAD West Hemel
Postcode	HP1 2SA
Study area	54.00 Hectares
Site coordinates	TL 03090 07050 51 0 51 45 07 N 000 30 22 W Point

Project creators

Name of Organisation	Archaeology South-East
Project brief originator	CgMs Consulting
Project design originator	CgMs Consulting
Project director/manager	Darryl Palmer/Jim Stevenson
Project supervisor	John Cook
Type of sponsor/funding body	CgMs Consulting

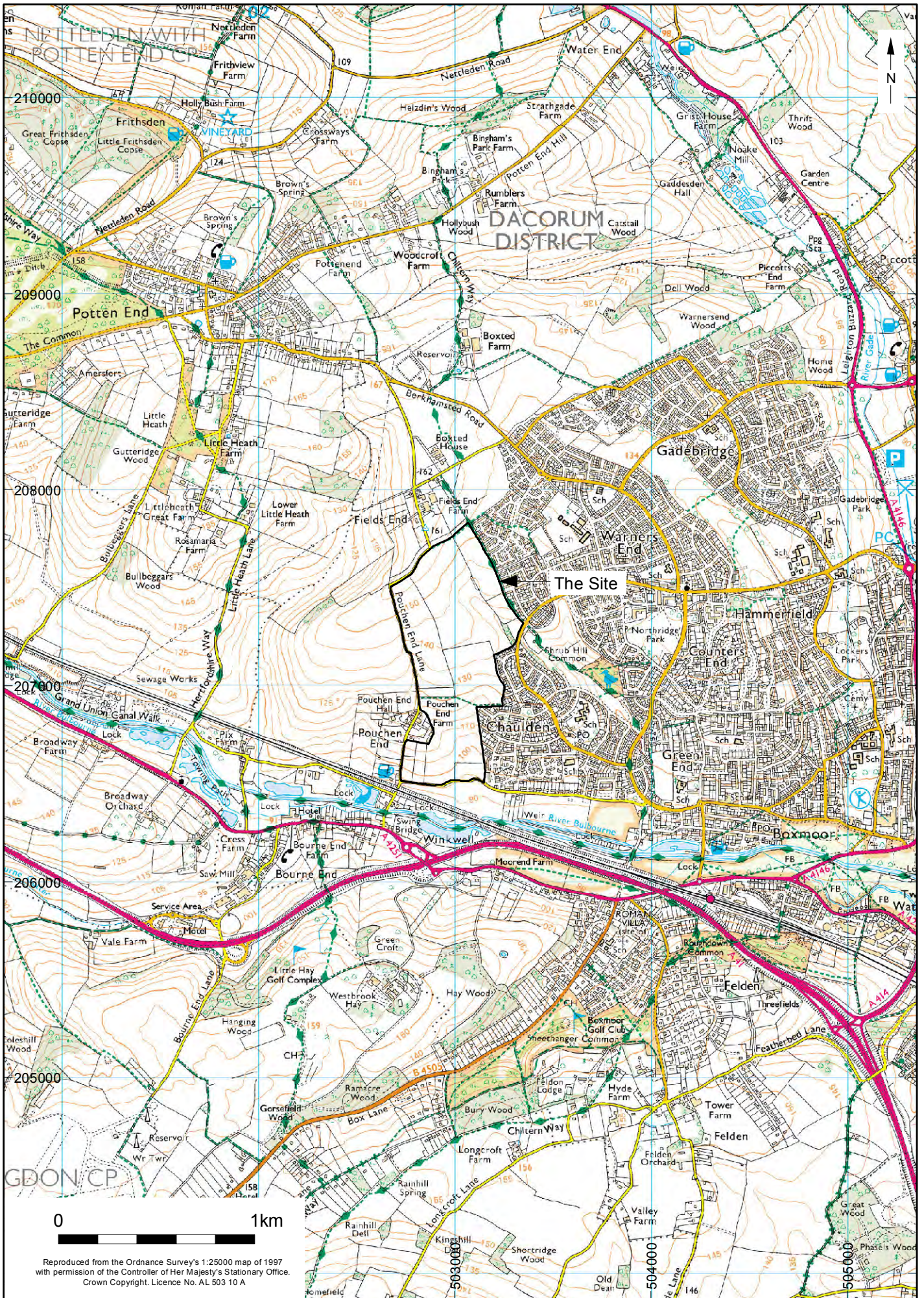
Project archives

Digital Contents	"Survey"
Digital Media available	"Geophysics","Images raster / digital photography","Text"

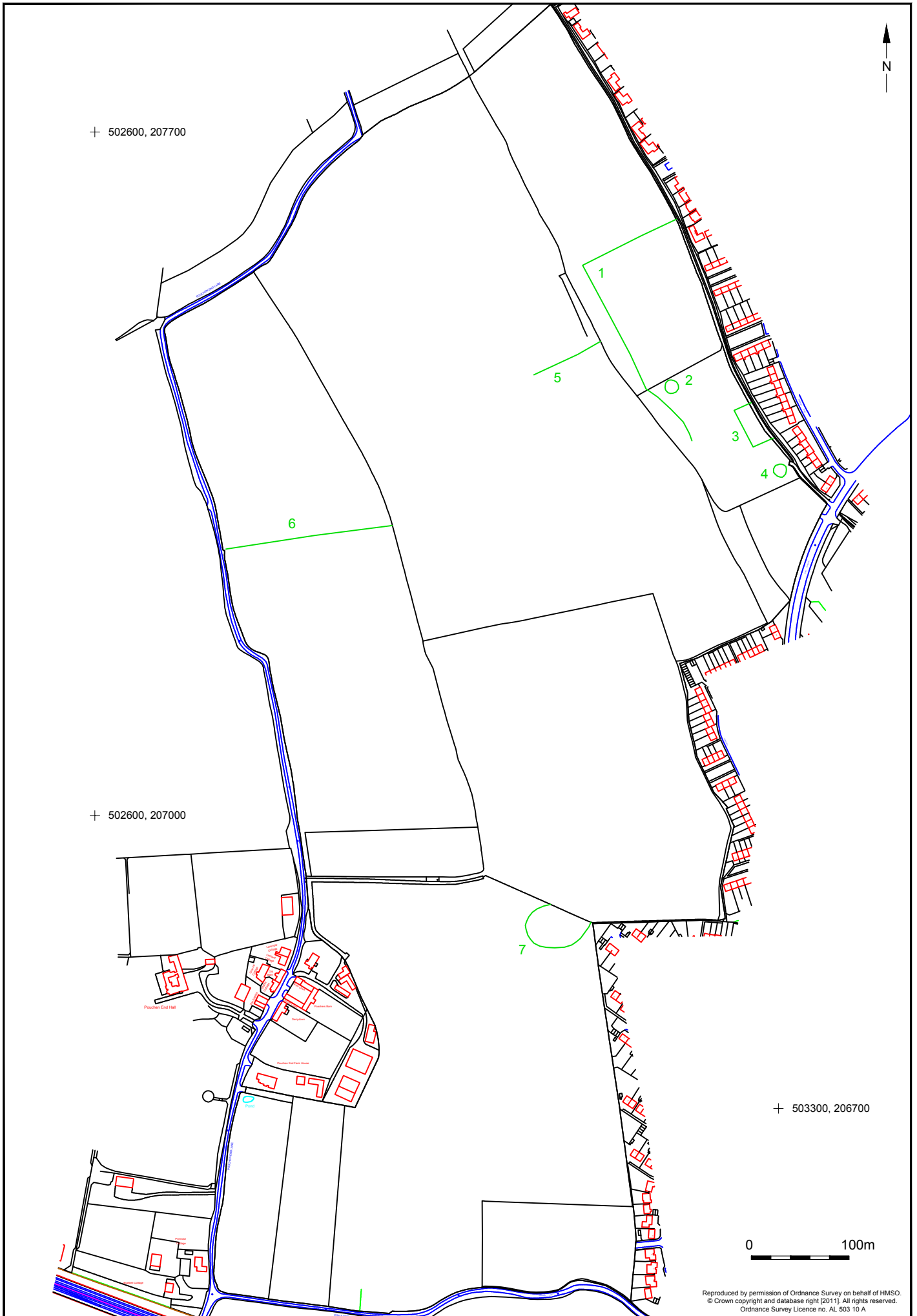
Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	A Historic Landscape Assessment and Detailed Magnetometer Survey on Land West of Hemel Hempstead, Hertfordshire
Author(s)/Editor(s)	Cook, J., James, R. and Russel, C.
Date	2013
Issuer or publisher	ASE
Place of issue or publication	Portslade

Entered by	John Cook (john.cook@ucl.ac.uk)
Entered on	13 November 2013



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Project Ref: 5980	November 2013	Site location		
Report Ref: 2013287	Drawn by: JLR			



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Project Ref: 5980	Nov 2013	Results of walkover survey		
Report Ref: 2013287	Drawn by: JLR			



Plate 1: Terraced edge of field adjacent to Chaulden Lane, looking west



Plate 2: Site 1, looking north-east



Plate 3: Site 1, looking south-east



Plate 4: Site 2, looking north-east



Plate 5: Site 3, looking north-east



Plate 6: Site 4, looking north-east



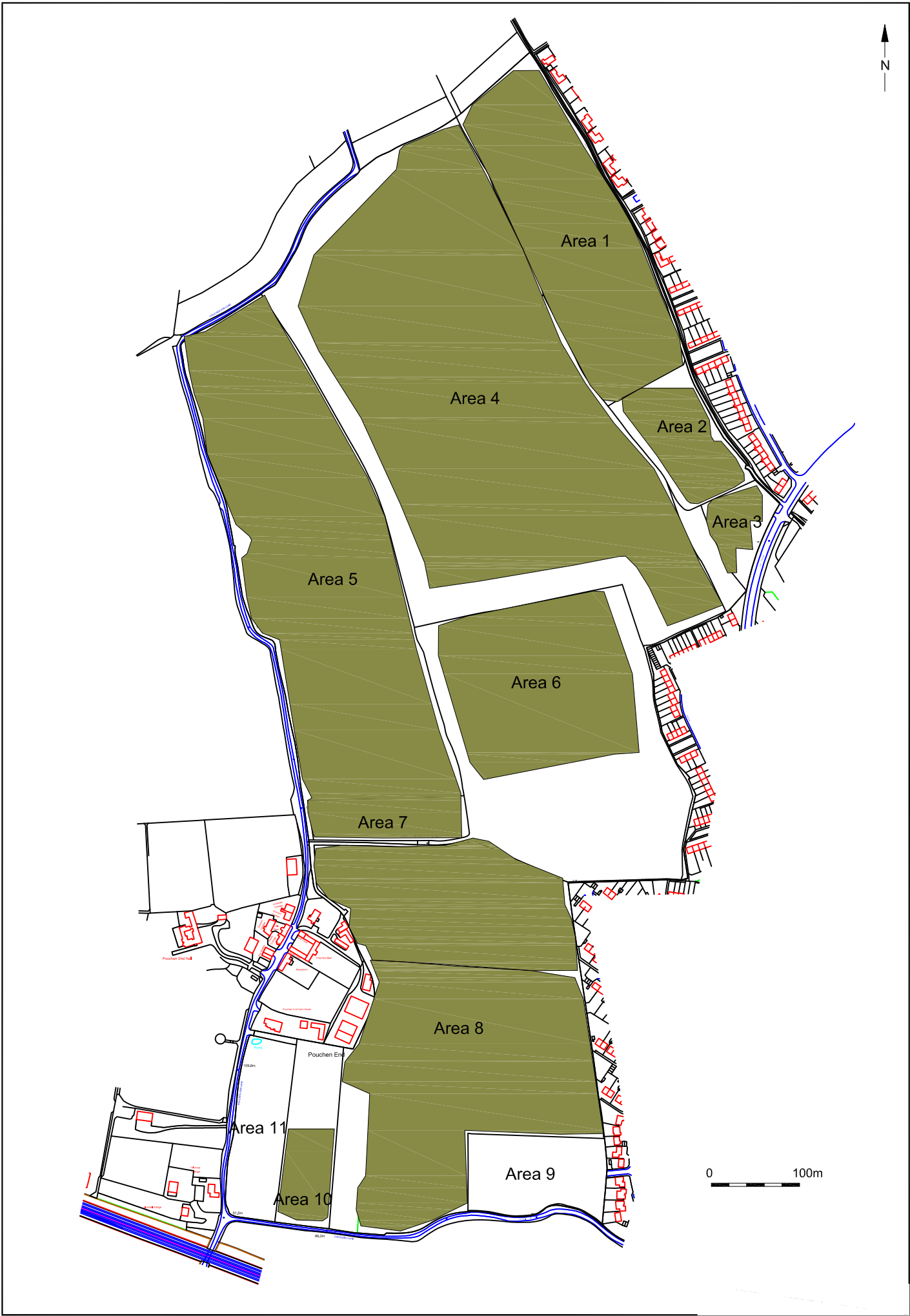
Plate 7: Site 5, looking south-east



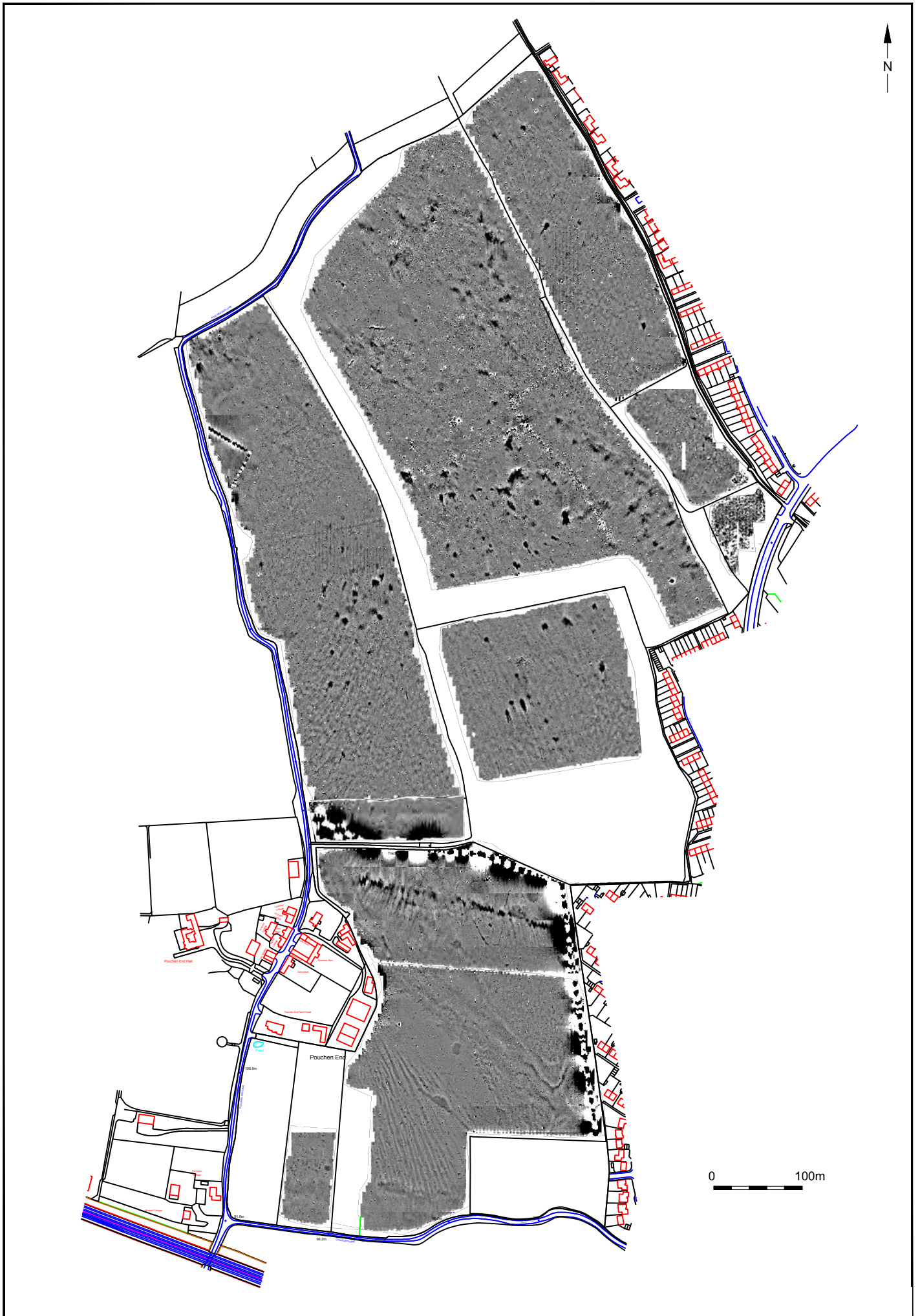
Plate 8: Site 6, looking east



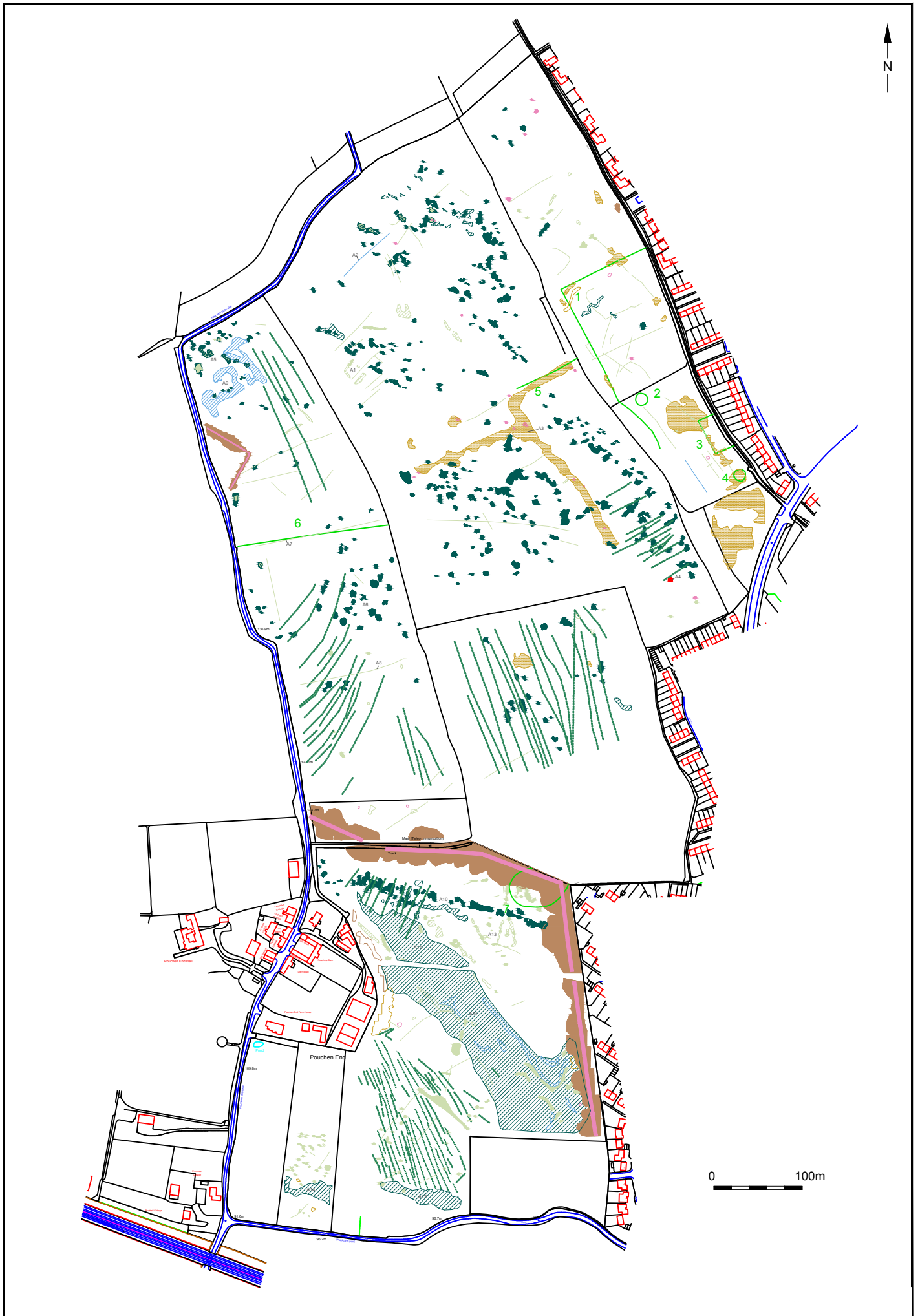
Plate 9: Site 7, looking west



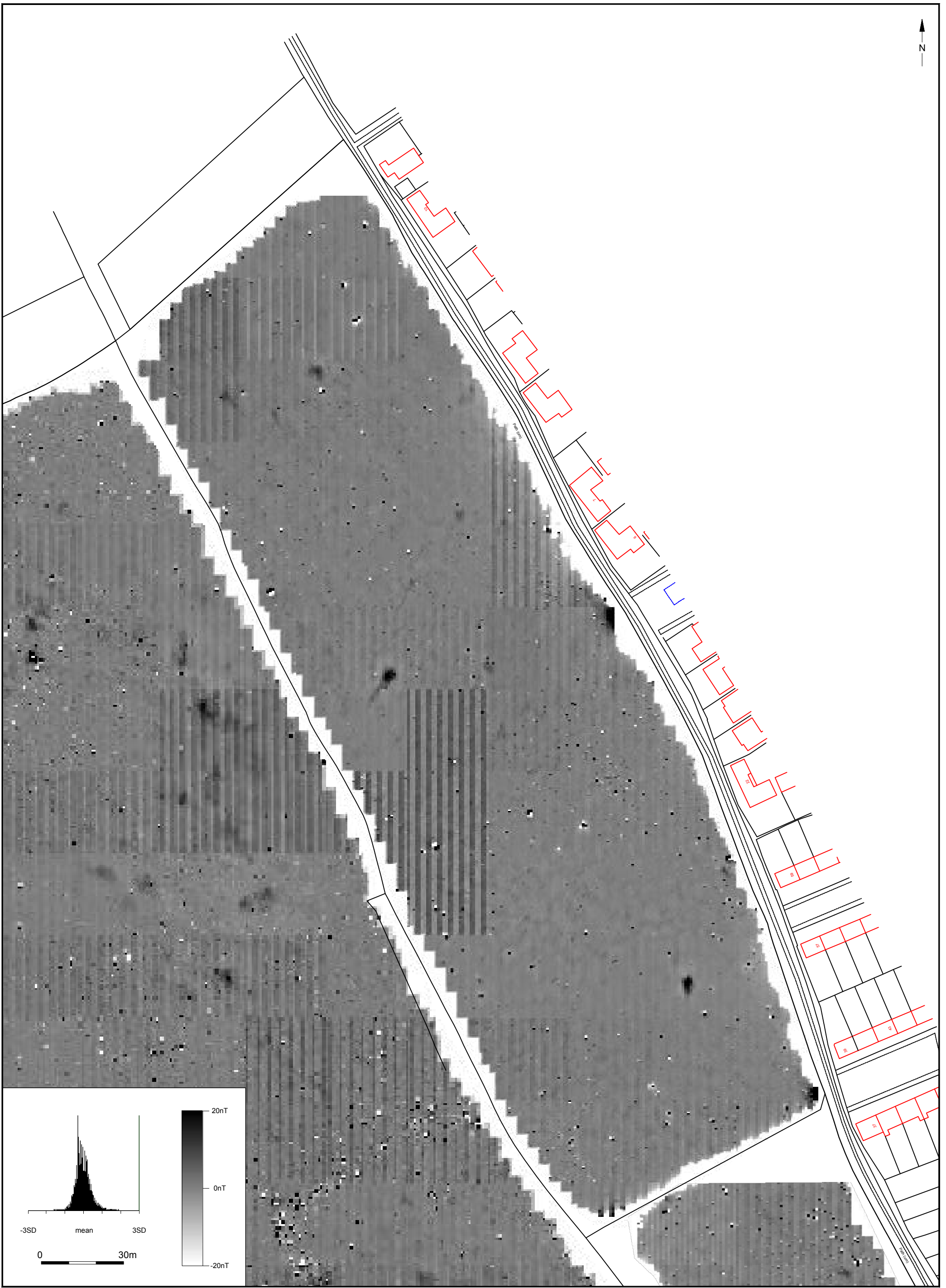
© Archaeology South-East		West Hemel, Hemel Hempstead	Fig. 4
Project Ref: 5980	Nov 2013	Location of geophysics survey areas	
Report Ref: 2013287	Drawn by: JC		



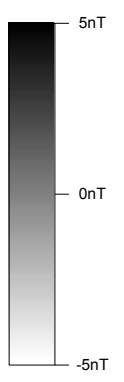
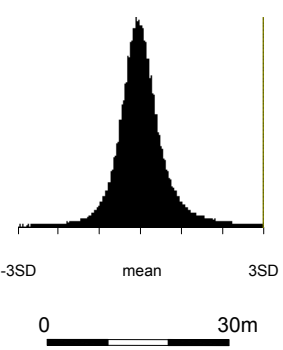
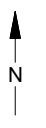
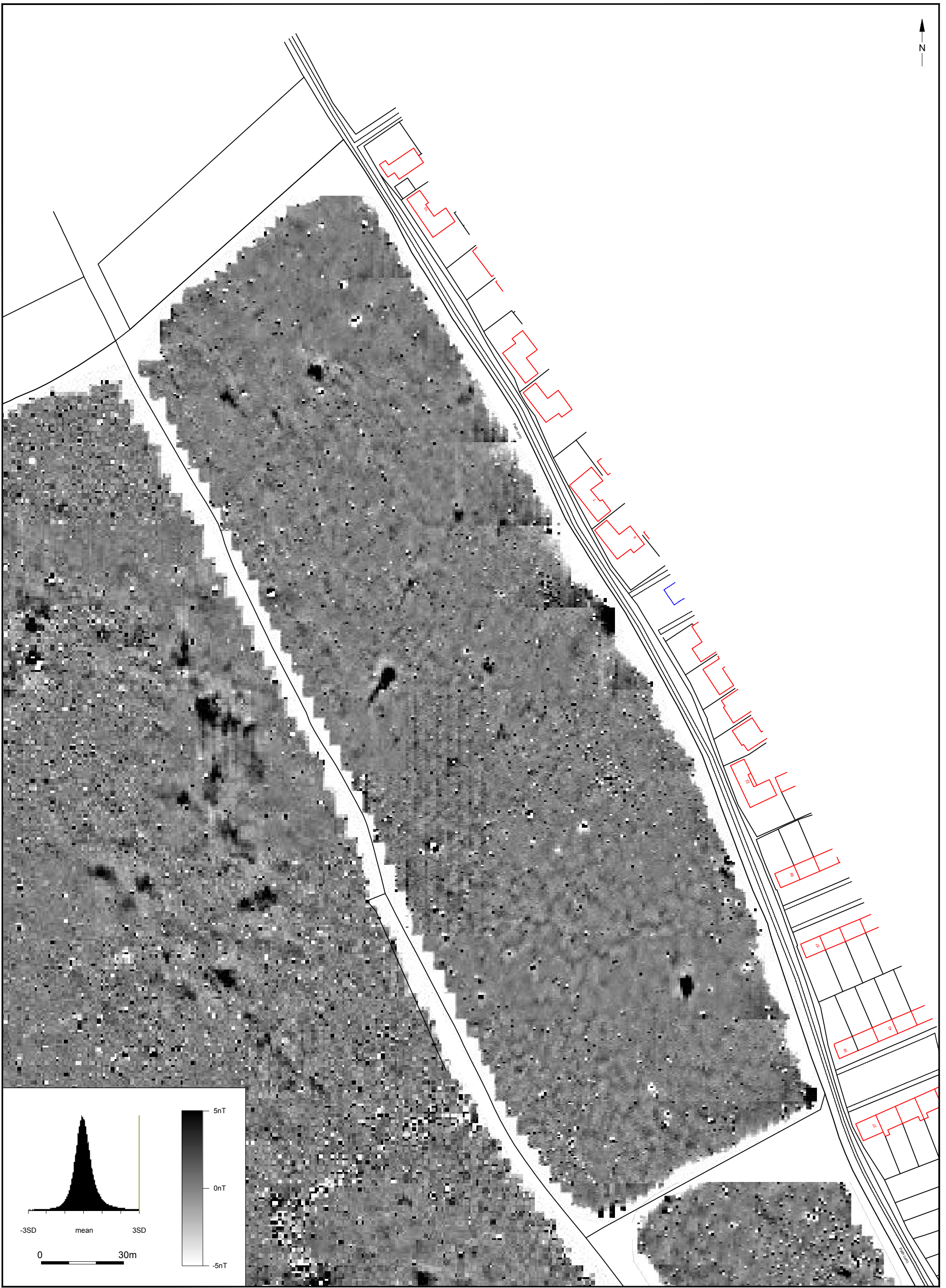
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Project Ref: 5980	Nov 2013	Processed data all areas	
Report Ref: 2013287	Drawn by: JC		

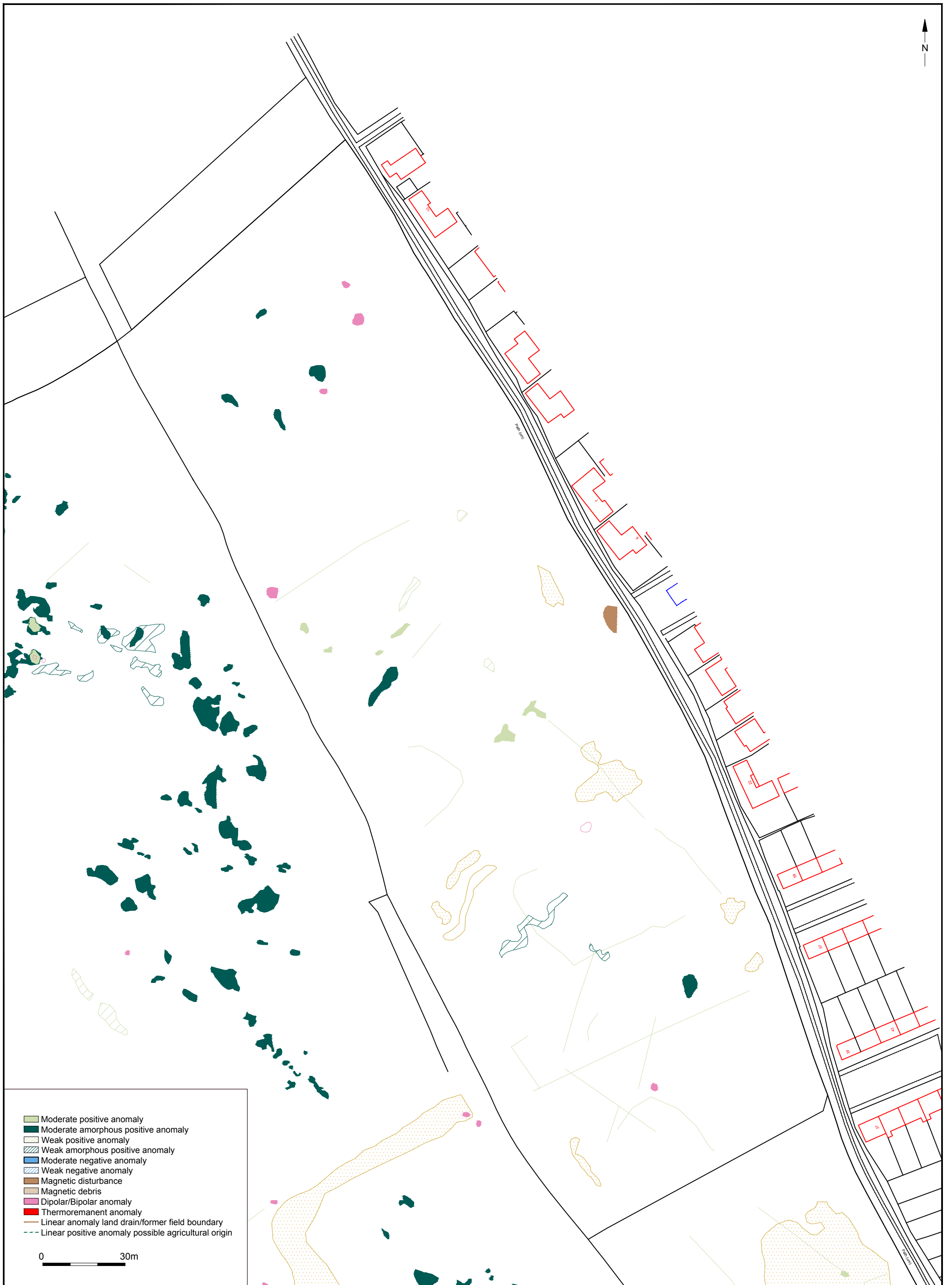


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Project Ref: 5980	Nov 2013	Interpretation all areas	
Report Ref: 2013287	Drawn by: JC		



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Project Ref: 5980	Nov 2013	Raw data	
Report Ref: 2013287	Drawn by: JC		





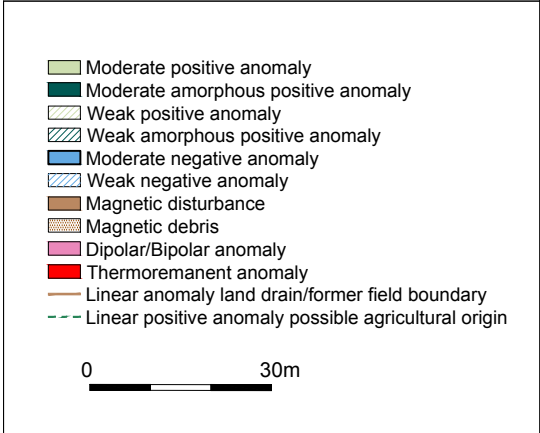
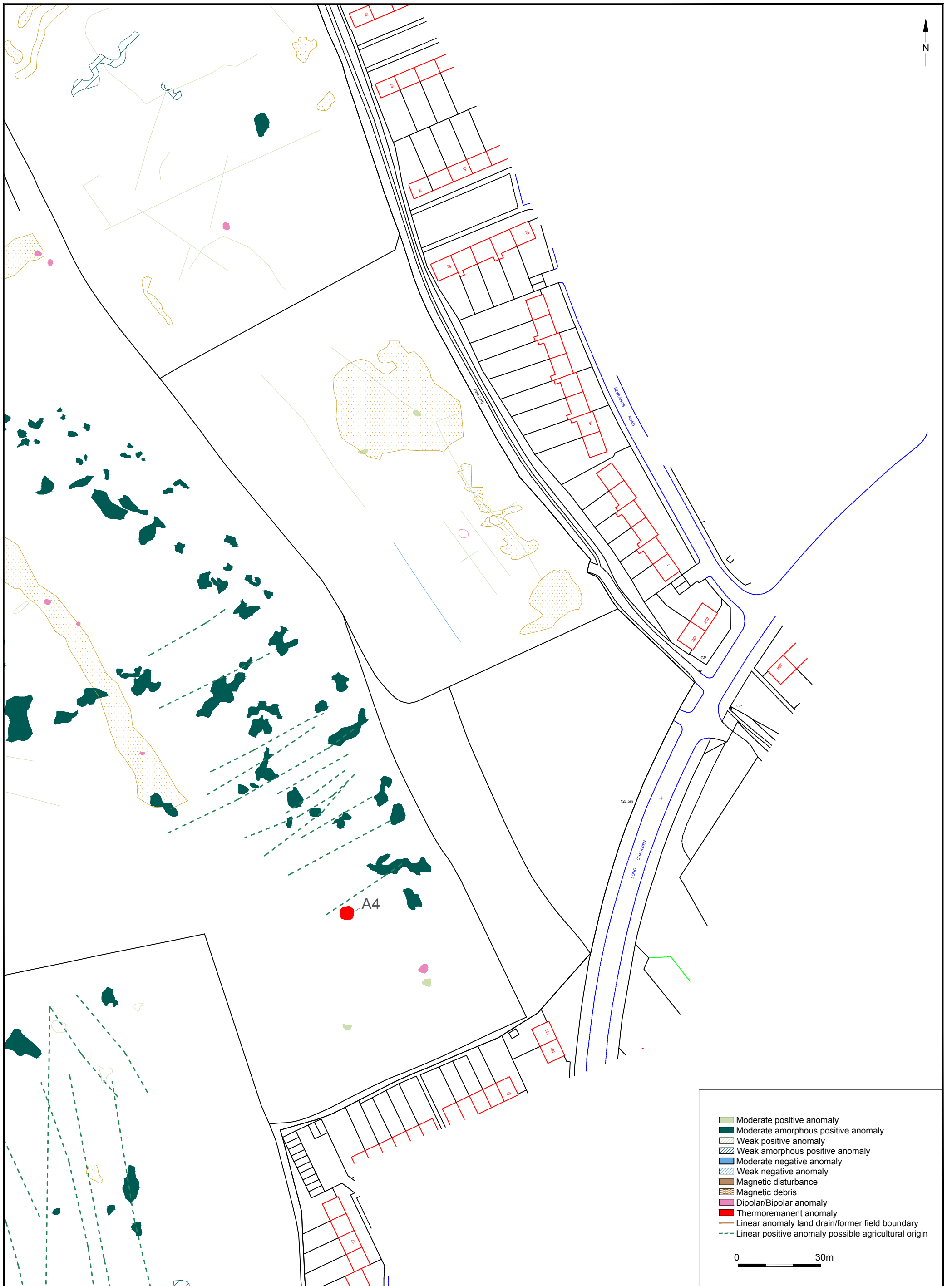
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- Weak positive anomaly
- Weak amorphous positive anomaly
- Moderate negative anomaly
- Weak negative anomaly
- Magnetic disturbance
- Magnetic debris
- Dipolar/Bipolar anomaly
- Thermoremanent anomaly
- Linear anomaly land drain/former field boundary
- Linear positive anomaly possible agricultural origin

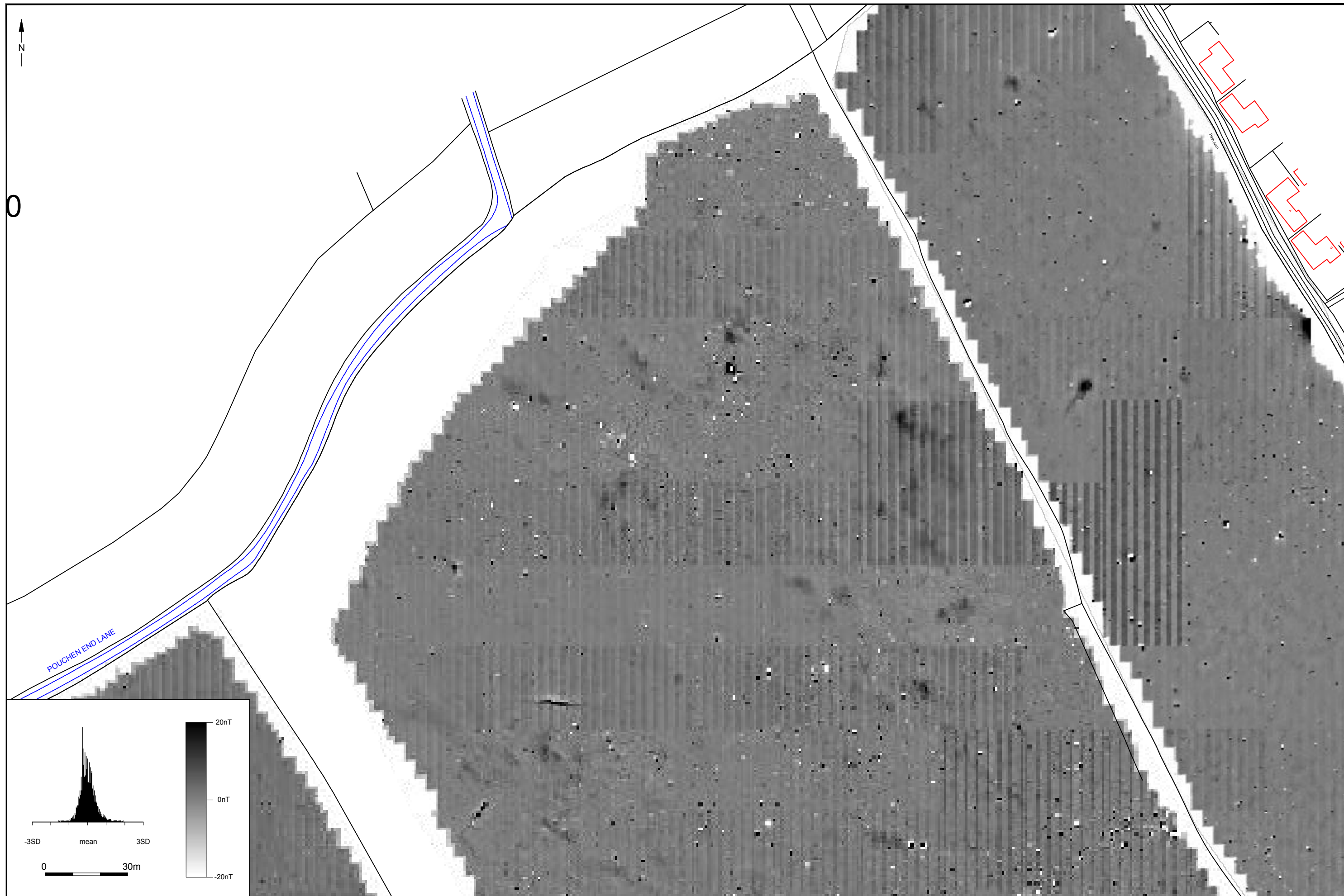
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Project Ref: 5980	Nov 2013	Interpretation	
Report Ref: 2013287	Drawn by: JC/JLR		

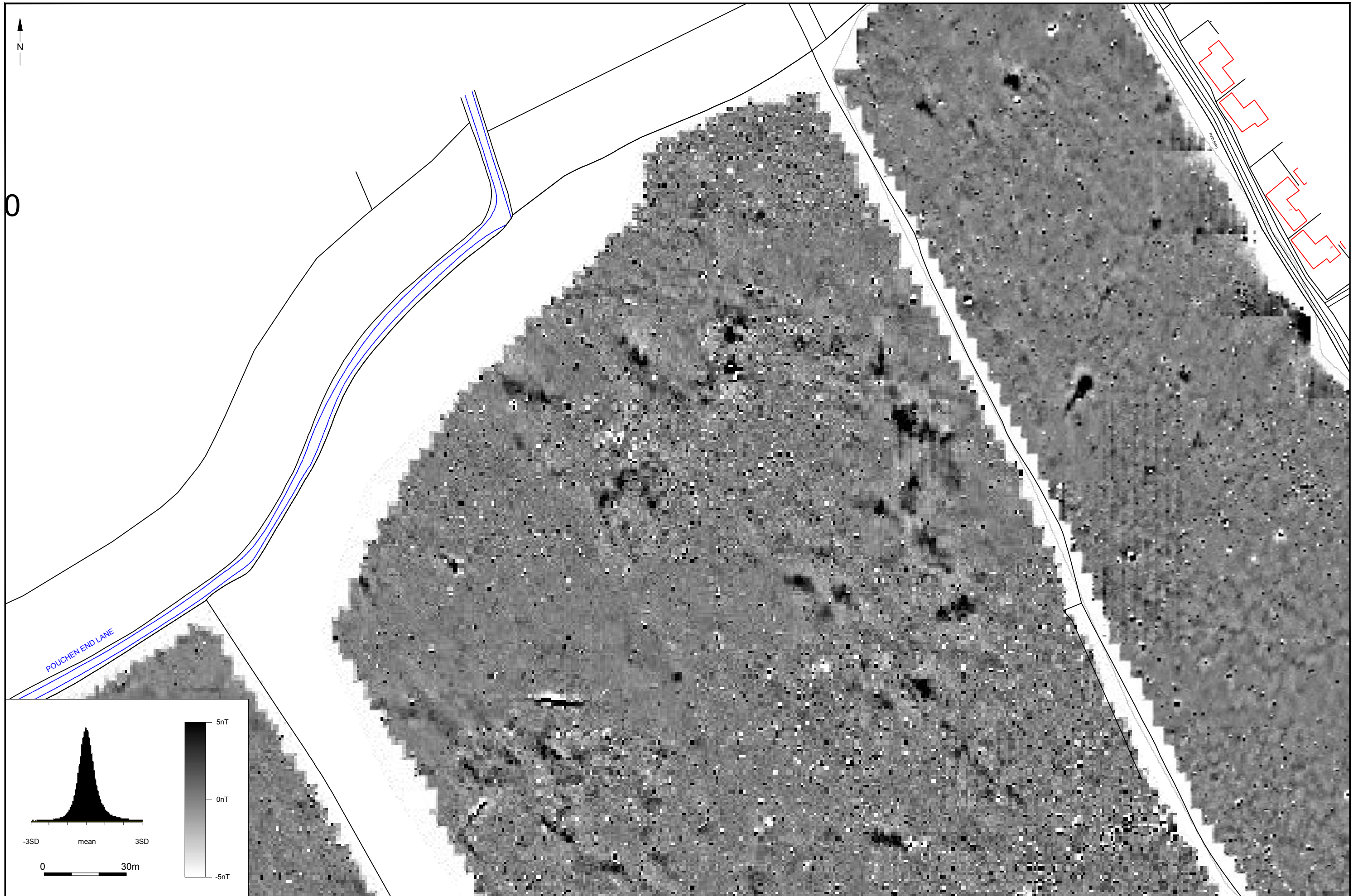




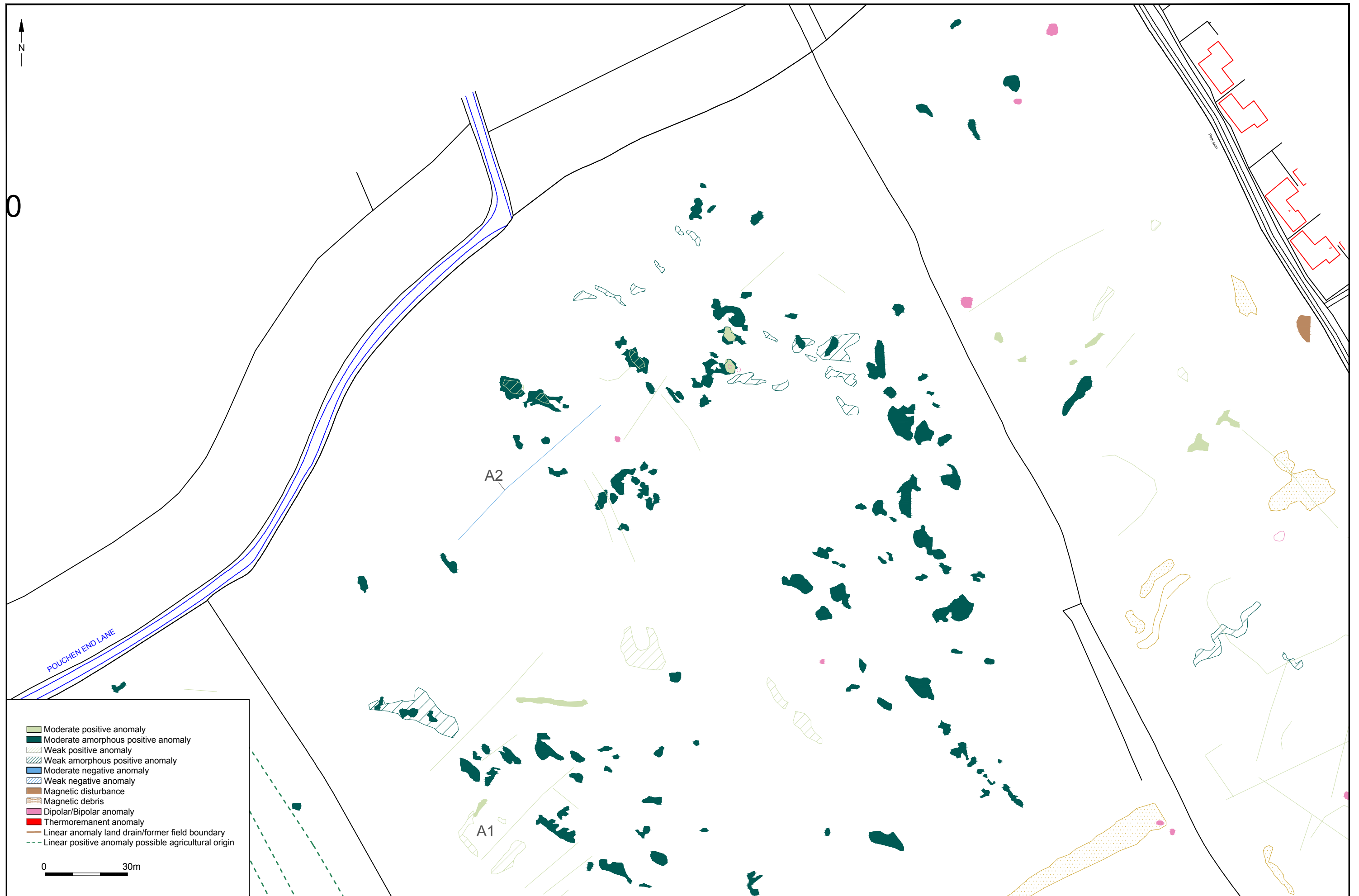




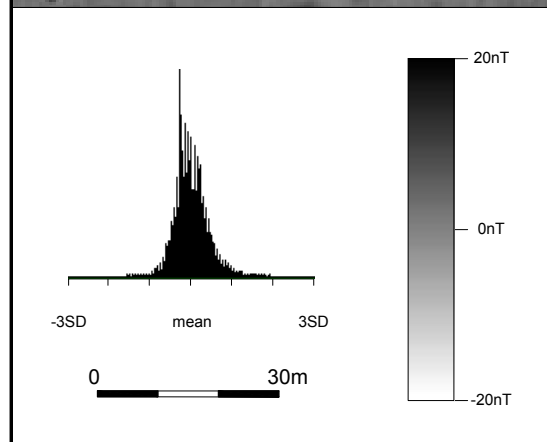
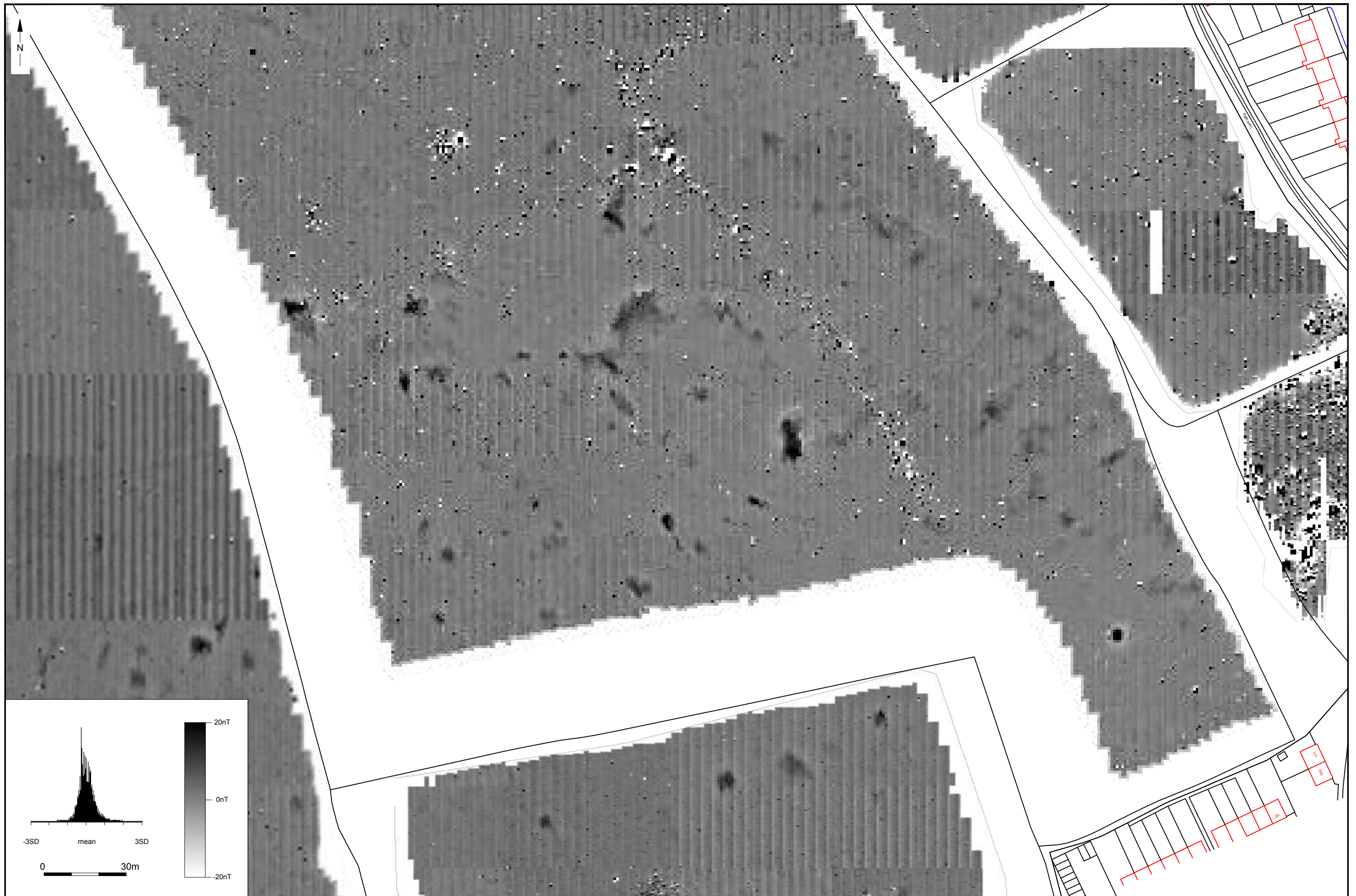
© Archaeology South-East		West Hemel, Hemel Hempstead	Fig. 13
Project Ref: 5980	Nov 2013	Raw data	
Report Ref: 2013287	Drawn by: JC		



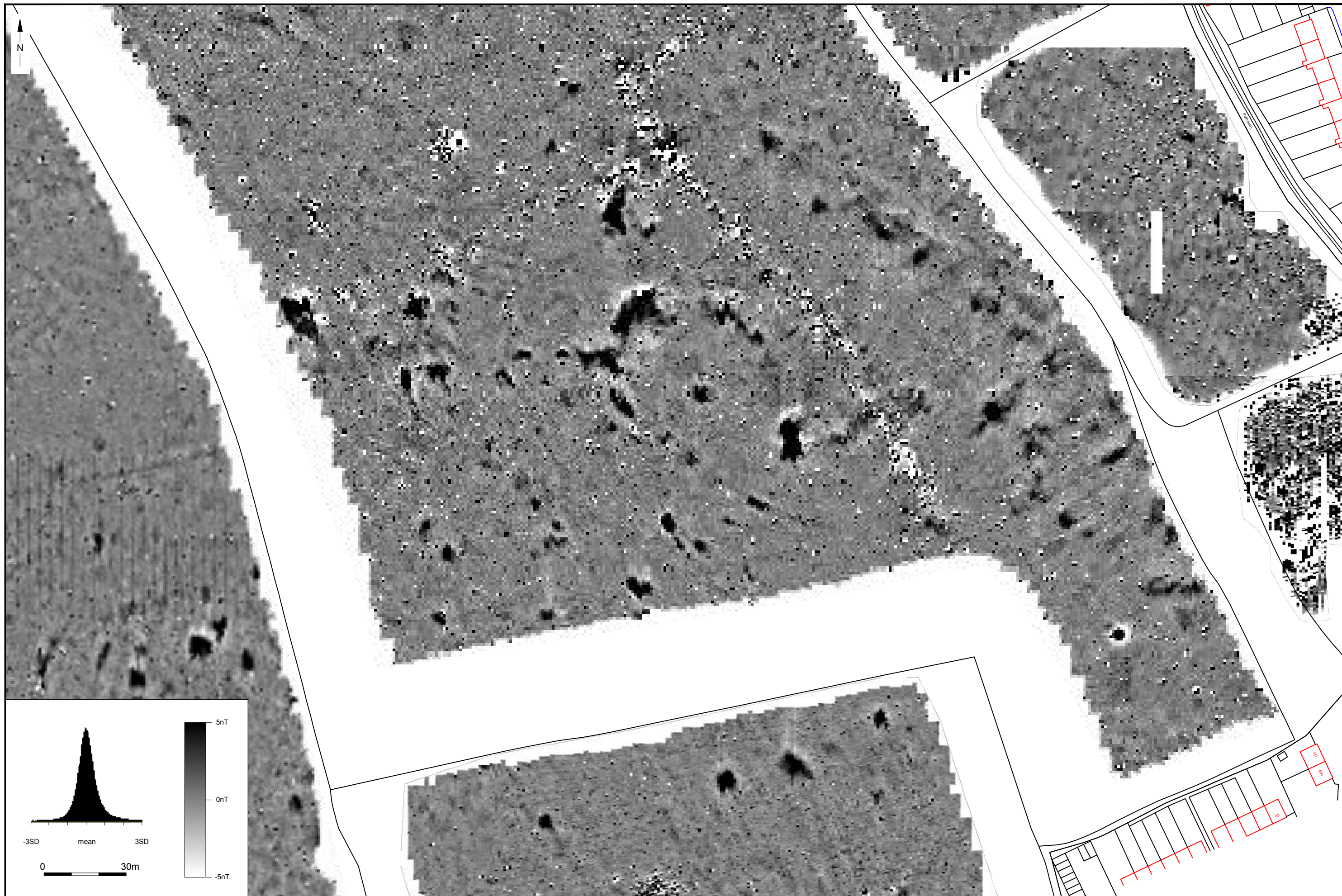
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Project Ref: 5980	Nov 2013	Processed data	
Report Ref: 2013287	Drawn by: JC		



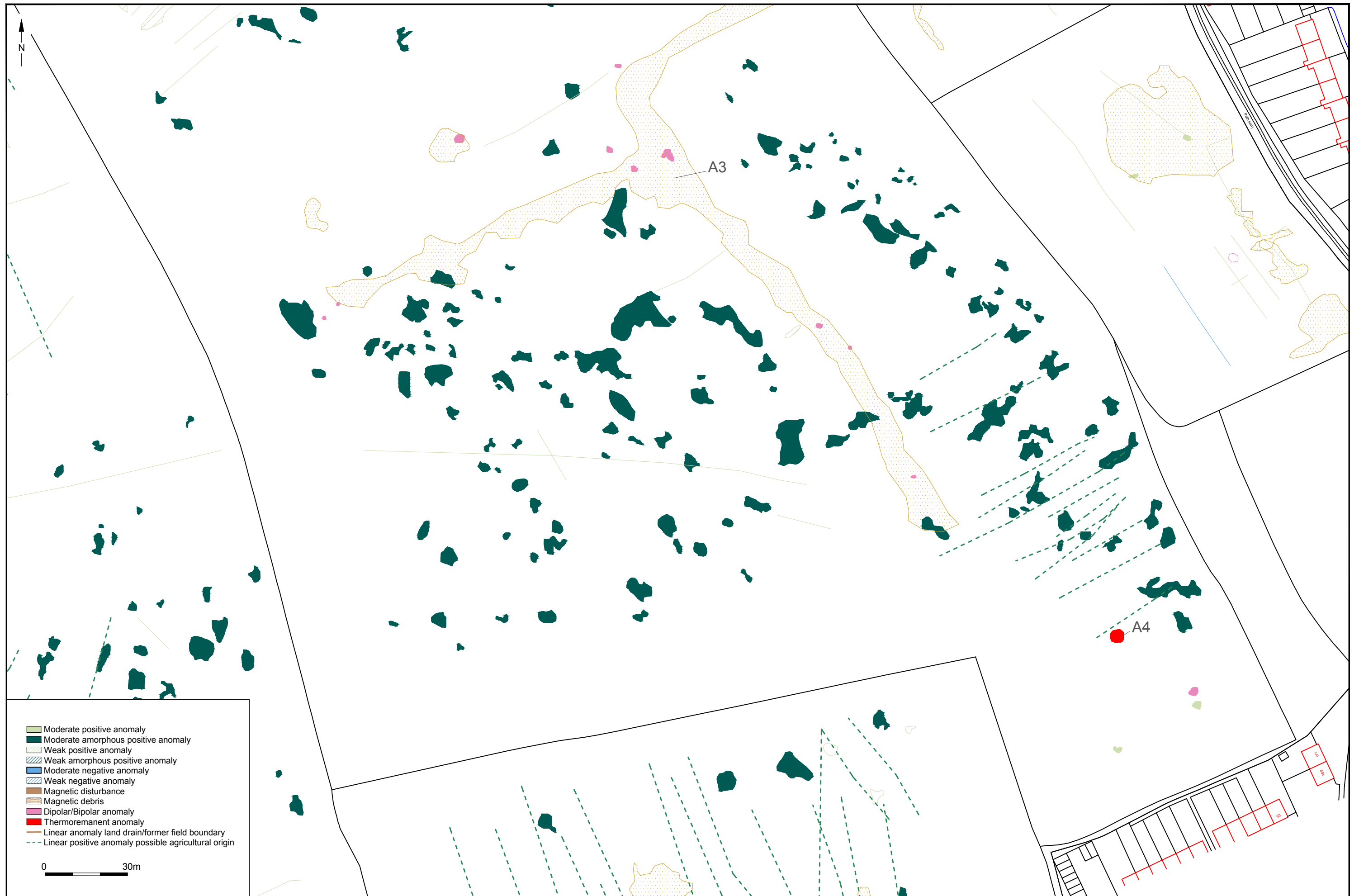
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- Magnetic debris
- Dipolar/Bipolar anomaly
- Thermoremanent anomaly
- Linear anomaly land drain/former field boundary
- Linear positive anomaly possible agricultural origin

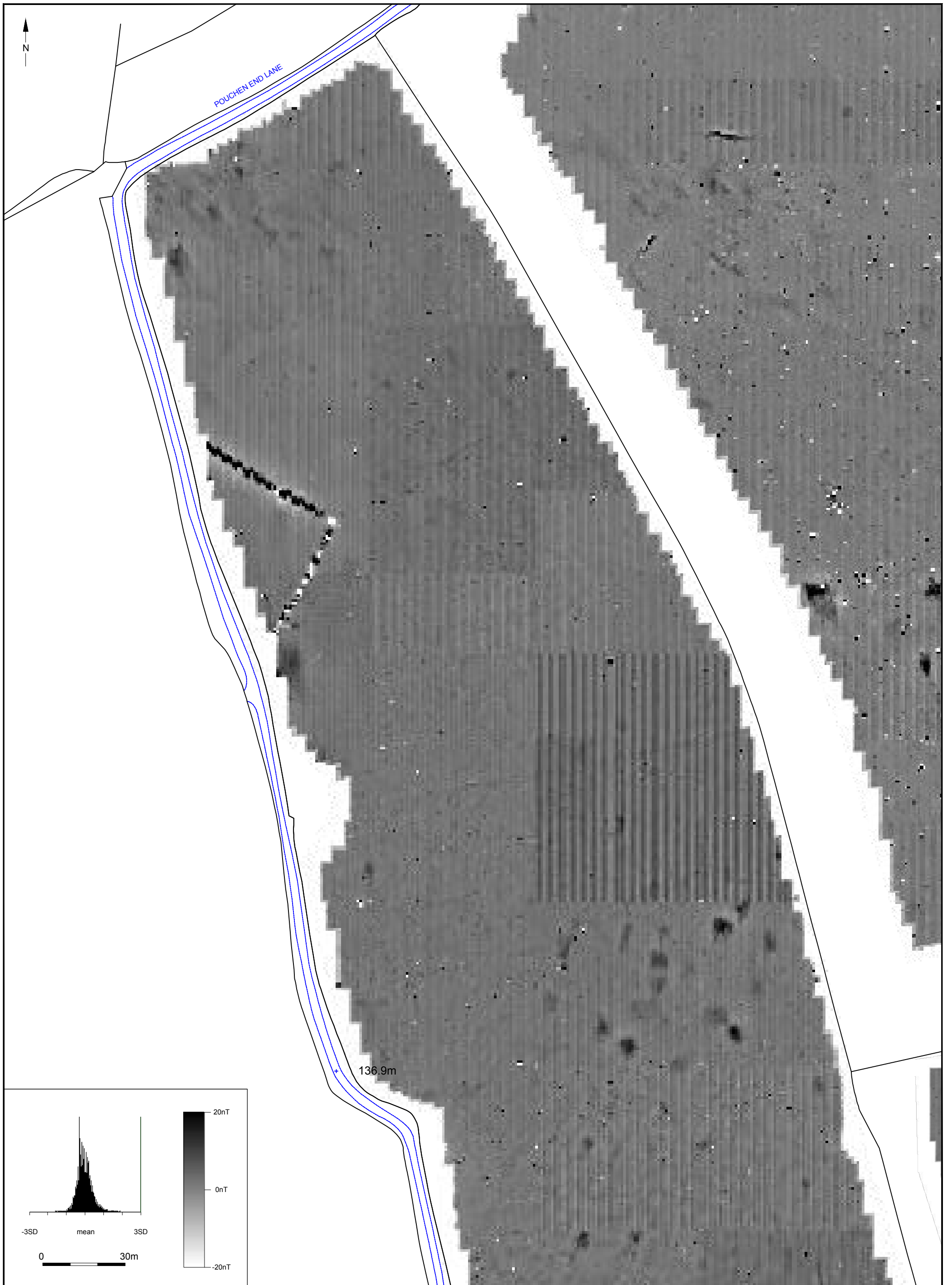


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Project Ref: 5980	Nov 2013	Raw data	
Report Ref: 2013287	Drawn by: JC		

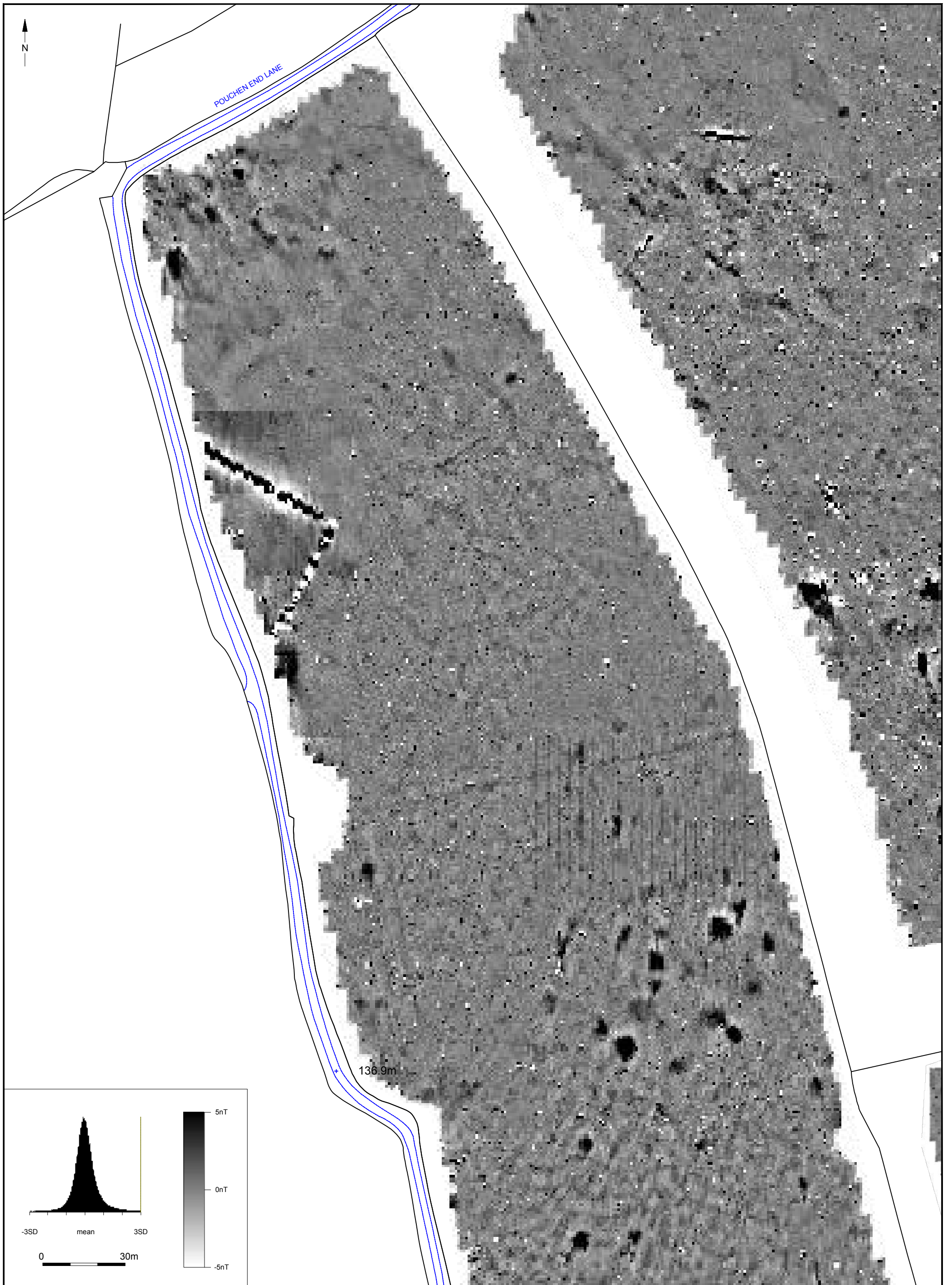


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Project Ref: 5980	Nov 2013	Processed data	
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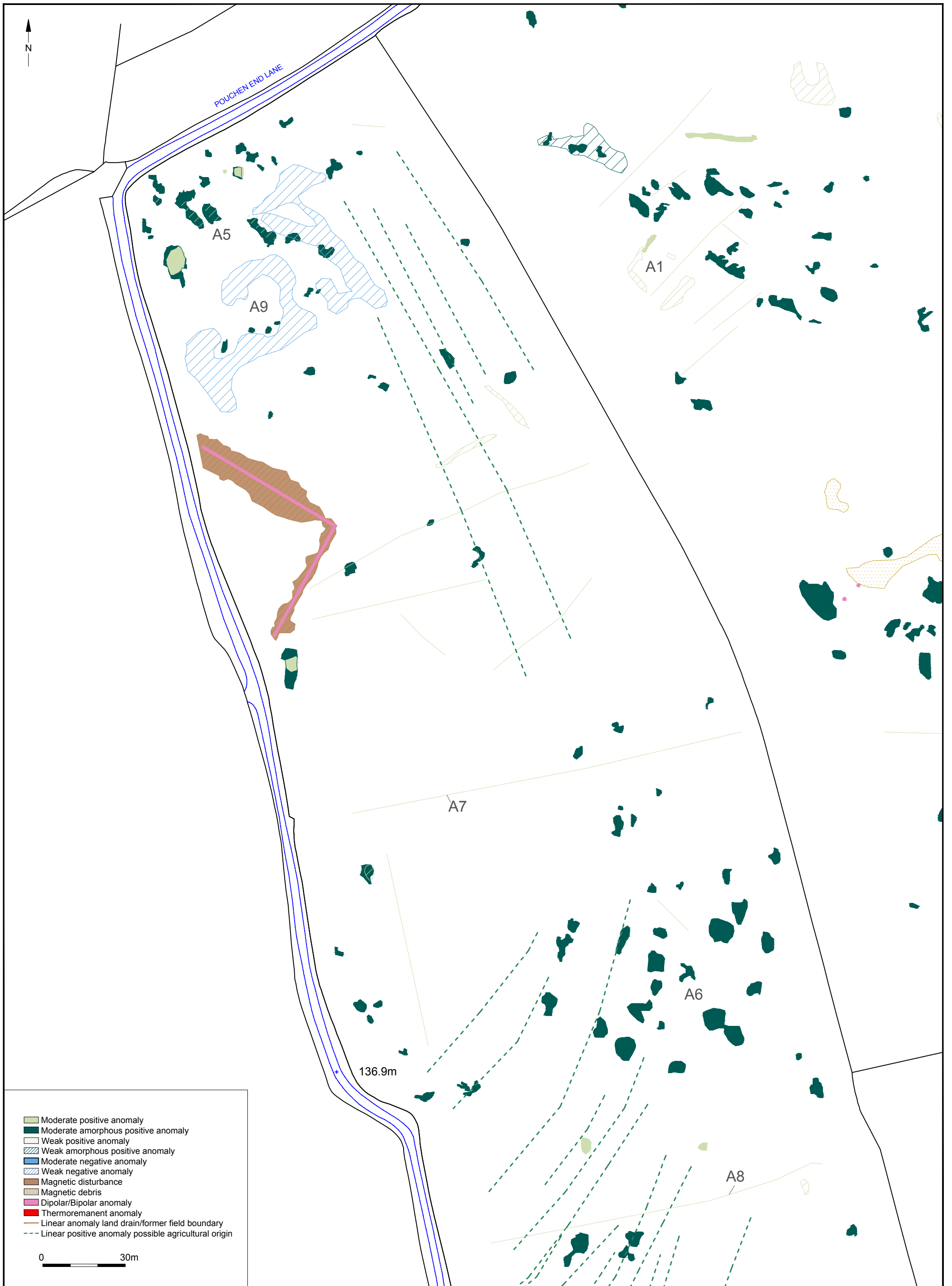


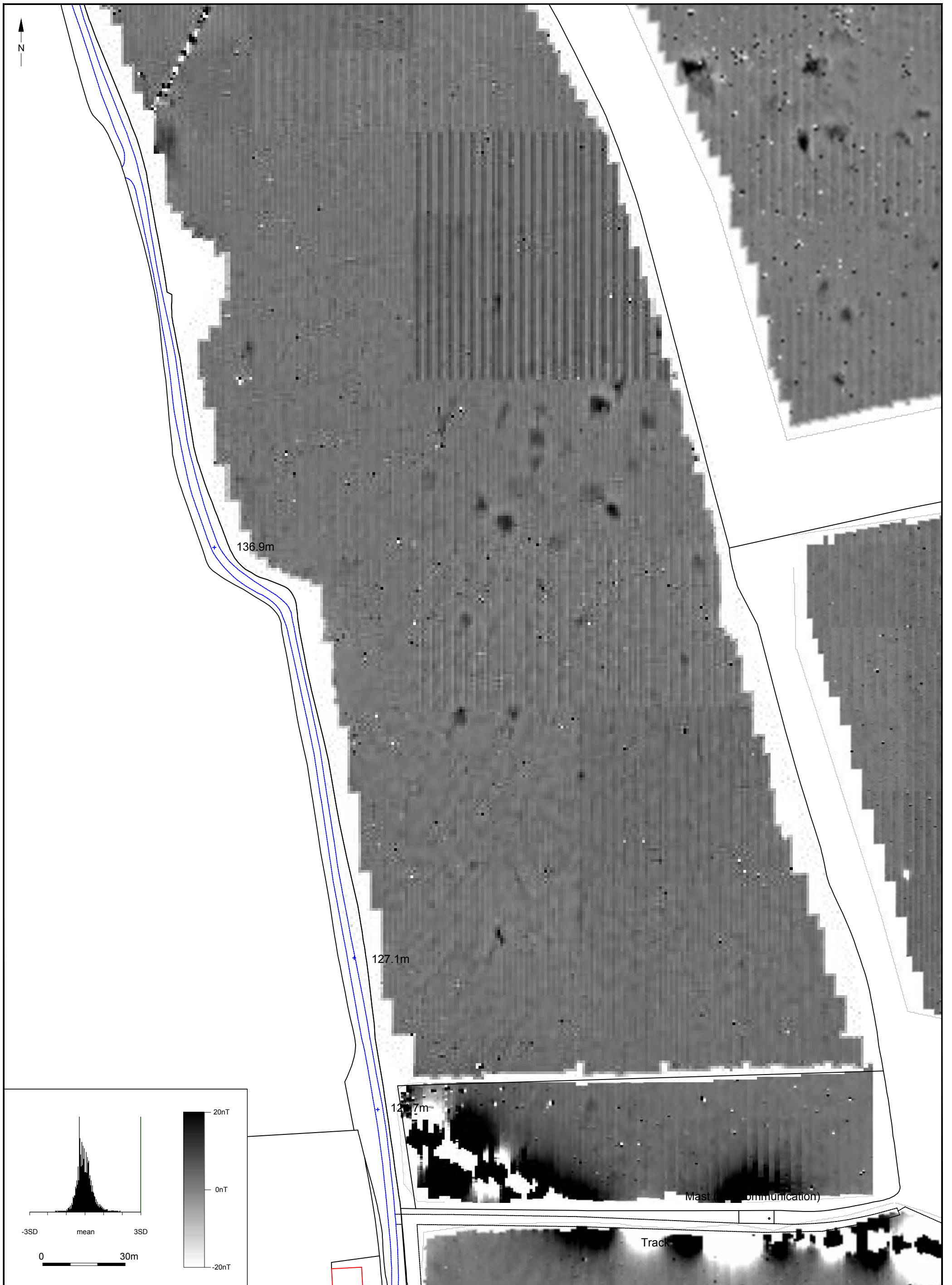


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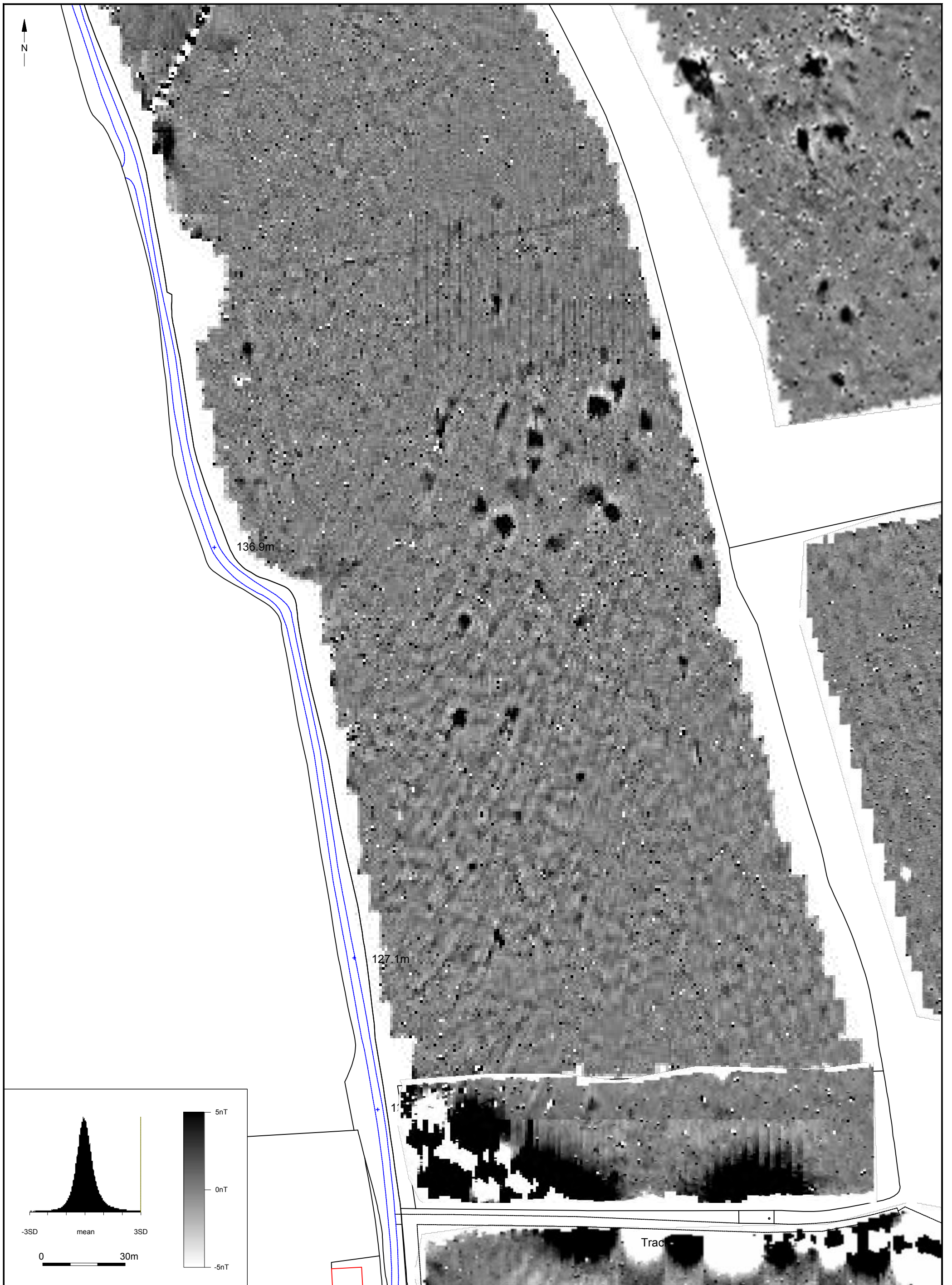


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Project Ref: 5980	Nov 2013	Processed data	
Report Ref: 2013287	Drawn by: JC		

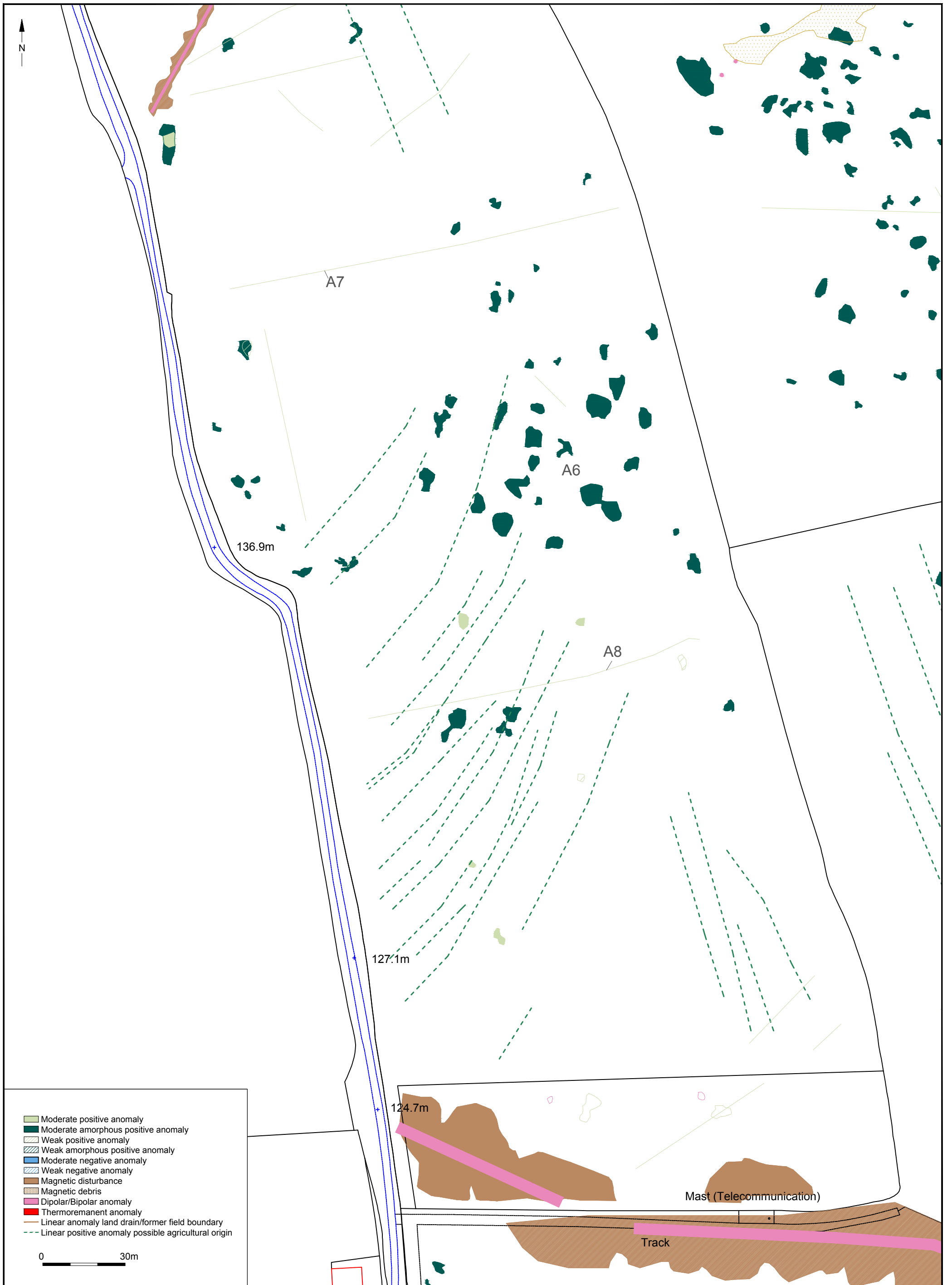




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Project Ref: 5980	Nov 2013	Raw data	
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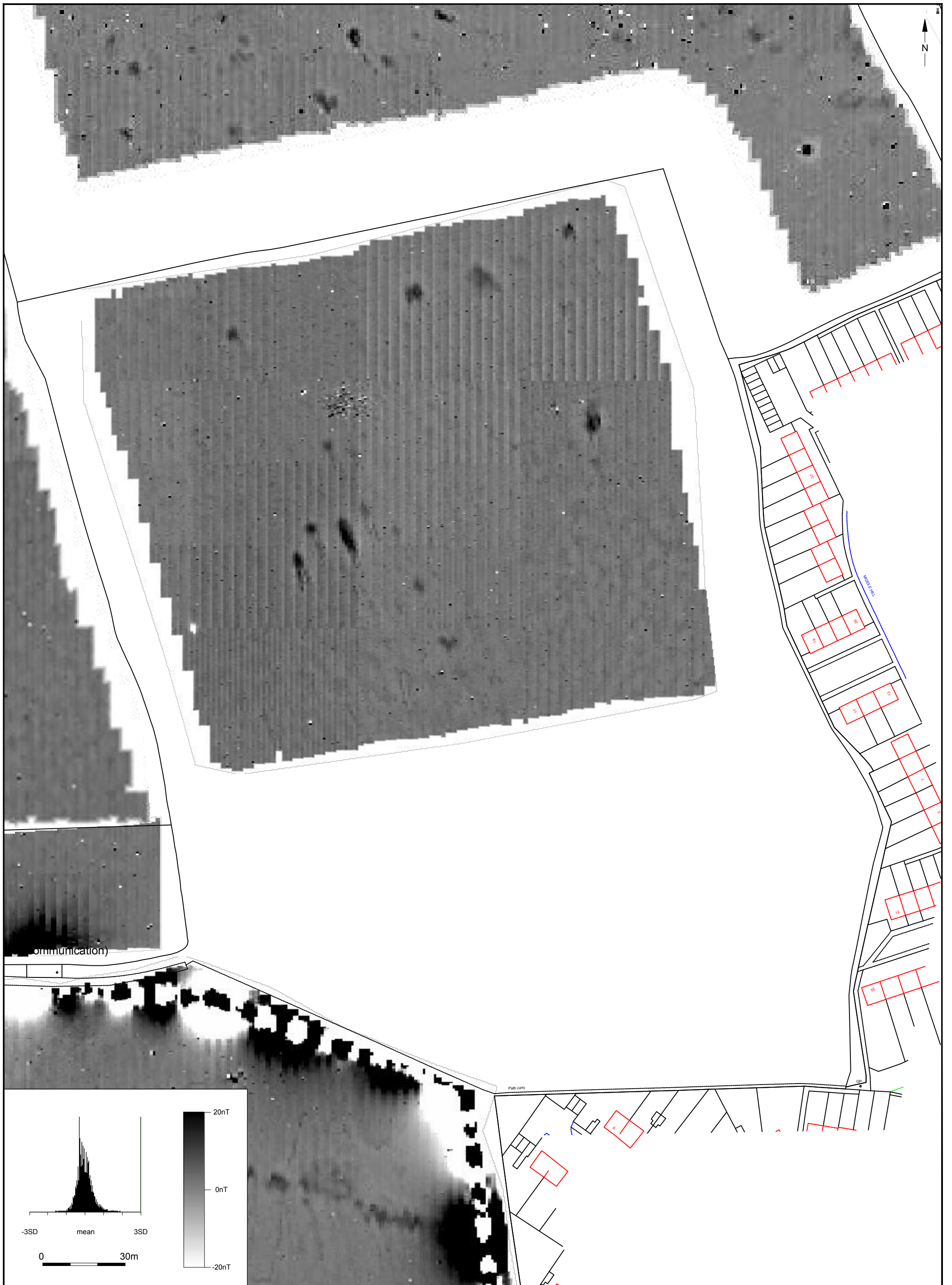
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Project Ref: 5980	Nov 2013	Processed data	
Report Ref: 2013287	Drawn by: JC		



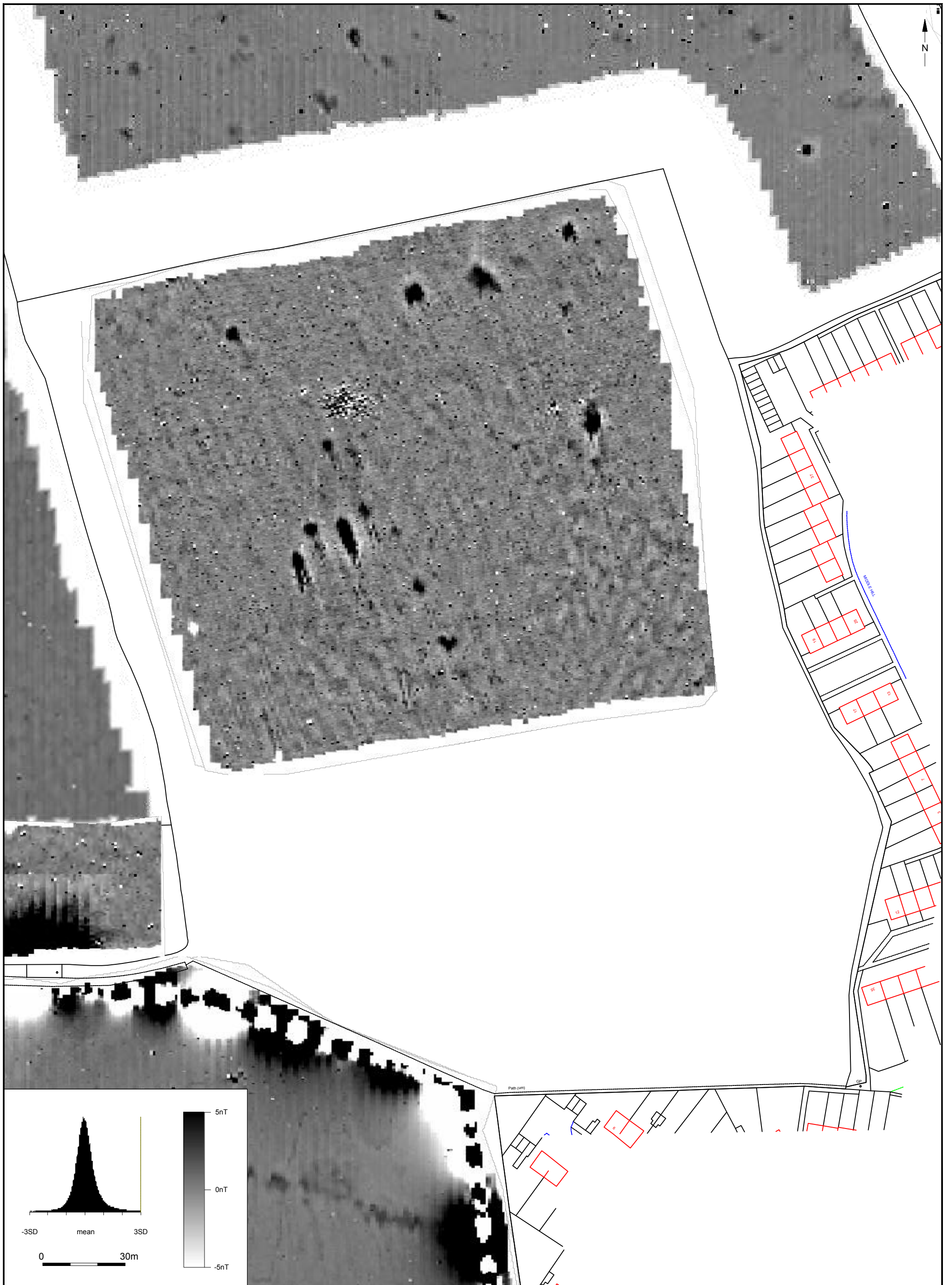
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- Magnetic debris
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- Thermoremanent anomaly
- Linear anomaly land drain/former field boundary
- Linear positive anomaly possible agricultural origin

0 30m

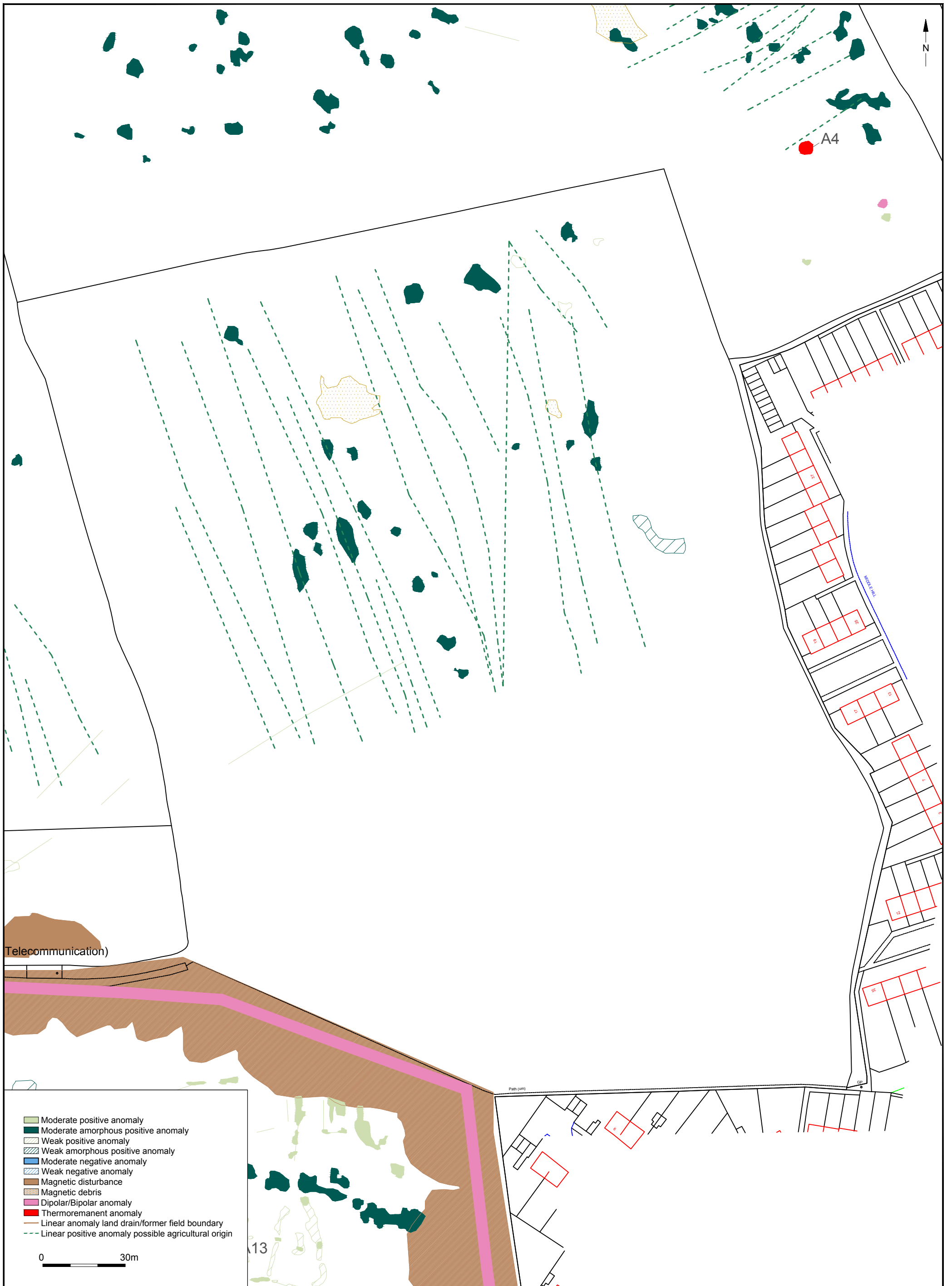
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Project Ref: 5980	Nov 2013	Processed data	
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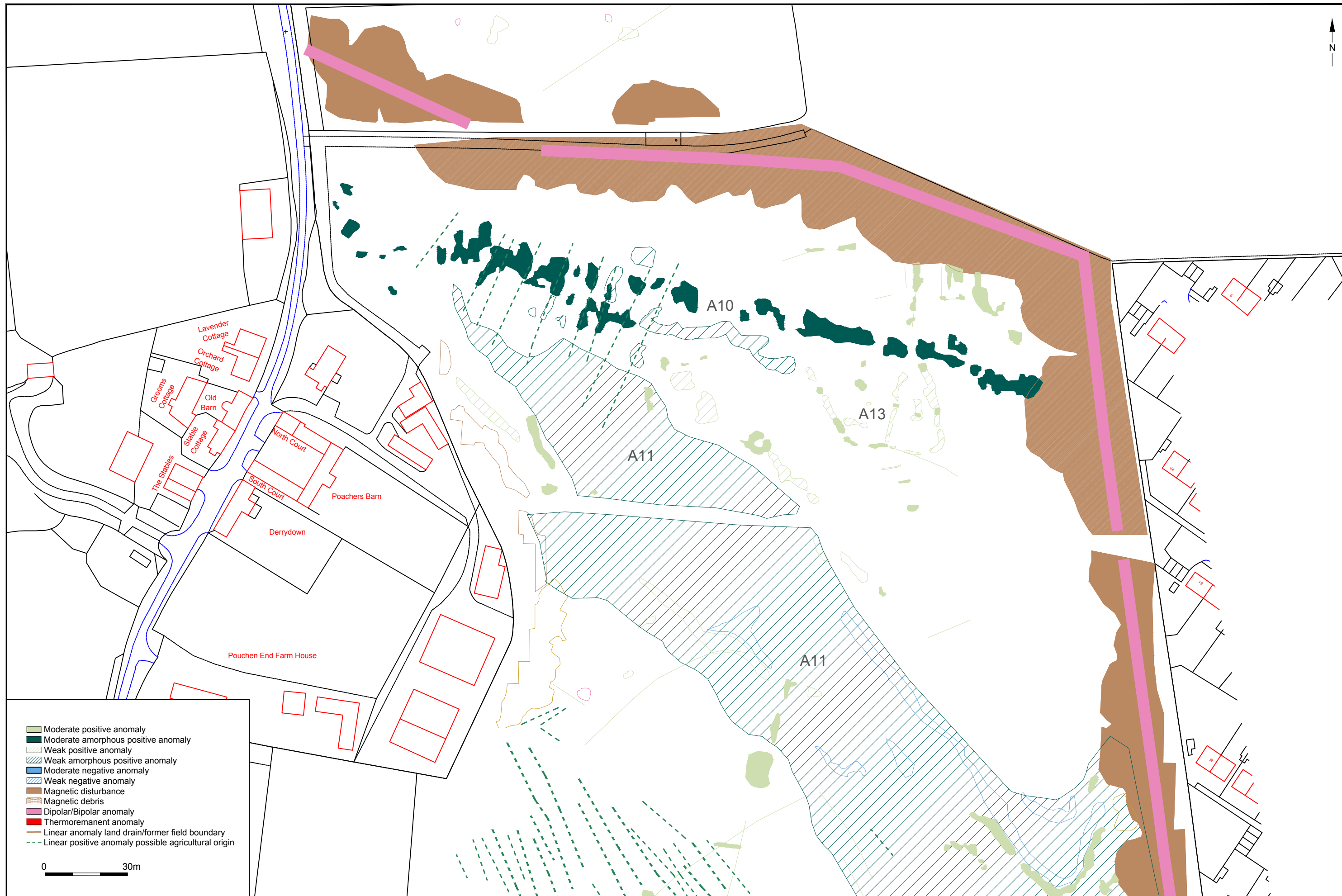


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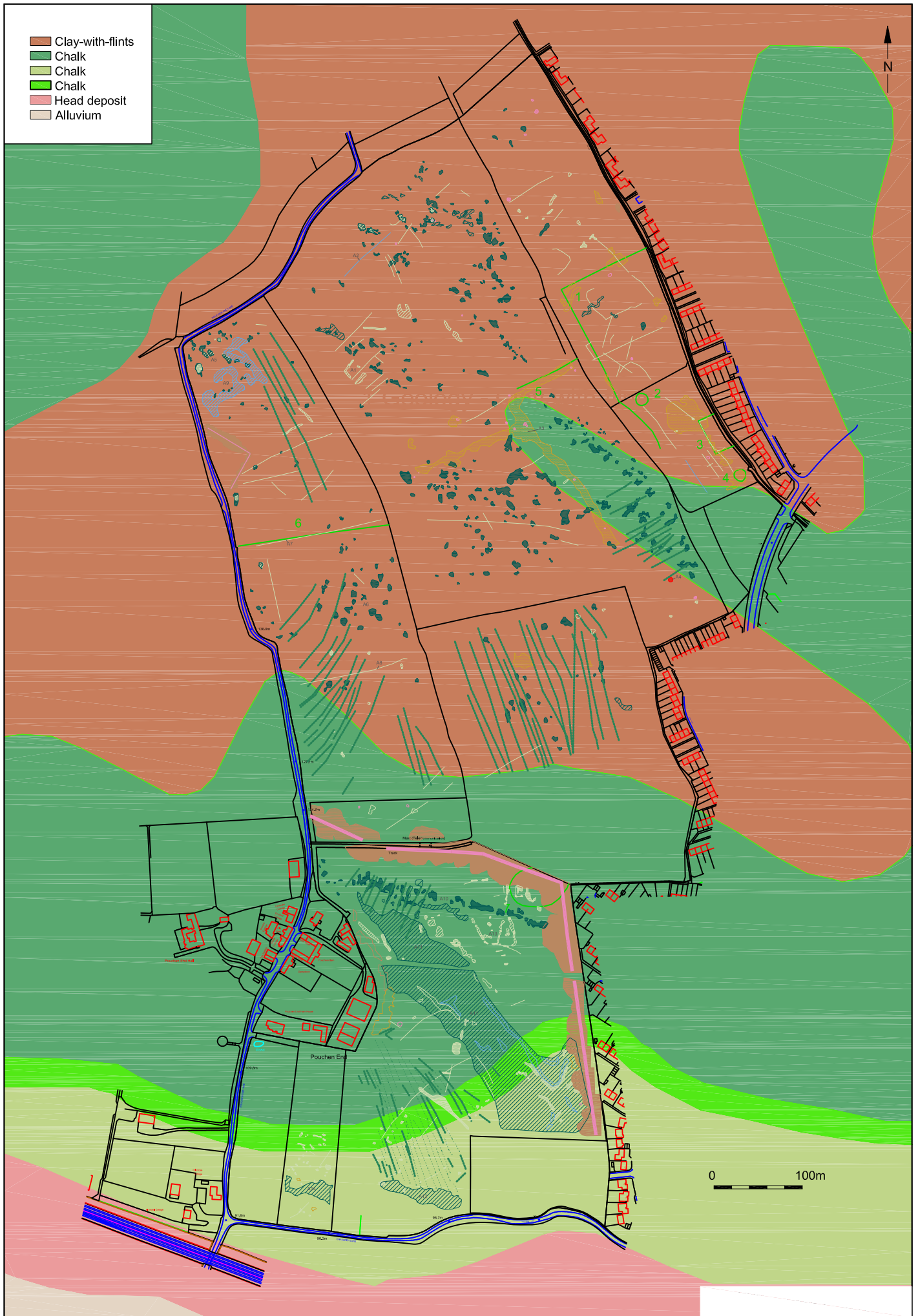
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- Linear anomaly land drain/former field boundary
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0 30m









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