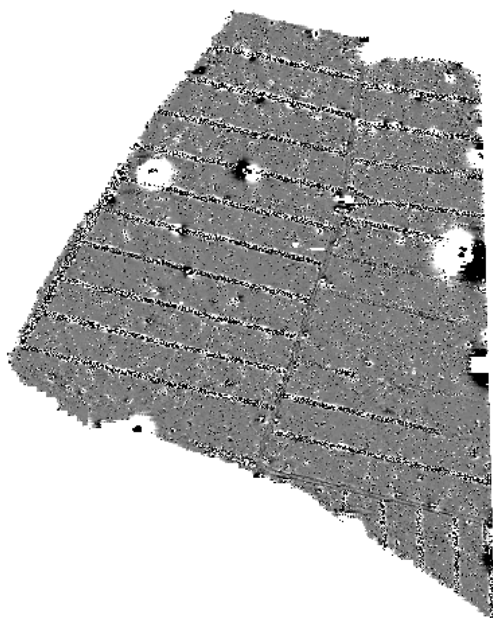




Northamptonshire Archaeology

Archaeological Geophysical Evaluation for the Silverstone Motor Racing Circuit Masterplan



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**Northamptonshire
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Report 11/189

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SILVERSTONE MRC

OASIS REPORT FORM

PROJECT DETAILS		
Project name	Archaeological geophysical evaluation for the Silverstone Motor Racing Circuit Masterplan	
Short description	Northamptonshire Archaeology was commissioned by Hyder Consulting to carry out a 42.2ha programme of detailed magnetometer survey at Silverstone Motor Racing Circuit. Survey located anomalies relating to recent structures and deposits, roads and tracks, reburied hard standing, service pipelines and ferrous debris. Two possible archaeological anomalies were identified in Area G2A, putatively ditches but equally feasibly ephemeral modern features, such as drainage channels or beaten paths. Despite the extensive disturbance on the site, sufficient open areas were surveyed between tracks and around hard standing, to demonstrate little significant archaeological activity.	
Project type	Geophysical survey	
Site status	None	
Previous work		
Current Land use	Grass & hard standing	
Future work	Not known	
Monument type/ period	None	
Significant finds	None	
PROJECT LOCATION		
County	Northamptonshire & Buckinghamshire	
Site address	Dadford Road, Silverstone	
Study area	63.79ha (42.2ha surveyed)	
OS Easting & Northing	567500 242000	
Height OD	c 142m – 155m AOD	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology (NA)	
Project brief originator	Hyder Consulting Ltd	
Project Design originator	NA	
Director/Supervisor	Adrian Butler	
Project Manager	Adrian Butler	
Sponsor or funding body	Hyder Consulting Ltd	
PROJECT DATE		
Start date	22 August 2011	
End date	16 September 2011	
ARCHIVES		
	Location	Content
Physical	N/A	
Paper	NA	Site survey records
Digital	NA	Geophysical survey & GIS data
BIBLIOGRAPHY		
	Journal/monograph, published or forthcoming, or unpublished client report	
Title	Archaeological geophysical evaluation for the Silverstone Motor Racing Circuit Masterplan	
Serial title & volume	Northamptonshire Archaeology Reports 11/189	
Author(s)	Adrian Butler	
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ARCHAEOLOGICAL GEOPHYSICAL EVALUATION FOR THE SILVERSTONE MOTOR RACING CIRCUIT MASTERPLAN AUGUST - SEPTEMBER 2011

ABSTRACT

Northamptonshire Archaeology was commissioned by Hyder Consulting to carry out a 42.2ha programme of detailed magnetometer survey at Silverstone Motor Racing Circuit. Survey located anomalies relating to recent structures and deposits, roads and tracks, reburied hard standing, service pipelines and ferrous debris. Two possible archaeological anomalies were identified in Area G2A, putatively ditches but equally feasibly ephemeral modern features, such as drainage channels or beaten paths. Despite the extensive disturbance on the site, sufficient open areas were surveyed between tracks and around hard standing, to demonstrate little significant archaeological activity.

1 INTRODUCTION

Northamptonshire Archaeology (NA) has been commissioned by Hyder Consulting to carry out detailed geophysical survey to inform the outline planning application of the proposed Masterplan at Silverstone Motor Racing Circuit (MRC) (NGR SP 67500 42000, Fig 1). The fieldwork was undertaken from 19 August – 6 September 2011, during which time a total area of 42.2ha was subject to detailed magnetic gradiometer survey. The aim of the survey was to determine whether there are likely to be archaeological remains present within the Site boundaries, and thus inform on the need for further assessment work following outline planning.

2 TOPOGRAPHY AND GEOLOGY

The circuit is located to the south-east of the village of Silverstone, on the south-east side of the A43 Silverstone Bypass and east of the Dadford Road. The site is located on the border between Northamptonshire and Buckinghamshire. Solid geology in the area has been mapped as Blisworth Clay Formation (BGS 2011). A drift of Diamicton Till overlies that in the west and north of the site. Occasional deposits of glacial sands and gravels have been mapped; in particular underlying Area G2F (see below). Soils over the area belong to the Ragdale group of chalky clays (SSEW 1983). The land is under a mixture of grass and hard-standing and is situated at an elevation of c 142m – 155m AOD.

A total of 63.79 hectares was been identified for geophysical survey (Hyder 2011). This was split into a number of different areas within each county, by the client. In turn were these were subdivided for ease of survey:

AREAS	SUBDIVISIONS	AREA /ha
Northamptonshire		
H1	H1	1.41
REW1	REW1	5.2
G2	G2 A,B,C,D,E,F,G	9.26
Buckinghamshire		
H2	H2	1.00
K	K, KK	16.15
U	U	6.36

The overall area of survey was reduced to 42.2ha due to the quantity of areas deemed unsuitable for survey (see Hyder 2011a, 1). These included car parking, camping, caravans, storage containers, and large areas of tarmac and hard-standing within the site boundaries.

3 ARCHAEOLOGICAL BACKGROUND

The archaeology of site has been summarized in the Brief (Hyder 2011a, 2f). Although a number of Neolithic and Bronze Age lithic finds, and Iron Age quern fragments have been recovered in the general area, there is deemed a low potential for prehistoric archaeology in the development area.

Evidence suggests that the line of the Towcester to Alchester Roman road passes close to the eastern extent of the development area and several enclosures are associated with that. Possible Romano-British ditches were located in previous alterations to the track, pit and paddock, suggesting a moderate potential for Roman period remains within the development area.

Luffield Priory, a Benedictine Priory was located within the west-central part of the MRC, although no remains are visible above ground. The former St. Thomas a Becket's Chapel and its associated hamlet, is located on the eastern boundary of the development area. Aerial photography has also produced evidence of medieval features including a square enclosure, possible hollow-way and green and cultivation patterns within and around the area. There is, therefore quite a potential for medieval archaeology to be present in undisturbed parts of the development area.

There is also the potential for remains of the former World War II airfield (RAF Silverstone NHER: MNN17558) and previous iterations of racing tracks to be present within the development area.

4 METHODOLOGY

The magnetometer survey was conducted with Bartington Grad 601-2, twin sensor array, vertical component fluxgate gradiometers (Bartington and Chapman 2003). These are standard instruments for archaeological survey and can resolve magnetic variations as slight as 0.1 nanoTesla (nT).

Each field within the survey area was sub-divided into a system of 30m grid squares, which were established by means of a tape measure and optical square. The grids were tied into the national grid by means of a Leica 1200 dGPS. The gradiometers were carried at a brisk but steady pace through each grid square, collecting data along 1m spaced traverse lines. Measurements were automatically triggered every 0.25m along the traverses, giving a total of 3600 measurements per grid. In accordance with the written scheme of investigation (NA 2011), one grid was surveyed twice each day to demonstrate the repeatability of the results (Fig 4).

All fieldwork methods complied with the Written Scheme of Investigation and with guidelines issued by English Heritage and by the Institute for Archaeologists (NA 2011; EH 2008; IfA 2010).

The survey data was processed using Geoplot 3.00v software. Striping, caused by slight mismatches in sensor balance, was removed using the 'Zero Mean Traverse' function and 'destaggering' of the data was performed as necessary.

The processed data is presented in this report in the form of greyscale plots (+/- 10nT black/white) which have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Figs 2 and following odd numbers 3 to 9). Interpretative overlays have been produced and are shown in Figures 4 to 10 (even numbers). Unprocessed 'raw' data plots have been included in Figures 11-13.

5 SURVEY RESULTS

Broadly, four main types of magnetic anomaly were detected in the survey. These were:

- Areas of strong dipolar (paired positive/negative) magnetic anomalies, representing brick hardcore, mill waste, clinker and asphalt used as a base for car parks.
- Broad bands of dipolar anomalies, 4-5m wide, indicating roadways and rough - metalled tracks.
- Linear alternating highly positive / negative magnetic anomalies reflecting ferrous pipelines.
- Intensely magnetised discrete anomalies caused by ferrous objects, many of which result from known surface features such as iron manhole covers.

5.1 West (Figs 3 & 4)

U

A roadway enters the area from the east, orientated west-south-west. A branching track leads from this to the southern corner of Area U. At the western boundary, the roadway turns through a right-angle, northwards. Three parallel tracks, 50m apart, align to the east across the area from this. An electricity pylon is situated adjacent to the south-west of these. Anomalies reflecting a north-east to south-east Surface Water Sewer (see Hyder 2011b) were detected in the north-east of U.

K

The road from Area U continues spinally north-eastwards through Area K. At 30m intervals, ninety degrees to either side of the spine road are tracks to the field boundaries. On the western side, the tracks met a track following the margin of the area. At the southern end of the spinal road, a second road orientates east-south-east out of the field, parallel tracks aligning south from that. An electricity pylon is situated in the mid-west of Area K.

KK

An axial track aligns south-west to north-east, with parallel tracks tangentially to the south-east. A road crosses the north of Area KK east to west and northern end of the axial track.

Areas K and KK are densely covered by small dipolar ferrous anomalies, probably reflecting the remnants of screws, nails and tent pegs. The areas have most likely been used as exhibition space, plots divided by tracks.

H2

Three tracks and a roadway cross the area west to east.

5.2 North-West (Figs 5 & 6)

H1

The majority of Area H1 is covered with ferrous anomalies of a variety of sizes. A track crosses north-east to south-west through the south of the area.

G2A

The south-eastern third of Area G2A, adjacent to an existing car park appears to have also been of the same construction, now grassed-over. There is a south-west to north-east aligned track bounding the former car park on the northern side, another is parallel to the south-east of this, halfway through the hard-standing. A second divides the area south-east to north-west and curves to the north, meeting the corner of Area G2B. Anomalies from the track on the eastern edge of G2A were recorded. The remainder of Area G2A is characterised by a south-west to north-east track from the western boundary to the southern corner of G2B. The track is split by a considerable number of ferrous anomalies, possibly indicating the backfill of a pond or similar depression. Other ferrous anomalies were identified around the area.

Two positive linear anomalies orientated south-east to north-west were identified in the southern part of Area G2A. These could represent ditch features of archaeological origin, although ephemeral features, such as drainage channels or beaten paths of a more recent date, are also a possibility.

G2B

The bounding track on the north-east edge of the area was recorded magnetically. The main feature identified was an unknown pipeline crossing G2B on a north-easterly alignment from the southern corner.

G2C

A track divides Area G2C in half on a north-west to south-east alignment. In turn this is crossed by a Foul Water Sewer (Hyder 2011b) aligned to the north-east. The north-eastern corner of G2C contains a marked concentration of ferrous anomalies.

G2D

The main anomaly in this area describes a track which enters the field at the western corner and meanders roughly north-east. Similar to Area K, G2D is covered by a concentration of small dipolar ferrous anomalies reflecting iron debris near to the surface.

G2G

A track follows the north-eastern boundary of this field. South of the track several large ferrous responses were recorded.

5.3 North-East (Figs 7 & 8)

G2E

The track recorded in Area G2G was apparent entering the south-west of this field but was lost after a short distance. A similar density of small dipolar ferrous anomalies to those adjacent to the west was located in Area G2E.

G2F

This triangular area was highly disturbed by small dipolar signals, except where the 'keyhole'-shaped concrete base of the WWII dispersal pan still stands producing a clear

area in the data. Two tracks cross the area west to east and another pair align along the north-east and north-west boundaries. A single track orientates due south from the northern corner of the G2F, stopping at the dispersal pan. Three further short lengths (up to 30m) of probable track were detected aligned west from the north-western quadrant of the pan.

5.4 East (Figs 9 & 10)

REW1

Survey recorded a roadway orientated south-east to north-west in the western half of Area REW1. 30m north-east of the road, a trackway is aligned similarly. Noisy data from the entire area east of this track indicates likely hardcore or hard-standing beneath the turf. Another track links the first road and track with an exit at the eastern corner of the field. Two further tracks align north at 30m intervals. This part of REW1 is likely to have been parking or exhibition space.

Two parallel pairs of lines of dipolar magnetic anomalies in the north-west and adjacent to the mid-western boundary reflect steel scaffolding towers. Two rows of sizable dipoles approximately 35m apart, situated at the northern end of the two western road/track ways may reflect steel stanchions for a large hanger known from the 1945 aerial photography (© GoogleEarth 2011).

6 CONCLUSION

An extensive programme of detailed magnetometer survey located anomalies relating to recent structures and deposits, roads and tracks, reburied hard standing, service pipelines and ferrous debris. Two possible archaeological anomalies were identified in Area G2A, putatively ditches but equally feasibly ephemeral modern features, such as drainage channels or beaten paths. Despite the extensive disturbance on the site, sufficient open areas were surveyed between tracks and around hard standing, to demonstrate little significant archaeological activity.

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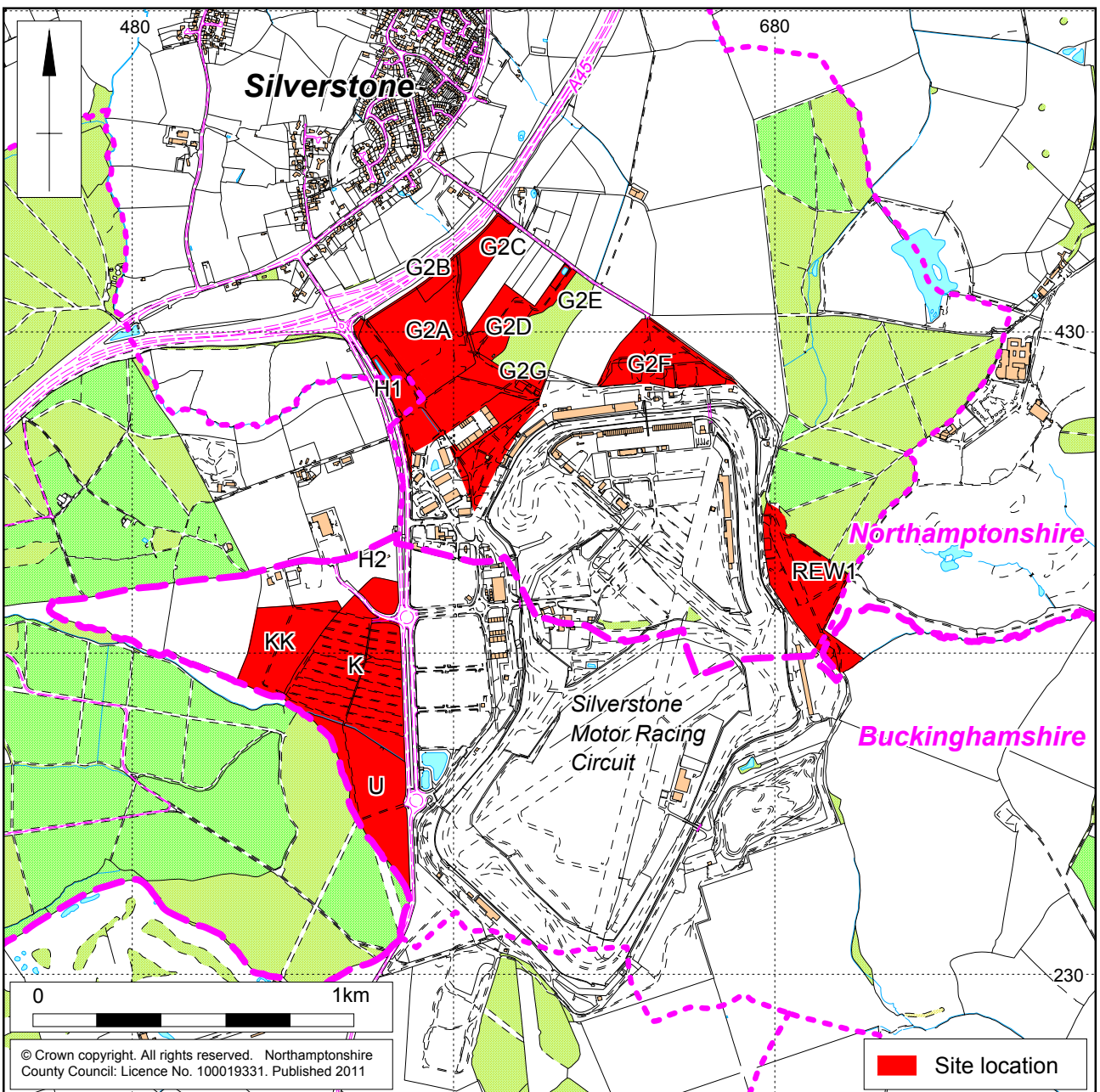
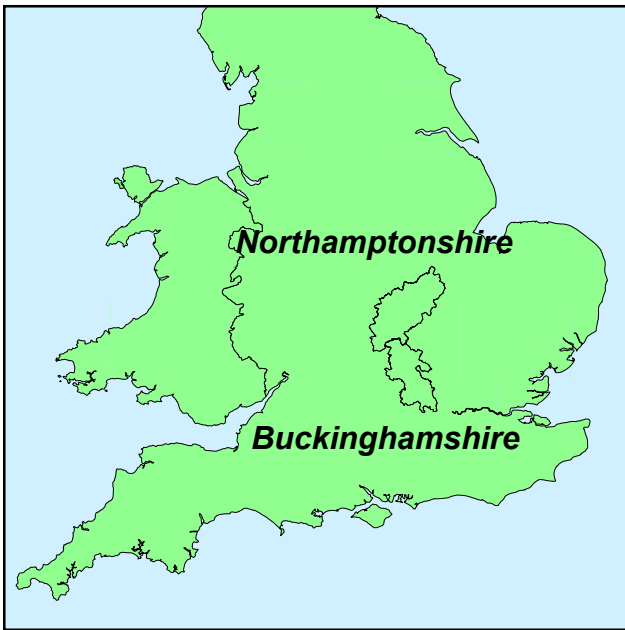
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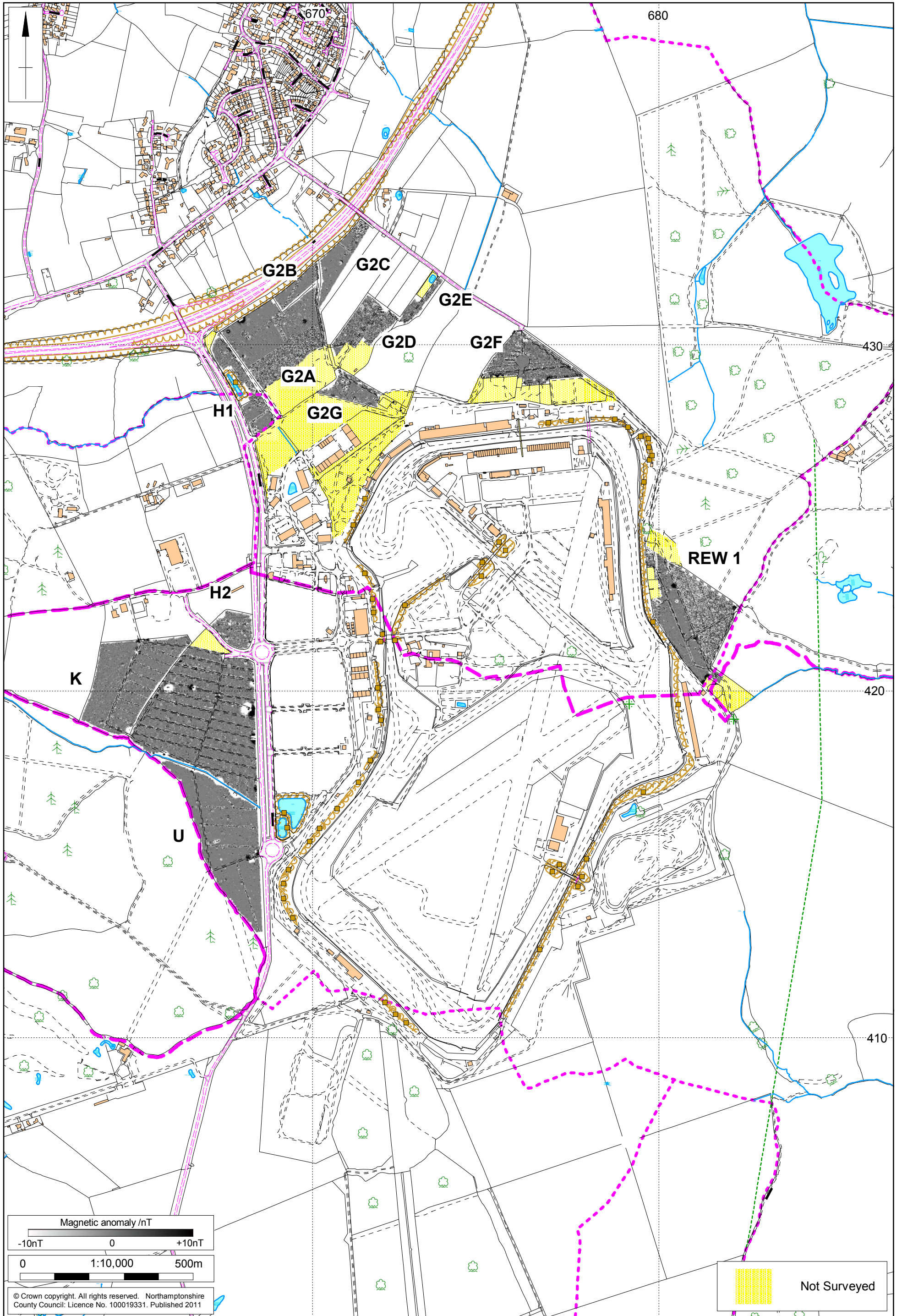
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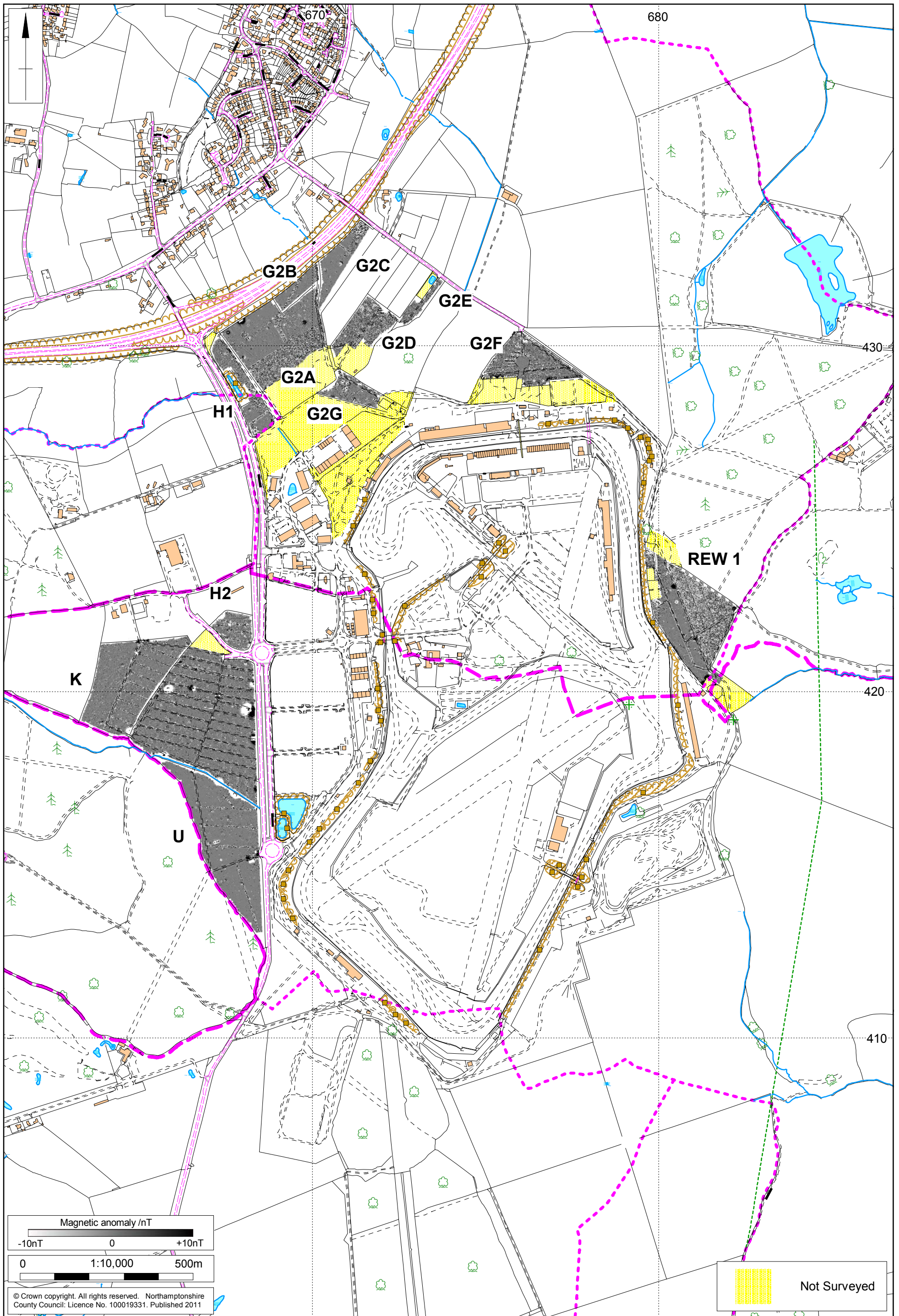
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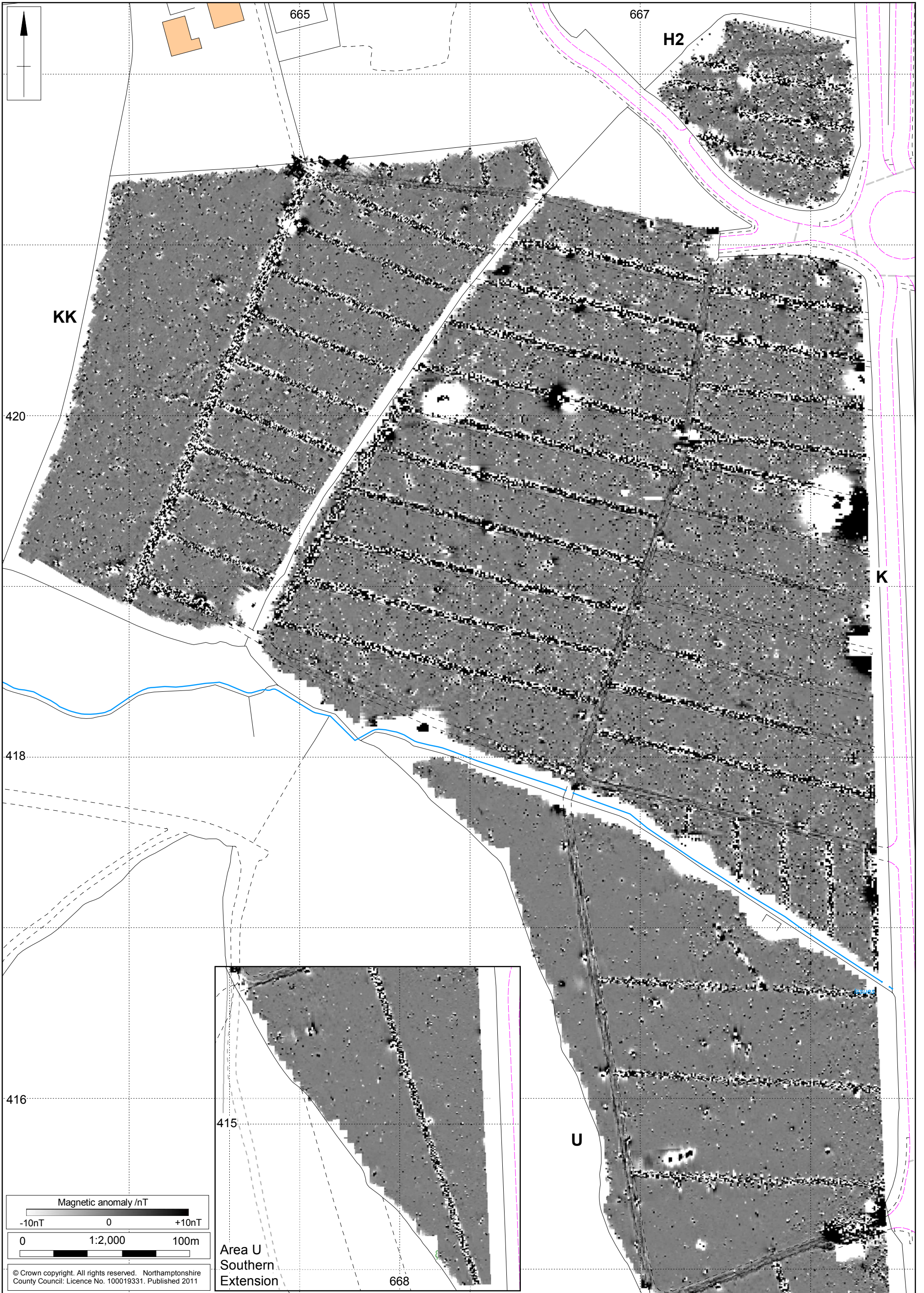


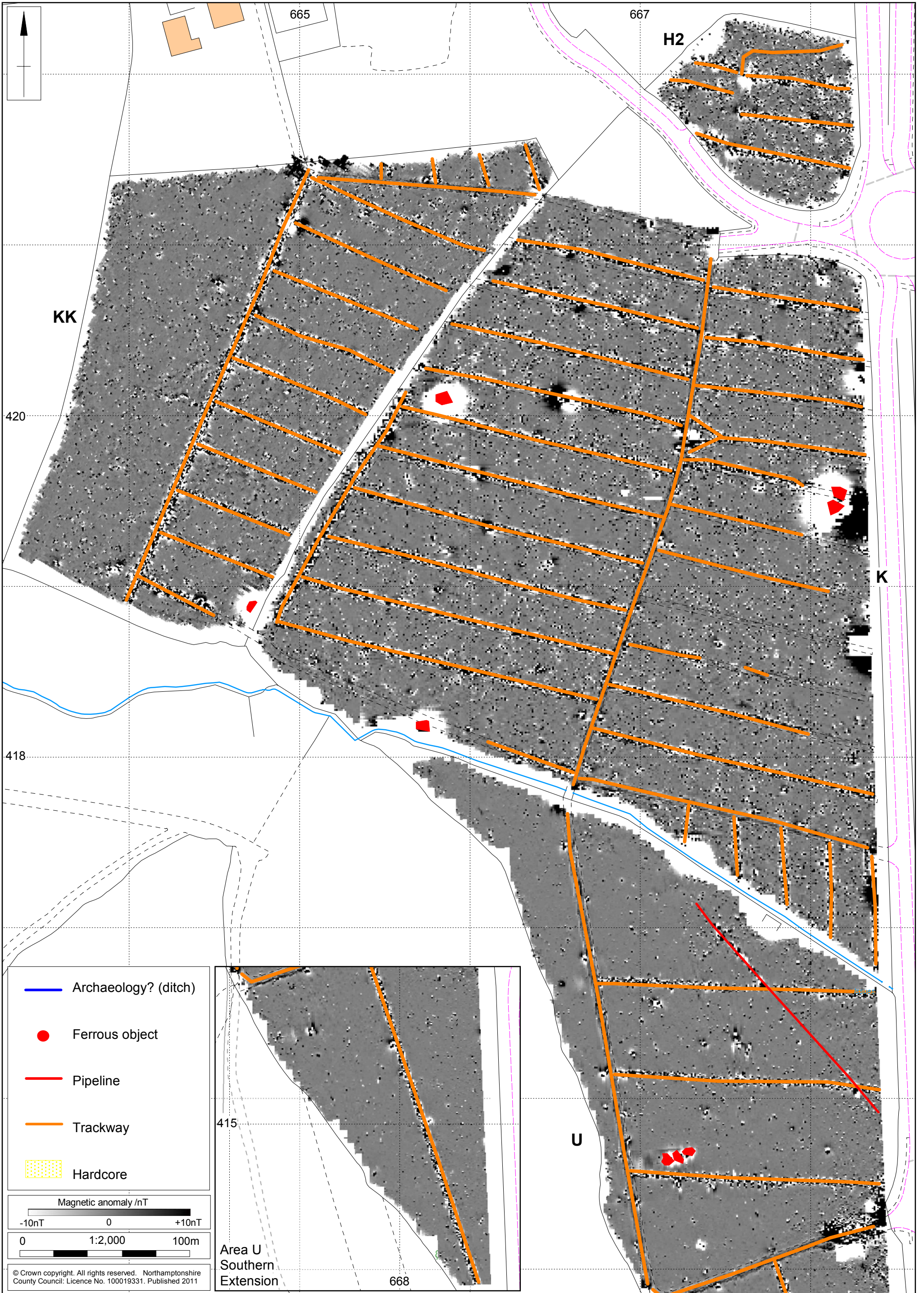
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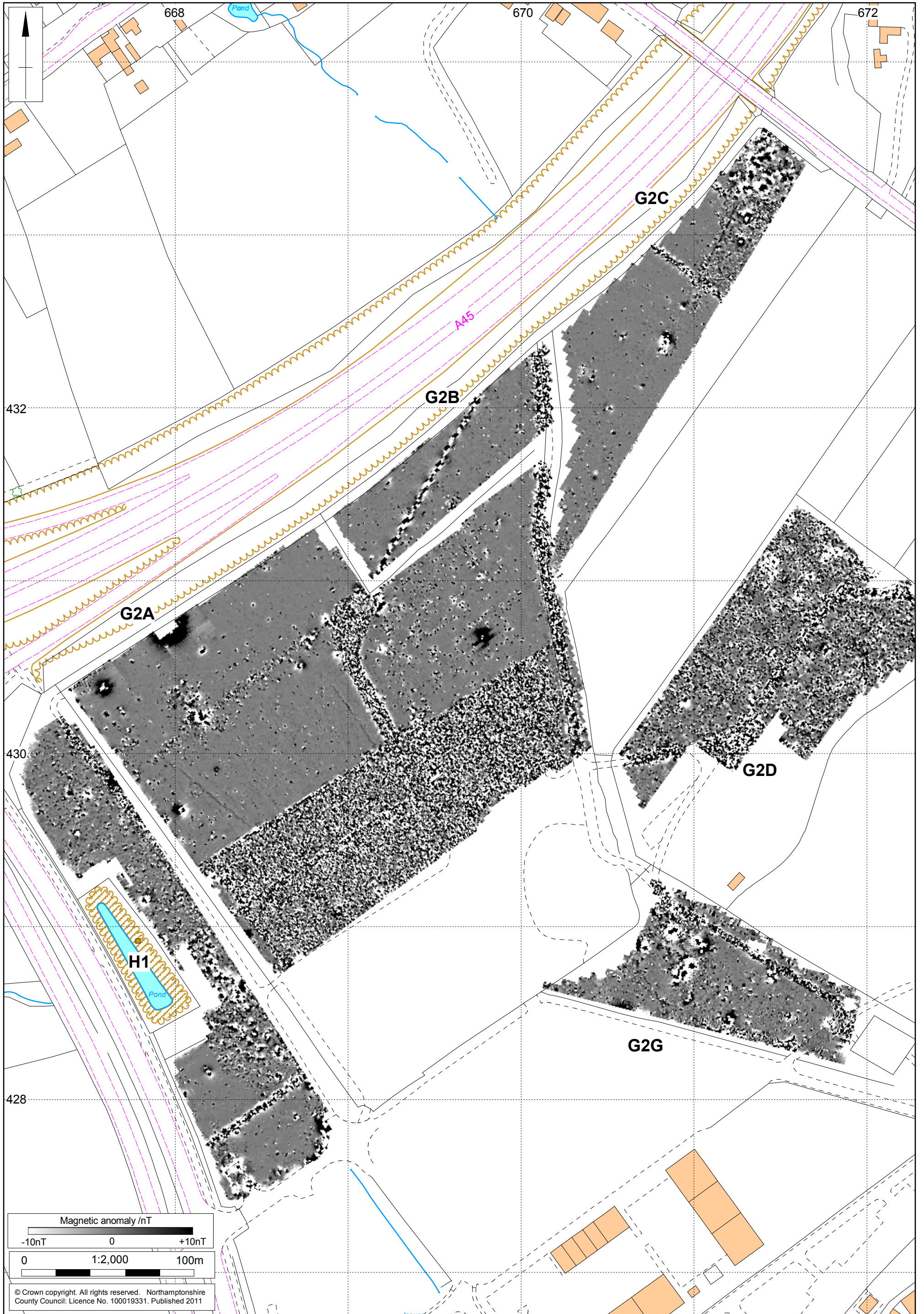
Site location Fig 1



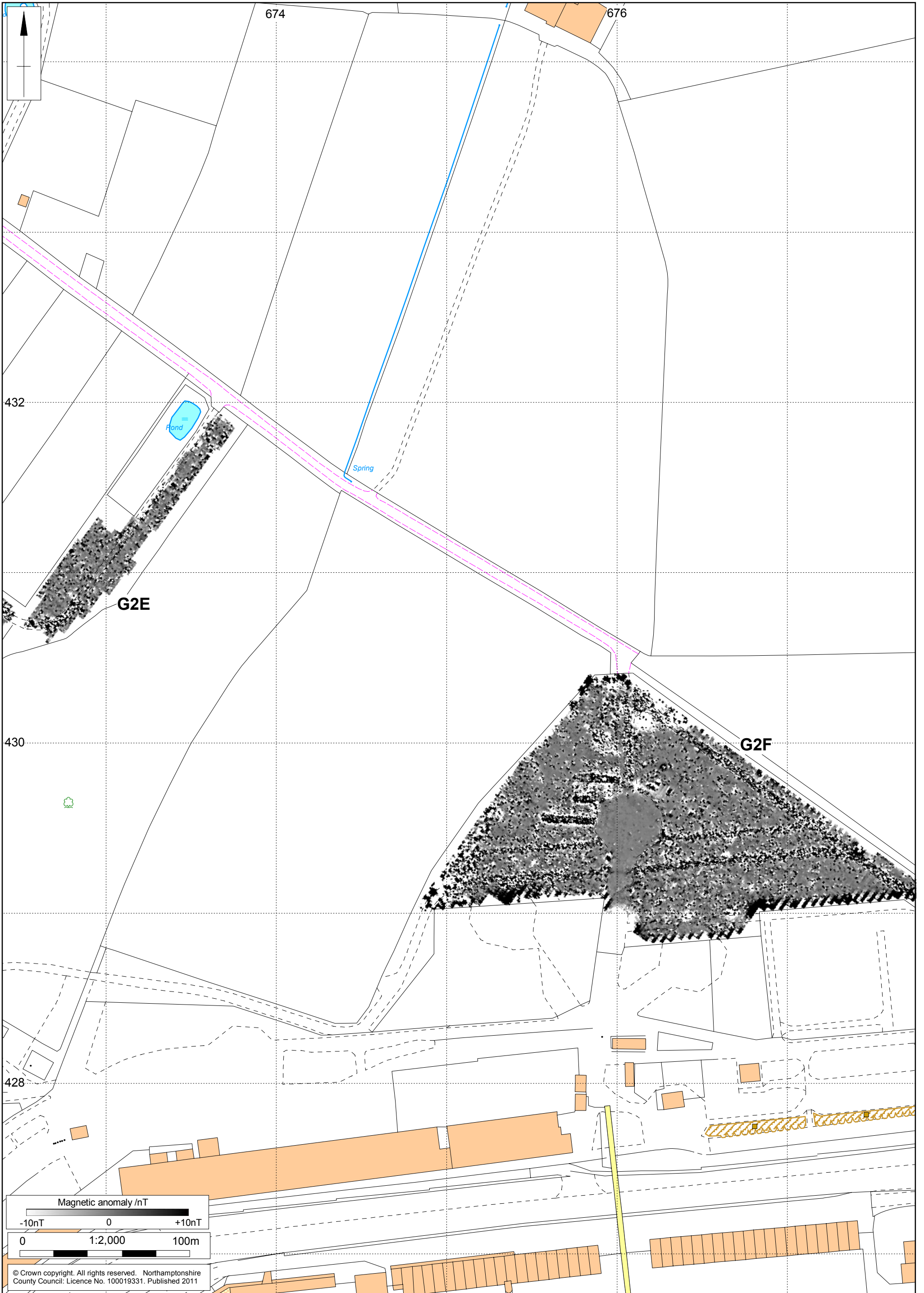


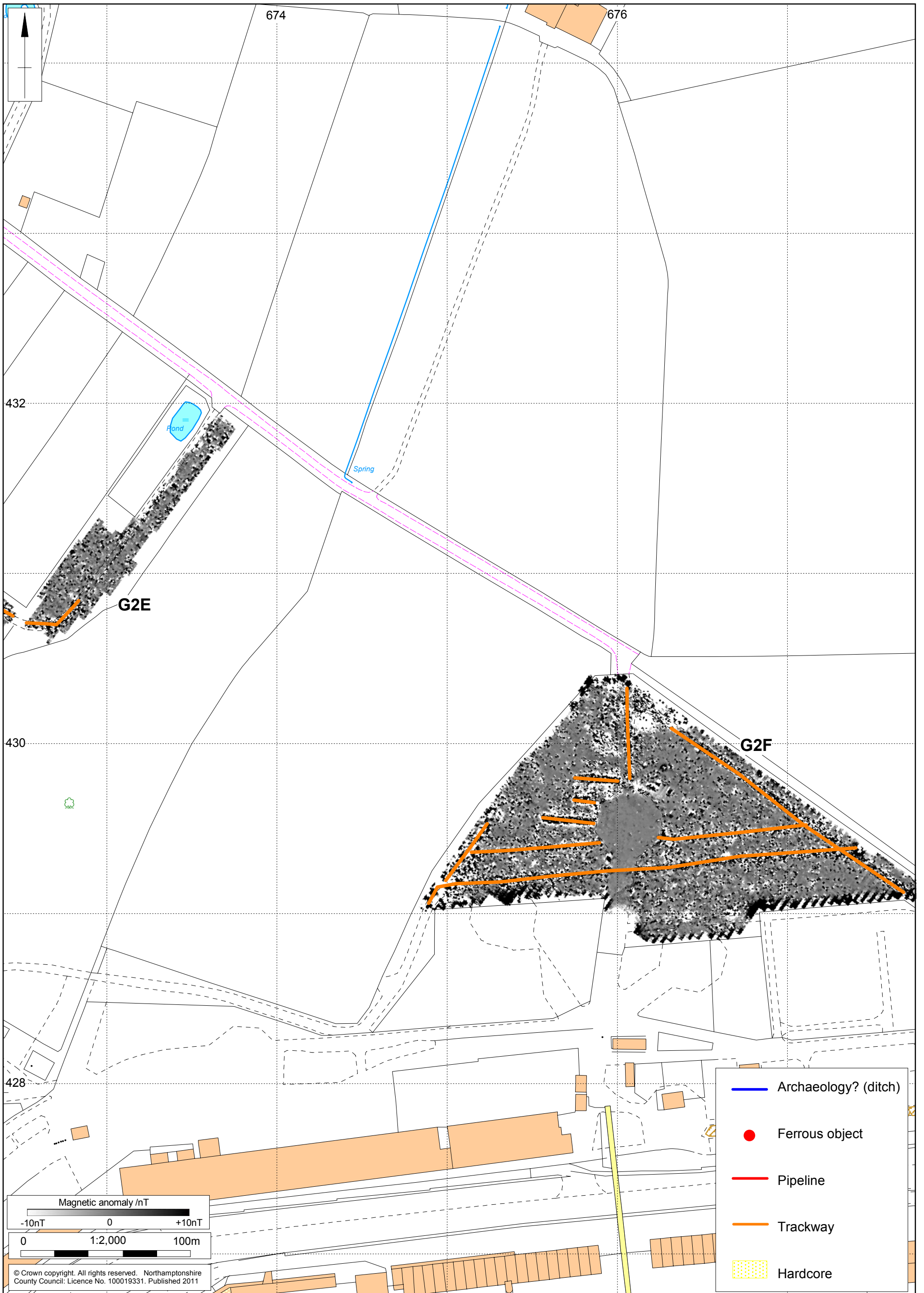


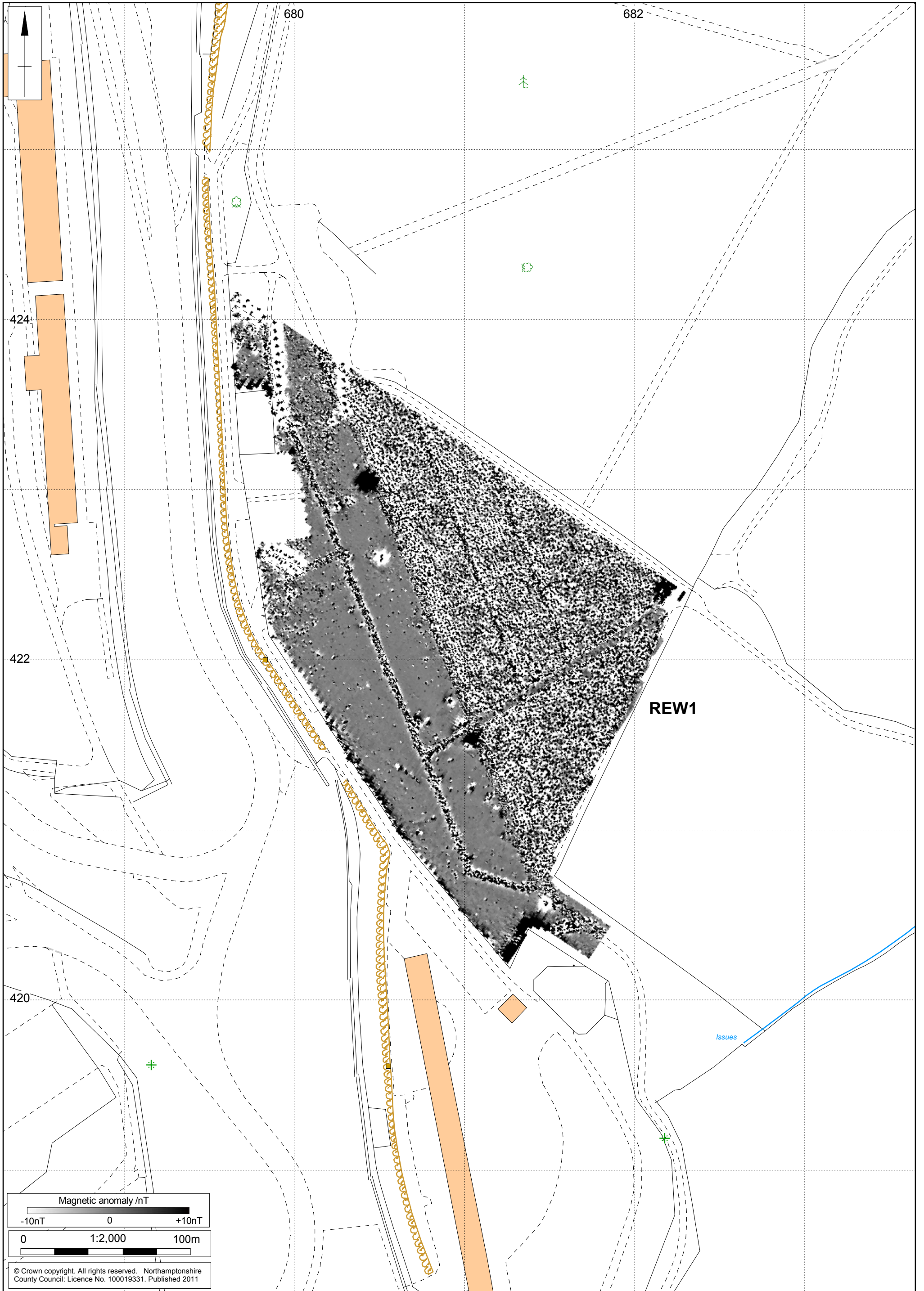






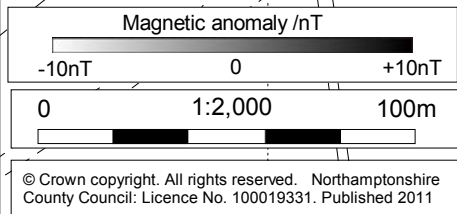


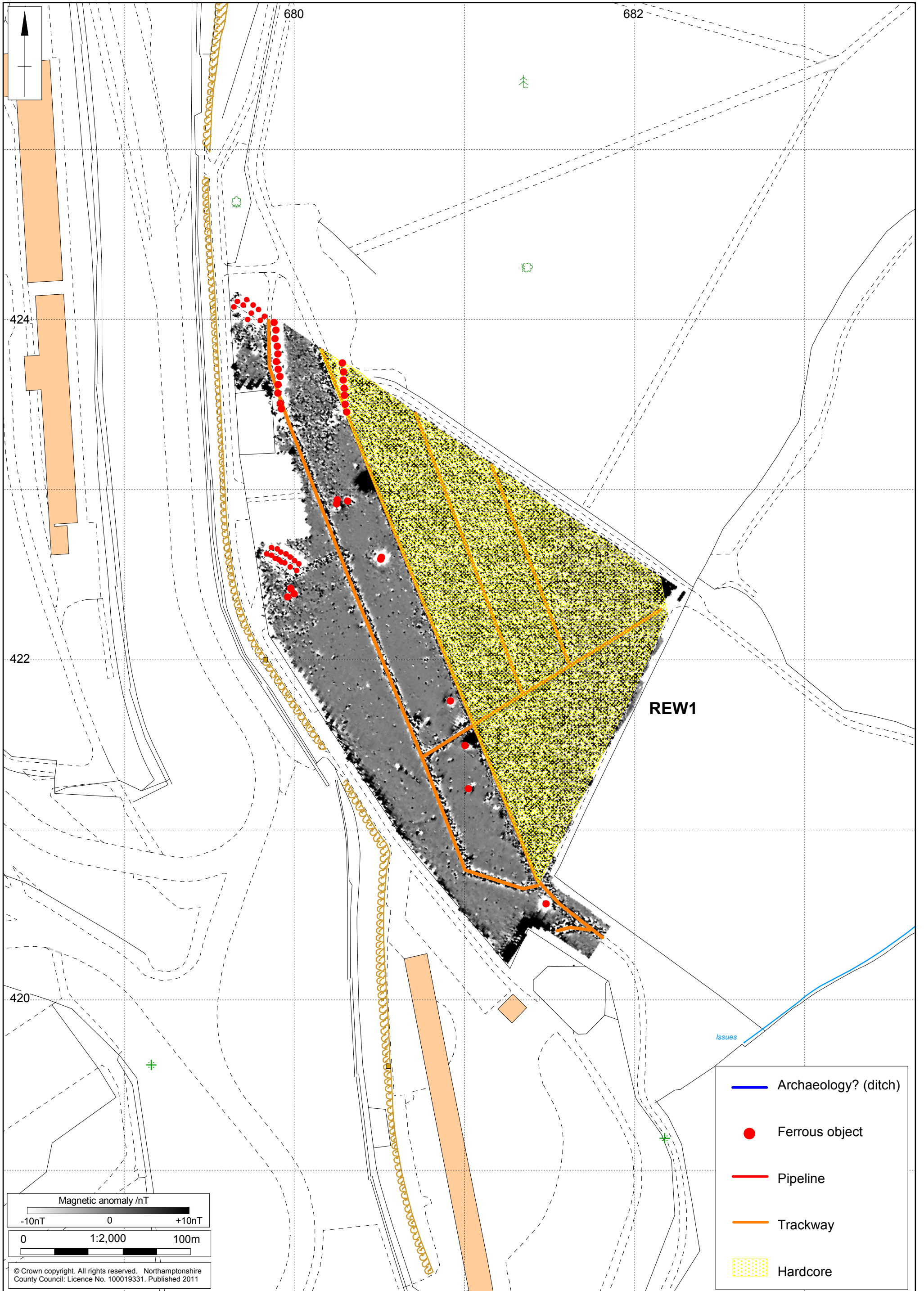


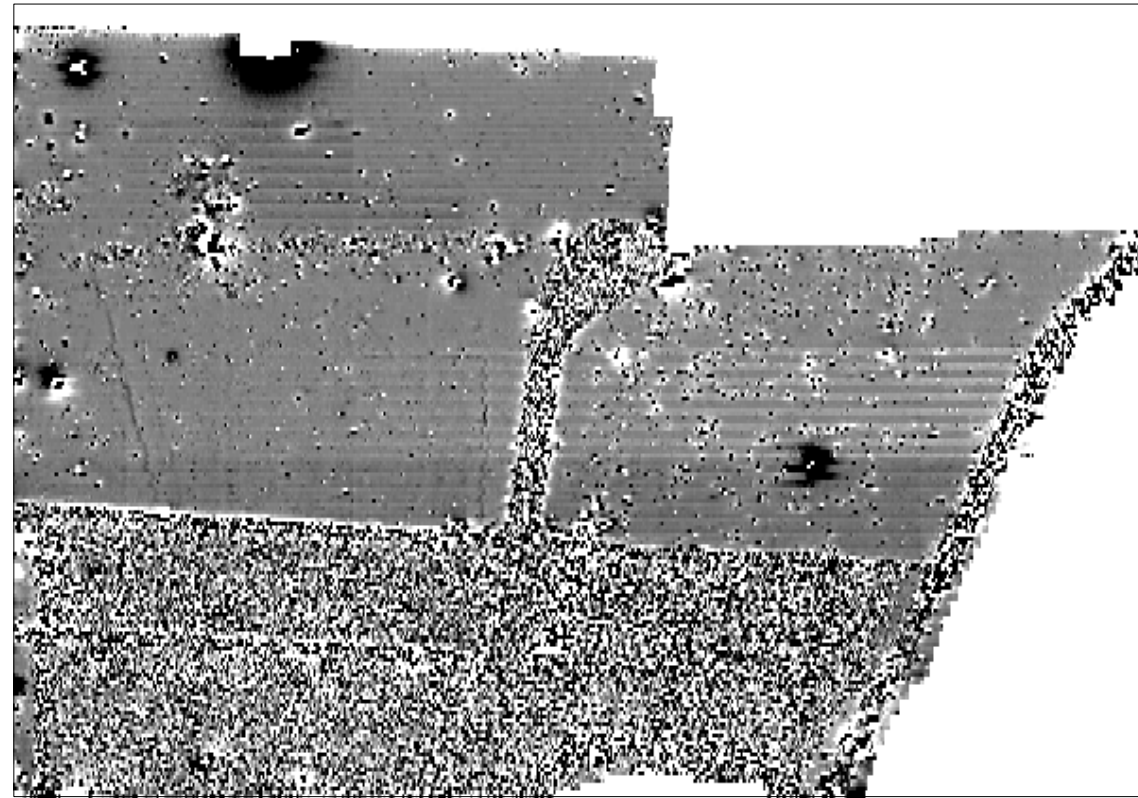


REW1

Issues



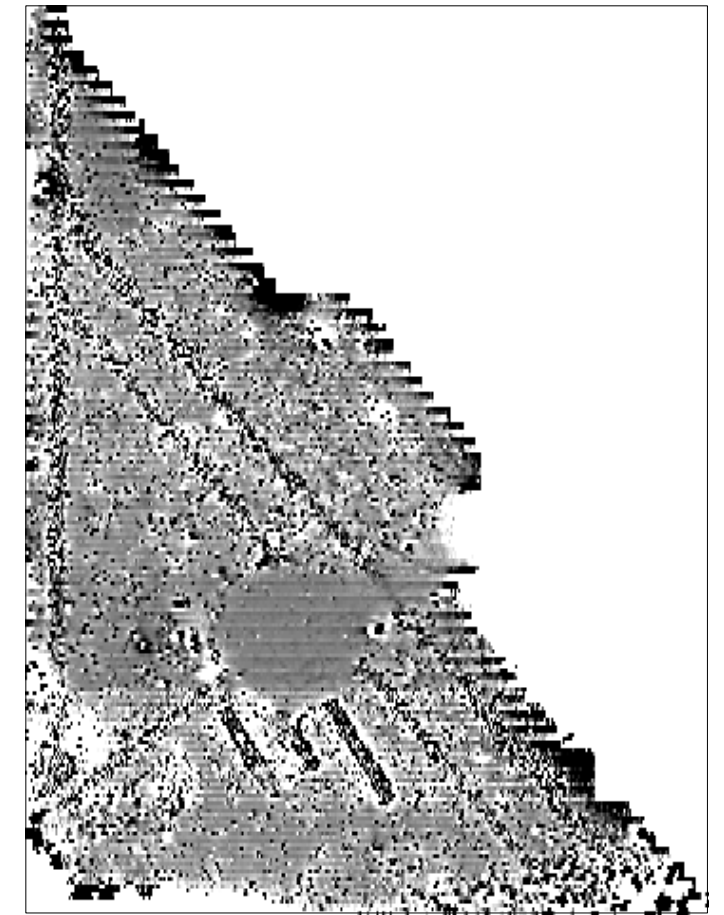




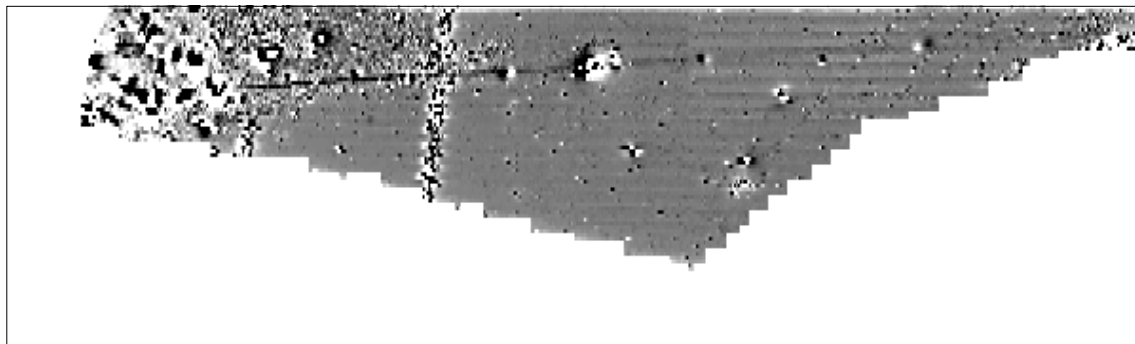
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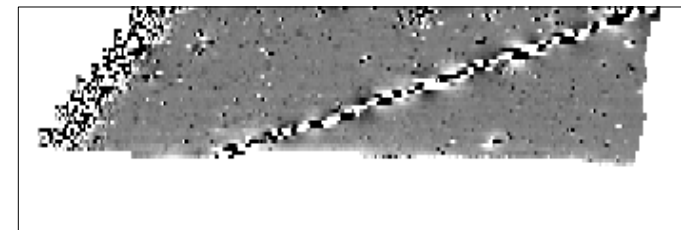
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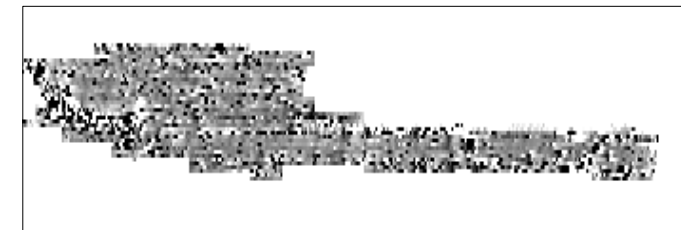
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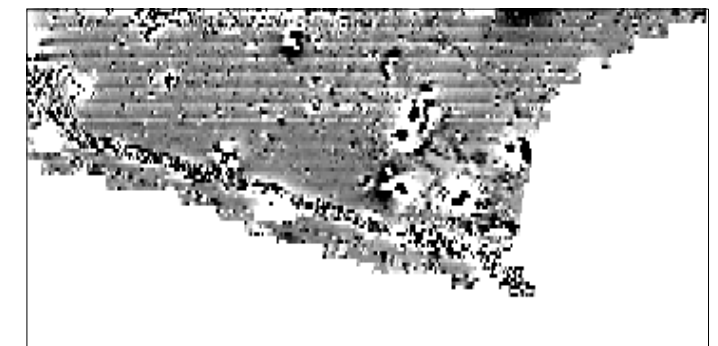
Area G2C



Area G2B



Area G2E



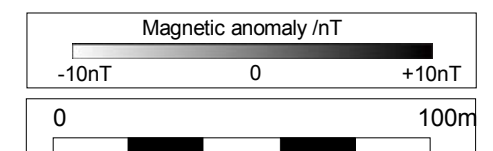
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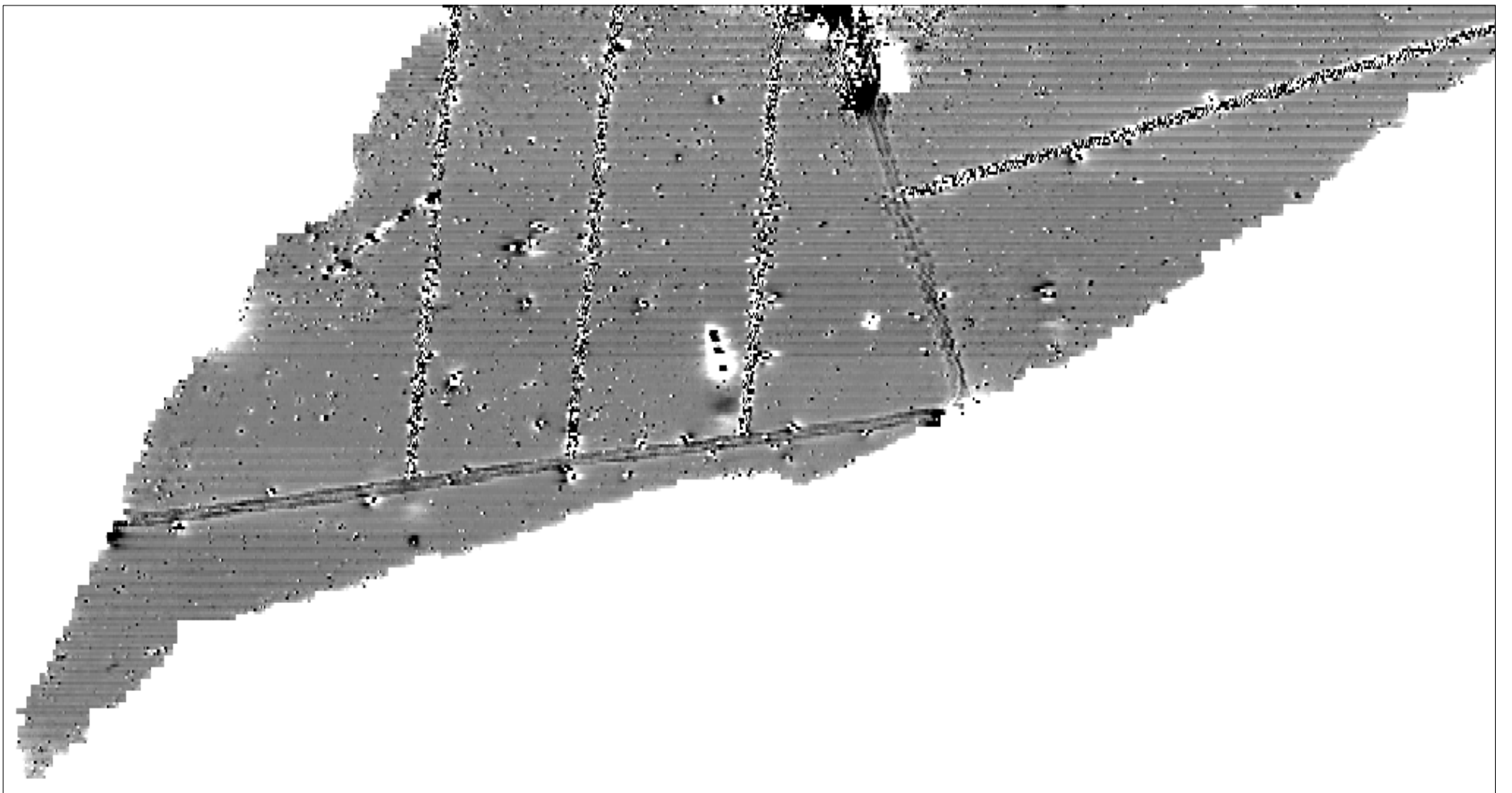
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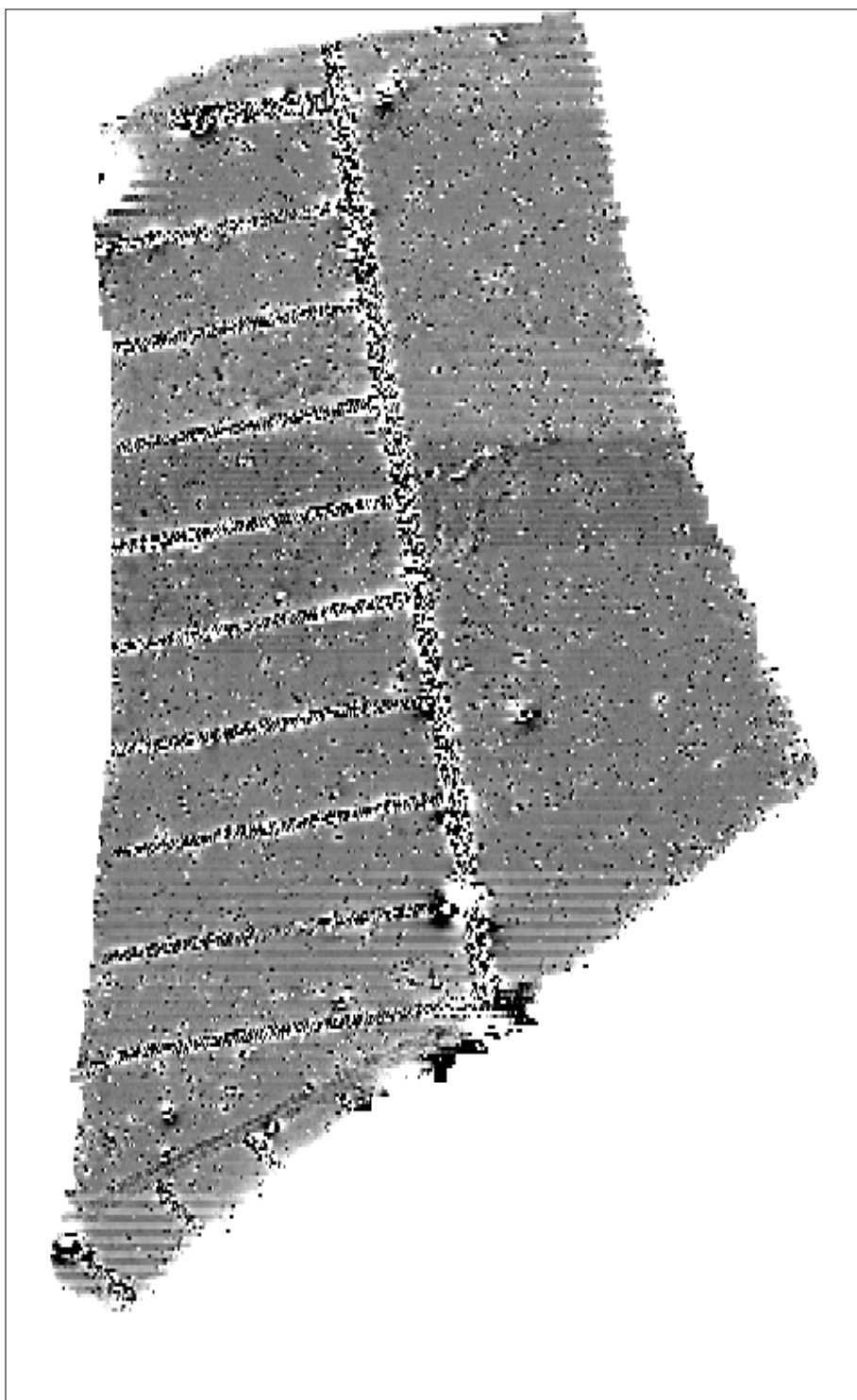
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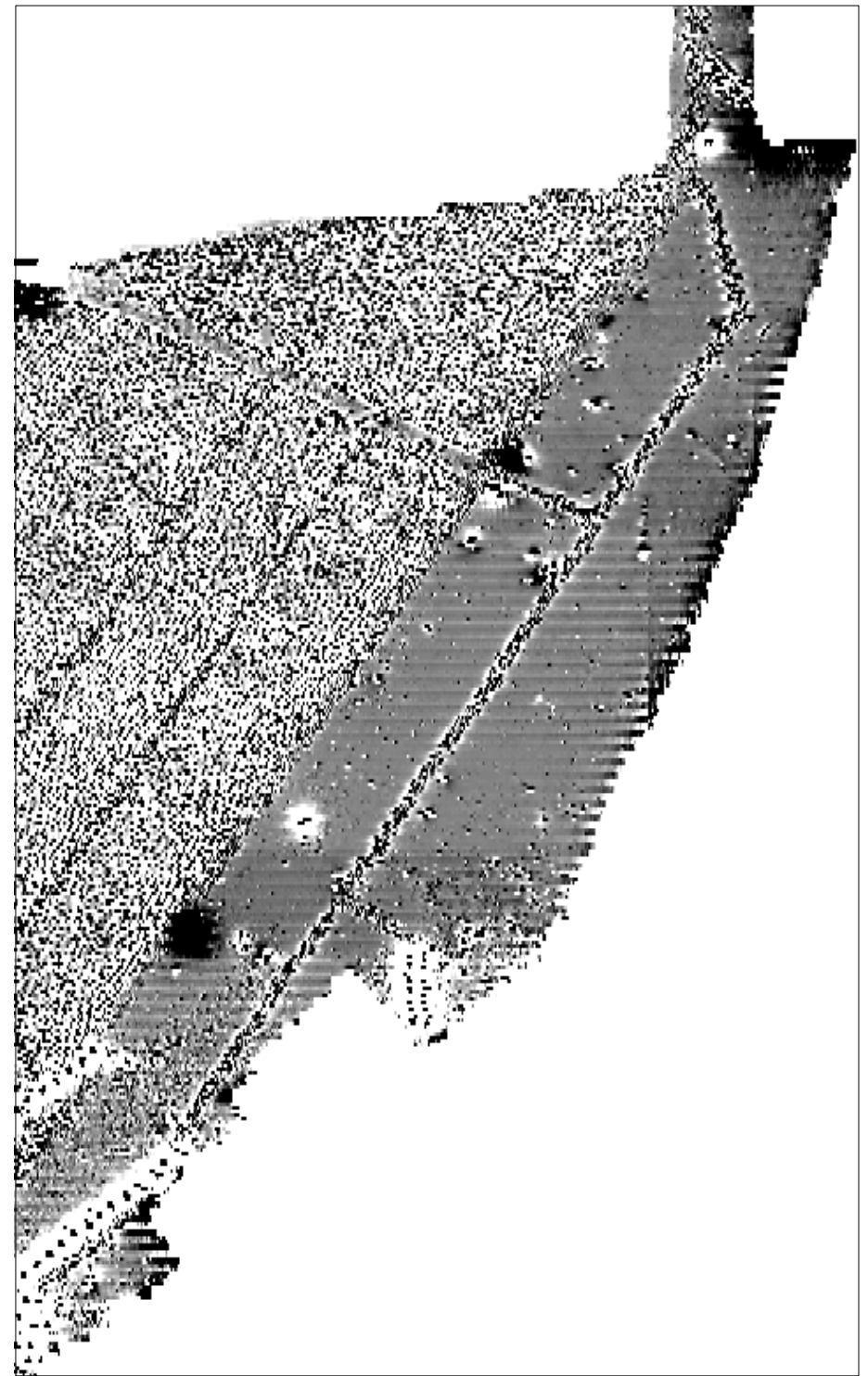
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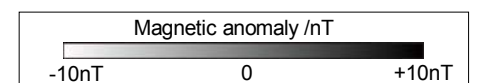
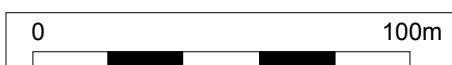
Area U

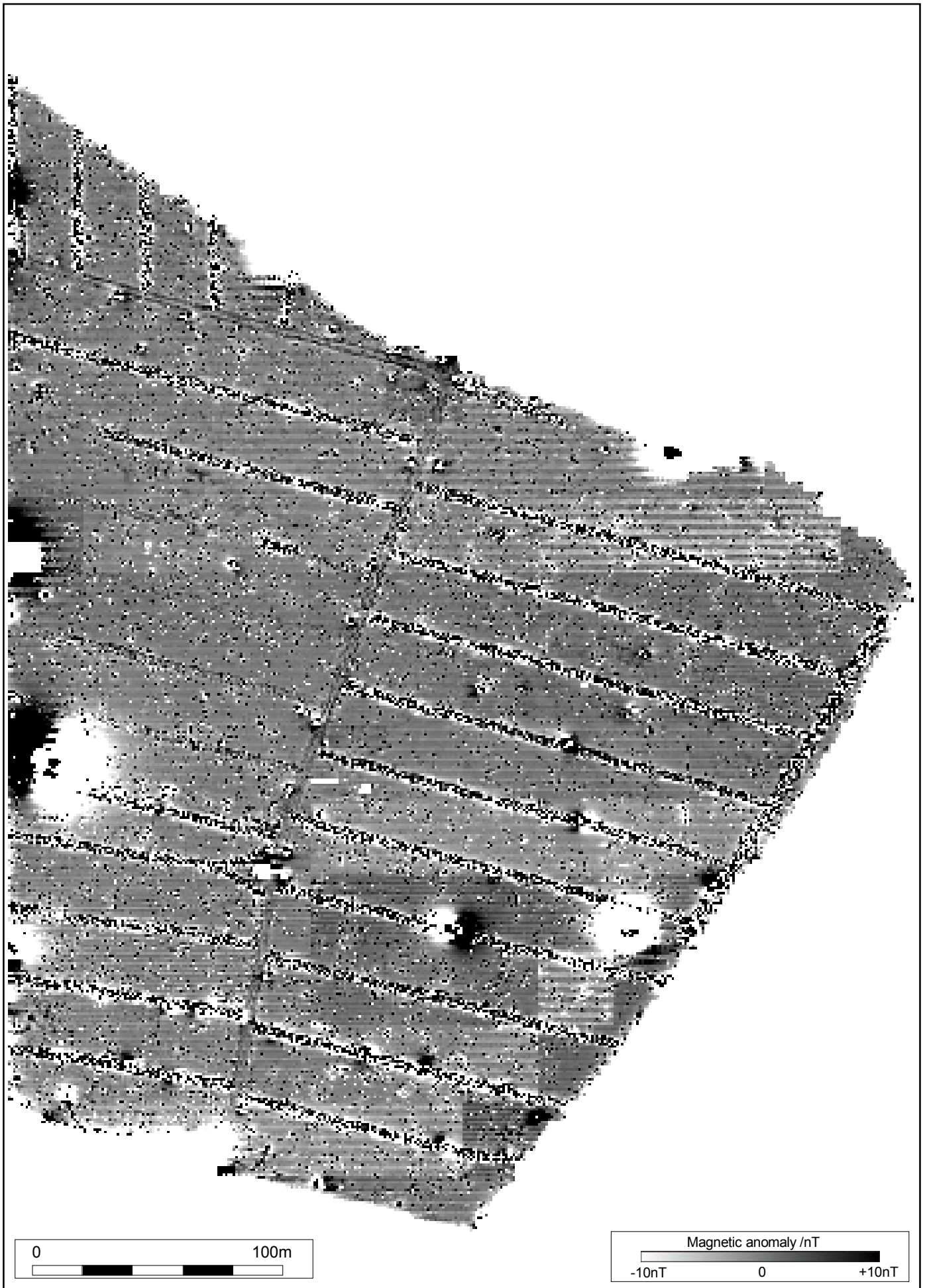


Area KK



Area REW 1







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