



'World War 2 Treasure Hunters' TV Series

Quorn Camp

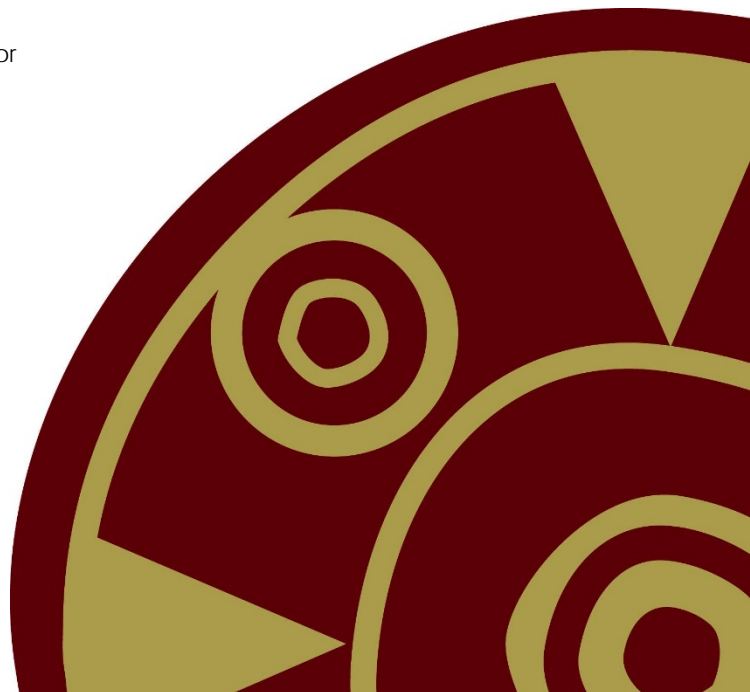
Quorn, Leicestershire

Client:



Date:
July 2018

Series 1, Episode 7
Geophysical & Metal Detector Survey Reports
SACIC Report No. 2017/120
Author: Tim Schofield, Mark Sommers & Stephen Taylor
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Quorn Camp, Quorn, Leicestershire
'World War 2 Treasure Hunters' Television Series
Series 1, Episode 7

Geophysical and Metal Detector Survey Reports

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HER Information

Site Name: Quorn Camp, Quorn, Leicestershire
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Grid Reference: SK 5640 1592
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Project Officers: Timothy Schofield, Mark Sommers
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Summary

On the 28th and 29th of June 2017, Suffolk Archaeology Community Interest Company (SACIC) undertook a detailed magnetometer and metal detector survey at Quorn Camp, Quorn, Leicestershire. A camp that was occupied by American Paratroopers in 1944, before becoming a prisoner of war (POW) camp run by the British Army towards the end of the conflict. Many finds were prospected, including cap badges, American and German dog-tags and uniform buttons. Cartridge cases of US origin, along with a variety of other munitions and domestic items such as toothpaste tubes, containers for hair products, boot polish tins and cutlery were recovered during the metal detector survey.

A relatively small area was surveyed using a magnetometer, the results of the survey revealed the location of a probable trackway and hut bases, associated with the POW camp. To gain a full recorded layout of the entire camp, the site would benefit from an extended geophysical survey.

1. Introduction

On the 28th and 29th of June 2017 a geophysical and metal detector survey was undertaken at Quorn Camp, Quorn, Leicestershire (Fig.1) by Suffolk Archaeology Community Interest Company (SACIC). The surveys were commissioned by Emporium Productions Ltd, as part of a television series investigating the history of a variety of military sites around the UK, broadcasted in the UK in the autumn of 2017, on the History Channel. This report covers the seventh episode to be filmed, which was transmitted as episode four of the series.

The specific research aims of the detailed magnetometer and metal detector surveys were:

- To locate anomalies associated with the access road, Nissen huts and rubbish dumps, along with any other anomalies associated with the WW2 camp;
- To locate, record and recover evidence of military activity within Quorn Camp;
- To define the type of activities being undertaken within the survey area;
- To recover information regarding the POW's that were housed at Quorn.

2. Geology and topography

Quorn Camp is located in the grounds of Quorn House, on the Farnham Estate, to the west of Wood Lane (SK 5640 1592) Leicestershire. Access to the site was gained via the main house entrance, off Meeting Road. The survey area comprised open pasture with occasional mature trees, copses and areas of woodland, it lies at a height of 47 to 56m AOD.

The bedrock geology is described as Gunthorpe Member Mudstone, a sedimentary deposit formed in the Triassic Period in hot desert conditions, with some marine deposits. Superficial deposits are described as Head clay, silt, sand and gravel, formed by subaerial slopes depositing fine-grained materials down-slope in the Quaternary Period (BGS 2018).



Figure 1. Site location

3. Archaeological background

Quorndon House, now called Quorn House, was completed in 1820, it is built in brick with cement facings in the late Georgian style. The house was passed from generation to generation of the Farnham family until 1992, when it was put up for sale. Today the house and grounds are owned by Tarmac.

Quorn Camp was established in the grounds of Quorn House during WW2, hosting the United States Army 82nd Airborne Division's 505th Parachute Infantry Regiment, who arrived on February 14th 1944. These paratroopers were involved in liberating the town of Sainte-Mère-Église, in Normandy, France, on the morning of D-Day and included Private Steele who famously became caught on the town's church spire. American veterans come back to Quorn on every tenth anniversary of the D-Day landings, to remember their comrades who did not return. A plaque commemorating the lost US servicemen is on display in Quorn's Memorial Gardens.

At the end of the war, the site was used as POW Camp 183, in 1946 its name was later changed to Repatriation Camp 9. Following the war, the camp remained in military use for 'staging' large units such as the Royal Leicestershire Regiment and the Royal Lincolnshire Regiment, who occupied the site for brief periods, the Royal Pioneer Corps (No. 523 Company) also became established here. In 1959 the camp was finally closed and the land was derequisitioned.

Figure 2 illustrates the layout of the camp as depicted on the Ordnance Survey (1:10,000 scale) map of 1955, revealing the layout of the POW camp with rows of semi-permanent rectangular huts that housed the prisoners, flanking a clear east to west access area. Many of these hut bases are visible on modern aerial photographs and a few can be discerned on the ground. Access to the POW site was from Wood Lane, with a track leading directly to an area of less regularly distributed buildings, that were probably used as accommodation blocks and administration buildings for the British guards. The camp was fenced and kept separate from Quorn House and the remainder of the estate.



Figure 2. Quorn Camp as depicted on the 1:10,000 scale OS map of 1955 (rescaled extract)

4. Methodology

Metal Detector Survey

The metal detecting survey was undertaken by a group of detectorists, all of whom have a specific interest in WW2 sites and used their own detecting equipment. The survey area was traversed along transects, at regularly spaced traverse intervals to ensure that the total area was covered. Find spots were initially marked with a survey flag, with the bagged finds and left *in-situ*. Multiple finds recovered within a 1m radius were bagged together, the central find's location being used as the group's identifying reference, small find numbers were later allocated to individual finds, during post-excavation processing.

A depth penetration of between 0.20 – 0.30m was achieved, depending on the type of detector coil employed, all finds were recovered from within the topsoil layer in all four survey areas, leaving the subsoil layers undisturbed.

A dedicated recording team tracked behind the detectorists to retrieve and record the finds detected. Each bag was issued a find spot number (prefixed with the site code

'GRP'), which was then geolocated employing a Leica Viva GS08+ Smart Rover RTK GLONASS/GPS, allowing an accuracy of +/- 0.03m. The resulting data was converted to National Grid Transformation OSTN15.

A list of find spot numbers, along with a rapid identifying description of the associated artefacts was produced, using pre-printed *pro-forma* record sheets and are presented as Appendix 1.

Geophysical Survey

Instrument type

A Bartington DualGRAD 601-2 fluxgate gradiometer was employed to undertake the detailed geophysical survey; the weather was dry and the geological conditions were found to be favourable for survey.

Instrument calibration and settings

One hour was allocated to allow the instrument's sensors to reach optimum operating temperature before the survey commenced; the weather was hot and sunny. Instrument sampling intervals were set to 0.25m along 1m traverses (four readings per metre).

Survey grid layout

The detailed survey was undertaken within 20m grids (Fig. 5, blue grid), orientated c. north-east to south-west and geolocated employing a Leica Viva GS08+ Smart Rover RTK GLONASS/GPS, allowing an accuracy of +/- 0.03m. Data were converted to National Grid Transformation OSTN15.

Data capture

Detailed fluxgate gradiometer survey data points were recorded on an internal data logger that were downloaded and checked for quality at midday and in the evening, allowing grids to be re-surveyed if necessary. A pro-forma survey sheet was completed to allow data composites to be created. Data were filed in unique project folders and backed-up onto an external storage device and then a remote server in the evening.

Data software, processing and presentation

Datasets were composited and processed using DW Consulting's Terrasurveyor v.3.0.33.6; the raw grid files, composite and raster graphic plots will be stored and archived in this format. No processing was undertaken on the raw (Fig. 6) data, algorithms undertaken on the processed datasets (Figs. 7 and 8) are presented in Appendix 2.

Data composites were exported as raster images into AutoCAD. An interpretation plan based on the combined results of the raw, processed and xy trace plots (Figs. 6, 7 and 8) has been produced (Fig. 9).

Survey grid restoration

Three virtual survey stations have been placed on survey grid nodes located along the baselines in order to accurately relocate the grid (Fig. 5).

5. Results and discussion

Metal Detector Survey

A total area of c.8.5ha was prospected over the two days and the results are presented as scaled plans below. Figure 3 depicts the find spot distribution across the survey area, Figure 4 shows the same data, including the find spot numbers.

The finds – description and discussion

Stephen Taylor

A large number of artefacts were recovered during the metal detector survey, the vast majority are attributable to the military occupation during WW2. Evidence for the presence of the US army was found, with large numbers of American cartridge cases, of various calibres, recovered from the site. Direct evidence was secured when two dog-tags (QRN 002, 007), a US lapel badge (QRN 030) and an army issue compass (QRN 056) were prospected.

Several artefacts directly attributable to the German POWs were further recovered, comprising dog-tags and coins from European countries that included a 5-pfennig coin, dated to 1941 and bearing the emblem of the 3rd Reich. Several military buttons (e.g. QRN 037) at least one of which was a Kriegsmarine button, which dated to 1938. The dog-tags recovered, reveal that the POWs came from every arm of the German armed forces; Luftwaffe, Wermacht and Kriegsmarine (QRN 050, 051, 052, 053, 177, 180).

The POW camp and the prisoners needed guards; the survey provides evidence of the units that may have performed these duties. Buttons and cap badges were recovered that showed the following British Army units had, at some point, been present at the site:

- Northamptonshire Regiment (QRN 062, 106)
- Leicestershire Regiment (QRN 063)
- Royal Armoured Corps (QRN 072)
- Sherwood Foresters (QRN 084)
- Royal Pioneer Corps (QRN 142)

The last unit on the list, the Royal Pioneer Corps, would have more likely been involved in the construction, rather than the guarding of the camp.

Given the units that were based at the camp, there are two items in particular that should not have been recovered. The US paratroopers were never equipped with any large calibre weapons (above .50 calibre), so the recovery of a 37mm cartridge case, (QRN 055) is intriguing. It is speculated that this was a souvenir brought back from one of the gunnery ranges that would have been visited by the US soldiers. The second item was a .55 calibre Boys anti-tank rifle drill round. The US army never used this weapon and it was declared obsolete by the British army in 1943 and withdrawn from service, prior to military occupation of the site.

A large number of domestic items, such as cutlery, a ration tin, polish tins, toothpaste tubes, hair product containers, a harmonica reed, a collection of English coins and cigarette lighters were further recovered.

Geophysical Survey

The detailed fluxgate gradiometer survey recorded a range of geophysical anomalies, the majority of which are likely to be associated with the WW2 camp at Quorn (Fig. 9).

A plethora of isolated dipolar responses (grey spots) were recorded in the dataset that are likely to record the presence of magnetic artefacts and rubbish located in the topsoil. It is possible that some of these could be artefacts relating to the WW2 camp, however many of them could be of an archaeological derivation or more modern rubbish lost or deposited in the area.

Areas of magnetic disturbance (grey hatching) were also numerous within the dataset, also indicating that rubbish has been deposited in the survey area. There is a high potential that these areas record rubbish pits and other magnetic features relating to the camp, further archaeological excavations would be likely to confirm a source of the large bipolar readings.

A bipolar linear anomaly (blue line) bisects the data plot, orientated northwest to southeast, with two perpendicular running confluences. This is thought to be a ferrous service run, that is potentially still live, running parallel with the road. It could also have been taken out of use following the deconstruction of the camp.

Eleven very strong discrete positive anomalies (orange hatching) were recorded across the plot that are likely to record the presence of rubbish pits within the camp. Further archaeological investigations would be needed to confirm their form and function.

Five rectangular areas of magnetic disturbance (red hatching) record the location of Nissen hut concrete pads. The southern most of which still contains cut iron bars that were used to construct the long-removed structure. These ferrous remains are recorded particularly well on this concrete pad in the magnetometer data.

A linear area of magnetic disturbance (cyan hatching) is thought to delineate the location of a service pipe that may have been used to service the huts. It is recorded leaving the southern-most Nissen hut before turning 90 degrees and running north up the centre of the other concrete pads. A second linear is also recorded at a 45-degree angle that appears to join the pipe that is orientated north to south. No other

connections to the remaining huts can be seen within the data, which suggests that the southern-most concrete pad had a separate function, possibly an ablutions block that needed a waste pipe or a water service pipe.

A broad linear area of magnetic disturbance (magenta hatching) may record the location of the former trackway into the camp, that is associated with the bipolar service pipe (blue line).

6. Conclusion

The metal detector survey recovered many artefacts, which have confirmed the presence of the US army at the camp, along with German prisoners of war. Finds prospected also provide evidence of the British army units that either guarded the POW's, or who were present in the 1950's when the British Army used the site as a training camp. No surviving relatives could be found of the American personnel whose names were on their dog-tags. Tracing the German dog-tags was further found to be an impossible task, due to German privacy laws.

The geophysical survey was also used to great effect, over a small area. Many of the camp buildings can be seen within the dataset, the site would benefit from further extended geophysical survey to record the entire camp layout.

7. Archive deposition

The paper and digital archive will be kept at the SACIC office in Needham Market, before deposition in a suitable HER or museum. Artefacts recovered will remain the property of Quorn Parish Council and will be displayed in a suitable local museum for the public to view in due course.

8. Acknowledgements

Detailed magnetometer survey and metal detector fieldwork and archiving was directed by Tim Schofield and Mark Sommers, the team of detectorists was led by Stephen Taylor and comprised Richard Jordan, Elaine Jordan, Martin Dewick and Darren Bond and members of the Loughborough Coin & Search Society, a local metal detecting club. Project management was undertaken by Rhodri Gardner.

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British Geological Survey, 2018, <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

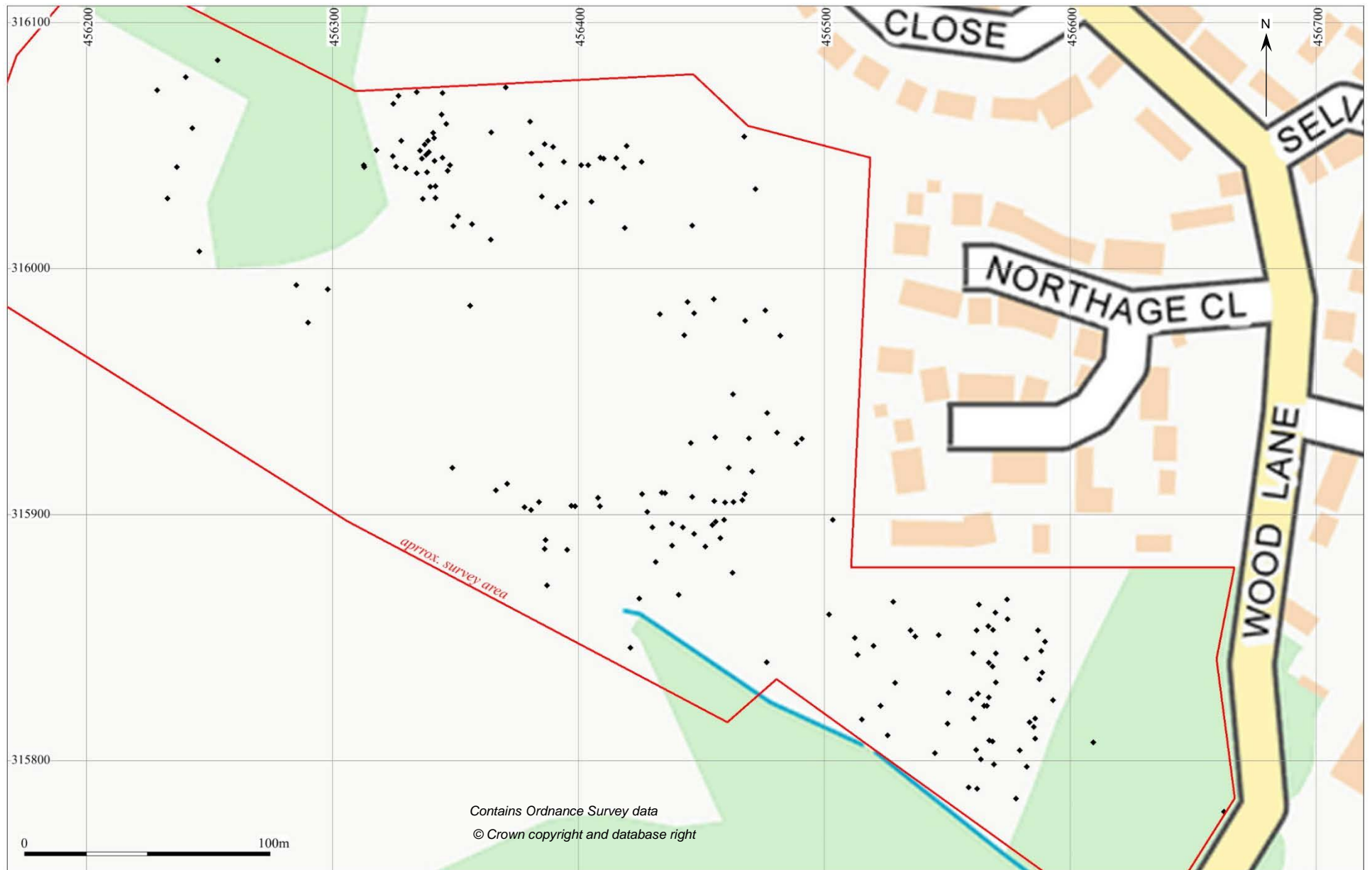


Figure 3. Quorn Camp - Metal detector findspots

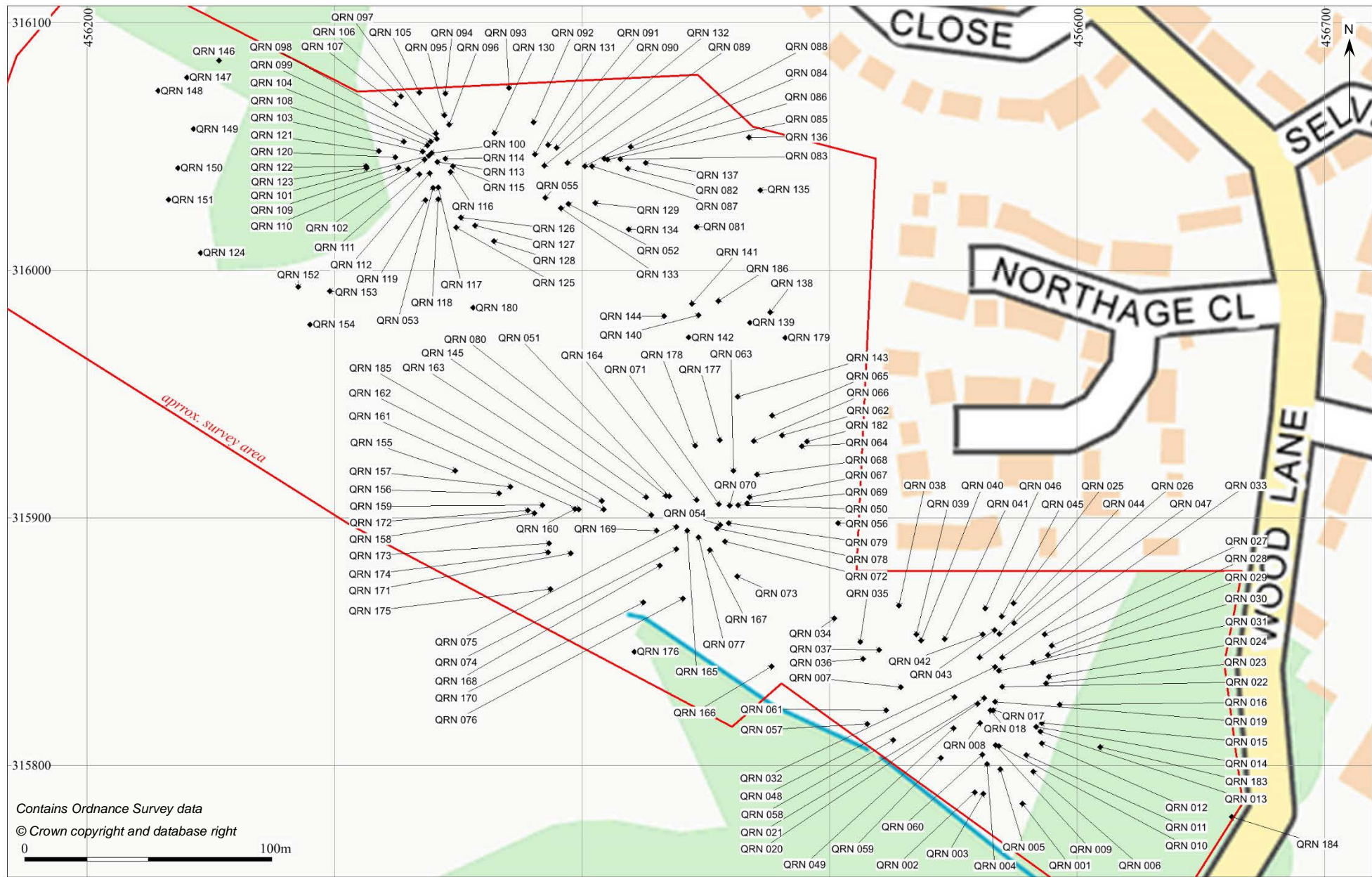


Figure 4. Quorn Camp - Metal detector findspots with ID numbers

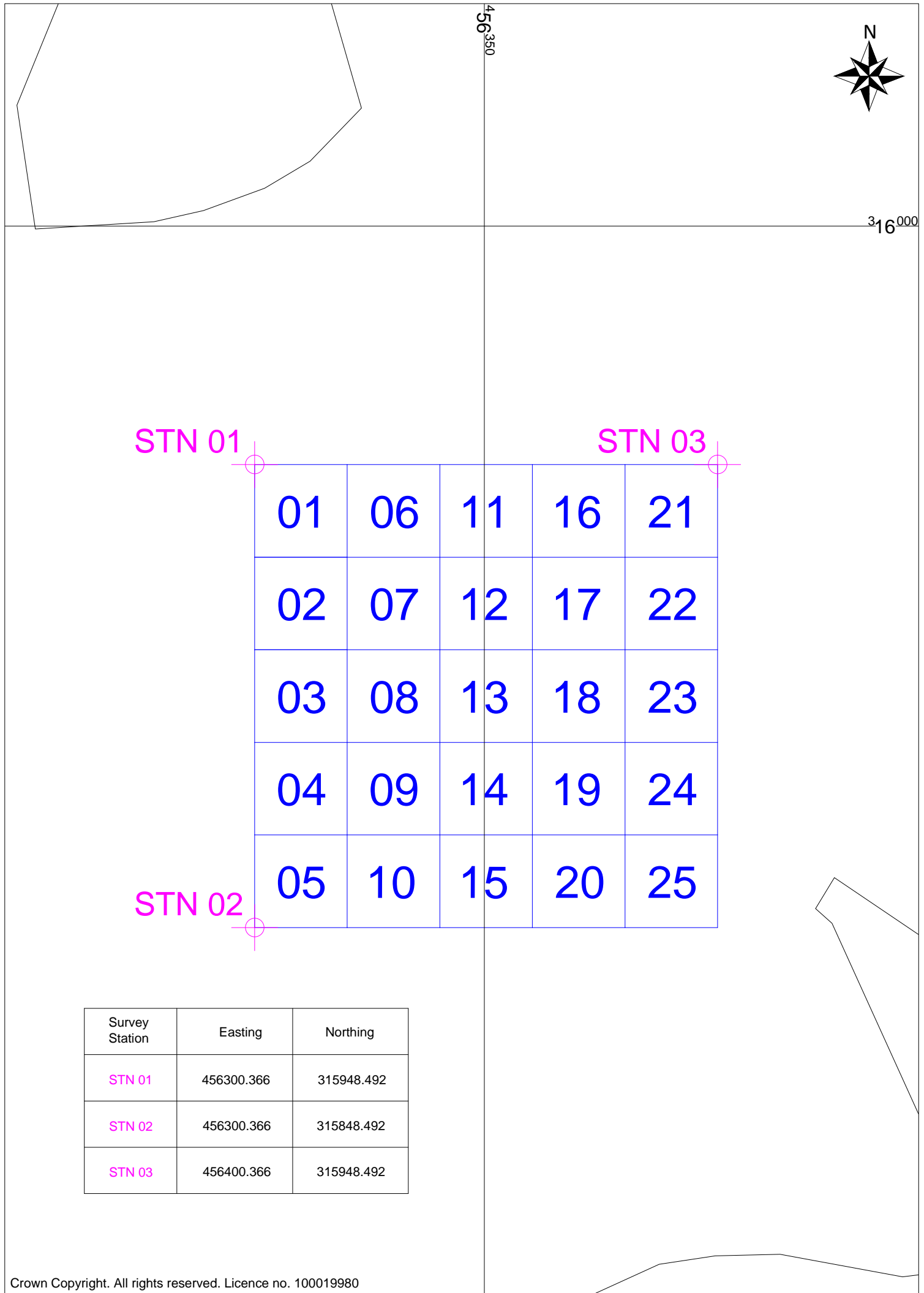
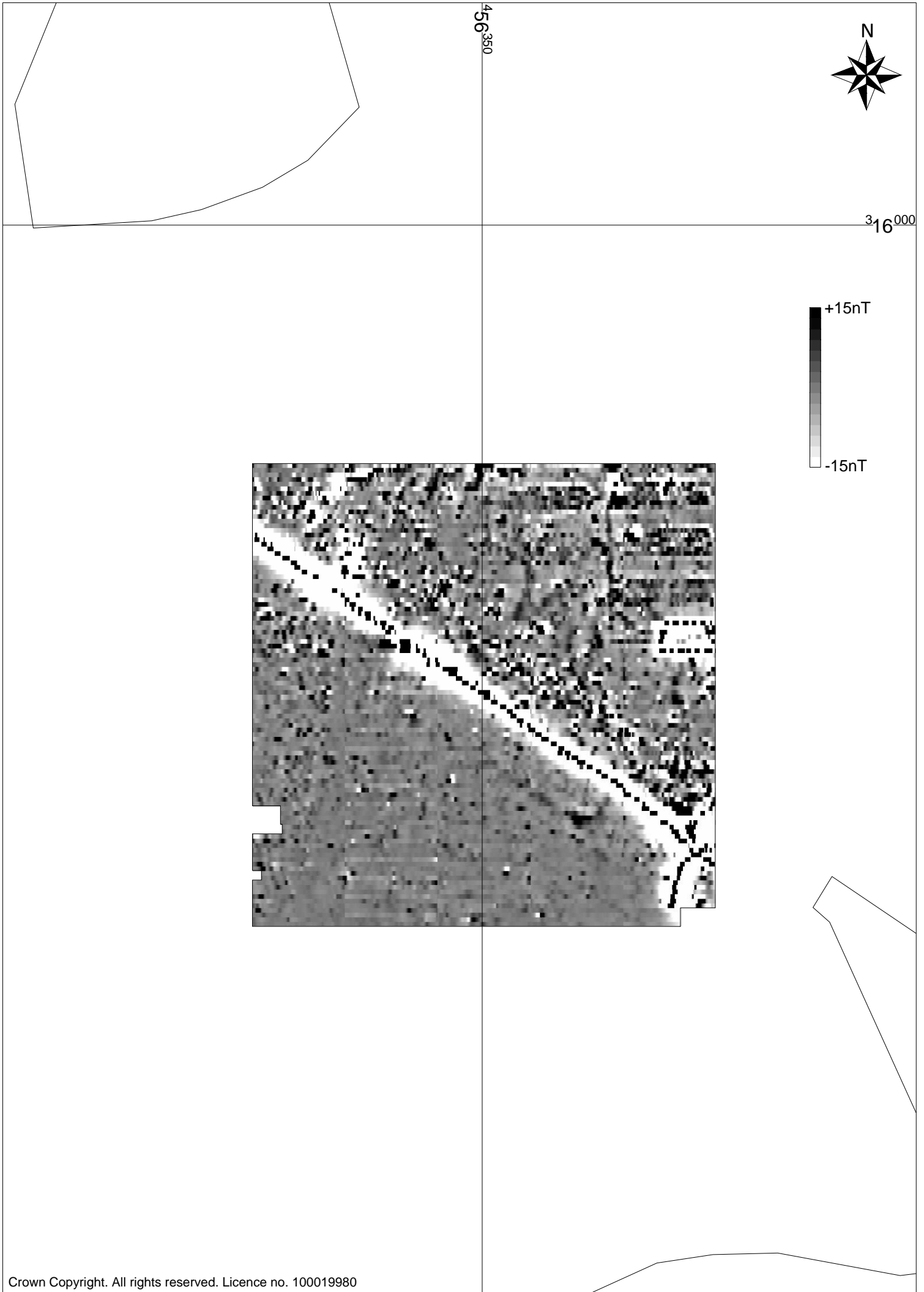
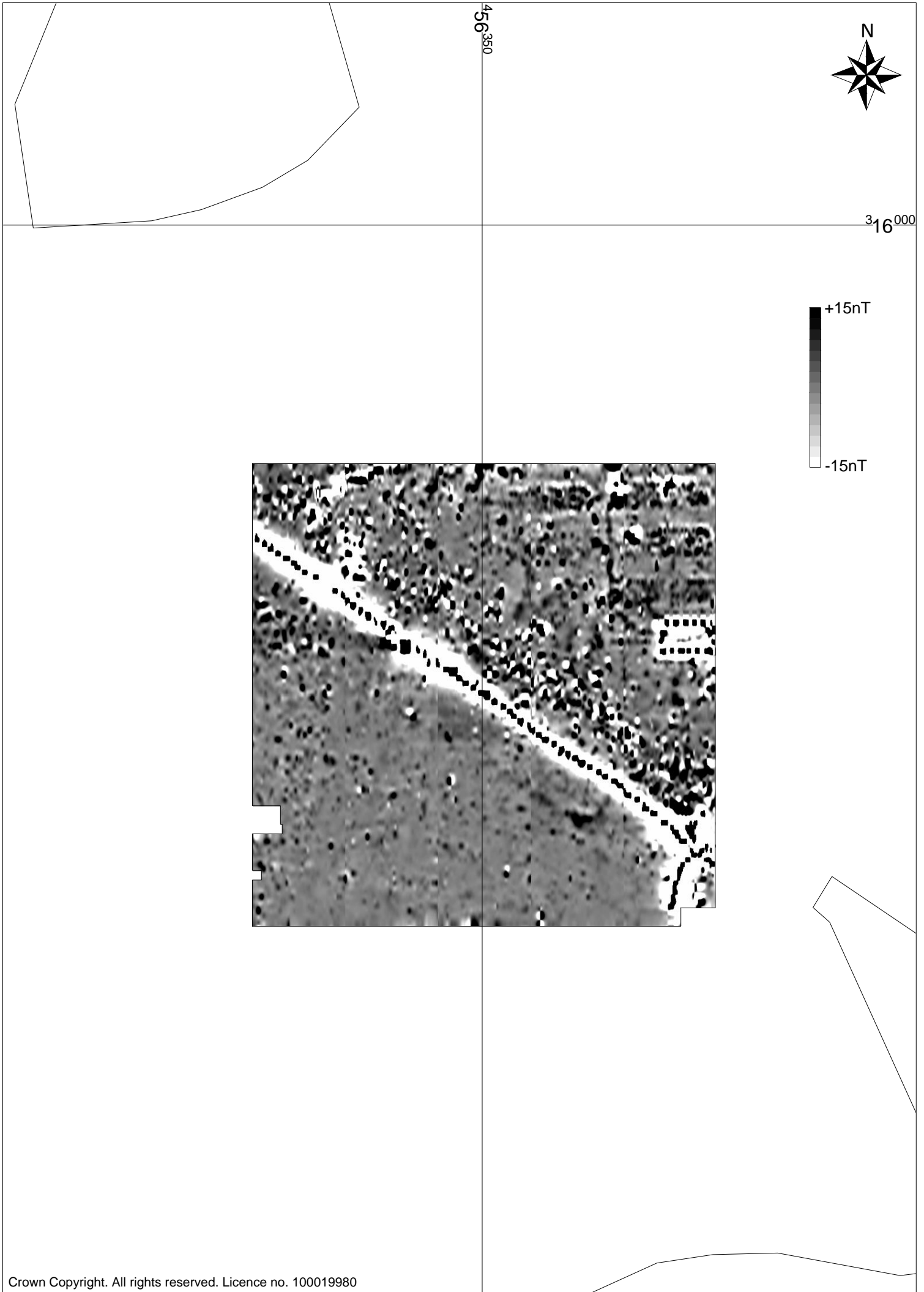


Figure 5. Survey grid and georeferencing information 13



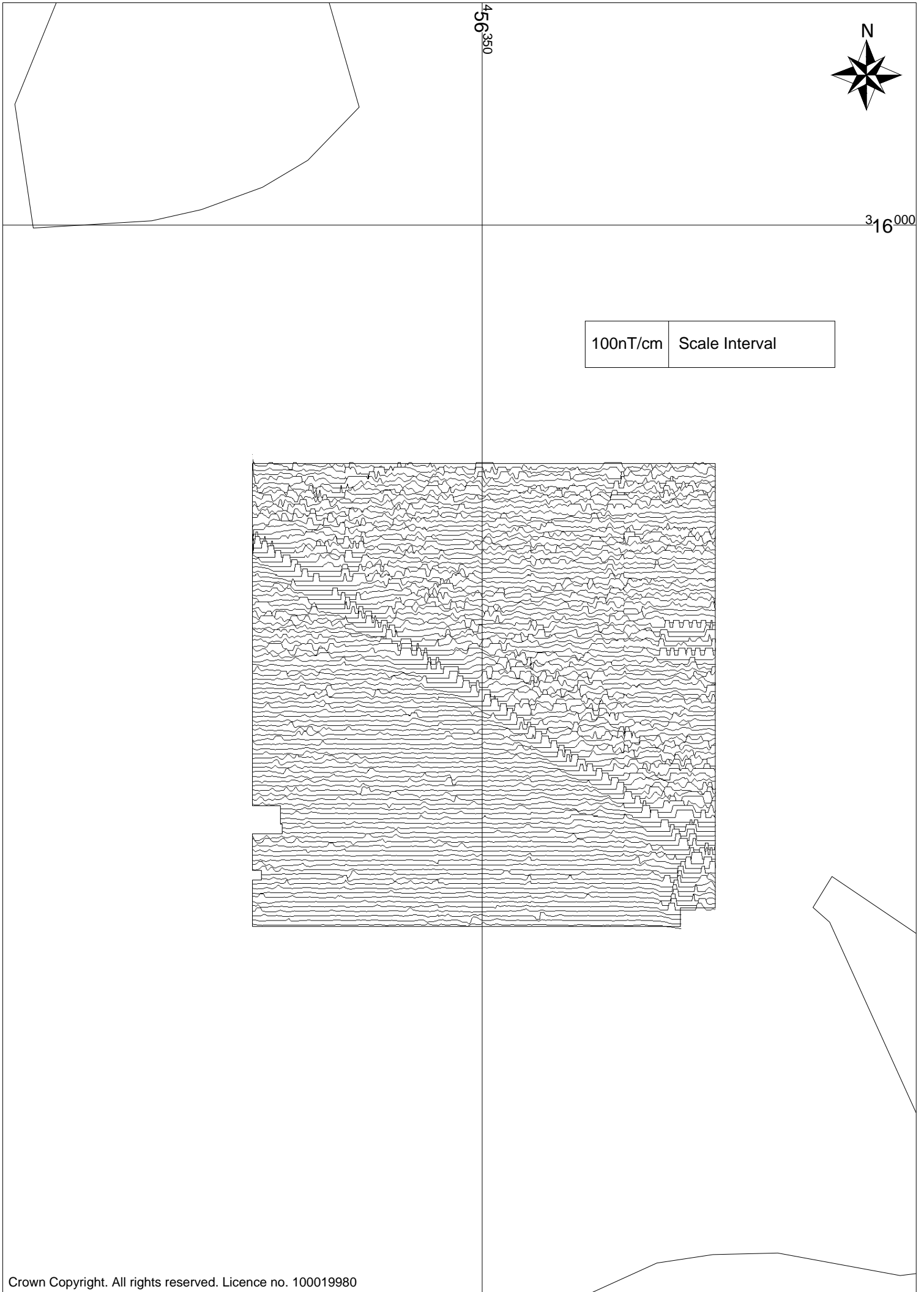
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Figure 6. Raw magnetometer greyscale plot



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Figure 7. Processed magnetometer greyscale plot



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Figure 8. Processed magnetometer xy trace plot

Appendix 2. Quorn Camp Metadata sheets

Quorn Camp Raw Magnetometer Data

Filename	Quorn 1 Raw -15 +15.xcp
Description	
Instrument Type	Grad 601 (Gradiometer)
Units	nT
Direction of 1st Traverse	90 deg
Collection Method	ZigZag
Sensors	2 @ 1.00 m spacing.
Dummy Value	2047.5
Dimensions	
Composite Size (readings)	800 x 100
Survey Size (meters)	100 m x 100 m
Grid Size	20 m x 20 m
X Interval	0.125 m
Y Interval	1 m
Stats	
Max	100.00
Min	-100.00
Std Dev	26.70
Mean	-4.21
Median	-0.83
Composite Area	1 ha
Surveyed Area	0.99285 ha
Program	
Name	TerraSurveyor
Version	3.0.33.6

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

Raw Data Schedule

Processes: 1
1 Display Clip -15 +15

Quorn Camp Processed Mag Data

Filename	Quorn 1 Pro -15 +15.xcp
Description	
Instrument Type	Grad 601 (Gradiometer)
Units	nT
Direction of 1st Traverse	90 deg
Collection Method	ZigZag
Sensors	2 @ 1.00 m spacing.
Dummy Value	2047.5
Dimensions	
Composite Size (readings)	800 x 100
Survey Size (meters)	100 m x 100 m
Grid Size	20 m x 20 m
X Interval	0.125 m
Y Interval	1 m
Stats	
Max	106.93
Min	-102.89
Std Dev	26.44
Mean	-2.59
Median	-0.07
Composite Area	1 ha
Surveyed Area	0.99285 ha
Program	
Name	TerraSurveyor
Version	3.0.33.6

Processed Data Schedule

Processes: 3
1 DeStripe Median Sensors: All Grids:
2 Display Clip -15 +15
3 Graduated Shade

Appendix 3. OASIS form

OASIS ID: suffolka1-316671	
Project details	
Project name	Quorn Camp, Quorn, Leicestershire
Short description of the project	Metal detecting survey undertaken within the grounds of Quorn House in an area used by the military in WW2 as an army camp and later a prisoner of war camp. A number of artefacts relating to these activities were recovered, including dog-tags (US and German), munitions, and domestic items.
Project dates	Start: 28-06-2017 End: 09-05-2018
Previous/future work	No / No
Type of project	Research project
Current Land use	Grassland Heathland 5 - Character undetermined
Monument type	NONE None
Significant Finds	CARTRIDGE Modern BUTTON Modern CUTLERY Modern
Investigation type	"Geophysical Survey","Systematic Metal Detector Survey"
Prompt	Research
Solid geology (other)	Gunthorpe Member Mudstone
Drift geology (other)	Head clay, silt, sand and gravel
Techniques	Magnetometry
Project location	
Country	England
Site location	LEICESTERSHIRE CHARNWOOD QUORNDON Quorn House Park (Quorn Camp)
Study area	8.6 Hectares
Site coordinates	SK 5640 1592 52.737626654444 -1.164560180823 52 44 15 N 001 09 52 W Point
Project creators	
Name of Organisation	Suffolk Archaeology CIC
Project brief originator	Not applicable - not under planning jurisdiction
Project director	Stephen Taylor
Project supervisor	Tim Schofield and Mark Sommers
Type of sponsor/funding body	Client
Project bibliography	
Publication type	Grey literature (unpublished document/manuscript)

Title	Magnetometer and Metal Detector Survey Report: Quorn House, Quorn, Leicestershire World War 2 Treasure Hunters (Series 1, Episode 7)
Author(s)/Editor(s)	Schofield, T., Sommers, M., Taylor, S.
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