



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement, North Yorkshire

Phase 2 geophysical surveys

on behalf of



AMEC

Faber Maunsell

for

Highways Agency

Report 1368

May 2006

Archaeological Services

Durham University

South Road

Durham DH1 3LE

Tel: 0191 334 1121

Fax: 0191 334 1126

archaeological.services@durham.ac.uk

www.durham.ac.uk/archaeological.services

A1(T) Dishforth to Barton Improvement, North Yorkshire

Phase 2 geophysical surveys

Report 1368

May 2006

Archaeological Services Durham University

on behalf of



for

Highways Agency

Contents

Figures lists	.	.	.	.	<i>i</i>
1. Summary	.	.	.	.	1
2. Project background	.	.	.	.	2
3. Previous geophysical surveys	.	.	.	.	3
4. Landuse, topography and geology	.	.	.	.	5
5. The survey areas	.	.	.	.	5
6. Geophysical survey method	.	.	.	.	7
7. Data processing.	.	.	.	.	7
8. Geophysical interpretation	.	.	.	.	8
9. Survey results	.	.	.	.	8
10. Conclusions	.	.	.	.	15
11. References	.	.	.	.	16
Figures 1 - 98					

Figures lists

1. by figure number; figures arranged south to north

Figure 1	Locations of study areas along corridor (Figures 2a-2m)
Figure 2a	Locations of Areas 6, 8 & 14 (Ph2)
Figure 2b	Locations of Areas 1-4, 54-59 & 60-2 (Ph1)
Figure 2c	Locations of Areas 47-49, 51-53 (Ph1)
Figure 2d	Locations of Areas 46(1-4), 46Q (Ph1), 53, 54, 58a & 58b (Ph2)
Figure 2e	Locations of Areas 43-45 (Ph1), 72-75, 77-79 (Ph2)
Figure 2f	Locations of Areas 14L, 37-42 (Ph1) & 91(Ph2)
Figure 2g	Locations of Areas 14x, 14y, 32-36 (Ph1), 122, 123, 127 & 129 (Ph2)
Figure 2h	Locations of Areas 138, 140-143 & 145 (Ph2)
Figure 2i	Locations of Areas 29-31 (Ph1), 147, 148, 150, 151, AS1-AS3 (Ph2)
Figure 2j	Locations of Areas 21-28 (Ph1), 161 & 162 (Ph2)
Figure 2k	Locations of Areas 5-7, 18-20 & 75 (Ph1)
Figure 2l	Locations of Areas 11-13, 15, 16, 68-70 (Ph1), 207-210 (Ph2)
Figure 2m	Locations of Areas 9, 61, 77, 78 (Ph1), 234 & 235 (Ph2)

Figures 3-5	Area 6	Figures 50-52	Area 140
Figures 6-8	Area 8	Figures 53-55	Area 141
Figures 9-11	Area 14	Figures 56-58	Area 142
Figures 12-14	Areas 53 & 54	Figures 59-60	Area 143
Figures 15-17	Area 58b	Figures 61-63	Area 145
Figures 18-20	Area 58a	Figures 64-66	Area 147
Figures 21-23	Area 72	Figures 67-68	Area 148
Figures 24-26	Area 73	Figures 69-71	Area 150
Figures 27-29	Area 74 & 75	Figures 72-74	Area 151
Figures 30-32	Area 77 & 78	Figures 75-77	Areas AS1 & 2
Figures 33-35	Area 79	Figures 78-80	Area AS3
Figures 36-38	Area 91	Figures 81-83	Areas 161 & 162
Figures 39-40	Area 122	Figures 84-86	Areas 207 & 208
Figures 41-42	Area 123	Figures 87-89	Area 209
Figures 43-44	Area 127	Figures 90-92	Area 210
Figures 45-46	Area 129	Figures 93-95	Area 234
Figures 47-49	Area 138	Figures 96-98	Area 235

2. by area number

Area 6	Figures 3-5	Area 140	Figures 50-52
Area 8	Figures 6-80	Area 141	Figures 53-55
Area 14	Figures 9-11	Area 142	Figures 56-58
Area 53	Figures 12-14	Area 143	Figures 59-60
Area 54	Figures 12-14	Area 145	Figures 61-63
Area 58a	Figures 18-20	Area 147	Figures 64-66
Area 58b	Figures 15-17	Area 148	Figures 67-68
Area 72	Figures 21-23	Area 150	Figures 69-71
Area 73	Figures 24-26	Area 151	Figures 72-74
Area 74	Figures 27-29	Area AS1	Figures 75-77
Area 75	Figures 27-29	Area AS2	Figures 75-77
Area 77	Figures 30-32	Area AS3	Figures 78-80
Area 78	Figures 30-32	Area 161	Figures 81-83
Area 79	Figures 33-35	Area 162	Figures 81-83
Area 91	Figures 36-38	Area 207	Figures 84-86
Area 122	Figures 39-40	Area 208	Figures 84-86
Area 123	Figures 41-42	Area 209	Figures 87-89
Area 127	Figures 43-44	Area 210	Figures 90-92
Area 129	Figures 45-46	Area 234	Figures 93-95
Area 138	Figures 47-49	Area 235	Figures 96-98

1. Summary

The project

- 1.1 This report presents the results of a second programme of geophysical survey conducted on land adjacent to the A1(T) between Dishforth and Barton in North Yorkshire, in advance of proposed road improvement. The initial survey programme was completed in March 2005 (Archaeological Services 2005a).
- 1.2 The works were commissioned by AMEC/Alfred McAlpine JV and conducted by Archaeological Services Durham University in accordance with instructions from Faber Maunsell acting on behalf of the Highways Agency. A Project Design was provided by Archaeological Services.

Results

- 1.3 The first programme of survey was conducted over 84 areas, with probable archaeological remains being detected in 71 of those areas. The second phase of survey targeted 40 areas located between the previous survey locations, with potential archaeological features being identified in 30 of the survey areas.
- 1.4 The potential features include occasional ditches and pits, ring-ditches, medieval ridge and furrow, and former field boundaries and trackways, as listed below. These features have the potential to be of archaeological significance, and some may warrant further investigation.

Miscellaneous ditches/field boundaries/pits: Areas 6, 8, 53, 58a+b, 73, 74, 77, 79, 91, 140, 141, 145, 147, 150, 151, 162, 234, AS1a+b & AS3

Possible ring-ditches: Areas 58a, 74 & 147

Ridge and furrow: Areas 14, 72, 75, 79, 140, 142, 147, 151, 161, 162, 207/208, 209, 210, 234 & 235

- 1.5 No anomalies of likely archaeological significance were identified in the following surveys:

Areas 54, 78, 122, 123, 127, 129, 138, 143, 148 & AS2.

2. Project background

Location (Figures 1 & 2)

- 2.1 The study area comprised a corridor of land adjacent to the A1(T) between Dishforth and Barton in North Yorkshire. Forty areas (c.56ha) were investigated during the Phase 2 surveys in this corridor, in addition to the 86 surveys (167ha) undertaken during the initial survey programme (Archaeological Services 2005a). The locations of all geophysical surveys undertaken for the project are shown in Figures 2a-2m.
- 2.2 The southernmost survey for this second phase was Area 6, to the east of the A1 at Southfield Farm, SE 3640 7390. The northernmost survey for this phase was Area 235, to the east of the A1 adjacent to Kneeton Cottage at NZ 2165 0675. A table of Phase 2 survey areas with their size and location is provided in Section 5, below.

Development proposal

- 2.3 The development proposal is to improve the A1(T) road between Dishforth and Barton, North Yorkshire.

Objective

- 2.4 The principal aim of the surveys was to determine the extent and nature of any sub-surface features of likely archaeological interest, including cut, built and fired features, which would assist the client and the planning authority in determining appropriate mitigation strategies should archaeological deposits be found to survive within the study area.

Dates

- 2.5 The surveys were undertaken between 25th February 2005 and 25th April 2006. This report was completed in May 2006.

Personnel

- 2.6 The fieldwork was conducted by Janice Adams, Bryan Atkinson, Graeme Attwood (Supervisor), Ed Blinkhorn (Supervisor), Ed Davies, Lorne Elliott (Supervisor), David Graham (Supervisor), Jill Inglis, Sam Roberts (Supervisor), Louise Robinson, Natalie Swann, Richard Villis and Matt Whincop. This report was prepared by Duncan Hale with illustrations by Janine Fisher and Martin Railton. The Project Manager was Duncan Hale.

Acknowledgements

- 2.7 Archaeological Services is grateful to Blaise Vyner, Steve Sherlock, staff at Faber Maunsell and all the landowners, agents and farmers for their assistance with this project.

Archive/OASIS

- 2.8 The survey archive is currently held at Archaeological Services, Durham University. Archaeological Services is registered with the **Online AccesS** to

the Index of archaeological investigationS project (OASIS). The OASIS ID number for this programme of survey is ‘**archaeol3-15356**’.

3. Previous geophysical surveys

3.1 The largest suite of geophysical survey along the Dishforth to Barton section of the A1 was undertaken by Archaeological Services in 2004/05 and was reported in March 2005 (Archaeological Services 2005a). 86 surveys were conducted over 84 areas, totalling 167ha. Probable archaeological remains were detected in 71 of those areas. The remains included occasional ditches and pits, medieval ridge and furrow, former enclosed field systems and trackways, Roman roads, a possible early Roman camp, parts of two Roman forts and *vici*, a large part of a Roman roadside settlement and parts of a Roman town. Stone-founded buildings, kilns and evidence for other industrial activities were almost certainly detected in and around the settlements. In some locations the surveys confirmed the results of previous investigations, and in many cases they provided added value to existing knowledge with the recording of many new features and more extensive mapping of settlements and field systems, particularly around Bainsesse Farm at Catterick.

3.2 Geophysical surveys have previously been undertaken at numerous other locations along this section, prior to proposed road improvement or other development, as outlined below.

A1 North of Leeming to Scotch Corner (North & South Sectors)

3.3 In 1993 twelve gradiometer surveys were undertaken by Geophysical Surveys of Bradford for Lancaster University Archaeological Unit. The report concluded that the results did not appreciably add to the archaeological record, and that while most of the surveys yielded some anomalies of possible archaeological significance the majority of these were weak and ephemeral (GSB 1993). Site 29 in that report corresponds to Area 77 in our earlier report 1121 (Archaeological Services 2005a).

A1 North of Leeming to Scotch Corner (Central Sector)

3.4 Also in 1993 the central sector of the above route, west of Catterick Village, was surveyed by Bartlett-Clark Consultancy for English Heritage Central Archaeology Service. Nine gradiometer surveys and two electrical resistance surveys were undertaken (English Heritage 1994). The majority of these survey areas were re-surveyed as part of the earlier phase of survey for the current project [Areas 19-27 in our earlier report 1121 (Archaeological Services 2005a)].

A1 Dishforth to North of Leeming

3.5 Between 1993 and 1995, 25 gradiometer and electrical resistance surveys were undertaken by Geophysical Surveys of Bradford for Barton Howe Warren Blackledge (BHWB) at various locations on the above section of the A1 (BHWB 1996). Approximately half of these surveys were undertaken to the south of the southernmost survey for the current study. The majority of the

remainder of surveys were undertaken at Healam Bridge; these broadly correspond to surveys undertaken for the present study [Area 46 in our earlier report 1121 (Archaeological Services 2005a)].

Former airfield at Marne Barracks, Catterick

- 3.6 In 2000 Archaeological Services conducted a 41ha gradiometer survey of the former airfield at Marne Barracks, immediately east of the A1 opposite Baines Farm, prior to proposed development by the MoD (Archaeological Services 2001a). A number of smaller gradiometer, electrical resistance and ground-penetrating radar surveys were also undertaken within the northern, built area of the base (Archaeological Services 2001b). The airfield survey detected features which were subsequently proven to range in date from the late Neolithic through to the 20th century (Archaeological Services 2002, 2005b & 2006).

Land north of Baines Farm, Catterick

- 3.7 Bradford University undertook trial magnetic and resistivity surveys in the field north of Baines Farm in 1980 (Heathcote 1980). The Ancient Monuments Laboratory undertook gradiometer surveys both here and in the field on the opposite side of the A1 in 1981 (CEU Site 46), prior to the construction of the existing ‘Catterick South’ junction (English Heritage 1981; Bartlett 2002). Remains of a Roman roadside settlement were identified in all of these surveys.

Catterick Bridge, Honey Pot Lane and Catterick Race course

- 3.8 The Ancient Monuments Laboratory undertook gradiometer surveys at each of the above sites between 1981 and 1984 (Bartlett 2002). Nothing of archaeological interest was detected at Catterick Bridge (Site 240). The survey at Honey Pot Lane (Site 251) detected a ditch and two possible pits. An area of occupation close to Dere Street was detected within the circuit of Catterick Racecourse (Site 273), while at the south end of the racecourse a ‘native’ farmstead previously identified on aerial photographs was surveyed.

Catterick Triangle

- 3.9 A resistivity survey was undertaken here, at the south end of Pallett Hill Quarry, by West Yorkshire Archaeology Service in 1987 (Abramson *et al.* 2002). The survey recorded the location of Dere Street and associated drains/ditches.

Cataractonium

- 3.10 In 1992 the Ancient Monuments Laboratory undertook a gradiometer survey over Brompton-on-Swale Playing Field prior to a proposed development (English Heritage 1994). Part of this area was re-surveyed as part of the current project, by both gradiometer and resistance techniques [Area 75 in our earlier report 1121 (Archaeological Services 2005a)].
- 3.11 In 1997 the Ancient Monuments Laboratory undertook a number of gradiometer surveys at *Cataractonium* (Cole 2002). Area 1 at Thornbrough

Farm [Area 19bW in our earlier report 1121 (Archaeological Services 2005a)] detected remains of a Roman fort, *vicus* and town defences. Area 2 at Thornbrough Farm [Area 19bE in our earlier report 1121 (*ibid.*)] mapped the clear remains of many buildings along Dere Street and another contemporary road. Area 3 [Area 18 in our earlier report 1121 (*ibid.*)] detected a number of ditch features, obscured by later ridge and furrow remains. Area 4, within Catterick Racecourse, detected the south-eastern corner of the town's defences, together with many internal and external anomalies, though not all likely to be of Roman origin. A broad defensive ditch was detected in Area 5, possibly enclosing an area of *vicus*. Area 6 in Cole (2002) comprises the playing field survey described above in para. 3.10.

4. Landuse, topography and geology

- 4.1 The study area comprised a rural mixed farming landscape. Fields were typically in use for cereal crops or pasture, with occasional brassica.
- 4.2 The landscape is gently undulating, with mean elevations at the southern end of the corridor lying at between 30-40m OD rising up to 130-140m OD at the northern end.
- 4.3 The route corridor overlies a number of different geological strata, summarised here from south to north: Permian & Triassic Mudstones; Permian Mudstones; Magnesian Limestone; Millstone Grit and Carboniferous Limestone. These strata are variously overlain by glacial sands and gravels, boulder clay and alluvial deposits.

5. The survey areas

- 5.1 Except where stated otherwise, each survey area covered a corridor measuring 60m in width. Forty surveys were undertaken, ranging in size from 0.2ha to 3.8ha, and totalling approximately 56ha. The only fields in which it was not possible to conduct survey were 160, which had been set with potato ridges, and Fields 81 & 82 for which access was denied. Field 131 was not surveyed as it turned out to be a backfilled quarry.
- 5.2 Summary information for each survey area is provided in the following table. The field numbers are taken from 1:10,000 plans supplied by Faber Maunsell on 18th January 2005. Fields to the south-east of the former airfield at Marne Barracks had not been allocated numbers and so have been assigned numbers AS1 to AS3.

Field no.	Survey (ha)	Location
6	0.7	SE 3640 7390; Southfield Farm
8	0.9	SE 3630 7410; S of Rainton Quarry
14	1.6	SE 3612 7460; Howlamarr Field, Rainton

53	0.5	SE 3320 8185; Ramshaw Farm, Sinderby
54	0.7	SE 3315 8195; Ramshaw Farm, Sinderby
58a	1.0	SE 3280 8265; Roxby House
58b	0.8	SE 3290 8240; Roxby House
72	1.0	SE 3190 8460; oppo. Oak Tree Cottages
73	1.7	SE 3180 8485; oppo. Oak Tree Cottages
74	2.2	SE 3160 8515; S of Scot Lane/Street House
75	0.9	SE 3160 8500; N of Oak Tree, Burneston
77	0.5	SE 3150 8540; N of Scot Lane
78	0.7	SE 3145 8550; Burneston Grange, Burneston
79	0.7	SE 3140 8560; Burneston Grange, Burneston
91	0.7	SE 3010 8735; nr Toft Lane, Exelby
122	1.2	SE 2810 9065; Conygarth Hill, N of Leeming Bar
123	1.1	SE 2825 9065; Conygarth Hill, N of Leeming Bar
127	2.0	SE 2805 9085; S of Leases Bridge, N of Leeming
129	0.2	SE 2795 9105; N of Leases Bridge
138	1.3	SE 2710 9260; S of Sand Hill, Holtby
140	1.1	SE 2700 9275; Sand Hill, Holtby
141	1.6	SE 2685 9295; N of Sand Hill, Holtby
142	1.1	SE 2675 9310; N of Sand Hill, Holtby
143	1.8	SE 2660 9330; oppo. Holtby Grange
145	1.8	SE 2645 9360; E of Street House
147	3.8	SE 2620 9400; N of Street House
148	1.8	SE 2590 9440; Goskins, N of Lords Lane
150	2.9	SE 2560 9490; N of High Goskins
151	3.5	SE 2535 9530; Sowber Hill Farm
161	0.9	SE 2350 9705; Cowstand Farm
162	0.5	SE 2375 9720; Weir Bridge
207/208	3.1	NZ 2195 0265; NE of Oak Grange
209	1.0	NZ 2190 0300; N of 208
210	1.0	NZ 2185 0320; Scurragh House
234	2.2	NZ 2165 0650; S of Kneeton Cottage
235	0.5	NZ 2165 0675; Kneeton Cottage
AS1a	1.4	SE 2565 9530; Opposite Field 151
AS1b	2.2	SE 2550 9535; Opposite Field 151
AS2	1.7	SE 2540 9550; Opposite Field 151
AS3	2	SE 2525 9570; Opposite Fields 152/153

6. Geophysical survey method

Standards

- 6.1 The surveys and reporting were conducted in accordance with English Heritage Research and Professional Services Guideline No.1, *Geophysical survey in archaeological field evaluation* (David 1995); the Institute of Field Archaeologists Paper No.6, *The use of geophysical techniques in archaeological evaluations* (Gaffney *et al.* 2002); and the Archaeology Data Service *Geophysical Data in Archaeology: A Guide to Good Practice* (Schmidt 2001).

Technique selection

- 6.2 Given the anticipated shallowness of targets (<1.5m in depth) and the non-igneous geological environment of the study area a geomagnetic technique, fluxgate gradiometry, was considered appropriate for detecting any cut, built and fired archaeological features which might be present. This technique has previously proved to be a particularly effective means of detecting potential archaeological features in the types of soils and sediments encountered throughout the study area.

Field methods

- 6.3 A 30m grid was established across each survey area and tied-in to known, mapped Ordnance Survey points using either a Leica GS50 global positioning system (GPS) or a Leica TR307 total survey station instrument and datalogger with *Penmap* software.
- 6.4 Measurements of vertical geomagnetic field gradient were determined using Geoscan FM36, FM256 and Bartington Grad601-2 fluxgate gradiometers with automatic datalogging facilities. A zig-zag traverse scheme was employed and data were logged in 30m grid units. The instrument sensitivity was set to 0.1nT, the sample interval to 0.25m and the traverse interval to 1.0m, thus providing 3600 sample measurements per 30m grid unit.
- 6.5 Data were downloaded on-site into laptop computers for initial processing and storage and subsequently transferred to a desktop computer for processing, interpretation and archiving.

7. Data processing

- 7.1 Geoplot v3 software was used to process the geophysical data and to produce continuous tone greyscale images of the raw data. The greyscale images have been imported directly into digital basemaps supplied by Faber Maunsell. In the greyscale images, positive magnetic anomalies are displayed as dark grey and negative magnetic anomalies as light grey. Palette bars relate the greyscale intensities to anomaly values in nanoTesla.
- 7.2 The following basic processing functions have typically been applied to each dataset:

Zero mean traverse – sets the background mean of each traverse within a grid to zero; for removing striping effects in the traverse direction and removing grid edge discontinuities.

Despike – locates and suppresses random iron spikes in gradiometer data.

Interpolate – increases the number of data points in a survey to match sample and traverse intervals. In this instance the gradiometer data have been interpolated to 0.5 x 0.25m intervals.

- 7.3 The following basic processing function has been applied to some datasets:

Destagger – corrects for displacement of anomalies caused by alternate zig-zag traverses

8. Geophysical interpretation

- 8.1 Colour-coded geophysical interpretation plans are provided for each survey area. Three types of geomagnetic anomaly have been distinguished in the data:

positive magnetic regions of anomalously high or positive magnetic field gradient, which may be associated with high magnetic susceptibility soil-filled structures such as pits and ditches

negative magnetic regions of anomalously low or negative magnetic field gradient, which may correspond to features of low magnetic susceptibility such as wall footings and other concentrations of sedimentary rock or voids

dipolar magnetic paired positive-negative magnetic anomalies, which typically reflect ferrous or fired materials (including fences and service pipes) and/or fired structures such as kilns or hearths

9. Survey results

General comments

- 9.1 The survey results are described by field from south to north, Dishforth to Barton. For illustrative purposes the proposed development corridor is divided into 13 sections, as shown on Figures 1 and 2a-2m. Colour-coded geophysical and archaeological interpretation plans are provided for each survey area.
- 9.2 A scatter of small, discrete dipolar magnetic anomalies was detected in each survey area. These anomalies almost certainly reflect items of near-surface ferrous and/or fired debris, such as horseshoes and brick fragments, and have not been included in the archaeological interpretation drawings.

- 9.3 Except where stated otherwise in the text below, positive magnetic anomalies are taken to reflect relatively high magnetic susceptibility materials, typically sediments in negative archaeological features (such as furrows, ditches or pits), which contain decomposed organic matter and/or burning.

Area 6 (Figures 2a, 3-5)

- 9.4 The remains of a probable ditch feature were detected in the south-eastern part of the survey, aligned north-west/south-east.
- 9.5 A weak north-east/south-west oriented texture across the whole survey area reflects the current plough direction.

Area 8 (Figures 2a, 6-8)

- 9.6 Three extremely weak positive magnetic lineations in this area may reflect former ditches, possibly field boundaries.

Area 14 (Figures 2a, 9-11)

- 9.7 A number of very weak, parallel, positive magnetic anomalies here may reflect ploughed-out traces of ridge and furrow cultivation.

Area 53 (Figures 2d, 12-14)

- 9.8 A very weak, short, curvilinear anomaly near the southern corner of the area could reflect the remains of a ditch or gully.

Area 54 (Figures 2d, 12-14)

- 9.9 No features of likely archaeological significance were detected.

Area 58a & b (Figures 2d, 15-20)

- 9.10 Survey of this field was divided into two areas, north and south of Roxby House. Two adjoining anomalies in Area 58b almost certainly reflect the remains of ditches.
- 9.11 The southern part of Area 58a was occupied by silage and the western edge comprised an existing driveway; these areas were not surveyed. A very prominent negative magnetic anomaly running almost the length of this area corresponds to an open ditch between two areas of crop. Of potential archaeological significance are a number of positive magnetic anomalies, which may reflect ditch remains.

Area 72 (Figures 2e, 21-23)

- 9.12 A number of extremely weak, parallel, positive magnetic anomalies here probably reflect ploughed-out traces of ridge and furrow.

Area 73 (Figures 2e, 24-26)

- 9.13 A small group of possible soil-filled pits was detected towards the northern end of the survey area. A number of other possible soil-filled features were recorded in the central part of the survey area.

- 9.14 Intense dipolar magnetic anomalies recorded here reflect the adjacent garage to the west and a ferrous service pipe at the north end of the field.

Area 74 (Figures 2e, 27-29)

- 9.15 A strong, curvilinear, positive magnetic anomaly detected in the northern part of the survey almost certainly reflects the presence of a substantial ditch. A much smaller and weaker sub-circular anomaly to the west of, and apparently enclosed by, the ditch could represent the remains of a ring-ditch c.18m in diameter.

- 9.16 Two weak linear anomalies aligned north-east/south-west probably reflect former field boundaries.

- 9.17 A large concentration of intense dipolar magnetic anomalies at the southern end of the survey area probably reflects dumped ferrous/fired materials.

Area 75 (Figures 2e, 27-29)

- 9.18 Two very weak magnetic textures were recorded here: one is aligned north-west/south-east and reflects the recently ploughed surface, while the other lies perpendicular to this and may reflect former ridge and furrow cultivation.

Area 77 (Figures 2e, 30-32)

- 9.19 Two possible ditch features were detected here, one of which is parallel to the existing field boundaries.

- 9.20 An intense anomaly along the southern limit of the survey corresponds to the existing Scot Lane (track).

Area 78 (Figures 2e, 30-32)

- 9.21 No features of likely archaeological significance were detected here. Intense dipolar magnetic anomalies at the southern end of the survey correspond to railings around a transmitter and a pylon for overhead cables. A chain of intense anomalies was also detected in this area, almost certainly reflecting a ferrous service pipe.

Area 79 (Figures 2e, 33-35)

- 9.22 A series of parallel, alternate positive and negative magnetic anomalies was detected across much of this survey area, aligned north-west/south-east. These anomalies almost certainly represent former ridge and furrow cultivation. Additional, weak, linear anomalies appear to reflect headlands and other possible soil-filled features associated with the ridge and furrow.

- 9.23 A weak and narrow negative magnetic anomaly crossing the central part of the survey area may reflect a drain or non-ferrous pipe.

- 9.24 The concentrations of intense anomalies towards the northern end of the area correspond to dumps of rubble.

Area 91 (Figures 2f, 36-38)

- 9.25 One short, very weak, positive magnetic anomaly here may reflect the remains of a soil-filled ditch.

Areas 122, 123 and 127 (Figures 2g, 39-44)

- 9.26 The survey corridor for Areas 122 and 123 measured 50m in width, for a possible access road.
- 9.27 No features of likely archaeological significance were detected in any of these three areas. An electric fence crosses the northern part of Area 127.
- 9.28 A number of large and intense, dipolar and positive magnetic anomalies were detected throughout these areas and the adjacent Area 32E from the first phase of survey (Archaeological Services 2005a). Two of the anomalies correspond to existing geotechnical monitoring boreholes. Mid-20th century Ordnance Survey map editions indicate the former presence of several large ‘sand pits’ in this general area; the detected anomalies almost certainly reflect materials within the backfill of these pits.

Area 129 (Figures 2g, 45 & 46)

- 9.29 No features of likely archaeological significance were detected. A considerable amount of rubble was noted on the ground surface, particularly to the immediate north of the area surveyed.

Area 138 (Figures 2h, 47-49)

- 9.30 No features of likely archaeological significance were detected here. A number of positive magnetic anomalies were detected parallel to the eastern, A1, field boundary, however these are likely to be associated with sub-soiling activity, evidence for which was noted in the field.

Area 140 (Figures 2h, 50-52)

- 9.31 A number of parallel positive magnetic anomalies detected towards the southern end of the survey almost certainly reflect former ridge and furrow cultivation.
- 9.32 Several other positive magnetic anomalies in this area may represent soil-filled features of archaeological interest.
- 9.33 A weak magnetic texture aligned broadly east-west reflects the current plough regime.

Area 141 (Figures 2h, 53-55)

- 9.34 Sub-soiling tracks were noted on the ground during survey; sub-soiling is likely to have given rise to the anomalies aligned east-west at the northern and southern margins of the field as well as the north-south aligned anomalies detected elsewhere.

- 9.35 Three positive magnetic anomalies may represent soil-filled features such as ditches.

Area 142 (Figures 2h, 56-58)

- 9.36 A number of parallel, slightly curved, positive magnetic anomalies detected throughout this area almost certainly reflect former ridge and furrow cultivation. The furrows are evenly spaced at 7-8m intervals, aligned north-south.

Area 143 (Figures 2h, 59-60)

- 9.37 No features of likely archaeological significance were detected. Many intense positive and dipolar magnetic anomalies were detected throughout this survey area. The anomalies are irregular in shape, similar to those detected further south in Areas 122, 123 and 127, and are not considered likely to reflect features of archaeological significance. The anomalies may reflect natural features, possibly palaeochannels.

Area 145 (Figures 2h, 61-63)

- 9.38 Sinuous anomalies in the southern and central parts of the survey area may represent further possible palaeochannels. Some parallel negative magnetic anomalies overlie these features in the central part; these are interpreted as land drains.
- 9.39 A few positive magnetic anomalies detected in the northern part of the survey area may reflect soil-filled features of archaeological interest.

Area 147 (Figures 2i, 64-66)

- 9.40 Two series of chains of intense magnetic anomalies were detected in the southern half of the survey area; these anomalies almost certainly reflect fired clay land drains.
- 9.41 Parallel positive magnetic anomalies aligned north-west/south-east throughout much of the area probably reflect ridge and furrow remains. Two similar anomalies aligned perpendicular to this in the central part of the area may represent a former double-ditched trackway or field boundary.
- 9.42 Two smaller, arcuate, positive magnetic anomalies in the northern half of the survey may reflect the remains of ring-ditches.

Area 148 (Figures 2i, 67-68)

- 9.43 No features of likely archaeological significance were detected. A series of chains of intense magnetic anomalies in the northern half of the survey area almost certainly reflect fired clay land drains.
- 9.44 A north-east/south-west aligned texture in the data corresponds to the current plough direction.

Area 150 (Figures 2i, 69-71)

- 9.45 A number of strong positive and dipolar magnetic anomalies were detected in this area. Those towards the southern end could reflect substantial soil-filled ditches. Elsewhere in the survey the anomalies are less well-defined but could still represent soil-filled features.
- 9.46 A negative magnetic anomaly which runs through the whole survey area corresponds to an open ditch dividing ploughed land from set-aside.

Area 151 (Figures 2i, 72-74)

- 9.47 An intense dipolar magnetic anomaly near the north-western end of the survey corresponds to the location of a telegraph pole.
- 9.48 A series of parallel, alternate positive and negative magnetic anomalies detected at the southern end of the survey is typical of the response over ridge and furrow remains or perhaps soil-creep, although the anomalies here occupy a relatively steep ploughed slope.
- 9.49 Anomalies detected elsewhere in this area are likely to reflect soil-filled features, possibly including ditch and gully remains.

Area AS1a & b (Figures 2i, 75-77)

- 9.50 A positive magnetic anomaly aligned broadly north-south in AS1a almost certainly reflects a soil-filled feature, possibly a former field boundary.
- 9.51 A curvilinear positive magnetic anomaly in AS1a and several smaller positive magnetic anomalies in AS1b may reflect parts of former ditches.
- 9.52 A series of lineations parallel to the existing A1, in both AS1a and 1b, corresponds to the plough direction at the time of survey. Relatively widely-spaced negative magnetic lineations in AS1a may reflect land drains

Area AS2 (Figures 2i, 75-77)

- 9.53 No features of likely archaeological potential have been identified in this area. Weak but well-defined parallel positive magnetic anomalies probably reflect land drains. Chains of small intense anomalies along the north-eastern and north-western sides of the area may reflect former fencelines. A large dipolar magnetic anomaly in the north of the area corresponds to a geotechnical monitoring borehole. The intense anomaly in the northernmost corner is due to the proximity of an existing gas main, as detected in AS3.

Area AS3 (Figures 2i, 78-80)

- 9.54 The most striking anomalies detected here comprise a chain of intense dipolar anomalies, which reflect an existing gas main.
- 9.55 A linear positive magnetic anomaly to the north of the pipe may reflect a former ditch feature, while more diffuse anomalies probably reflect local

geological variation. Modern ploughing has been recorded as a ‘texture’ aligned north-west/southeast across the area.

Area 161 (Figures 2j, 81-83)

- 9.56 Traces of ridge and furrow were detected aligned north-east/south-west in this area. A chain of small dipolar magnetic anomalies in the west of the area may reflect a former fenceline. Broad geomagnetic anomalies in the east of the area almost certainly reflect palaeochannels of the adjacent stream.
- 9.57 No direct evidence for blacksmithing/ironworking was detected here, though there are a number of large dipolar anomalies across the area.

Area 162 (Figures 2j, 81-83)

- 9.58 A number of geomagnetic anomalies in this area were previously detected in the adjacent Phase 1 Areas 25 and 26 (Archaeological Services 2005a). A service pipe which crosses the northern part of the area was also detected in Area 25. Ridge and furrow remains aligned north-east/south-west also continue into that area.
- 9.59 A strong positive magnetic anomaly traversing this area is a continuation of a ditch feature detected in Area 26 (Phase 1), and is actually part of an extensive system of ditched fields and enclosures, likely to have been associated with the Bainesse Roman roadside settlement. This rectilinear field system has also been found to continue northwards for another 300m.

Areas 207 & 208 (Figures 2i, 84-86)

- 9.60 These two areas were surveyed as one, the field boundary having been removed. The only anomalies of potential archaeological interest comprise weak parallel lineations in the southern part of the field, Area 207, possibly representing traces of ridge and furrow. The anomalies are parallel to the northern and southern field boundaries, however, and may simply reflect the existing plough regime; it was not possible to confirm this in the field due to snow cover.

Area 209 (Figures 2i, 87-89)

- 9.61 A chain of intense dipolar magnetic anomalies along the western edge of the survey area almost certainly corresponds to a ferrous service pipe.
- 9.62 Several parallel positive magnetic anomalies were detected here, aligned broadly north-south. These may reflect ridge and furrow remains.

Area 210 (Figures 2i, 90-92)

- 9.63 Two chains of intense dipolar magnetic anomalies almost certainly reflect ferrous pipes.
- 9.64 Two series of parallel magnetic lineations over other parts of this area almost certainly represent ridge and furrow cultivation remains.

- 9.65 An intense dipolar magnetic anomaly detected in the east of the area corresponds to a geotechnical monitoring borehole. A concentration of dipolar anomalies in the south of the area is likely to reflect ferrous litter or building rubble.

Area 234 (Figures 2m, 93-95)

- 9.66 A positive magnetic anomaly in the northern part of the area almost certainly represents a soil-filled ditch. Very weak anomalies in this area probably reflect the remains of ridge and furrow cultivation.
- 9.67 Strong irregular anomalies in the central part of the area may reflect palaeochannels of a diverted stream. Well-defined linear anomalies in the southern part of the area are likely to reflect land drains while a dipolar lineation at the north end reflects a service pipe.

Area 235 (Figures 2m, 96-98)

- 9.68 Weak and diffuse positive magnetic anomalies here almost certainly reflect ridge and furrow remains.

10. Conclusions

- 10.1 A second programme of geophysical survey has been conducted on land adjacent to the A1(T) between Dishforth and Barton in North Yorkshire, in advance of proposed road improvement.
- 10.2 Forty fluxgate gradiometer surveys were conducted over *c.*56ha for this phase of survey. The geomagnetic technique proved to be a particularly effective means of detecting potential archaeological features in the types of soils and sediments encountered throughout the study area.
- 10.3 Potential archaeological remains were detected in 30 of the survey areas. The remains include occasional ditches and pits, possible ring-ditches, medieval ridge and furrow, former field boundaries and trackways.
- 10.4 Some of the features may warrant further investigation by means of trial trenching.

11. References

- Abramson, P, Turner, R, and Turner, L (2002) Geophysical survey at Catterick Triangle (Site 425), in PR Wilson (ed) *Roman Catterick (Cataractonium): A Roman town and its hinterland. Excavations and research 1958-1997*. CBA Research Report **128**, Council for British Archaeology.
- Archaeological Services (2001a) *Archaeological Investigations at Marne Barracks, Catterick Garrison, North Yorkshire. Phase 1: Assessment report*, unpublished report **703** for GVA Grimley and Ministry of Defence, Archaeological Services Durham University
- Archaeological Services (2001b) *Archaeological Investigations at Marne Barracks, Catterick Garrison, North Yorkshire. Phase 2: Geophysical evaluation*, unpublished report **801** for GVA Grimley and Ministry of Defence, Archaeological Services Durham University
- Archaeological Services (2002) *Archaeological Investigations at Marne Barracks, Catterick Garrison, North Yorkshire. Phase 3: Evaluation*, unpublished report **911** for GVA Grimley and Ministry of Defence, Archaeological Services Durham University
- Archaeological Services (2005a) *A1(T) Dishforth to Barton Improvement, North Yorkshire: geophysical surveys Vols I-III*, unpublished report **1121** for AMEC, Archaeological Services Durham University
- Archaeological Services (2005b) *Marne Barracks, Catterick, North Yorkshire: archaeological excavation: assessment*, unpublished report **1219** for Gallifordtry Construction and Ministry of Defence, Archaeological Services Durham University
- Archaeological Services (2006) *Marne Barracks, Catterick, North Yorkshire: post-excavation analysis report*, unpublished report **1387** for Gallifordtry Construction and Ministry of Defence, Archaeological Services Durham University
- Bartlett, A, (2002) Geophysical surveys by the Ancient Monuments Laboratory at Bainesse (Site 46), Catterick Bridge (Site 240), Honey Pot Road (Site 251) and Catterick Racecourse (Site 273), in PR Wilson (ed) *Roman Catterick (Cataractonium): A Roman town and its hinterland. Excavations and research 1958-1997*. CBA Research Report **128**, Council for British Archaeology.
- BHWP (1996) *A1 Dishforth to North of Leeming Improvements*. Unpublished report by Barton Howe Warren Blackledge (BHWP).
- Cole, M, (2002) Magnetometer surveys by the Ancient Monuments Laboratory within the scheduled area of *Cataractonium*, in PR Wilson (ed) *Roman Catterick (Cataractonium): A Roman town and its hinterland. Excavations and research 1958-1997*. CBA Research Report **128**, Council for British Archaeology.
- David, A 1995 *Geophysical survey in archaeological field evaluation*, Research and Professional Services Guideline **1**, English Heritage

- English Heritage (1981) *Report on Geophysical Surveys by AML at Catterick, North Yorkshire*. Unpublished Ancient Monuments Laboratory report for English Heritage.
- English Heritage (1994) *A1 Motorway, Leeming to Scotch Corner, Central Sector: Archaeological Assessment Stage 3*. Unpublished report by English Heritage Central Archaeology Service.
- Gaffney, C, Gater, J & Ovenden, S 2002 *The use of geophysical techniques in archaeological evaluations*, Technical Paper **6**, Institute of Field Archaeologists
- GSB (1993) *A1 North of Leeming to Scotch Corner*. Unpublished report **93/130** by Geophysical Surveys of Bradford for Lancaster University Archaeological Unit.
- Heathcote, C, (1980) *Catterick South junction improvement*. Unpublished University of Bradford typescript report.
- Schmidt, A 2001 *Geophysical Data in Archaeology: A Guide to Good Practice*, Archaeology Data Service, Arts and Humanities Data Service



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

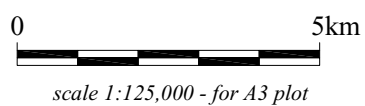
Figure 1

Location of study areas (Figures 2a-2m)

basemap courtesy of Faber Maunsell



outline of study area



REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

Figure 2a

Locations of Areas 6i, 8 & 14i

basemap courtesy of Faber Maunsell

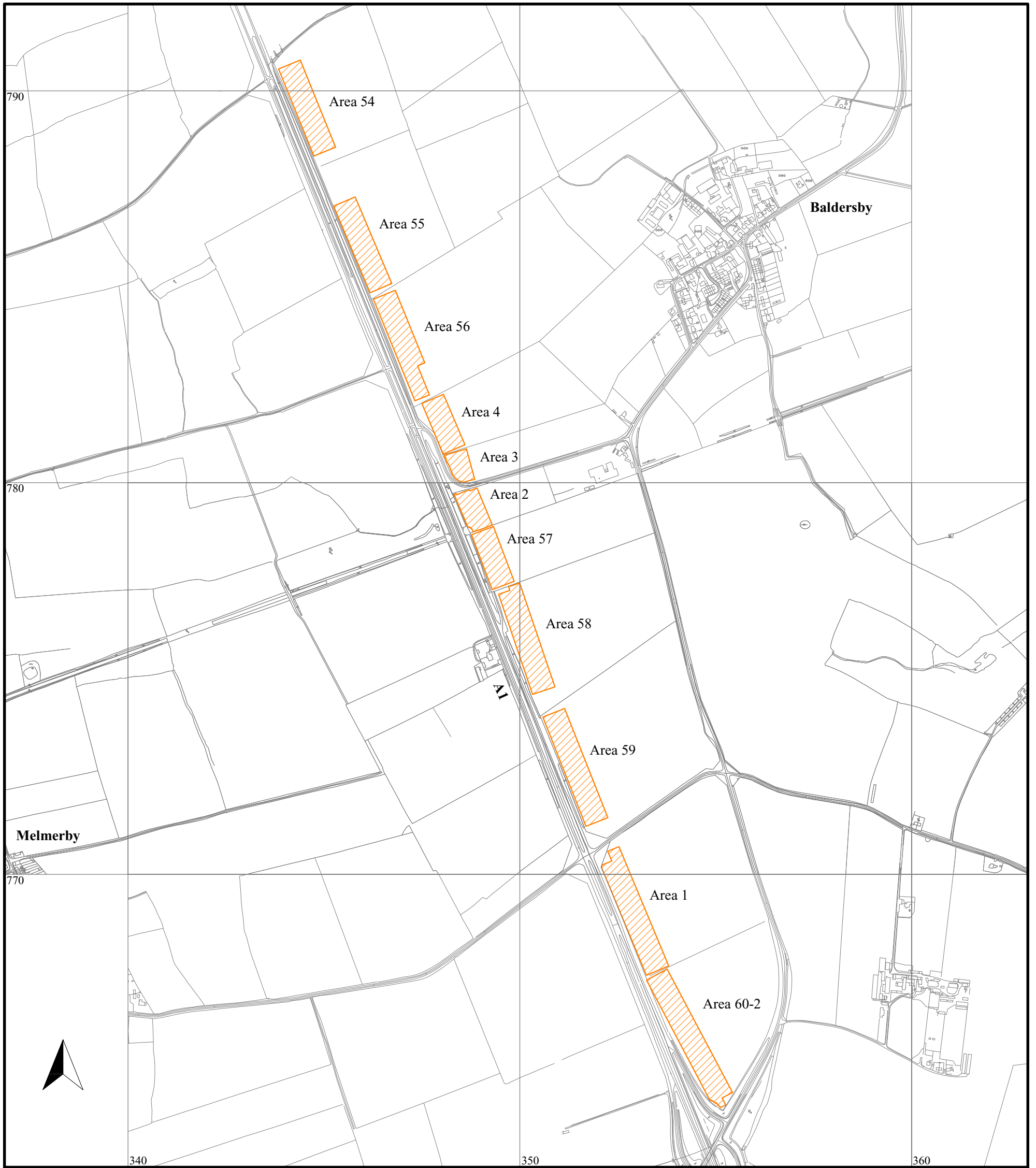


Phase 2 survey area



scale 1:10 000 - for A3 plot

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

Figure 2b

*Locations of Areas 1, 2, 3, 4, 54, 55, 56, 57,
58, 59 & 60-2*

basemap courtesy of Faber Maunsell

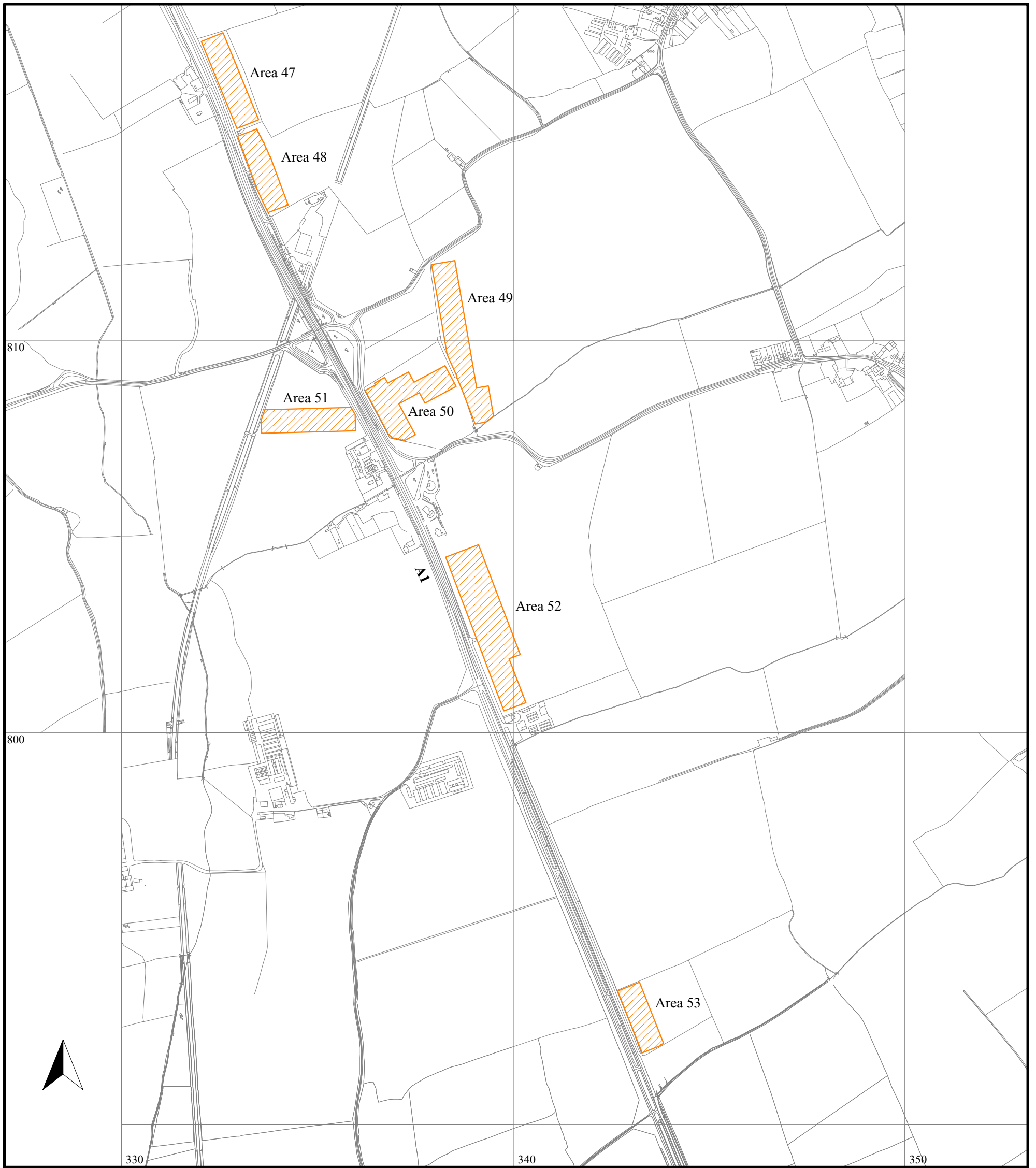


Phase 1 survey area



scale 1:10 000 - for A3 plot

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

Figure 2c

Locations of Areas 47, 48, 49, 51, 52 & 53

basemap courtesy of Faber Maunsell

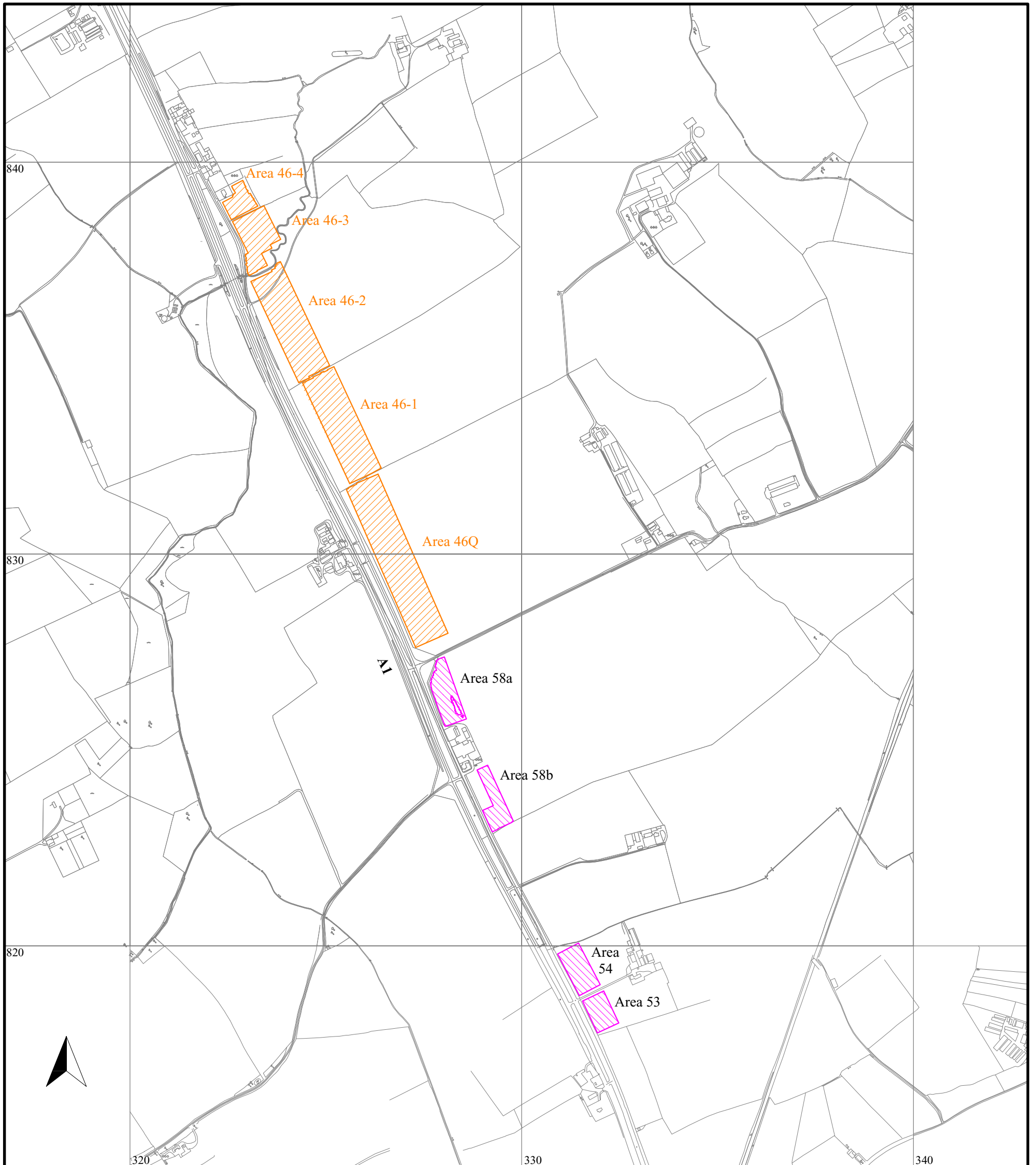


Phase 1 survey area



scale 1:10 000 - for A3 plot

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

Figure 2d

*Locations of Areas 46(1-4), 46Q, 53, 54,
58a & 58b*

basemap courtesy of Faber Maunsell



Phase 1 survey area



Phase 2 survey area



scale 1:10 000 - for A3 plot

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

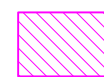
Figure 2e

*Locations of Areas 43, 44, 45, 72, 73, 74
75, 77, 78 & 79*

basemap courtesy of Faber Maunsell



Phase 1 survey area

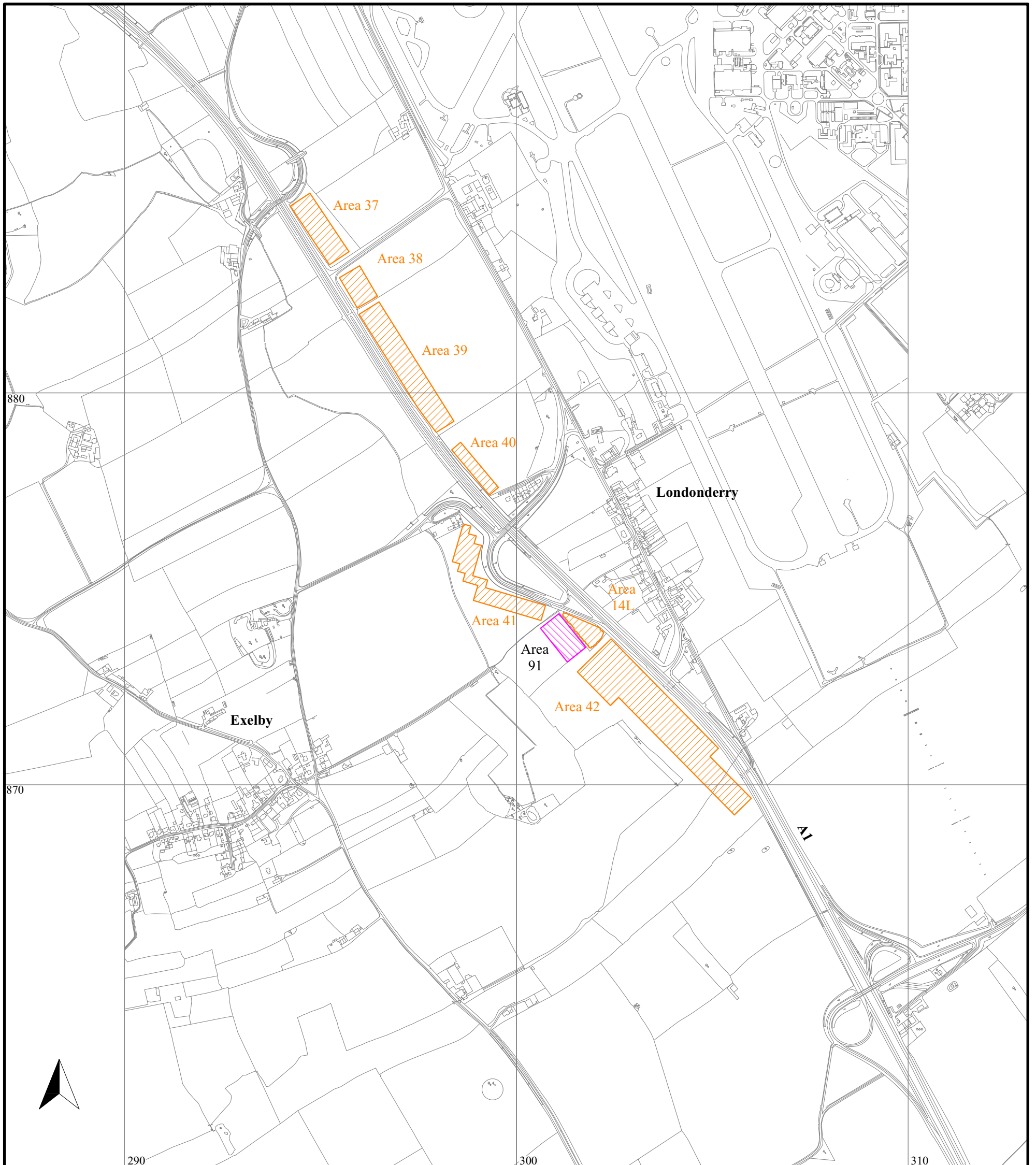


Phase 2 survey area



scale 1:10 000 - for A3 plot

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

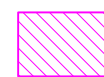
Figure 2f

*Locations of Areas 14L, 37, 38, 39, 40, 41,
42 & 91*

basemap courtesy of Faber Maunsell



Phase 1 survey area

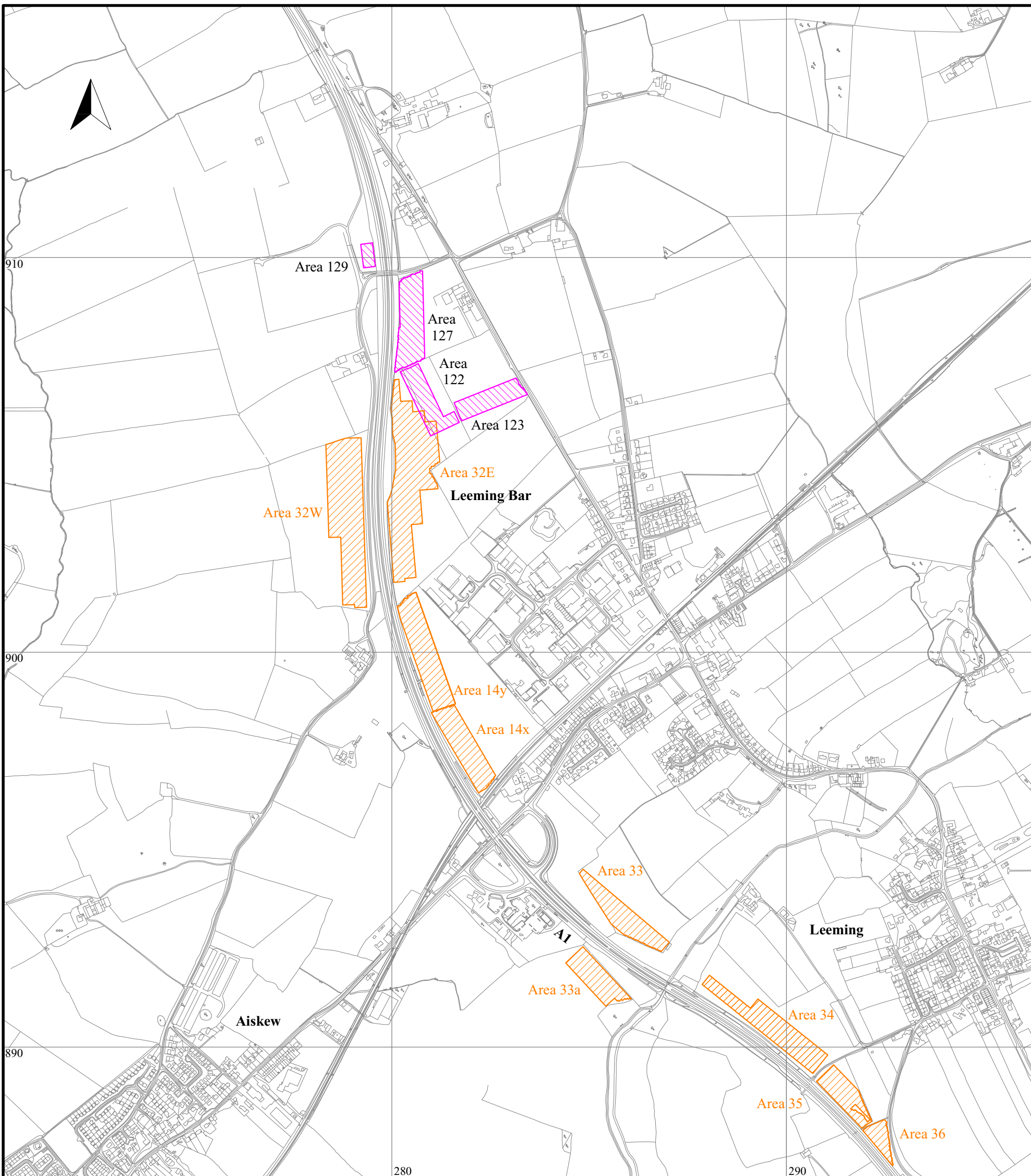


Phase 2 survey area



scale 1:10 000 - for A3 plot

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

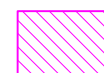
Figure 2g

*Locations of Areas 14x, 14y, 32E, 32W, 33,
33a, 34, 35, 36, 122, 123, 127 & 129*

basemap courtesy of Faber Maunsell



Phase 1 survey area



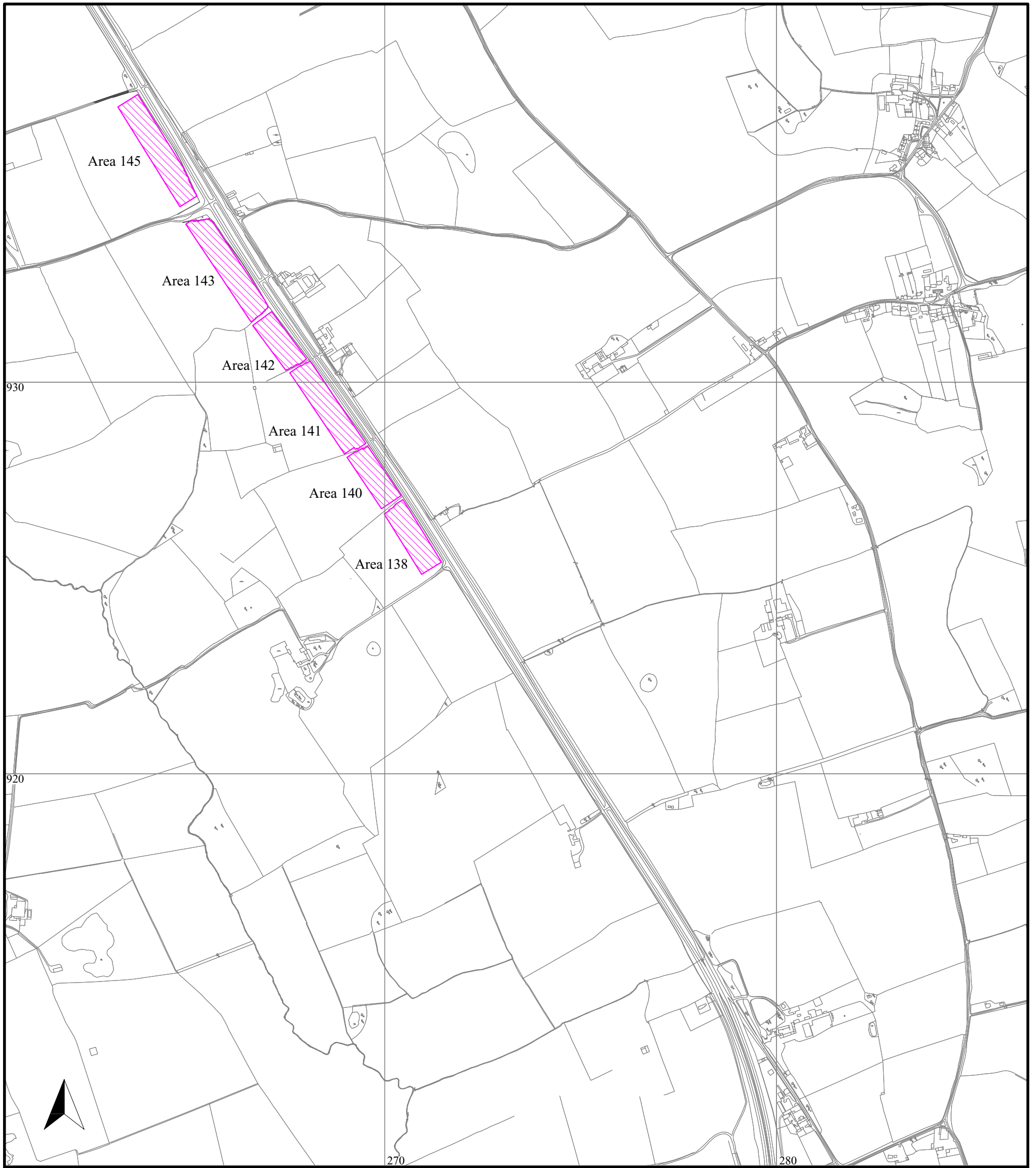
Phase 2 survey area

0 500m



scale 1:10 000 - for A3 plot

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

Figure 2h

*Locations of Areas 138, 140, 141, 142,
143 & 145*

basemap courtesy of Faber Maunsell

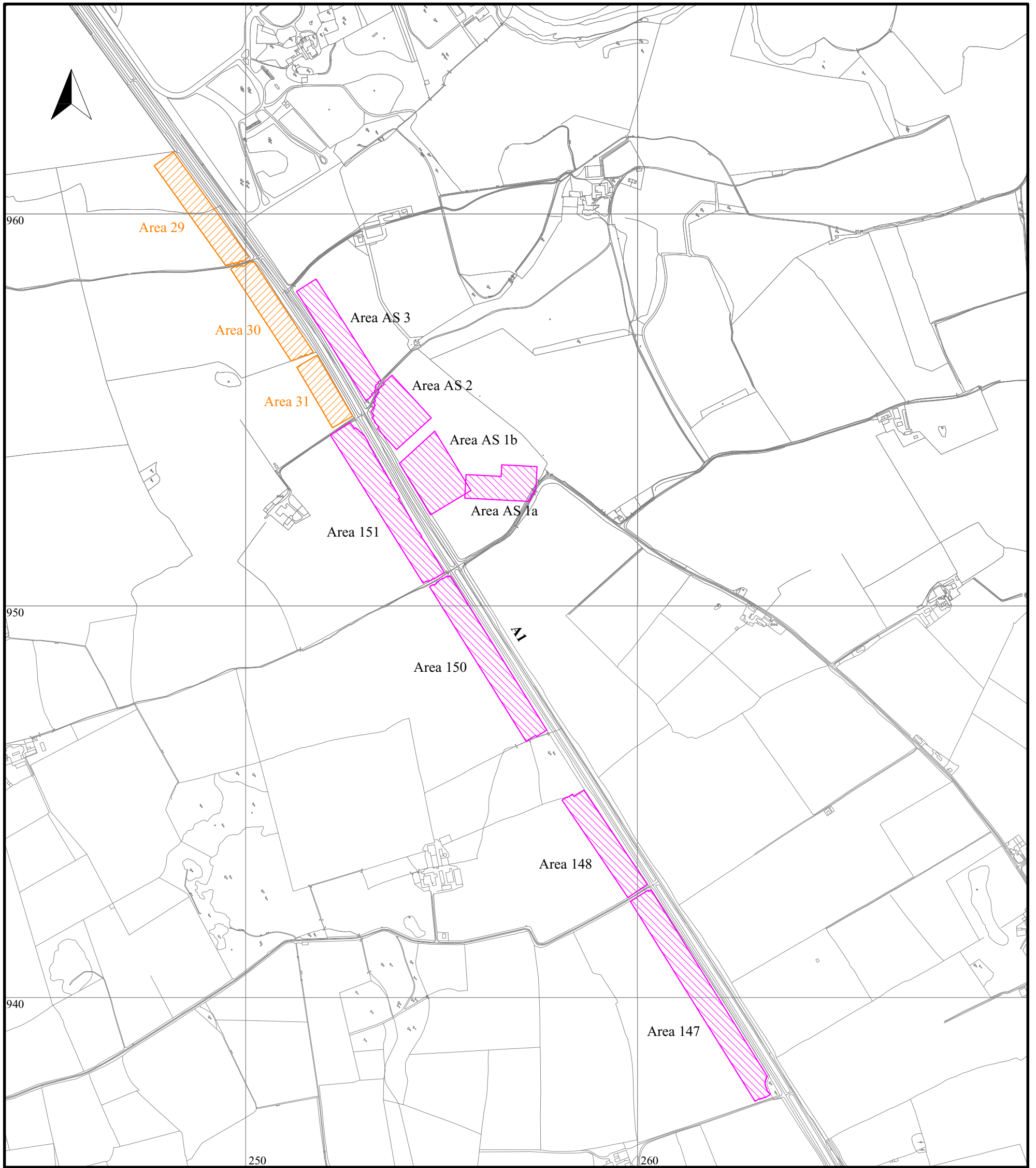


Phase 2 survey area



scale 1:10 000 - for A3 plot

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

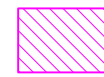
Figure 2i

*Locations of Areas 29, 30, 31, 147, 148,
150, 151, AS 1a, AS 1b, AS 2 & AS 3*

basemap courtesy of Faber Maunsell



Phase 1 survey area

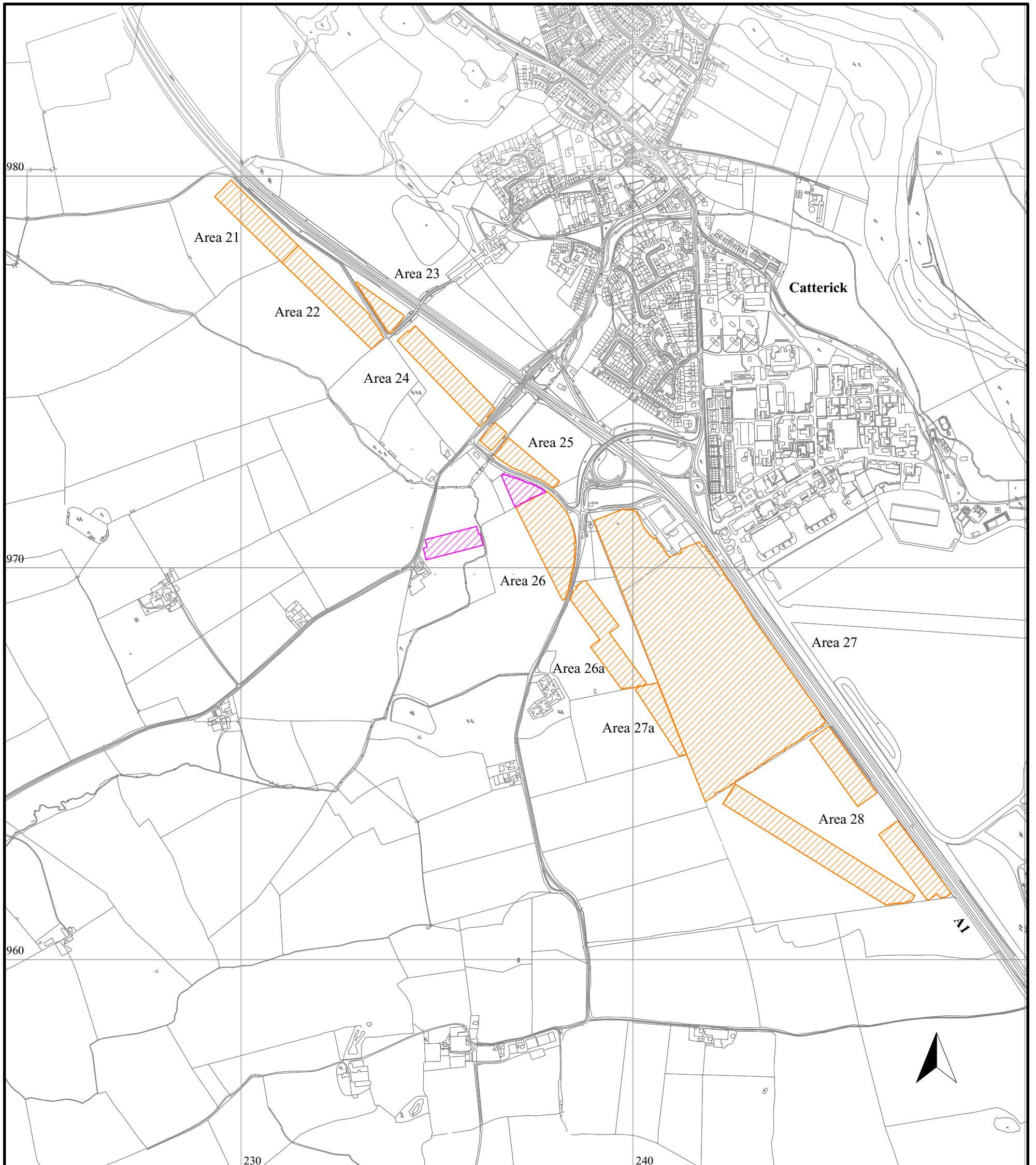


Phase 2 survey area



scale 1:10 000 - for A3 plot

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

Figure 2j

*Locations of Areas 21, 22, 23, 24, 25,
26, 26a, 27, 27a & 28*

basemap courtesy of Faber Maunsell



Phase 1 survey area

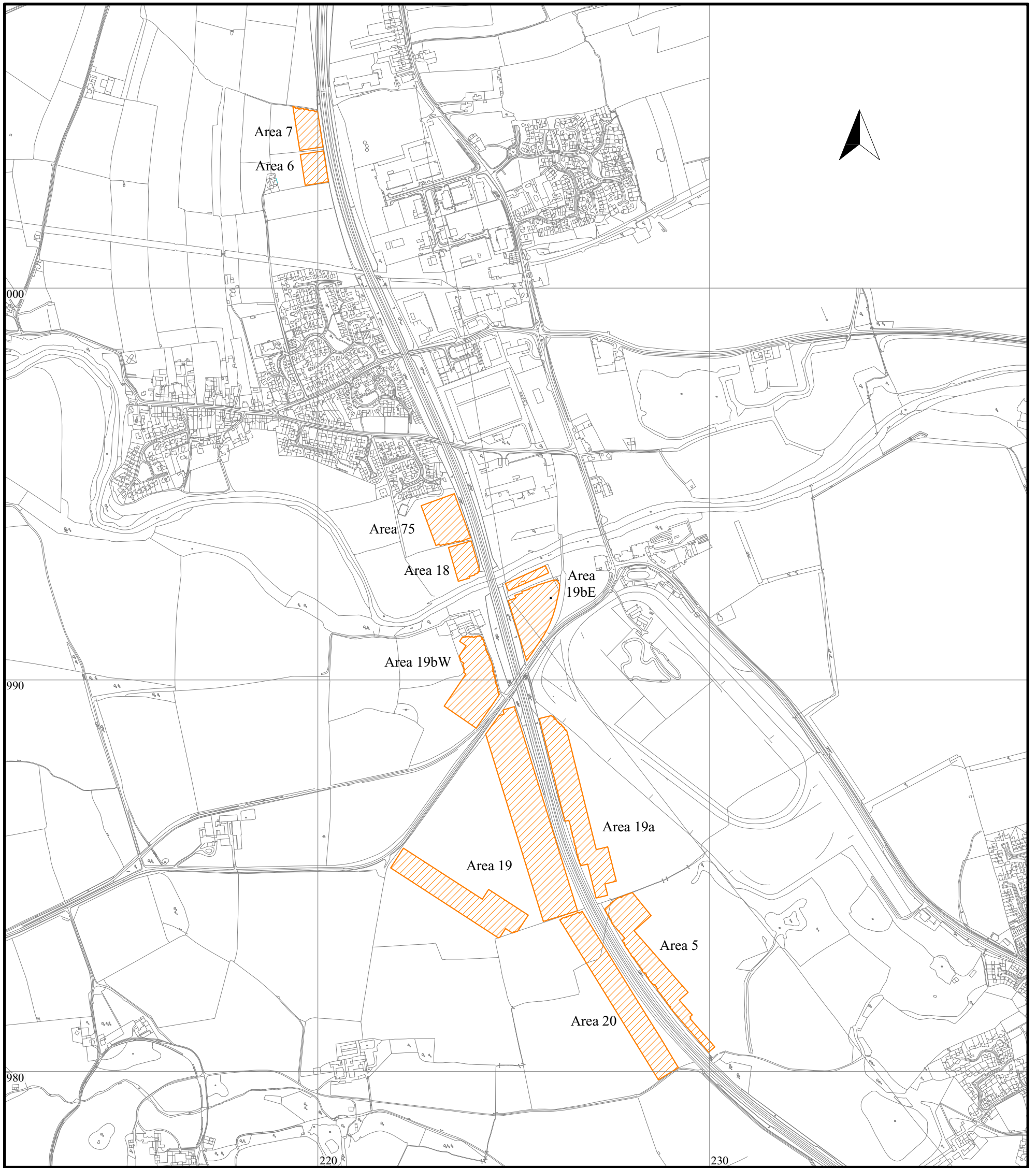


Phase 2 survey area



scale 1:10 000 - for A3 plot

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

Figure 2k

*Locations of Areas 5, 6, 7, 18, 19, 19a
19bW, 19bE, 20 & 75*

basemap courtesy of Faber Maunsell

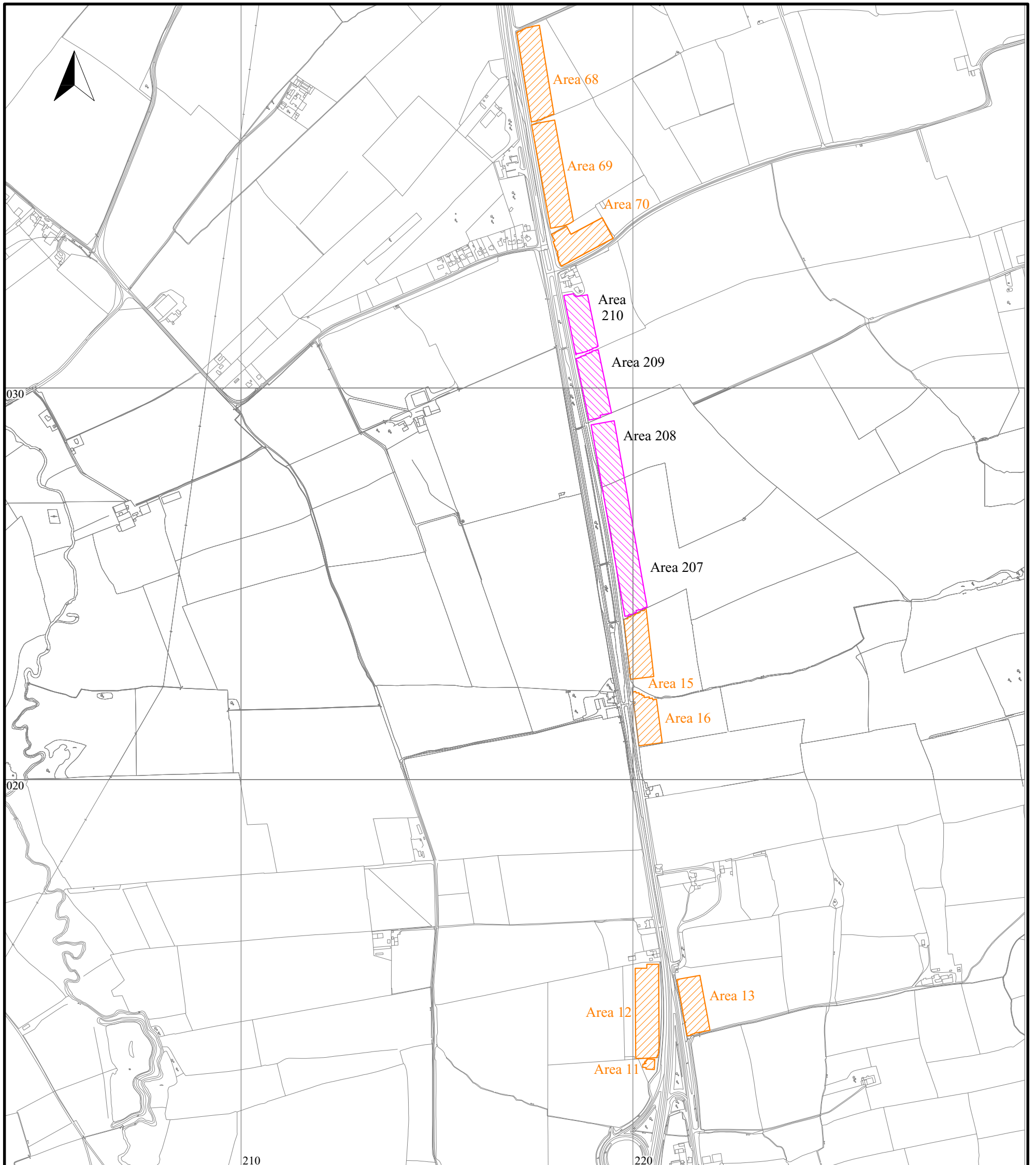


Phase 1 survey area



scale 1:10 000 - for A3 plot

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

Figure 21

*Locations of Areas 11, 12, 13, 15, 16, 68,
69, 70, 207, 208, 209 & 210*

basemap courtesy of Faber Maunsell



Phase 1 survey area

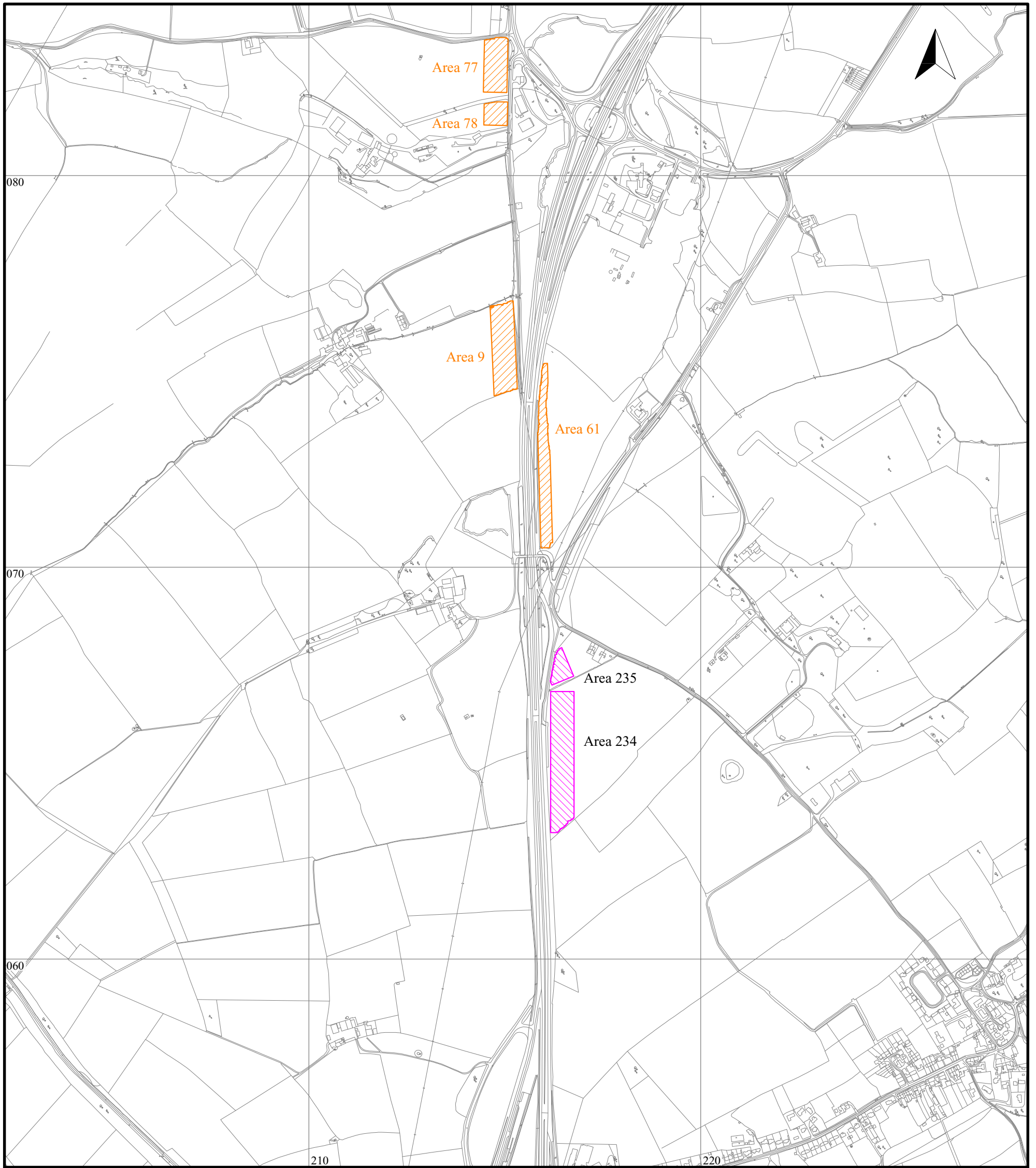


Phase 2 survey area



scale 1:10 000 - for A3 plot

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



Archaeological Services
University of Durham

A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

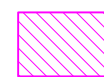
Figure 2m

*Locations of Areas 9, 61, 77, 78, 234
& 235*

basemap courtesy of Faber Maunsell



Phase 1 survey area

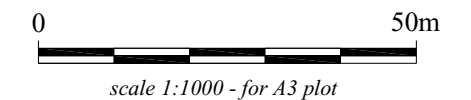
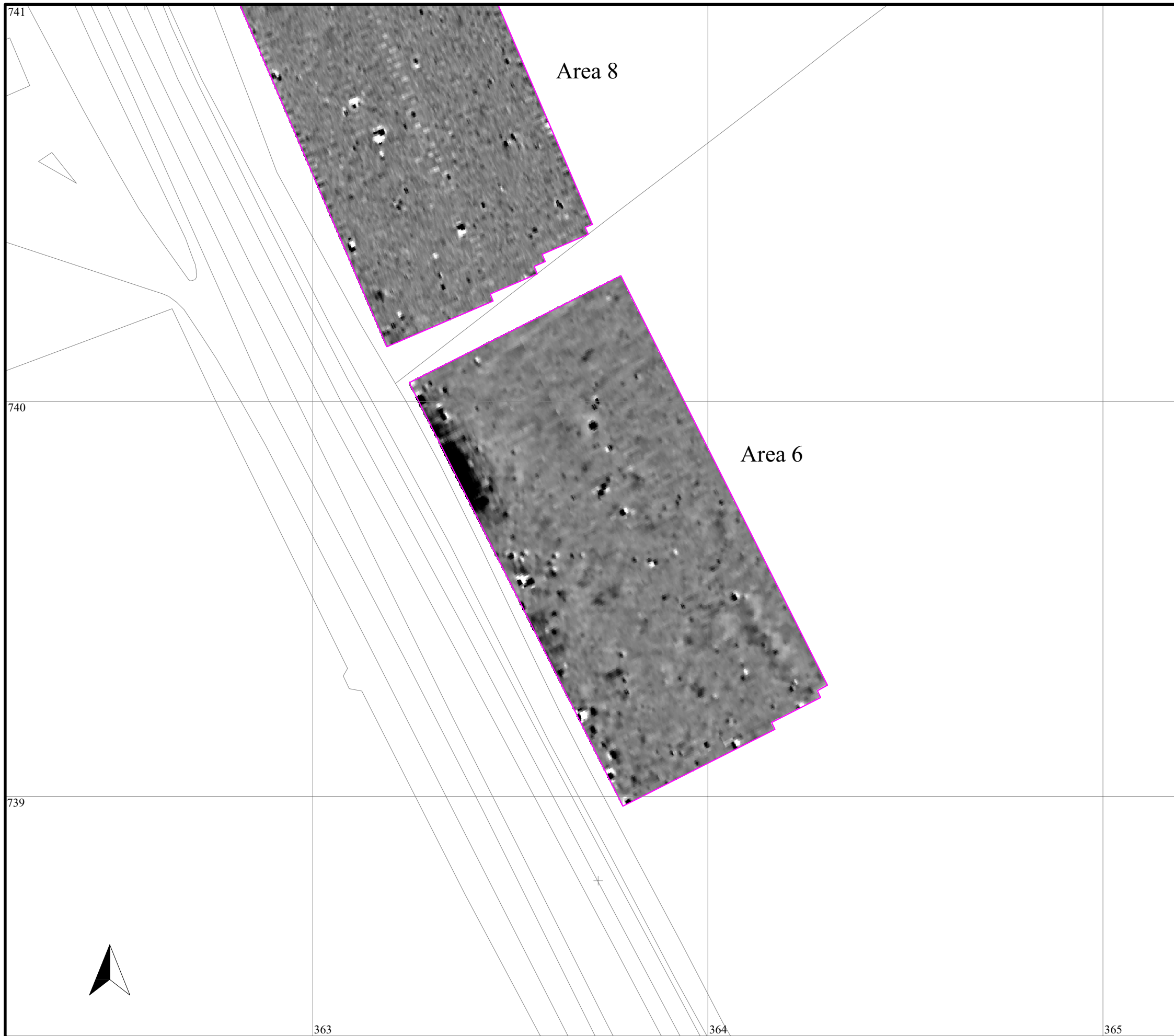


Phase 2 survey area

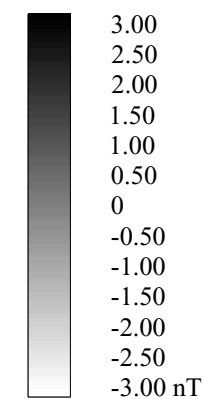


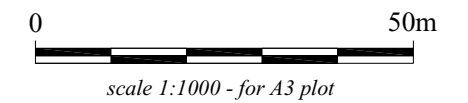
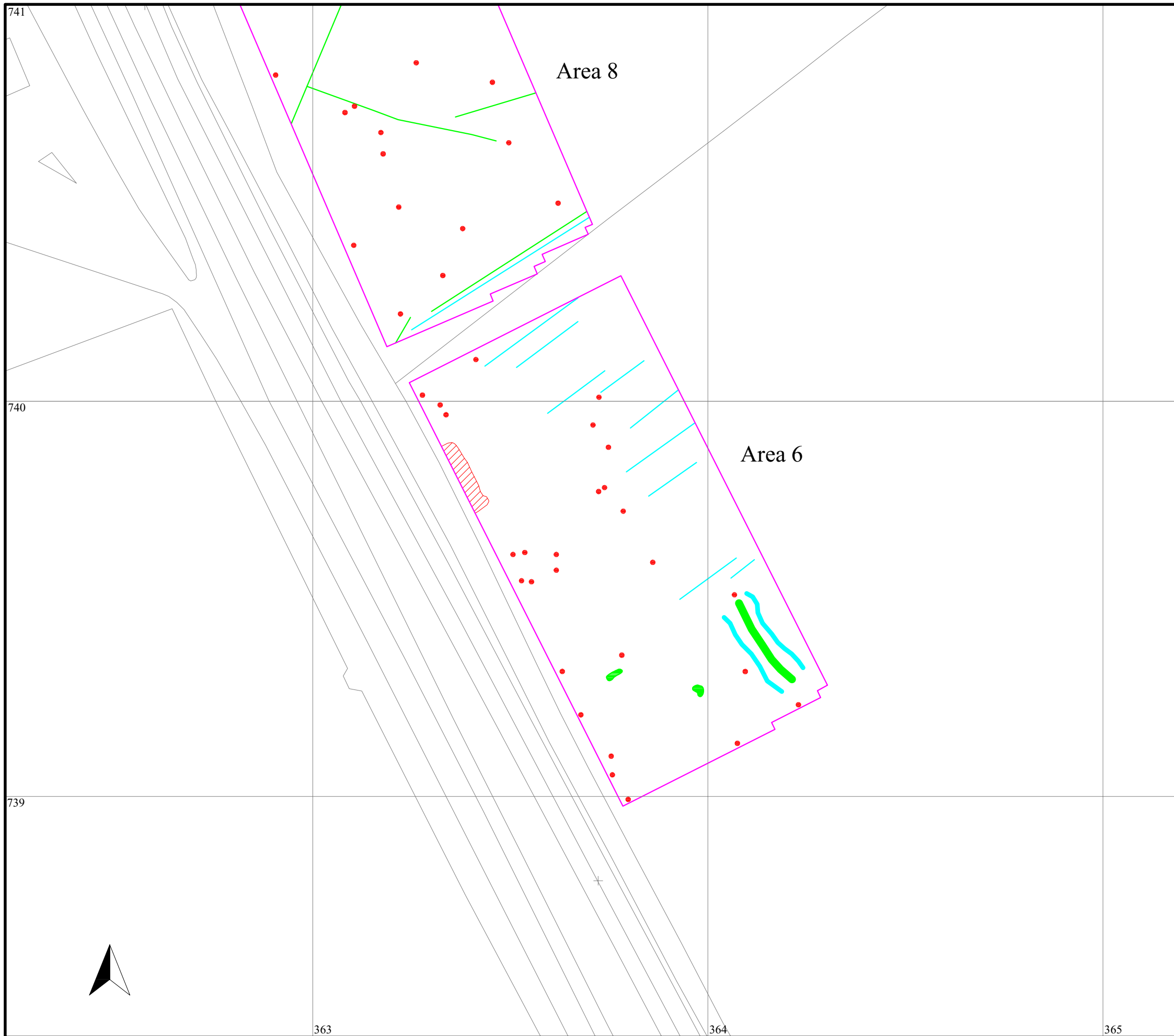
scale 1:10 000 - for A3 plot





REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



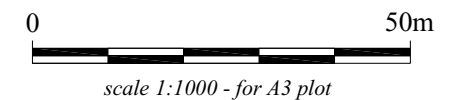
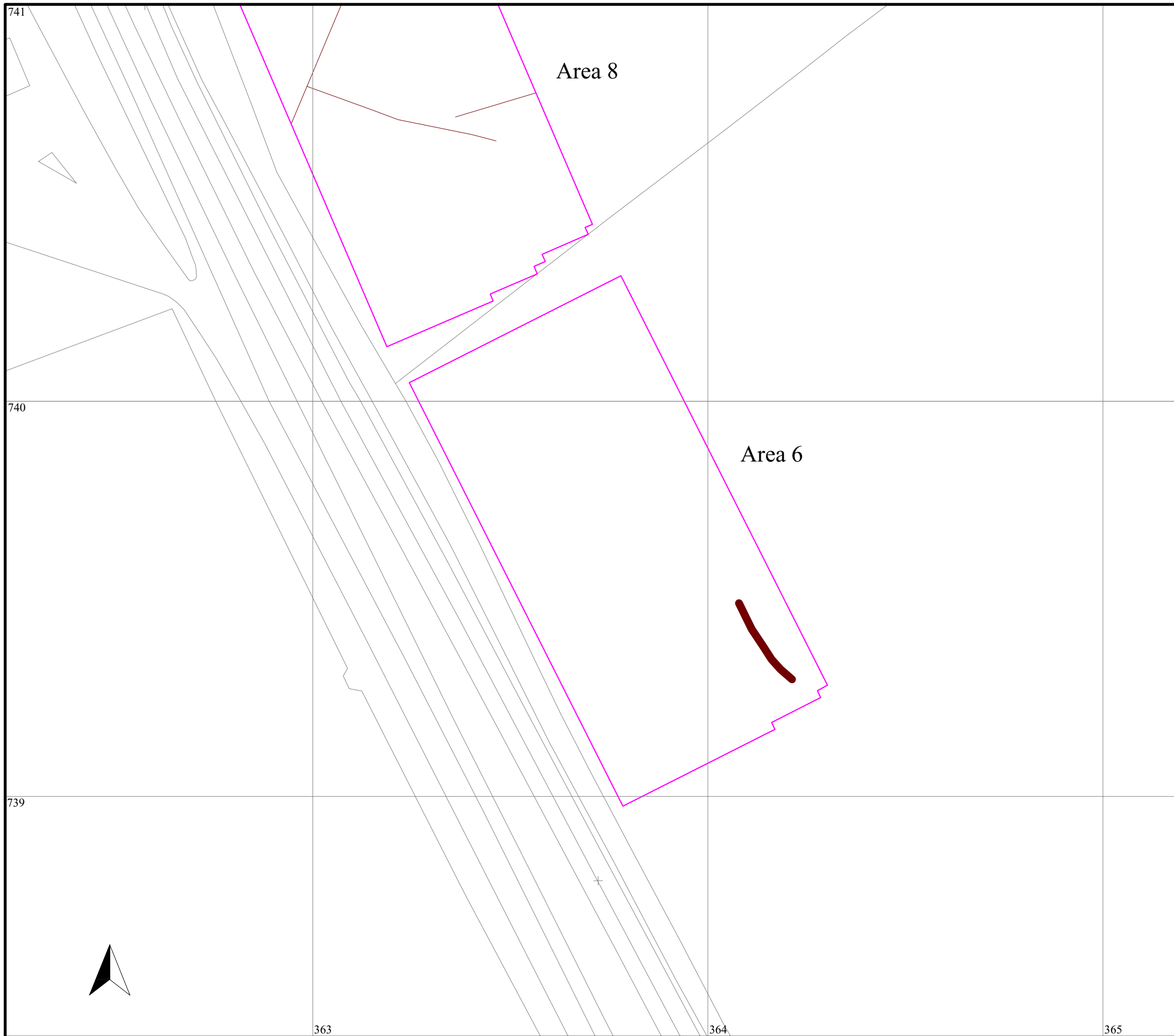
 outline of Phase 2 survey area





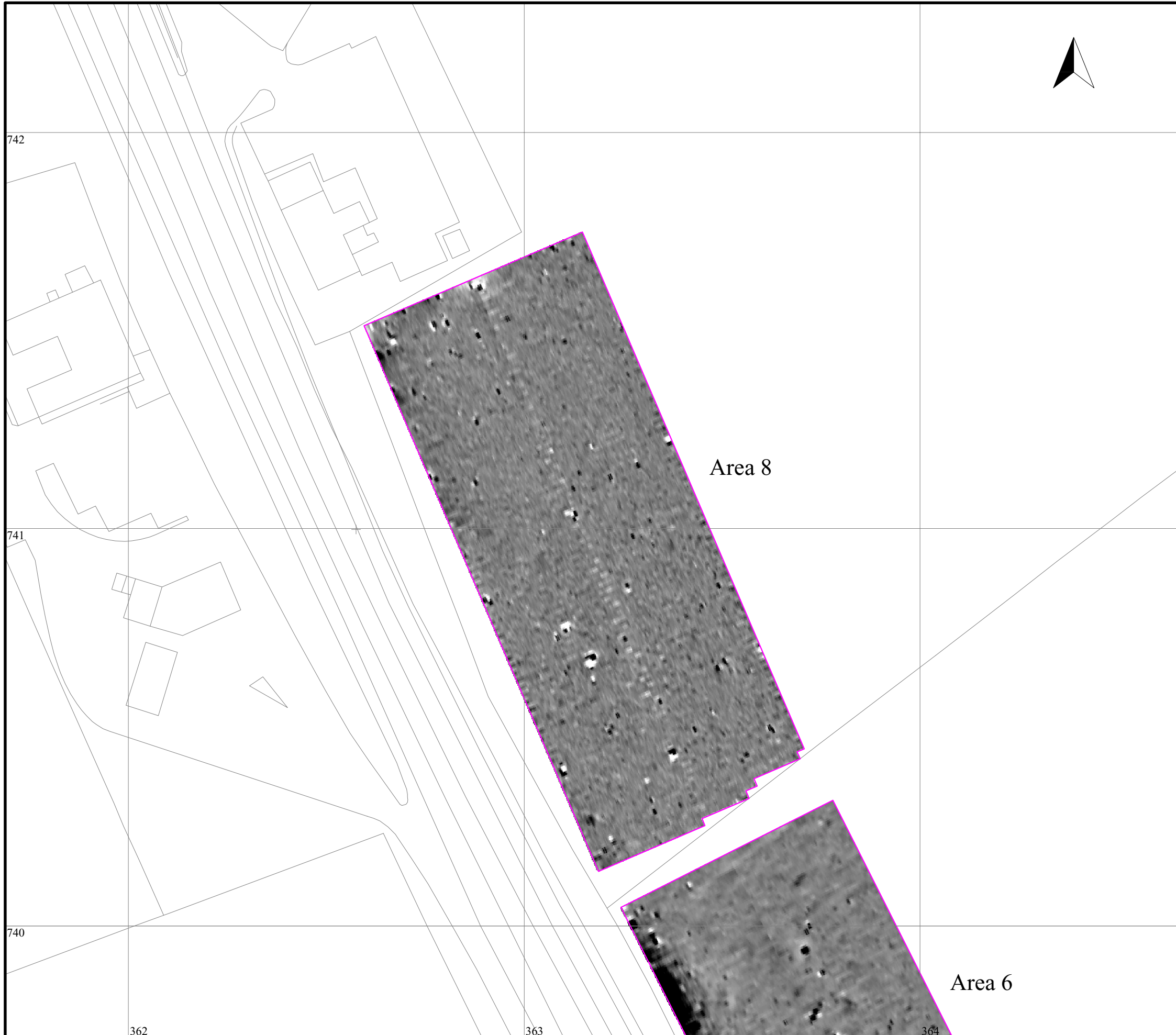


-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



-  outline of Phase 2 survey area
-  soil-filled features



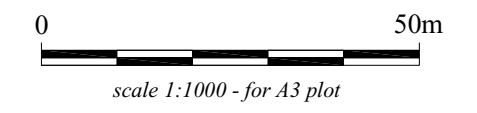
A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

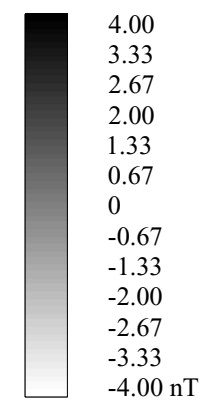
Figure 6

Geophysical survey of Area 8

basemap courtesy of Faber Maunsell



 outline of Phase 2 survey area



REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



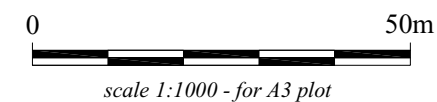
A1(T) Dishforth to Barton Improvement

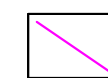

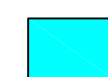

**Phase 2 geophysical surveys
Report 1368**

Figure 7

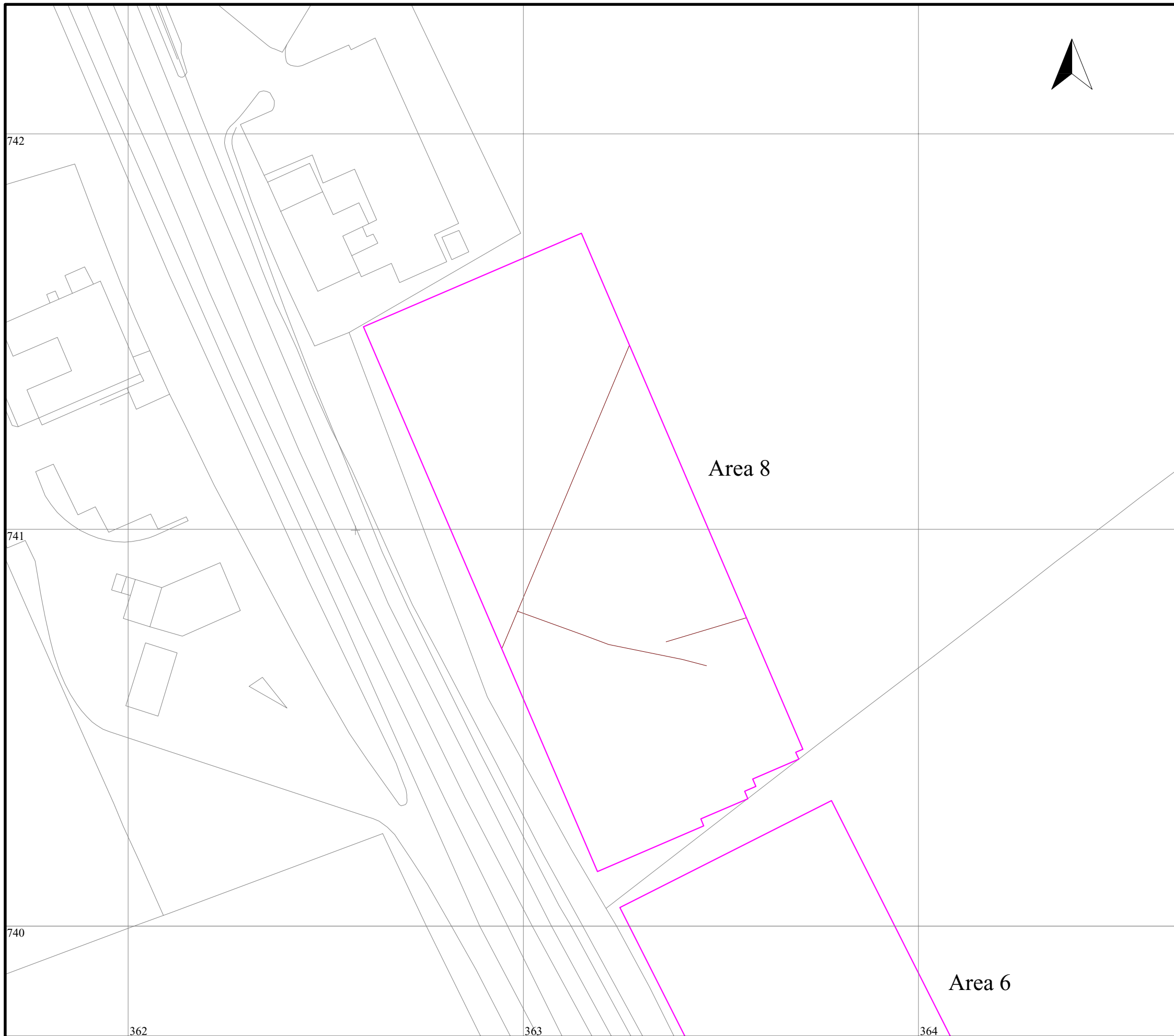
Geophysical interpretation of Area 8

basemap courtesy of Faber Maunsell



-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



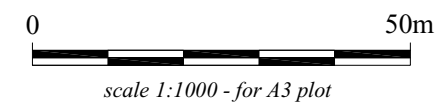
A1(T) Dishforth to Barton Improvement

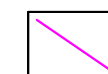
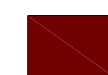
**Phase 2 geophysical surveys
Report 1368**

Figure 8

Archaeological interpretation of Area 8

basemap courtesy of Faber Maunsell



-  outline of Phase 2 survey area
-  soil-filled features

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

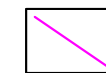
Figure 9

Geophysical survey of Area 14

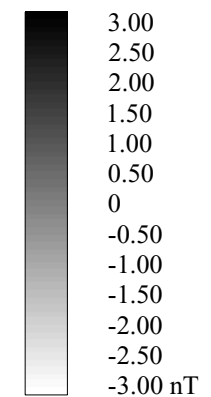
basemap courtesy of Faber Maunsell



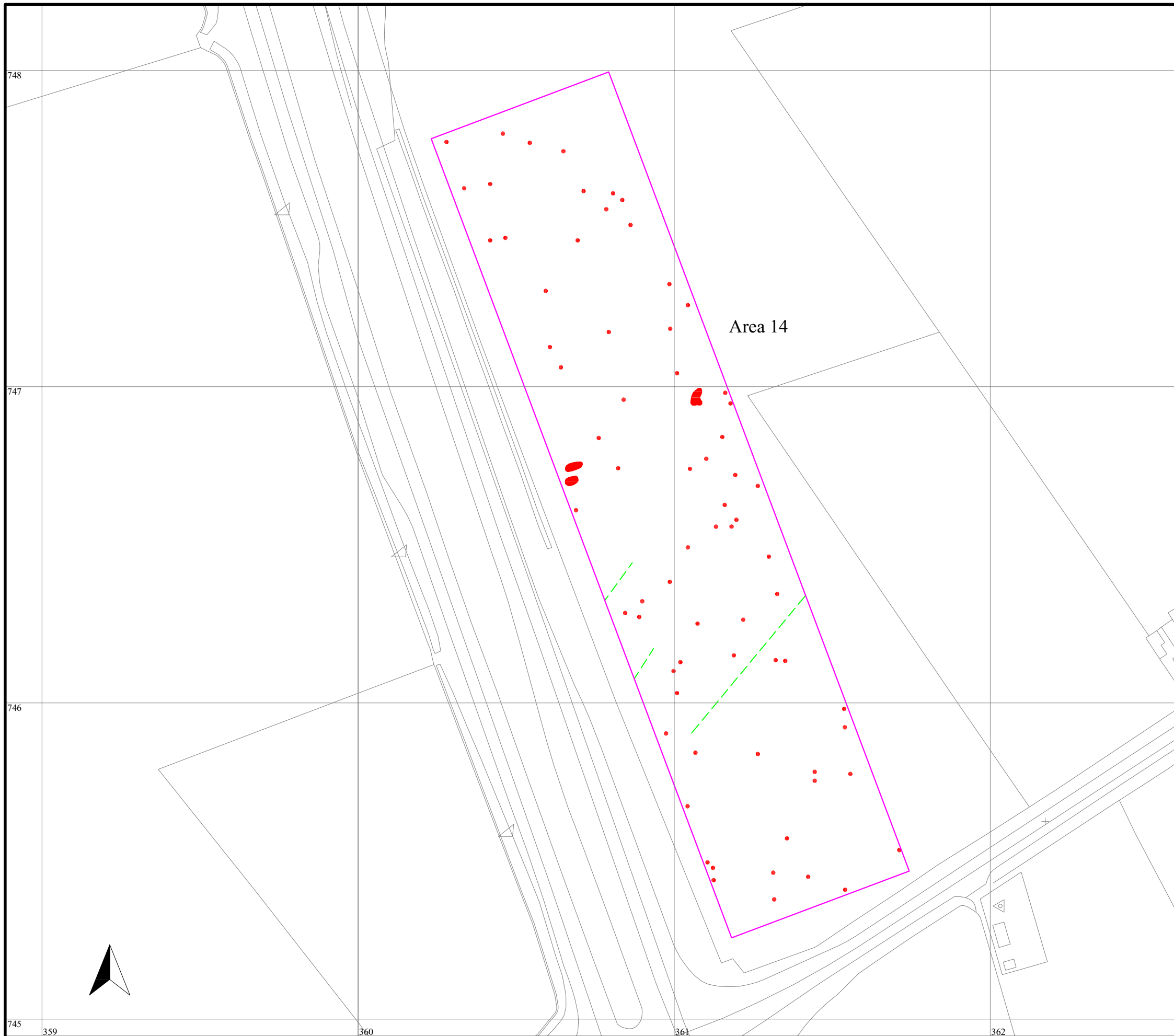
scale 1:1250 - for A3 plot



outline of Phase 2 survey area



REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



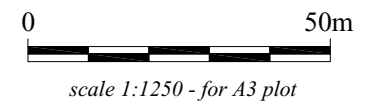
A1(T) Dishforth to Barton Improvement

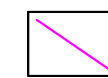
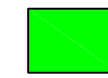
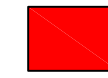
**Phase 2 geophysical surveys
Report 1368**

Figure 10

Geophysical interpretation of Area 14

basemap courtesy of Faber Maunsell



-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



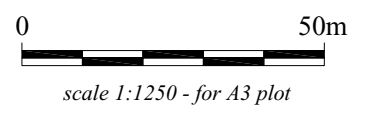
A1(T) Dishforth to Barton Improvement



**Phase 2 geophysical surveys
Report 1368**

Figure 11

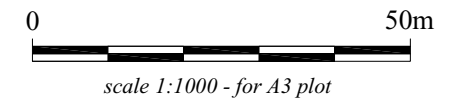
Archaeological interpretation of Area 14

basemap courtesy of Faber Maunsell

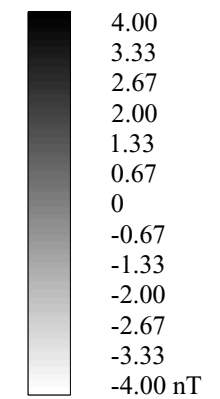


-  outline of Phase 2 survey area
-  direction of ridge and furrow

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

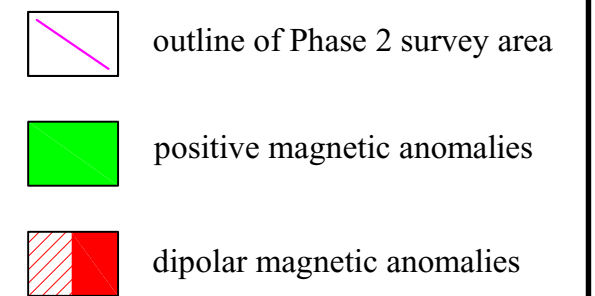
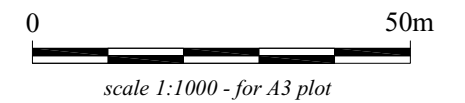


 outline of Phase 2 survey area



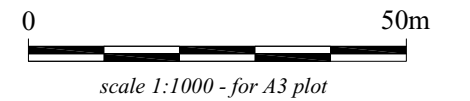
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

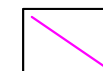





REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002





-  outline of Phase 2 survey area
-  soil-filled features

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



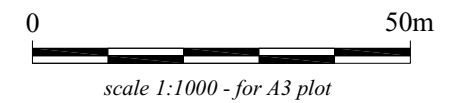
A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

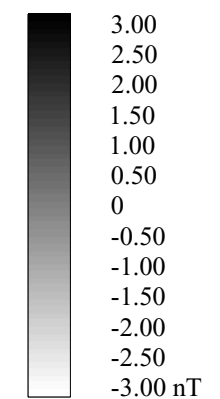
Figure 15

Geophysical survey of Area 58b

basemap courtesy of Faber Maunsell

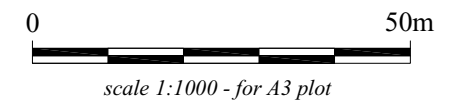


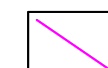


 outline of Phase 2 survey area



REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002





-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



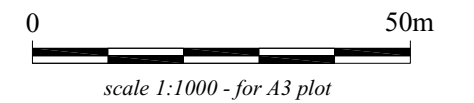
A1(T) Dishforth to Barton Improvement

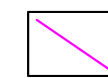

**Phase 2 geophysical surveys
Report 1368**

Figure 17

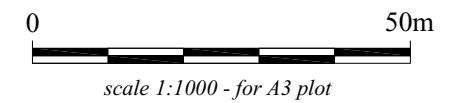
Archaeological interpretation of Area 58b

basemap courtesy of Faber Maunsell

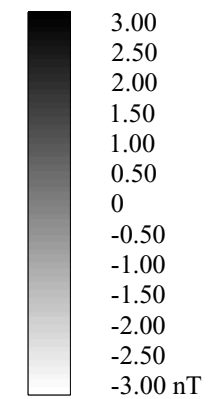


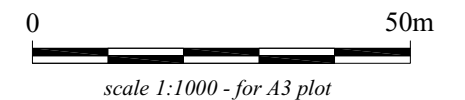
-  outline of Phase 2 survey area
-  soil-filled features

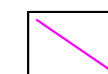
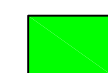
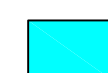

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



 outline of Phase 2 survey area





-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

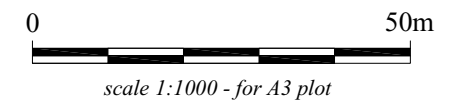


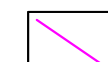

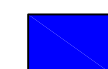
A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

Figure 20

*Archaeological interpretation of Area 58a
basemap courtesy of Faber Maunsell*



-  outline of Phase 2 survey area
-  soil-filled features
-  open drain

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



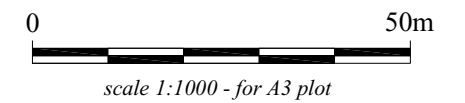
A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

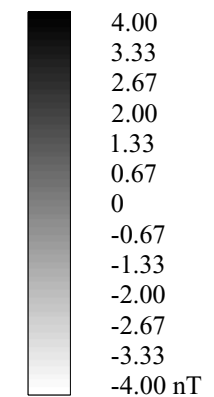
Figure 21

Geophysical survey of Area 72

basemap courtesy of Faber Maunsell



outline of Phase 2 survey area



REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



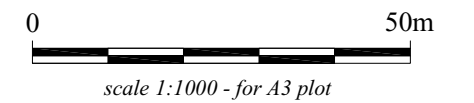
A1(T) Dishforth to Barton Improvement

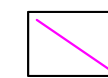
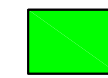
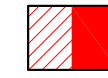
**Phase 2 geophysical surveys
Report 1368**

Figure 22

Geophysical interpretation of Area 72

basemap courtesy of Faber Maunsell



-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



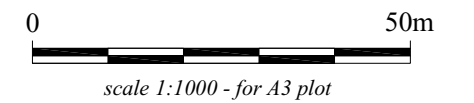
A1(T) Dishforth to Barton Improvement

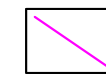
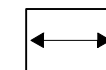
**Phase 2 geophysical surveys
Report 1368**

Figure 23

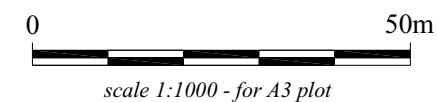
Archaeological interpretation of Area 72

basemap courtesy of Faber Maunsell

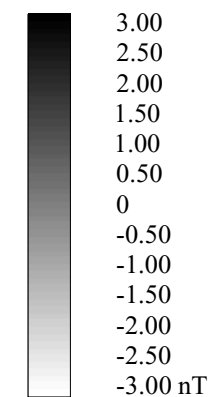


-  outline of Phase 2 survey area
-  direction of ridge and furrow

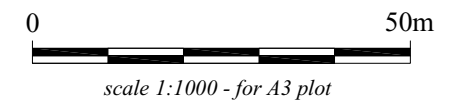
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

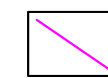
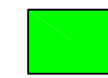
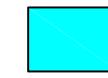




 outline of Phase 2 survey area

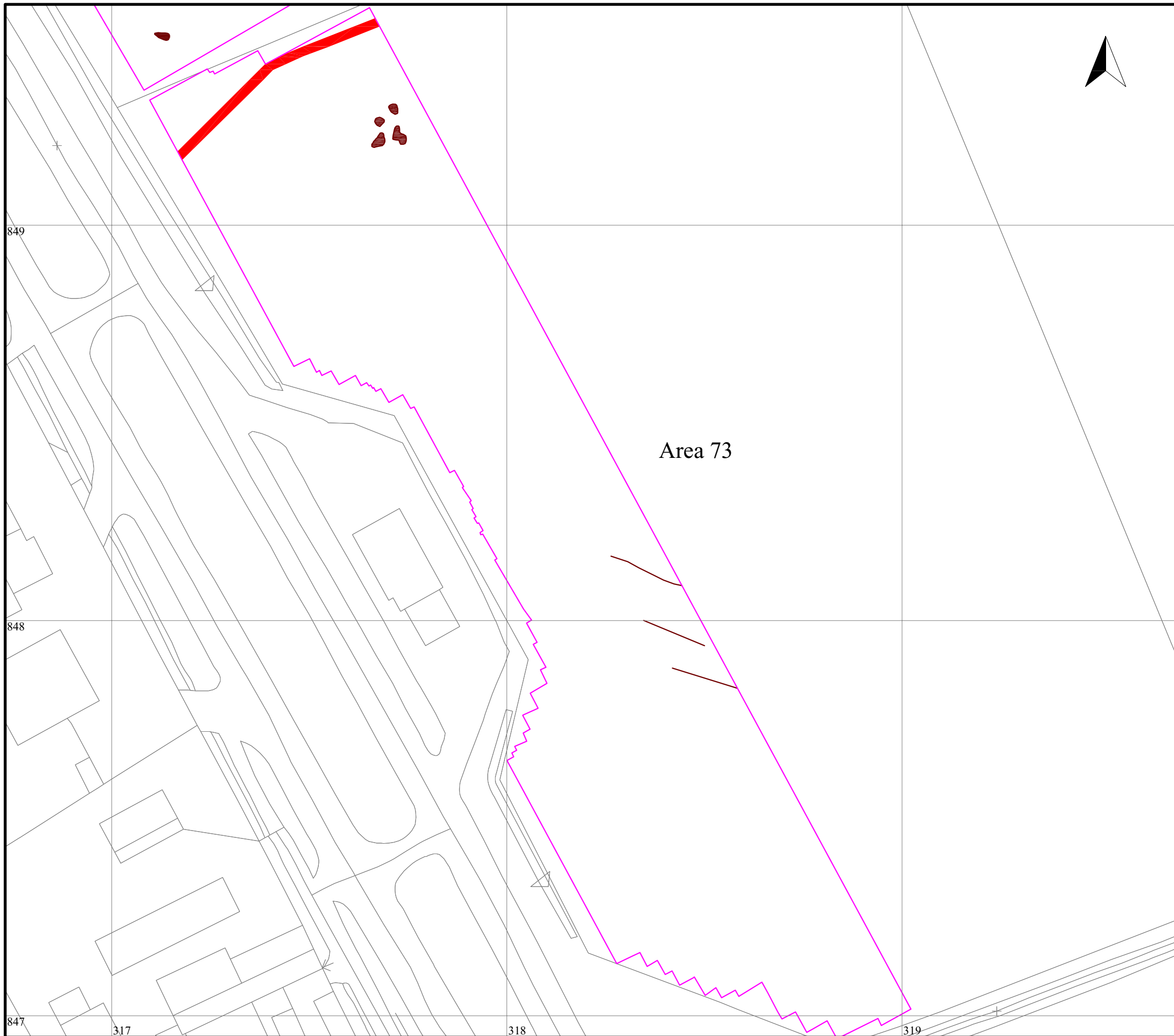


REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



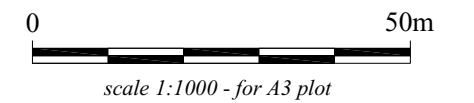
A1(T) Dishforth to Barton Improvement

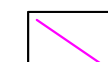


**Phase 2 geophysical surveys
Report 1368**

Figure 26

Archaeological interpretation of Area 73

basemap courtesy of Bullen Consultants



-  outline of Phase 2 survey area
-  soil-filled features
-  service pipe

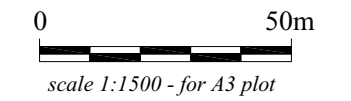
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



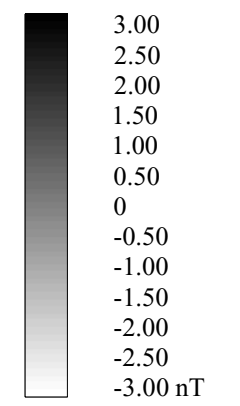
Figure 27

*Geophysical surveys of Area 74
and Area 75*

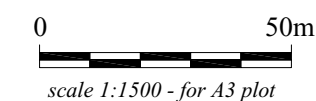
basemap courtesy of Faber Maunsell







 outline of Phase 2 survey area



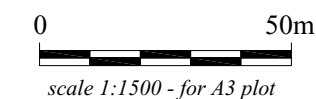
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002








-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002





-  outline of Phase 2 survey area
-  soil-filled features
-  service pipe
-  direction of ridge and furrow
-  former field boundary

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



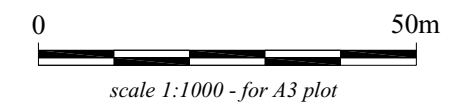
A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

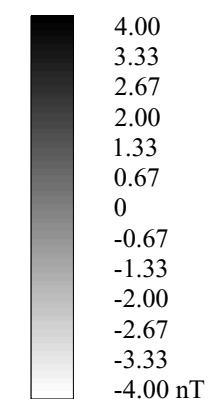
Figure 30

*Geophysical surveys of Area 77
and Area 78*

basemap courtesy of Faber Maunsell



 outline of Phase 2 survey area







REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

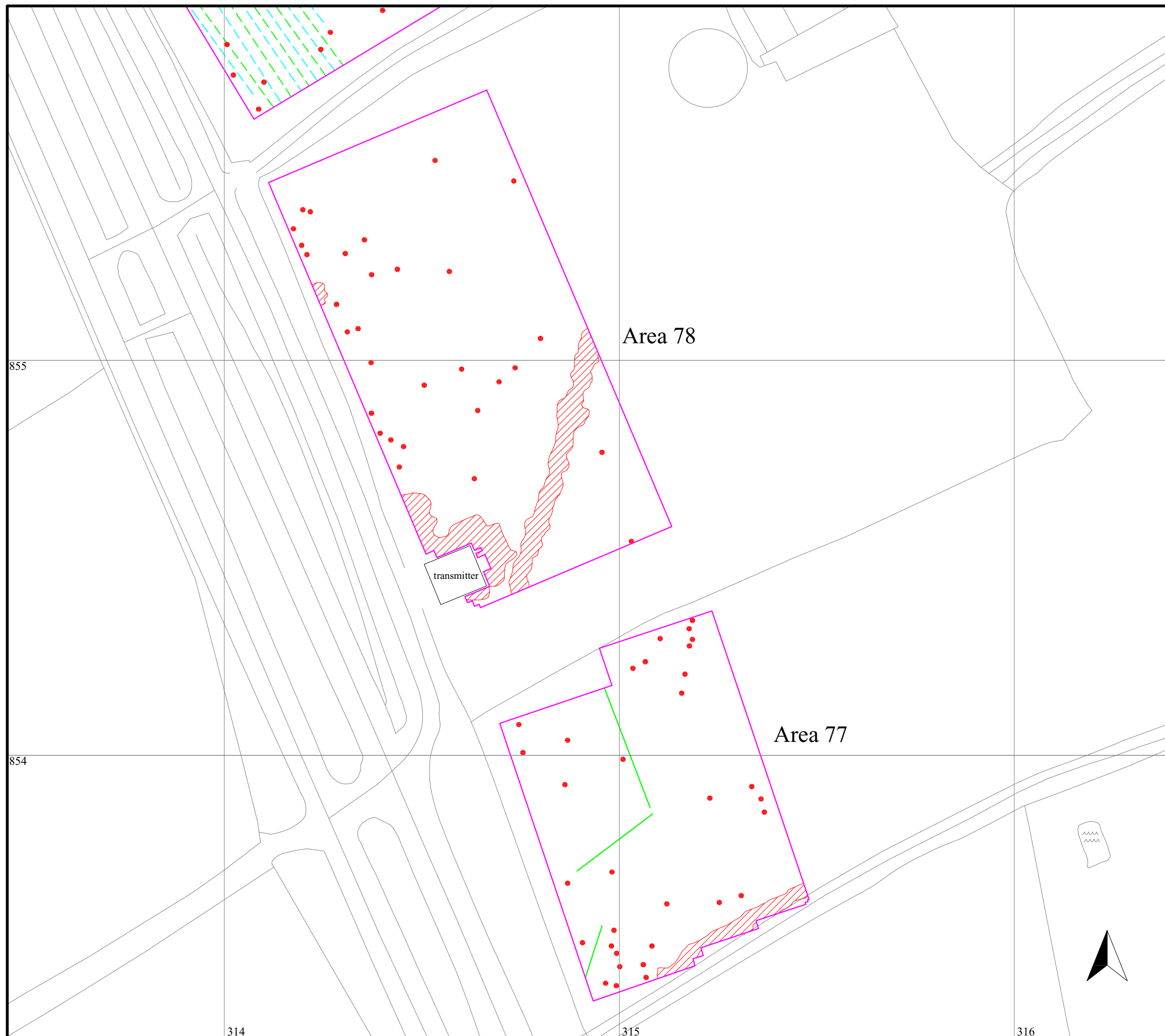


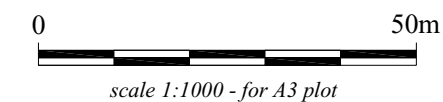
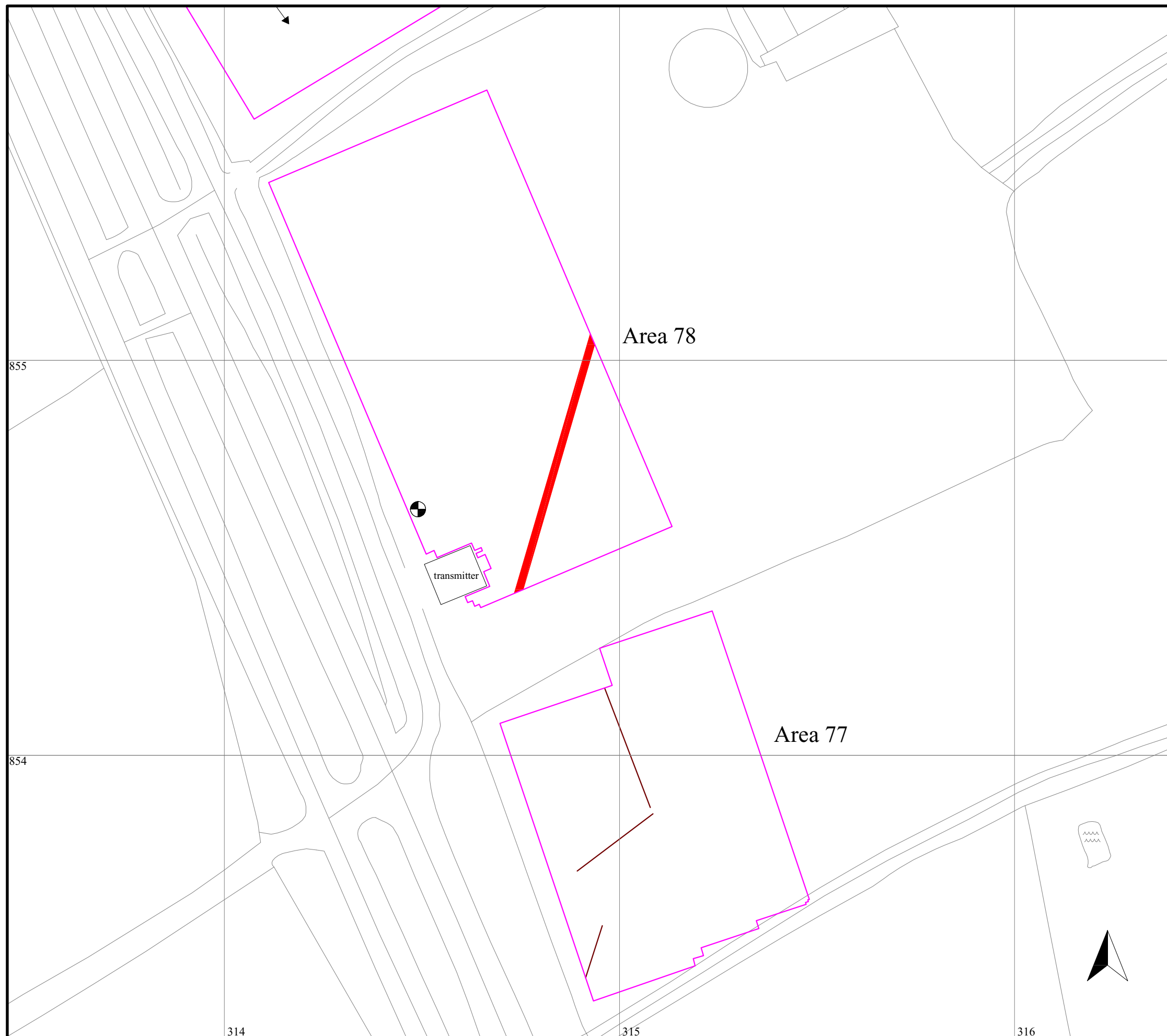


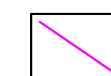


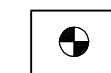
scale 1:1000 - for A3 plot

-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

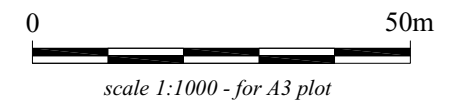
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



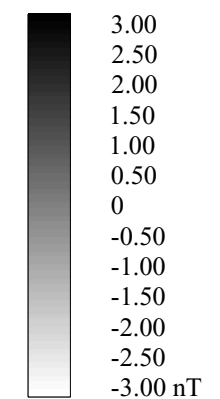


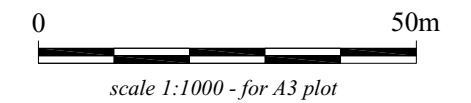
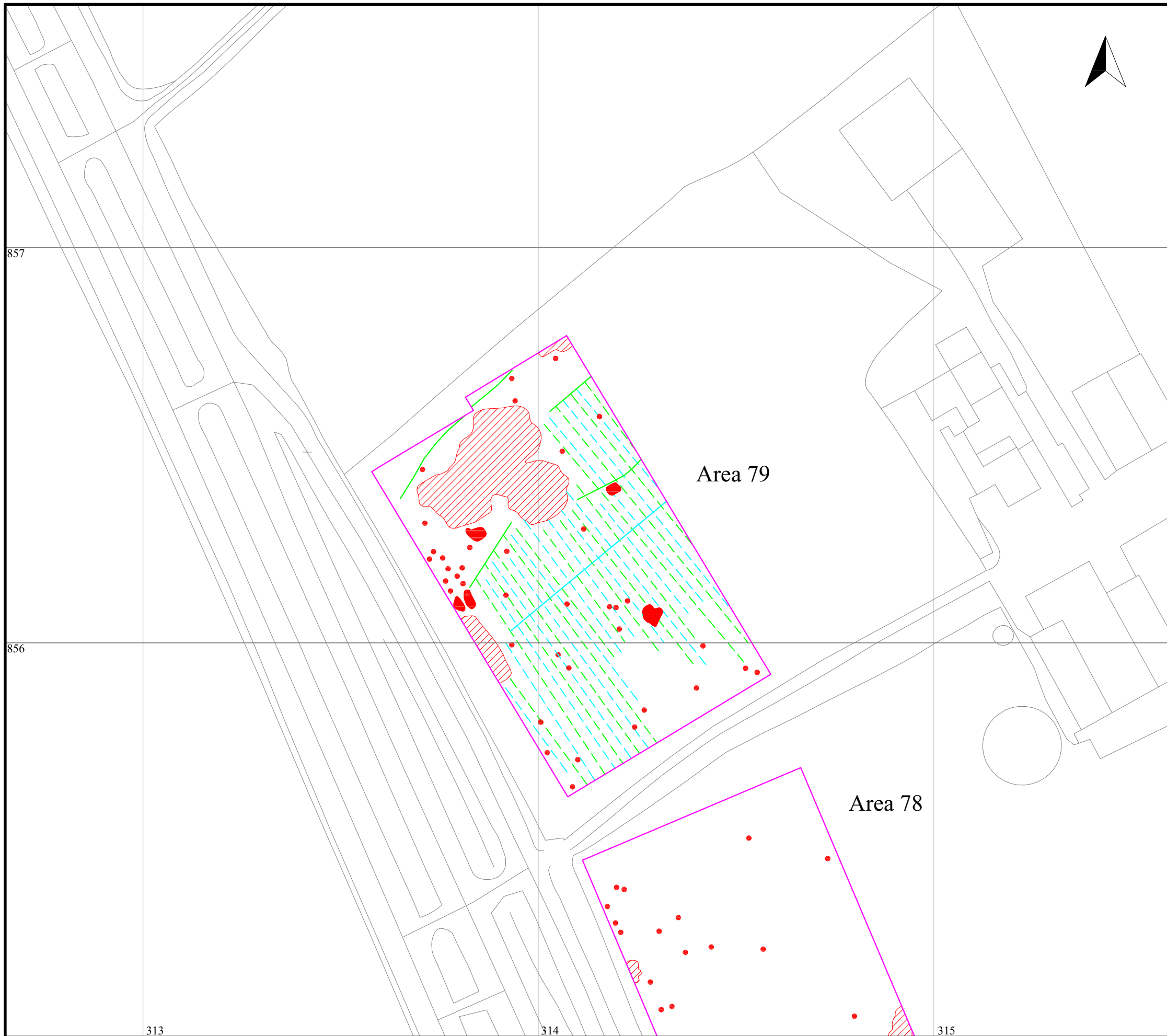
-  outline of Phase 2 survey area
-  soil-filled features
-  service pipe
-  pylon





REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



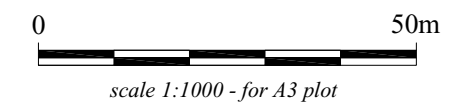
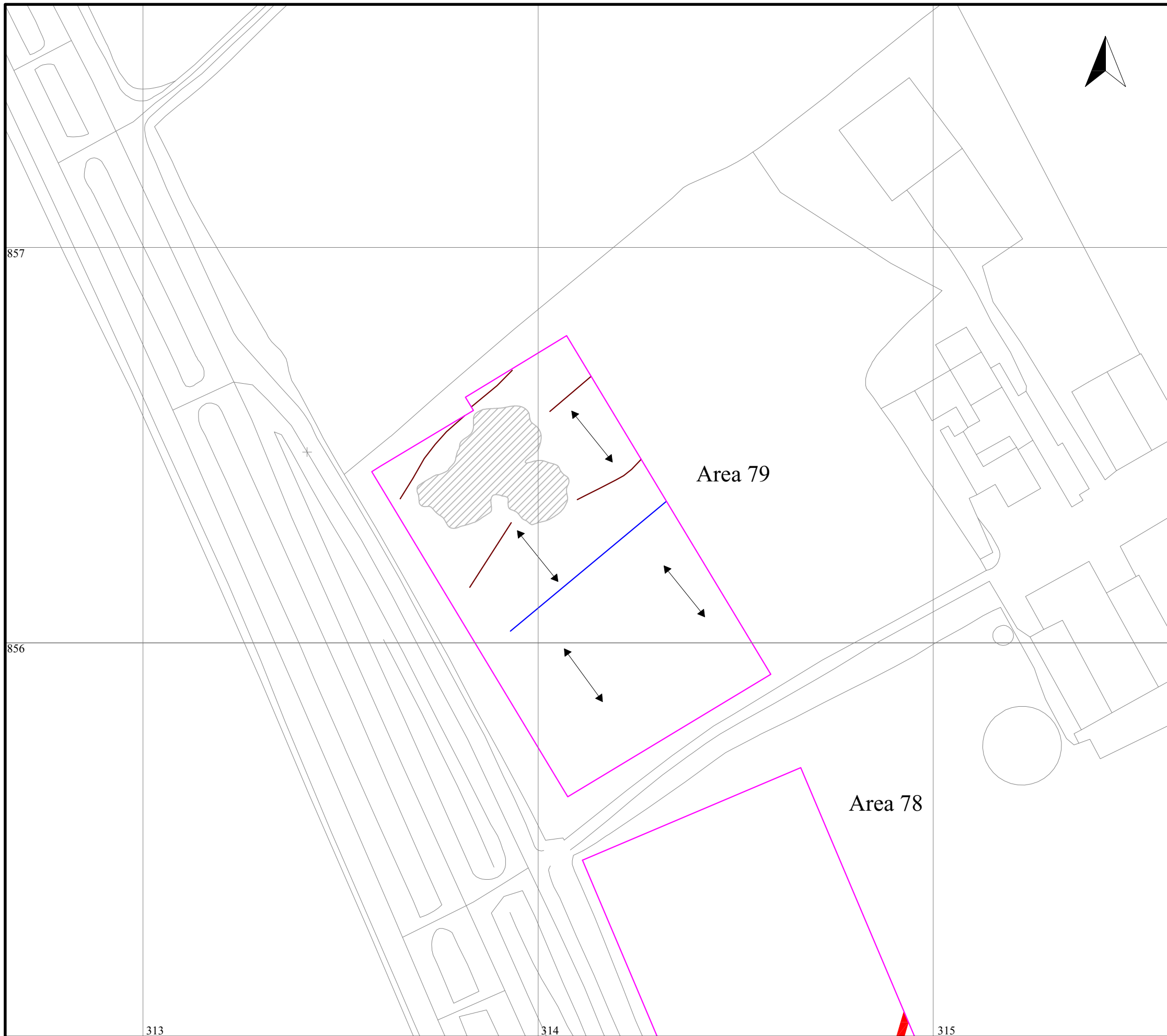

 outline of Phase 2 survey area










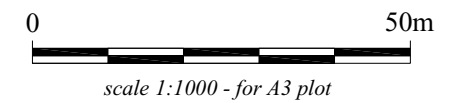
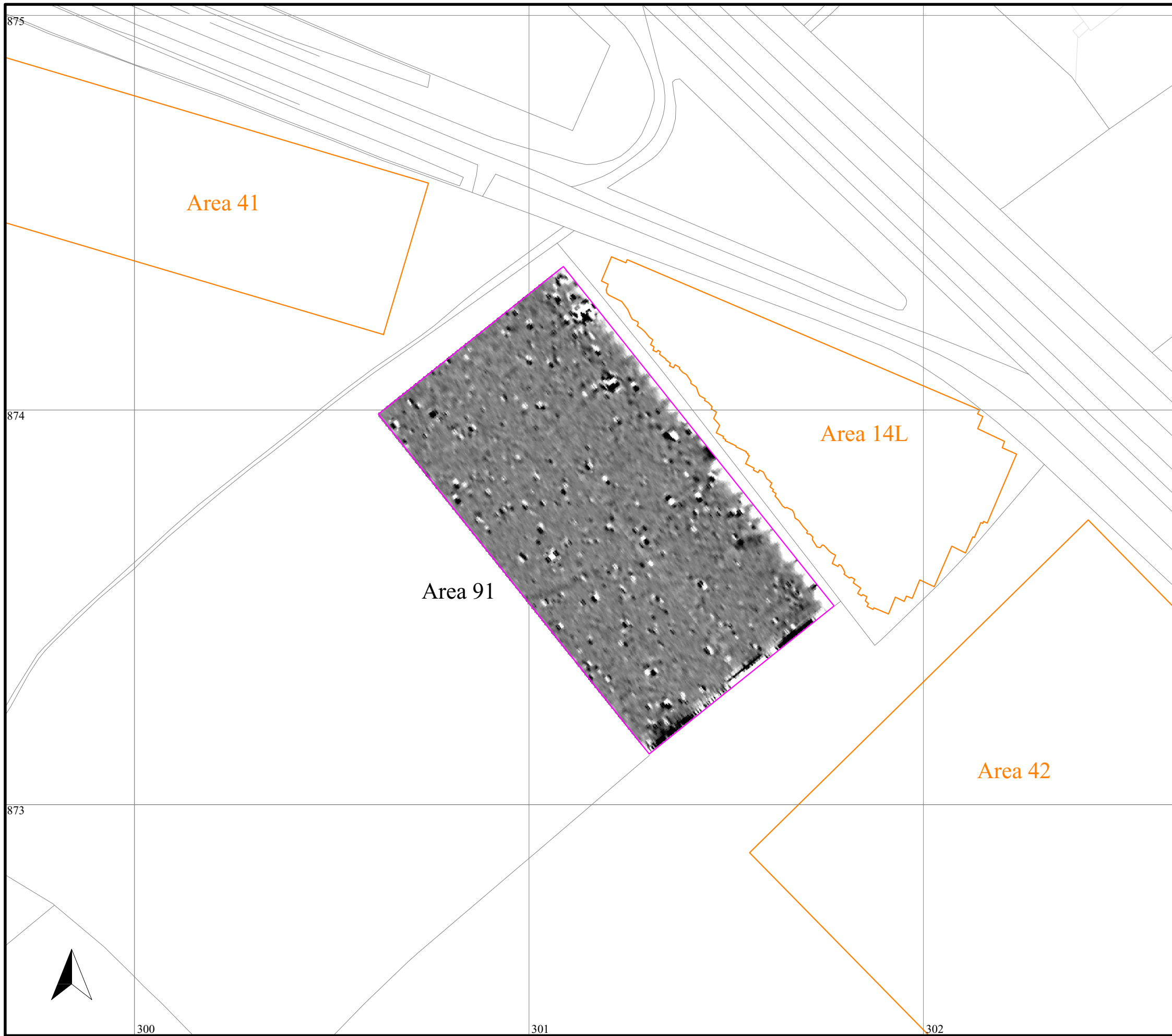
-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

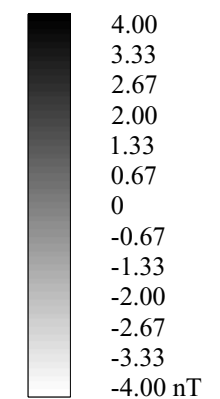


-  outline of Phase 2 survey area
-  soil-filled features
-  possible drain
-  direction of ridge and furrow
-  stone/rubble

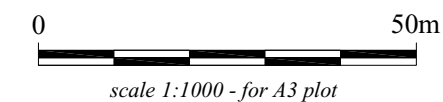
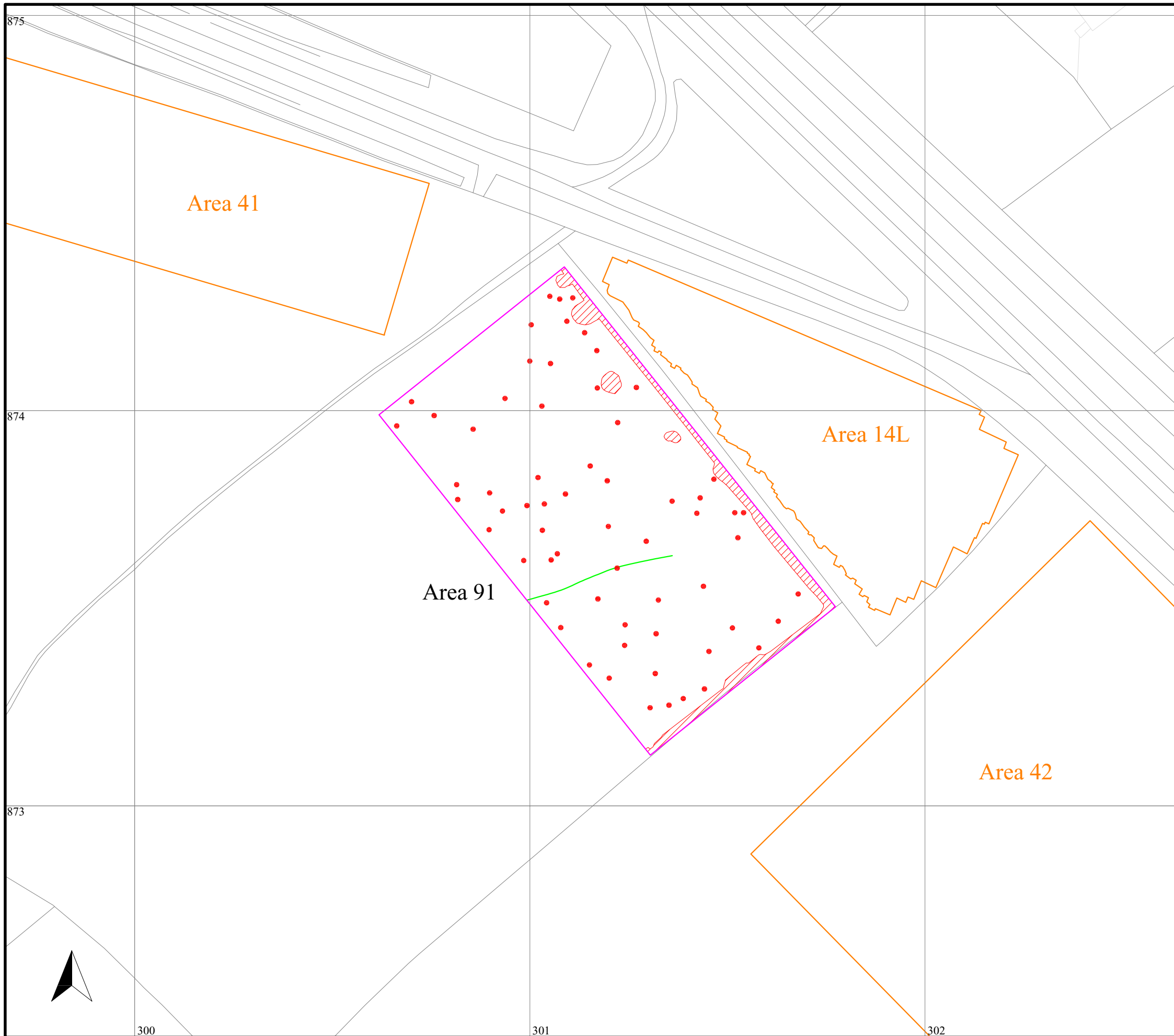
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002






 outline of Phase 2 survey area

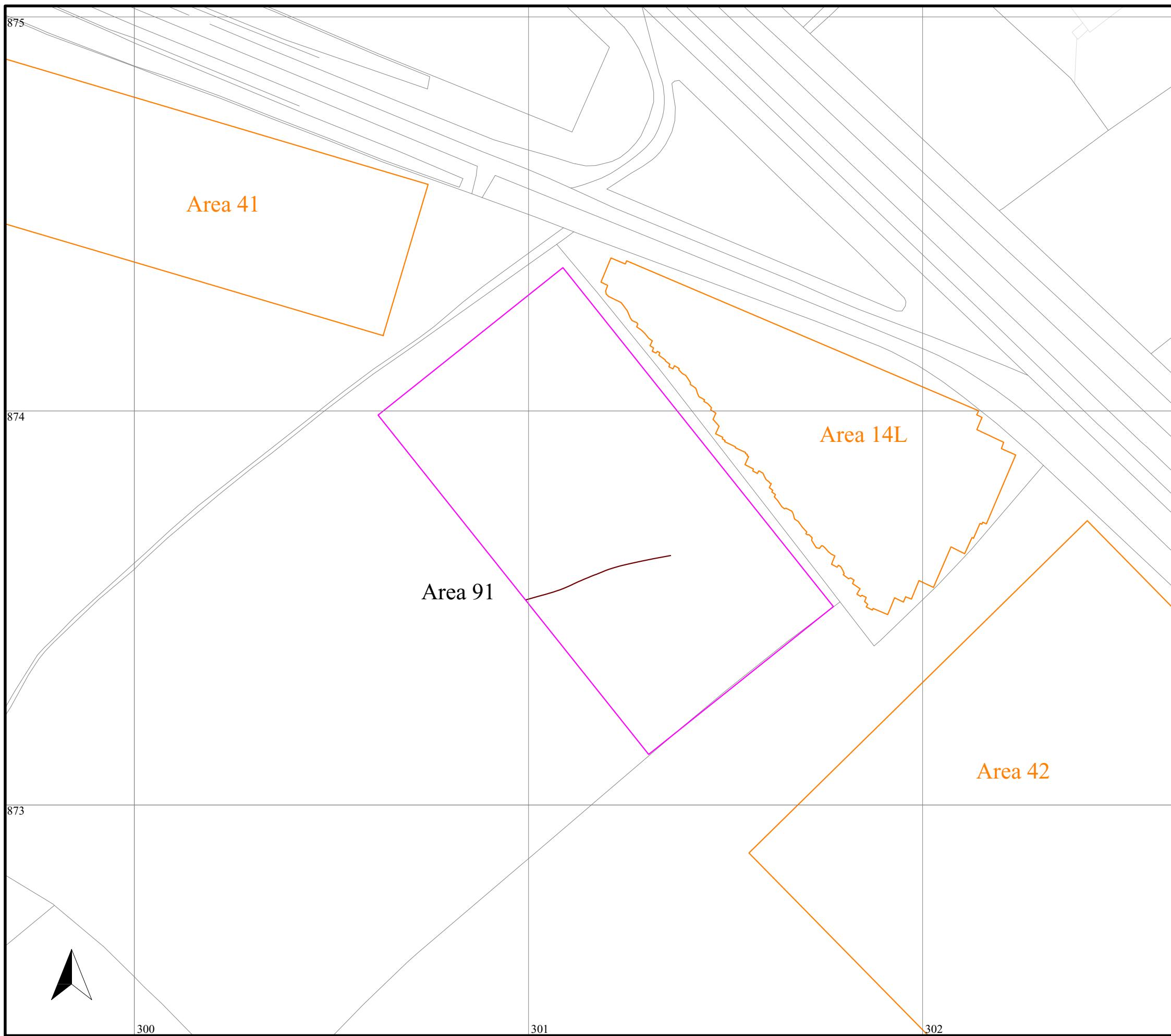


REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY



-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY



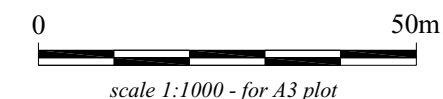
A1(T) Dishforth to Barton Improvement



**Phase 2 geophysical surveys
Report 1368**

Figure 38

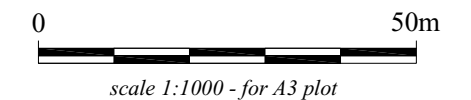
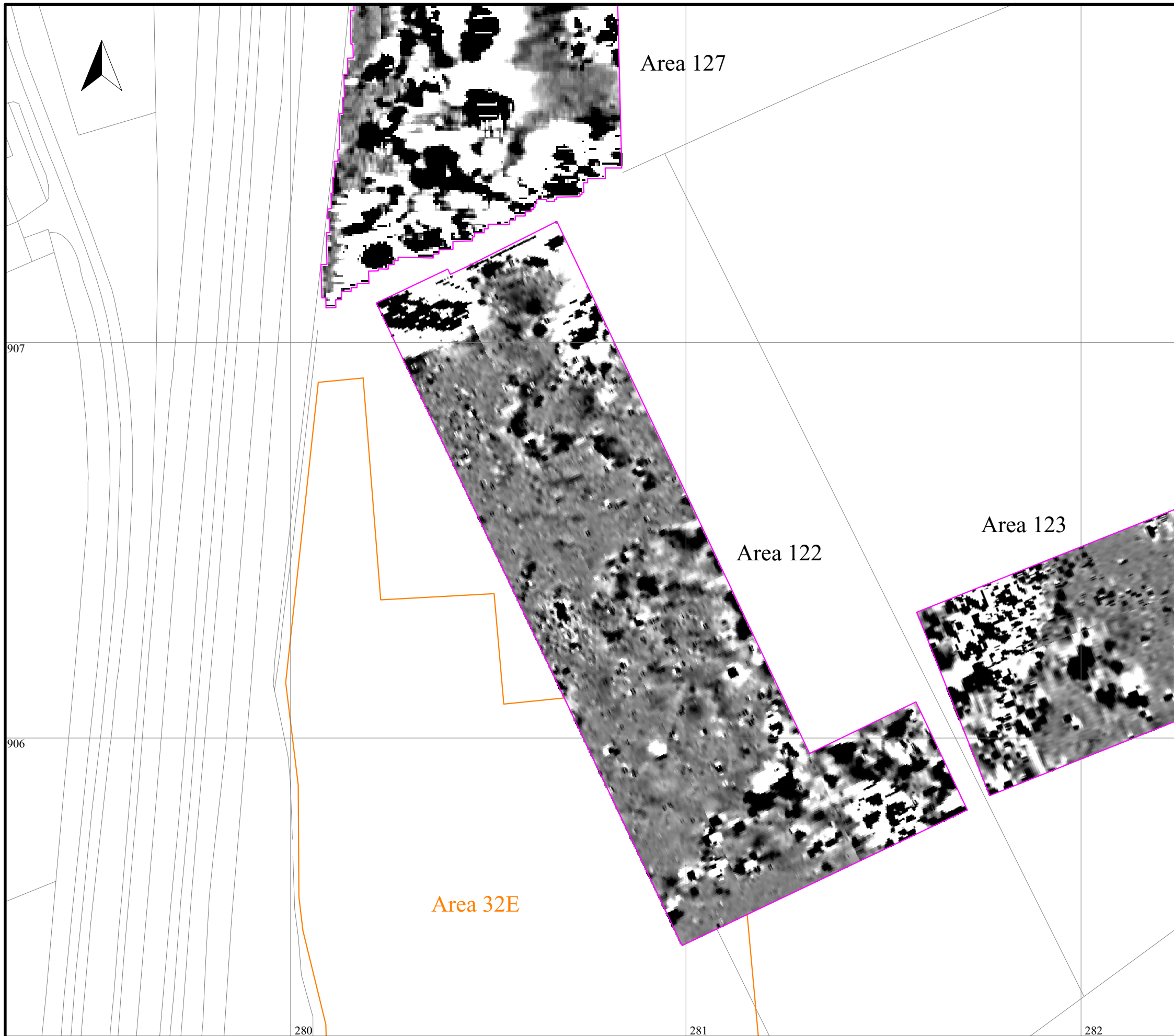
Archaeological interpretation of Area 91

basemap courtesy of Faber Maunsell

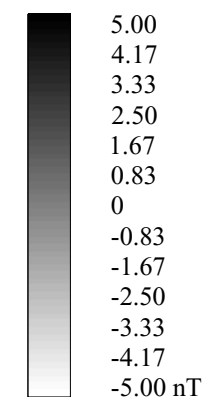


-  outline of Phase 2 survey area
-  soil-filled feature

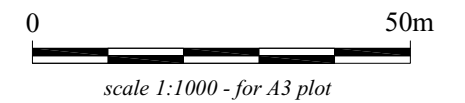
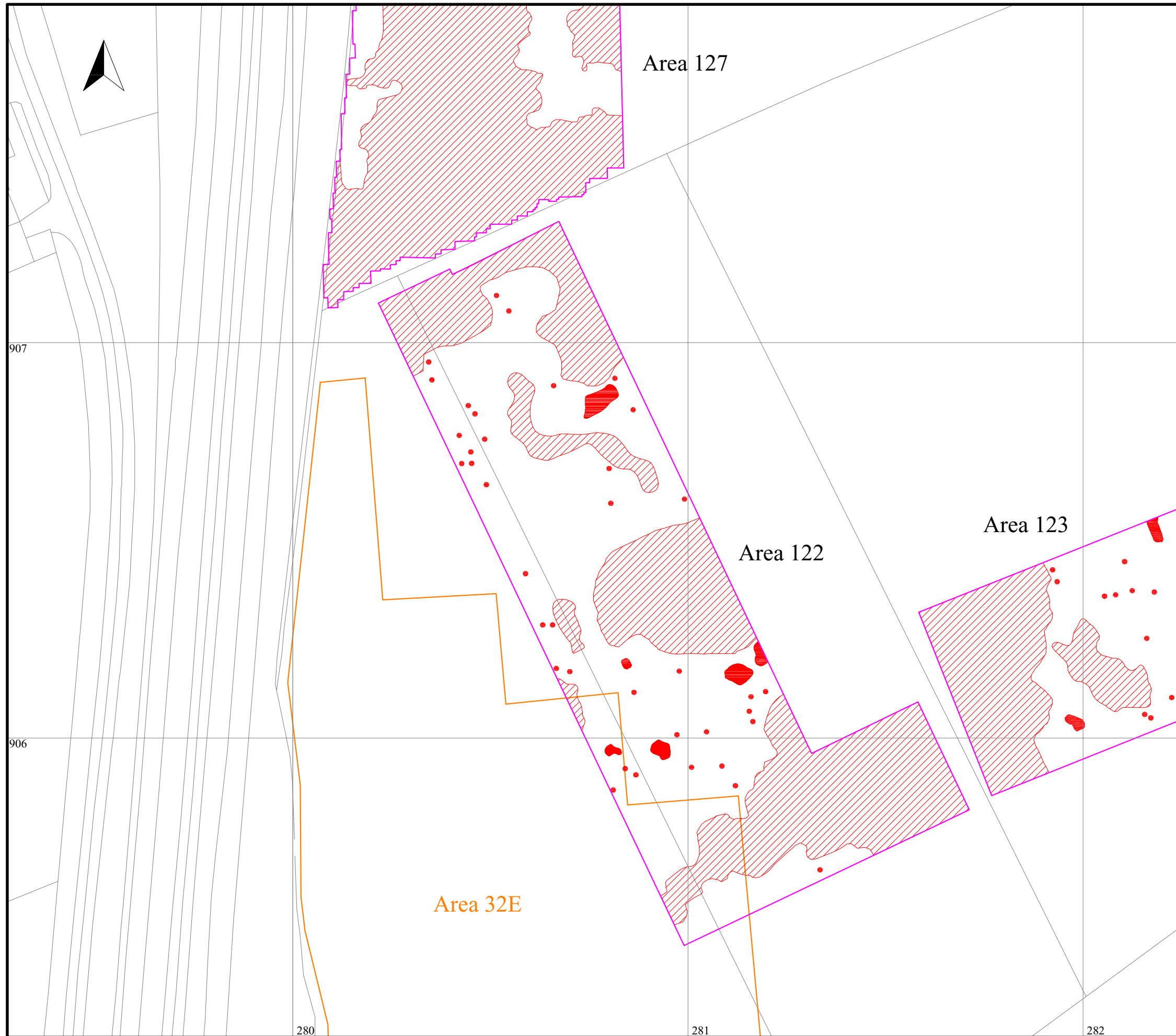
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY

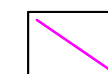




 outline of Phase 2 survey area

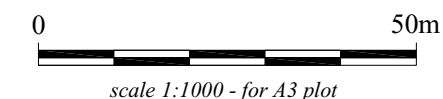


REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



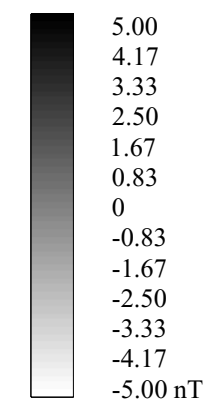
-  outline of Phase 2 survey area
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

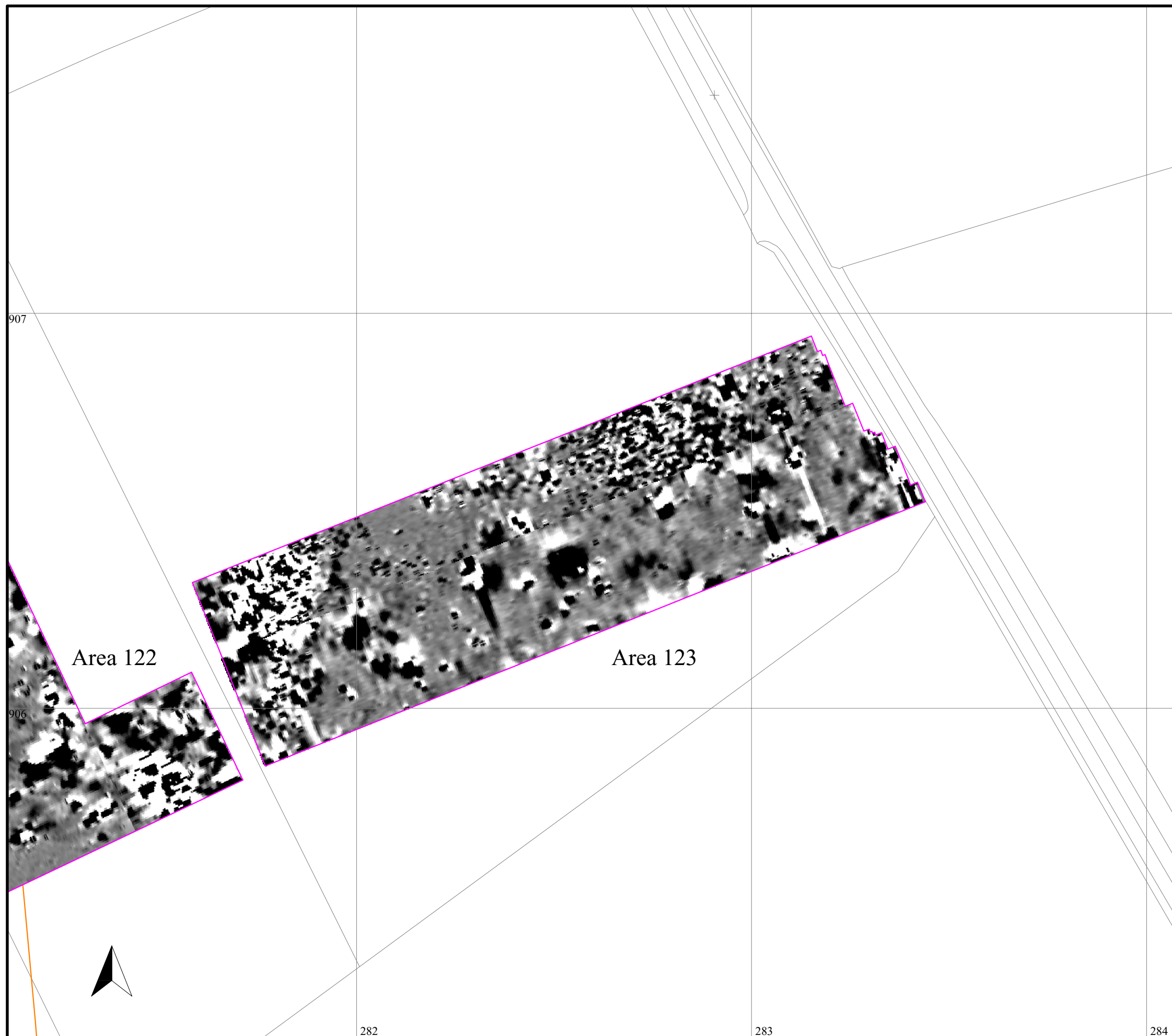


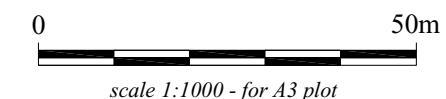
scale 1:1000 - for A3 plot

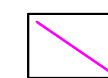

 outline of Phase 2 survey area



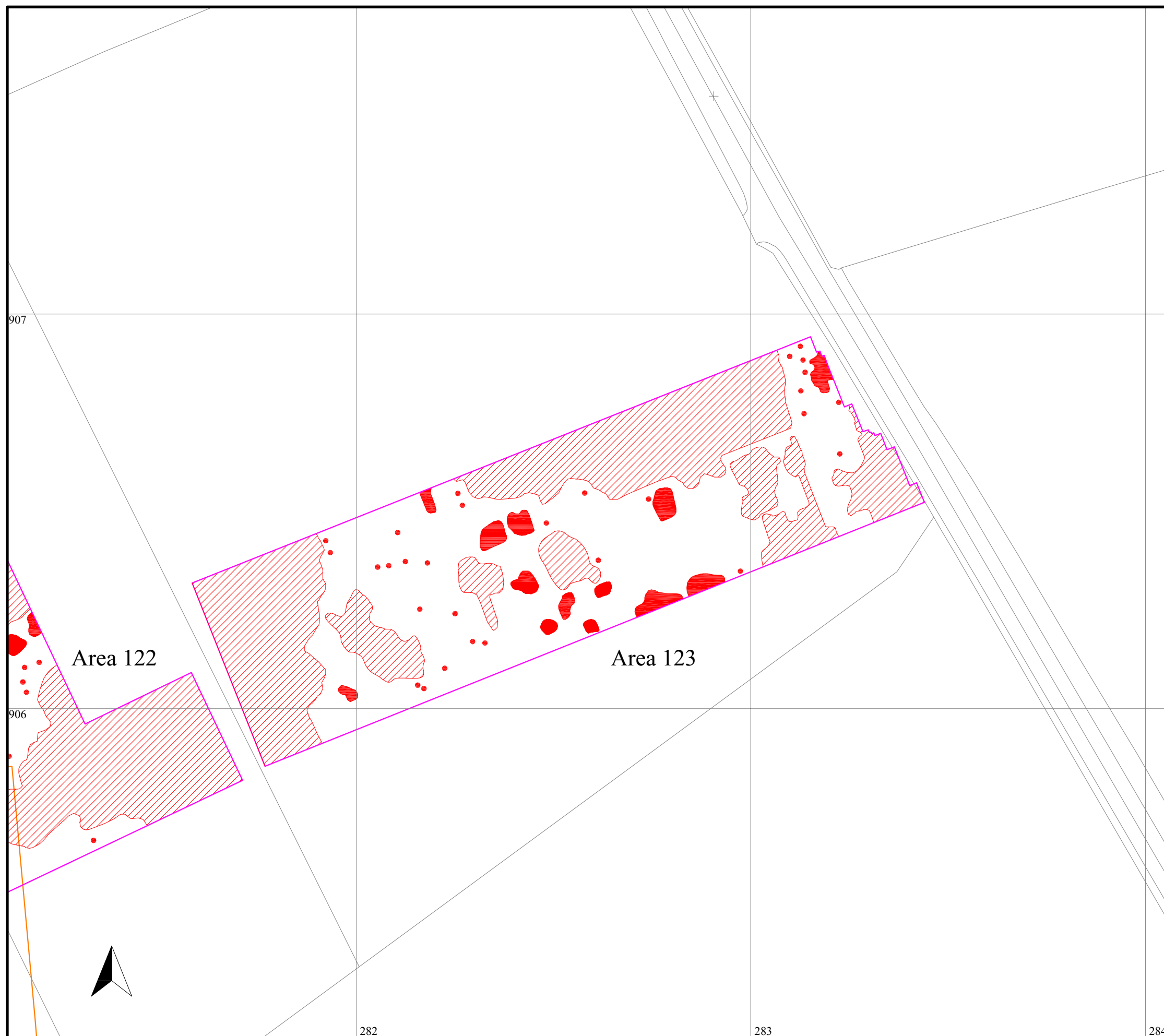
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

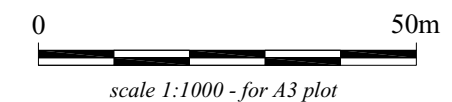
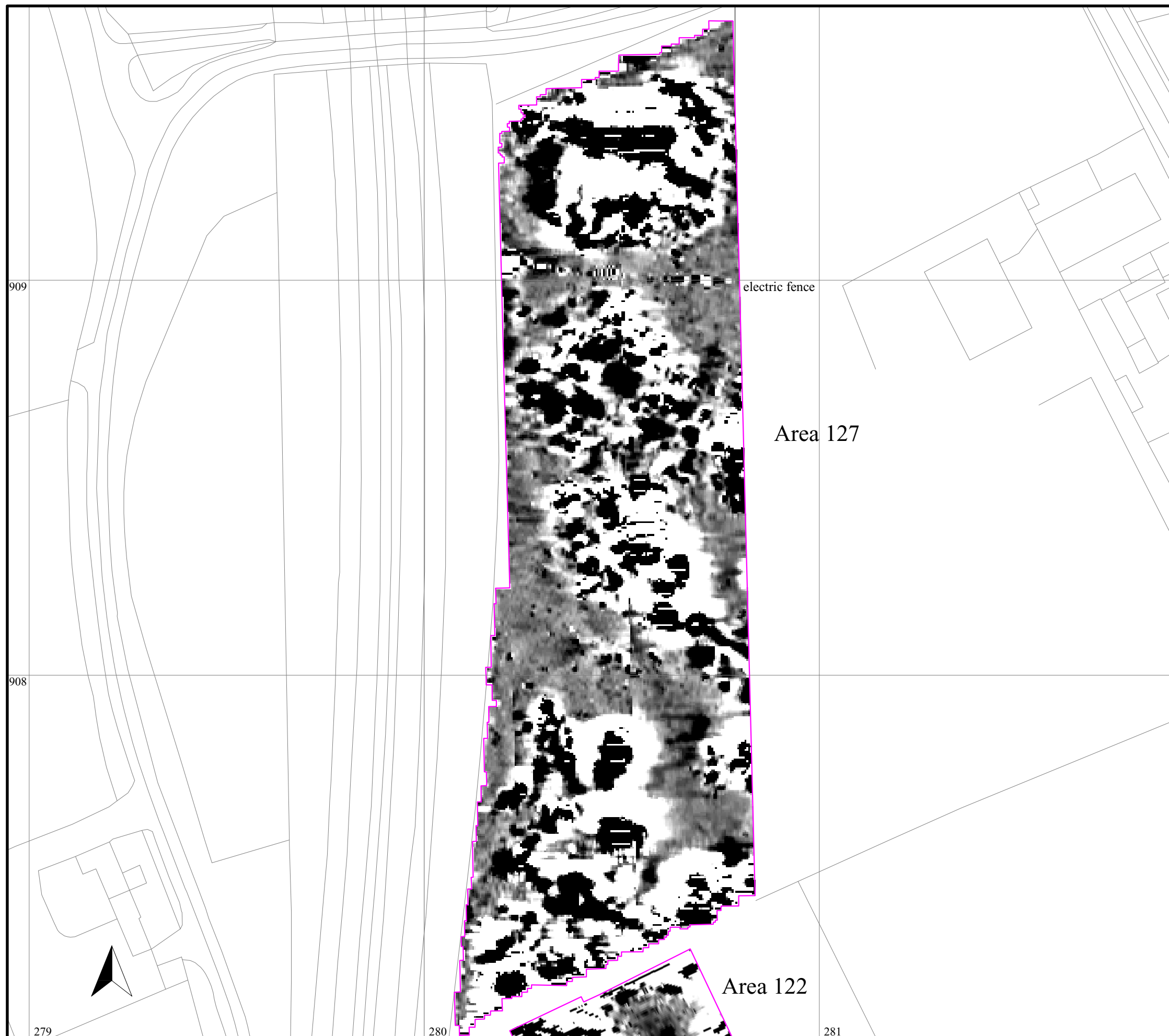




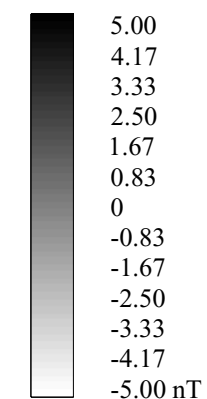
-  outline of Phase 2 survey area
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

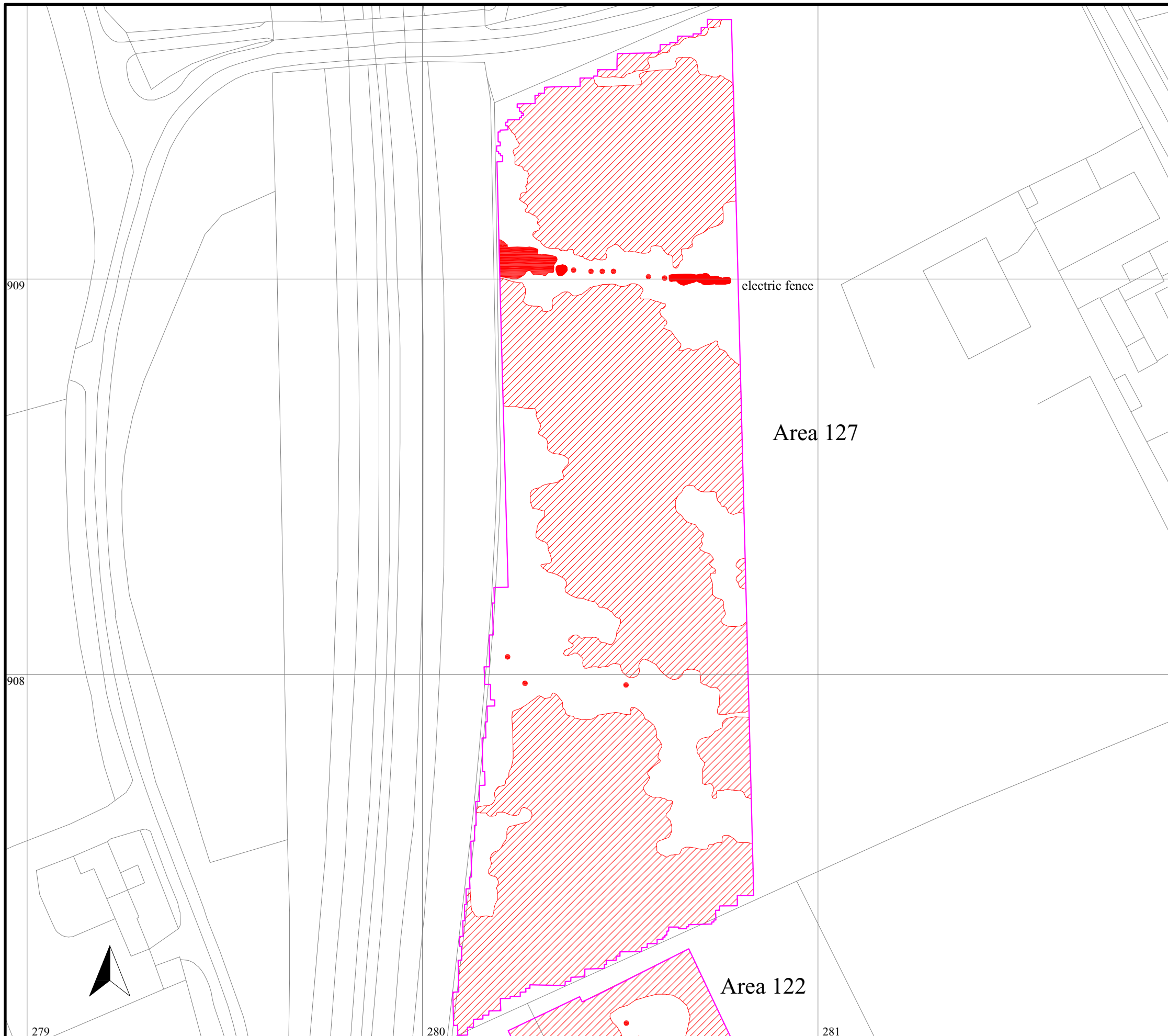




 outline of Phase 2 survey area



REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



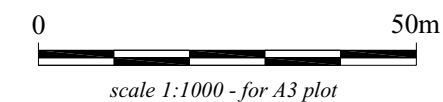
A1(T) Dishforth to Barton Improvement



**Phase 2 geophysical surveys
Report 1368**

Figure 44

Geophysical interpretation of Area 127

basemap courtesy of Faber Maunsell

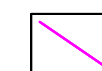


- 
 outline of Phase 2 survey area
- 
 dipolar magnetic anomalies

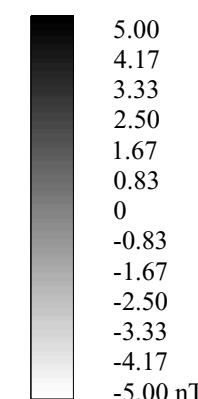
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



scale 1:500 - for A3 plot

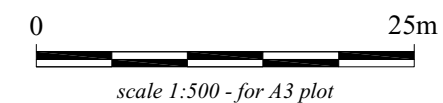


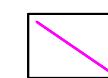

outline of Phase 2 survey area



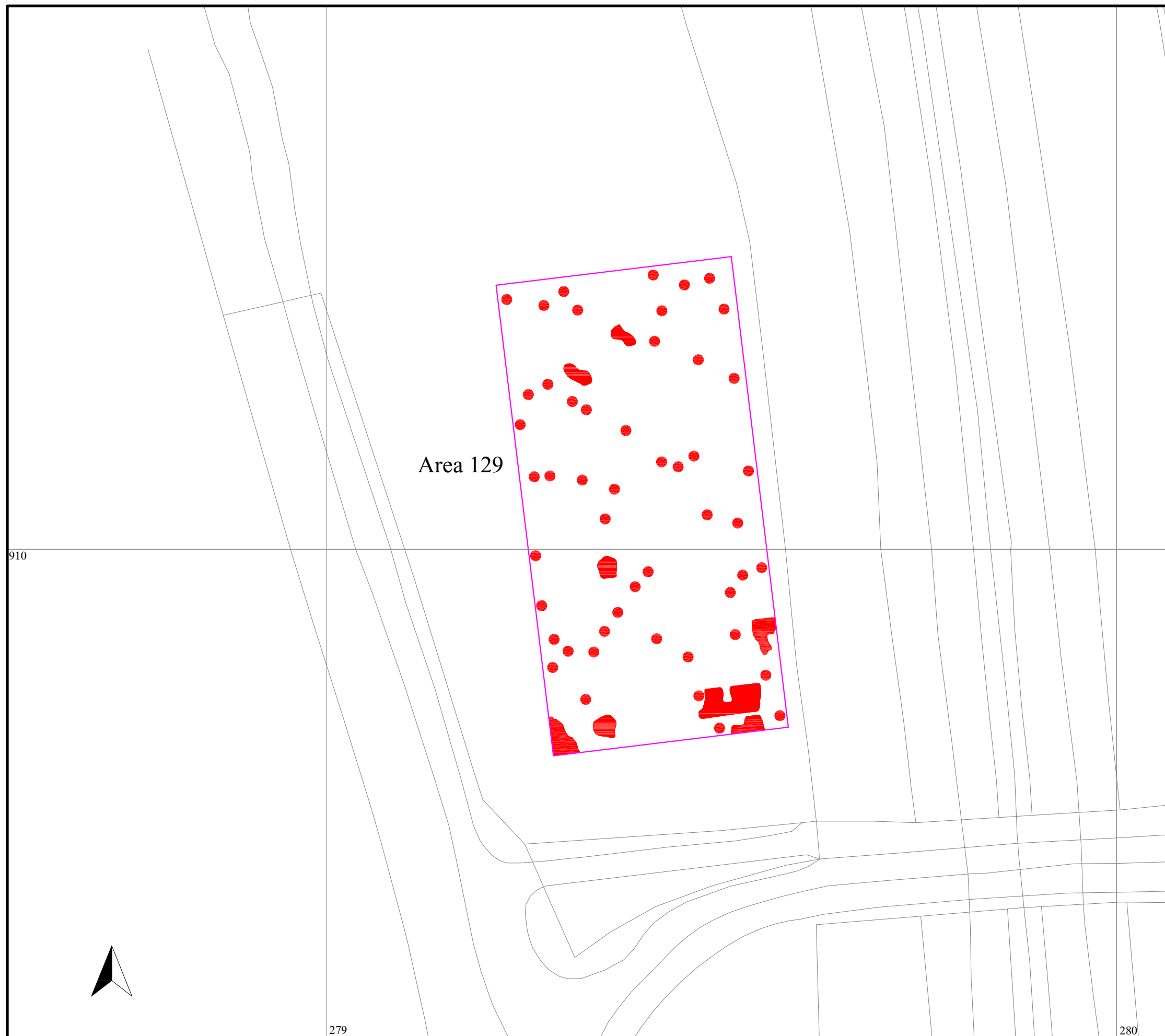
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

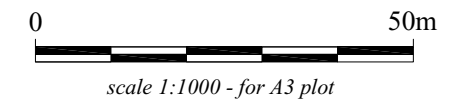




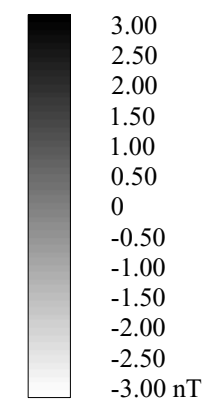
-  outline of Phase 2 survey area
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



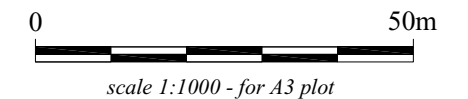






 outline of Phase 2 survey area



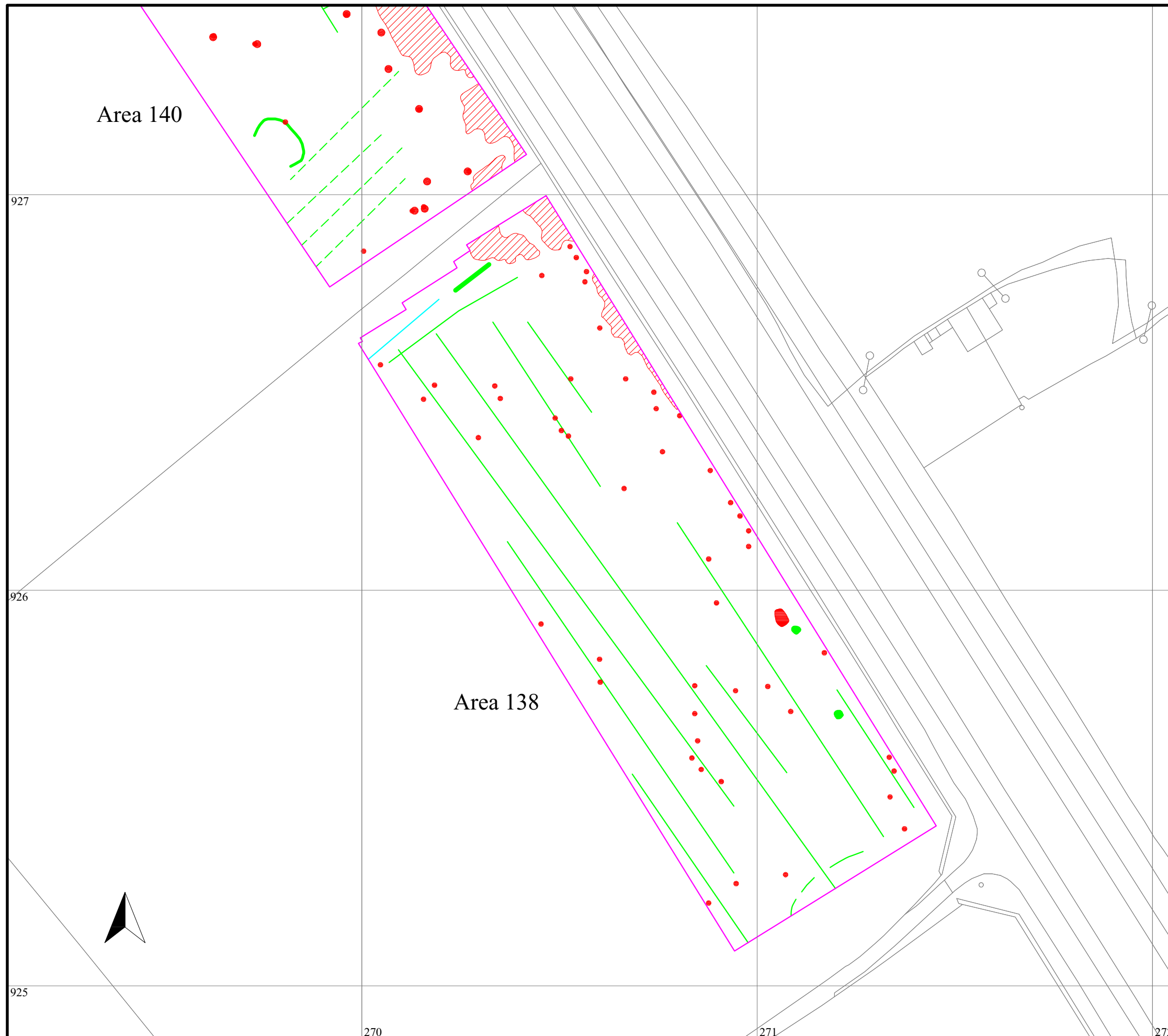
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

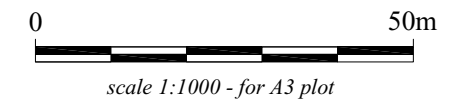







-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

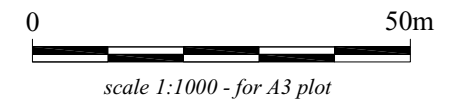
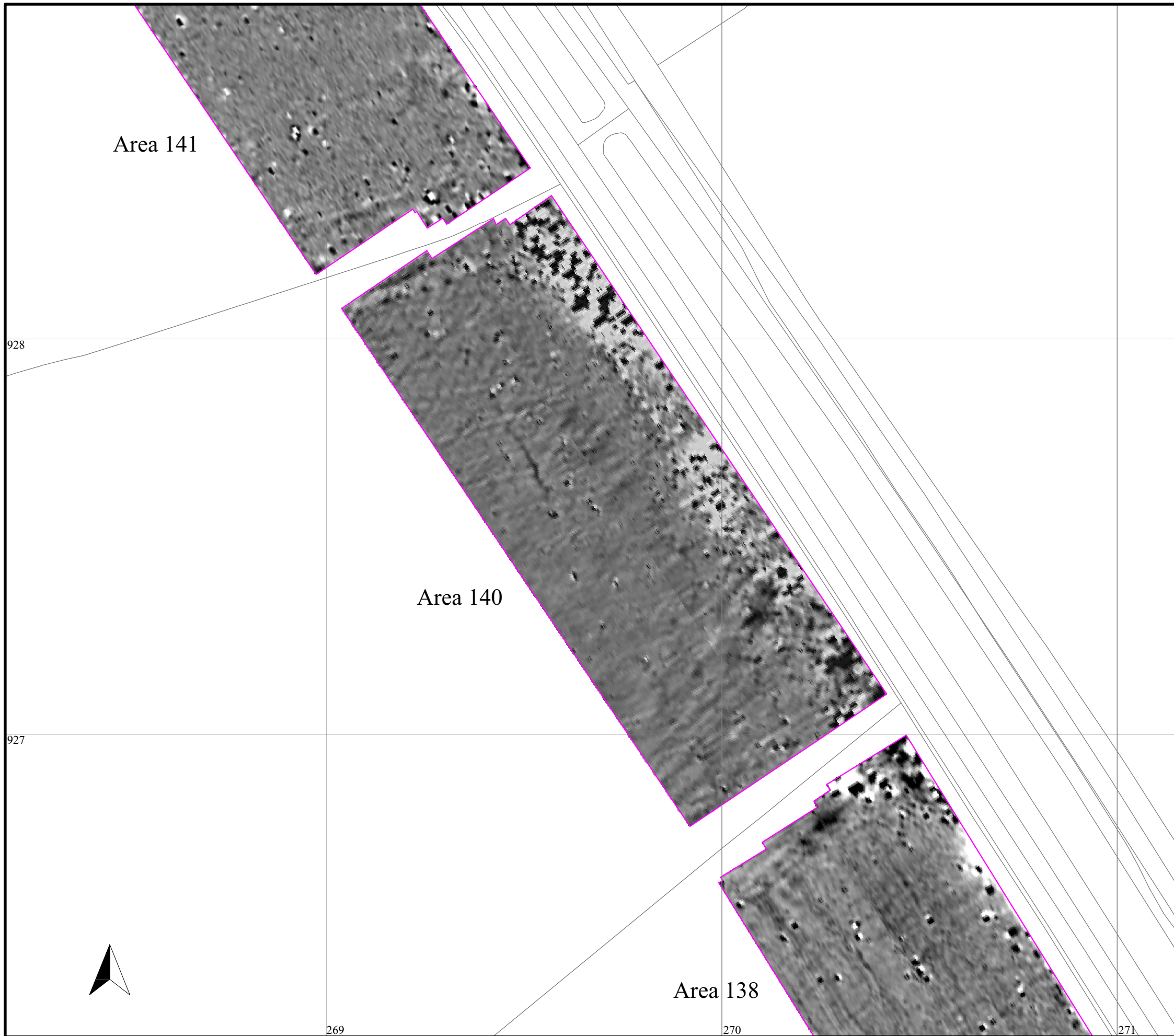


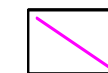


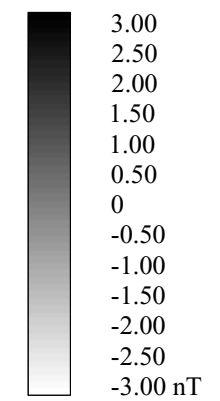
-  outline of Phase 2 survey area
-  soil-filled features
-  direction of ridge and furrow

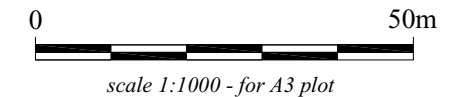
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002









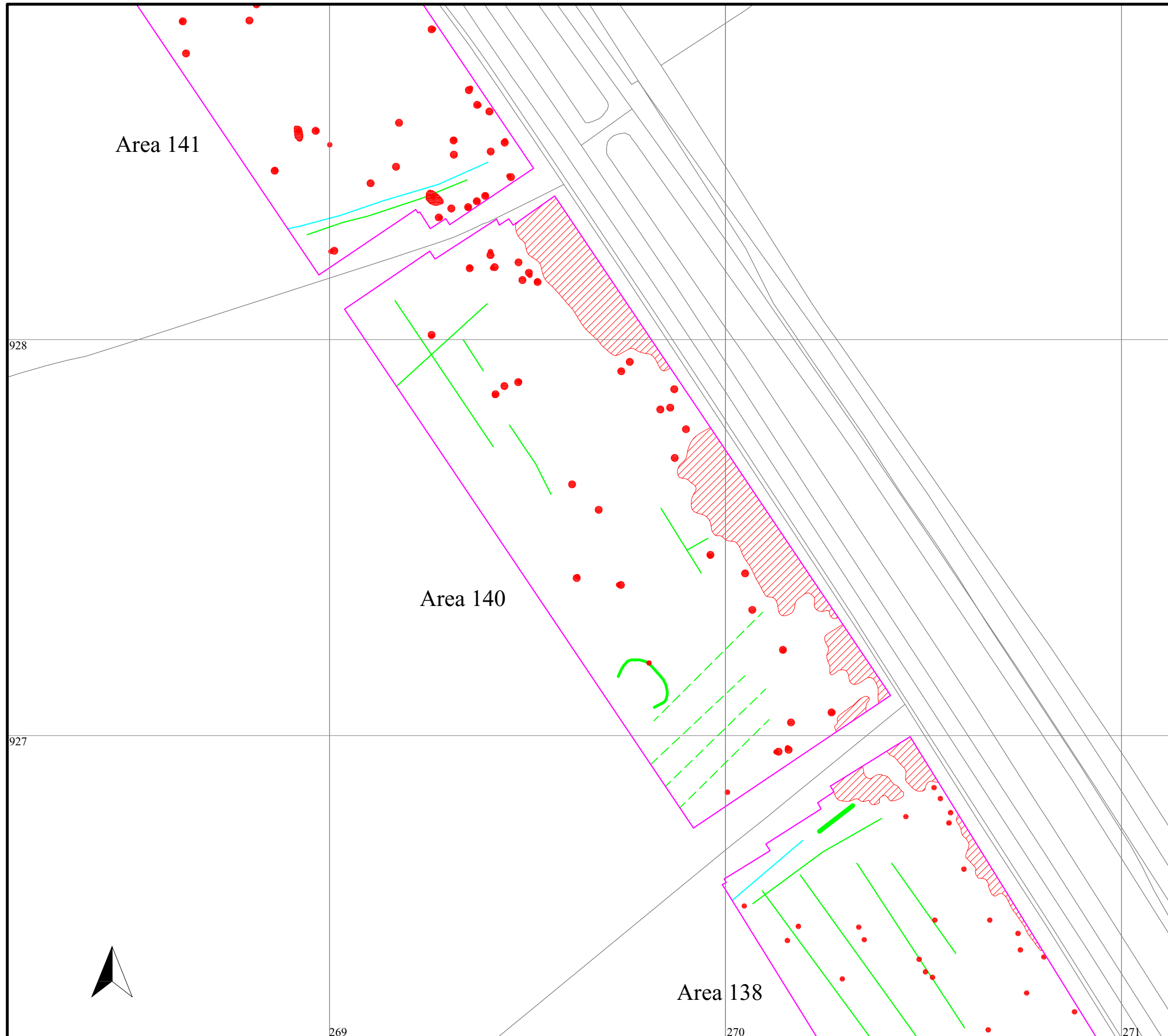

 outline of Phase 2 survey area

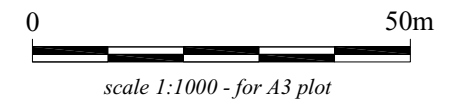







-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

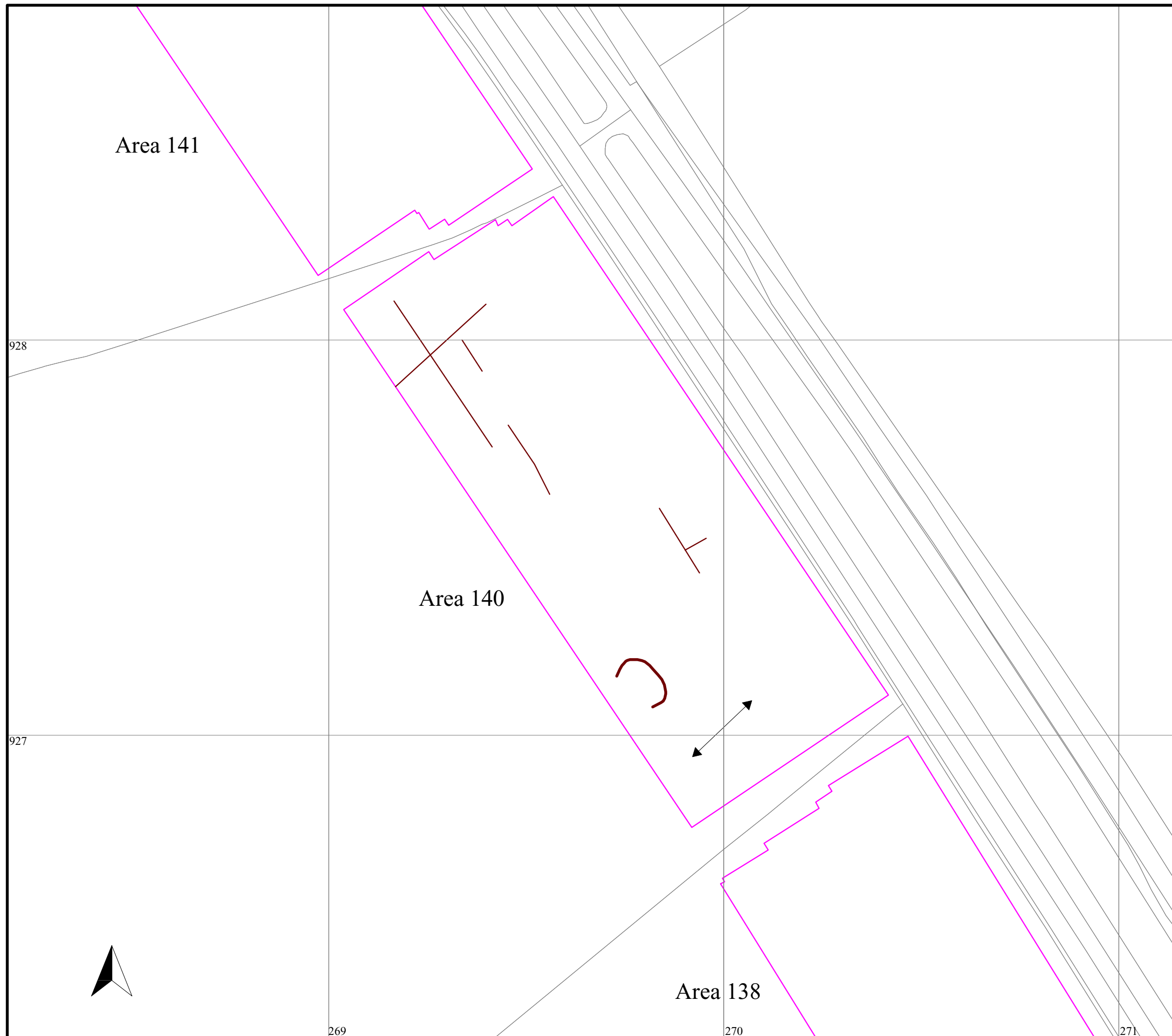
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

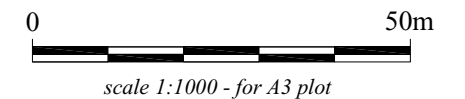




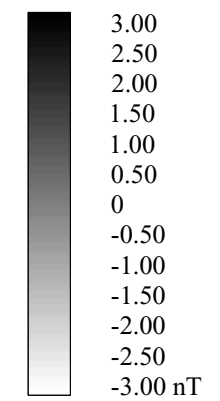
-  outline of Phase 2 survey area
-  soil-filled features
-  direction of ridge and furrow

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



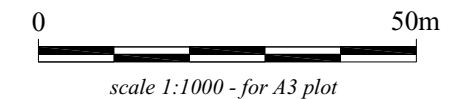






 outline of Phase 2 survey area



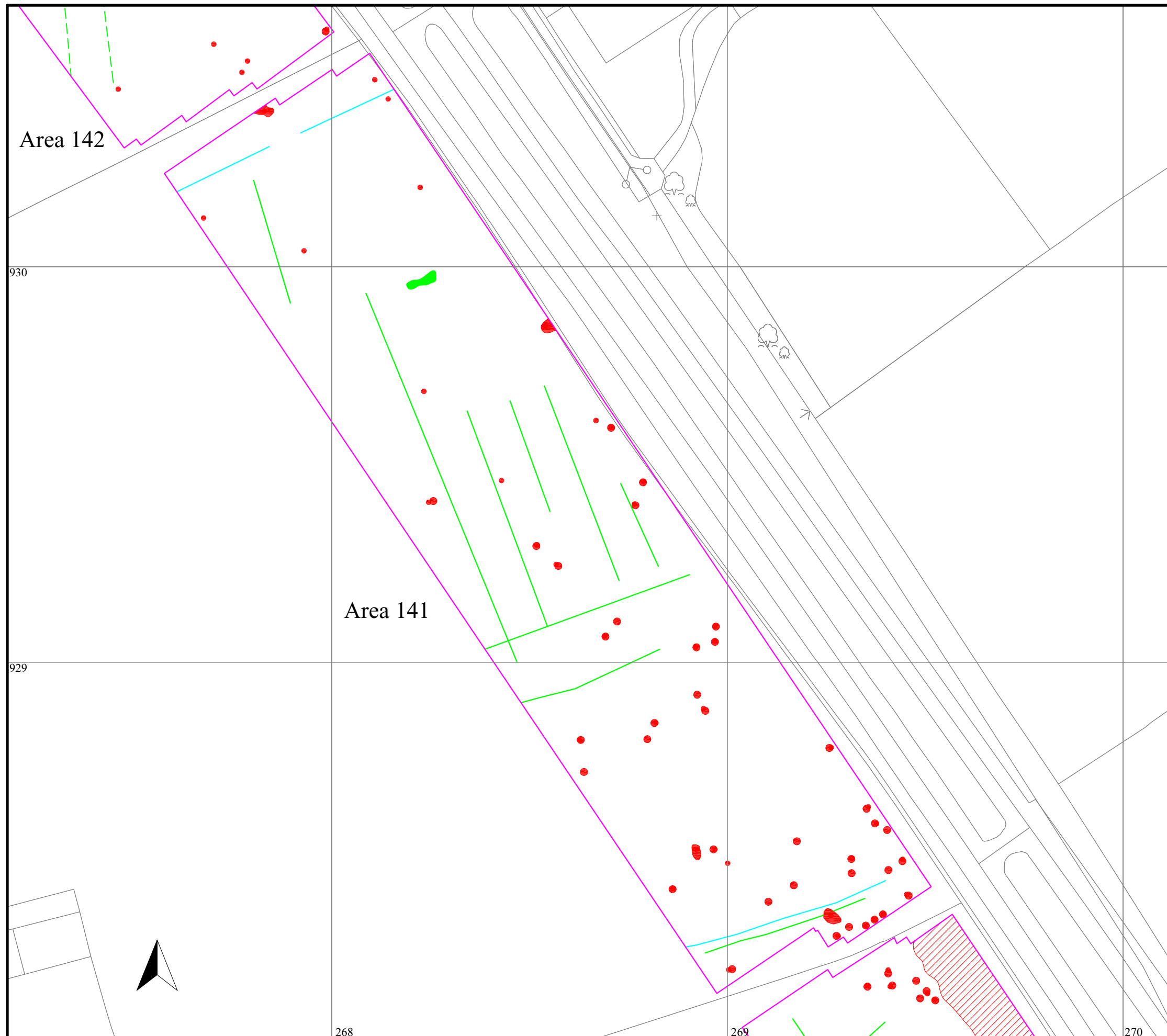
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

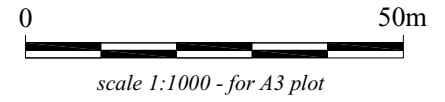
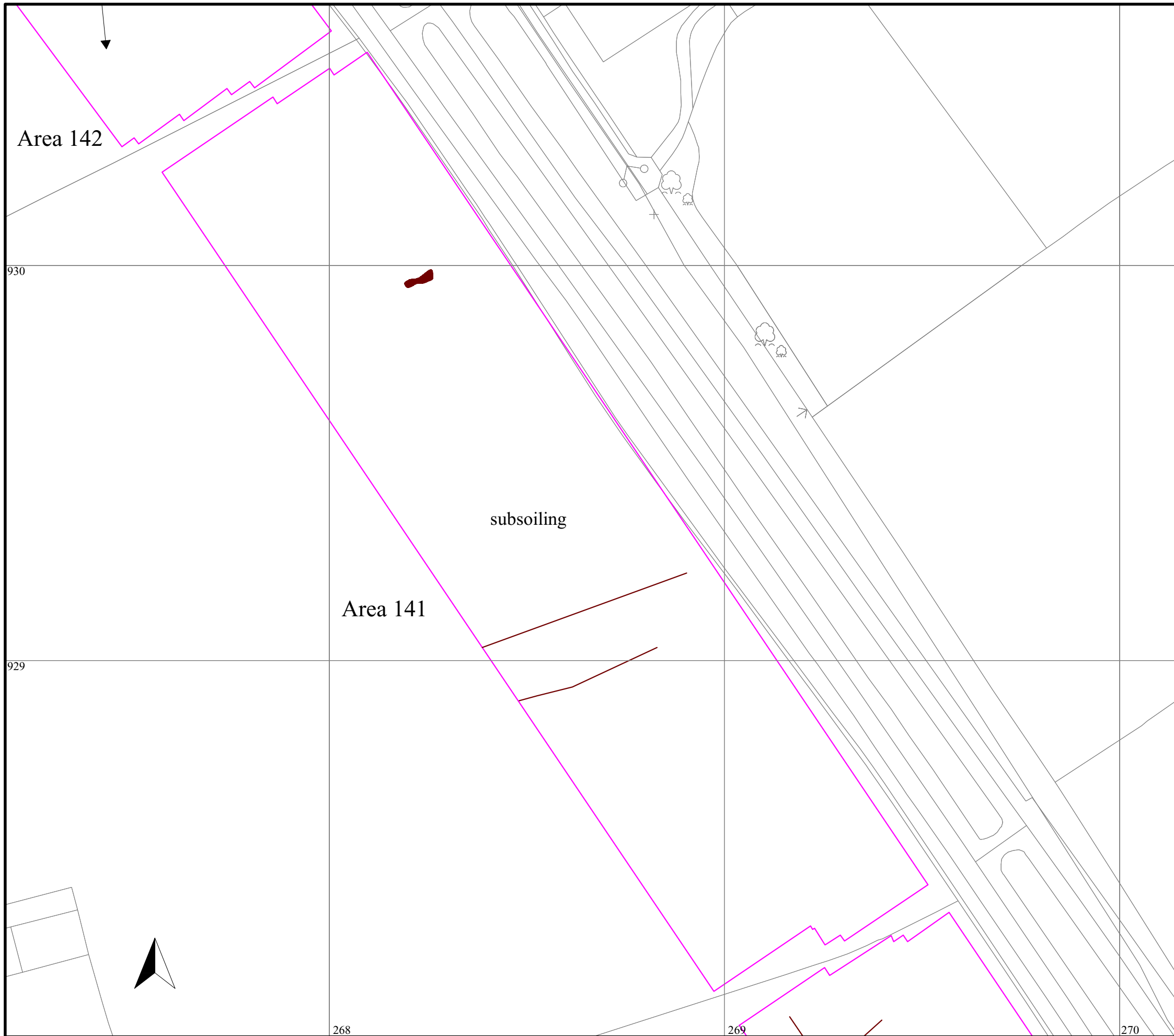







-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

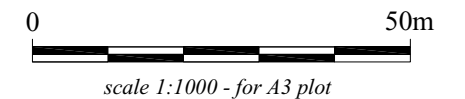
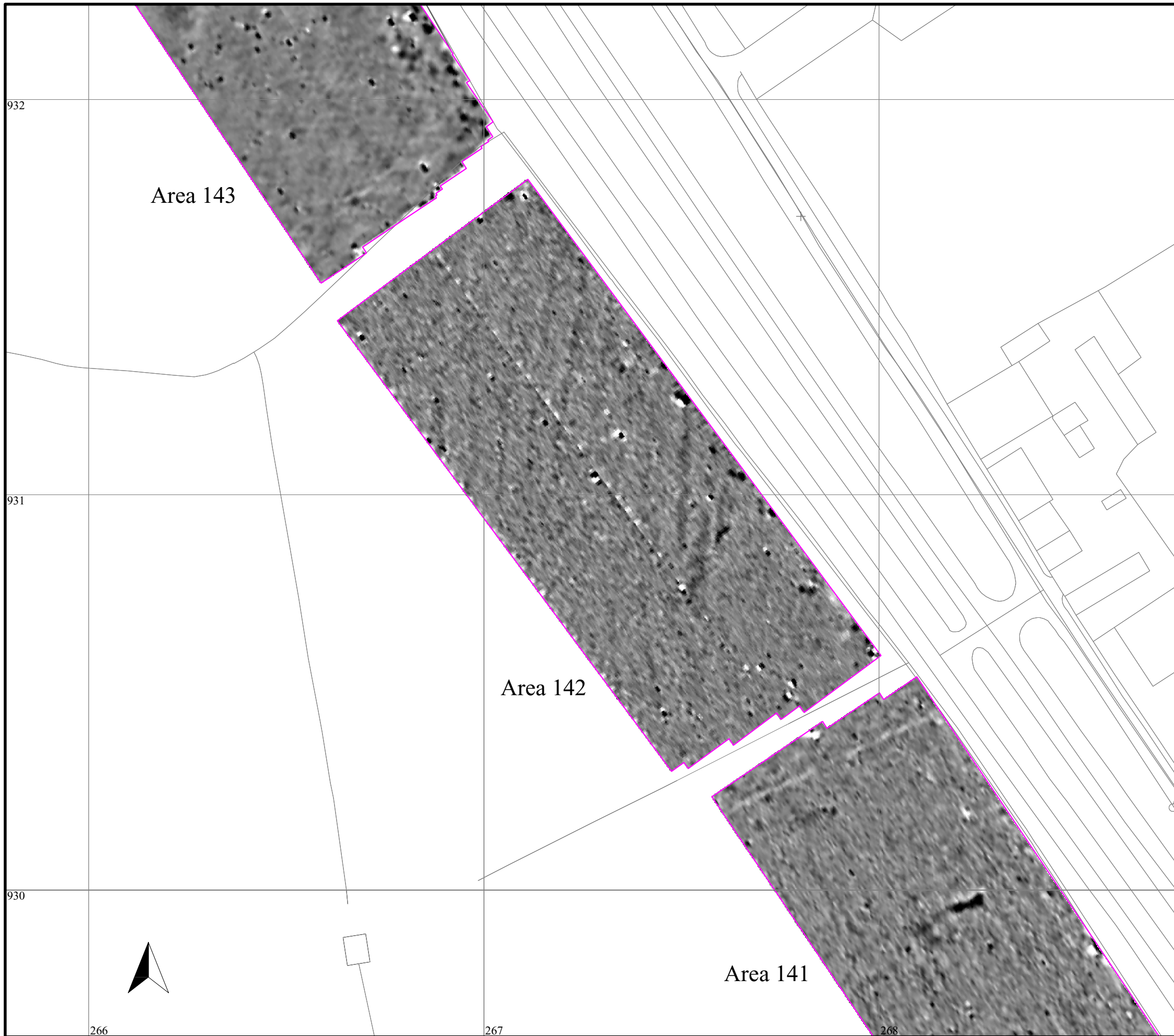
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



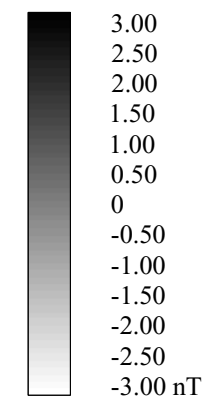


-  outline of Phase 2 survey area
-  soil-filled features
-  direction of ridge and furrow

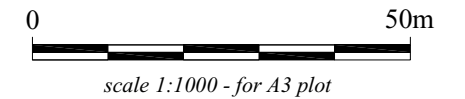
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

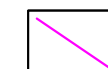





 outline of Phase 2 survey area

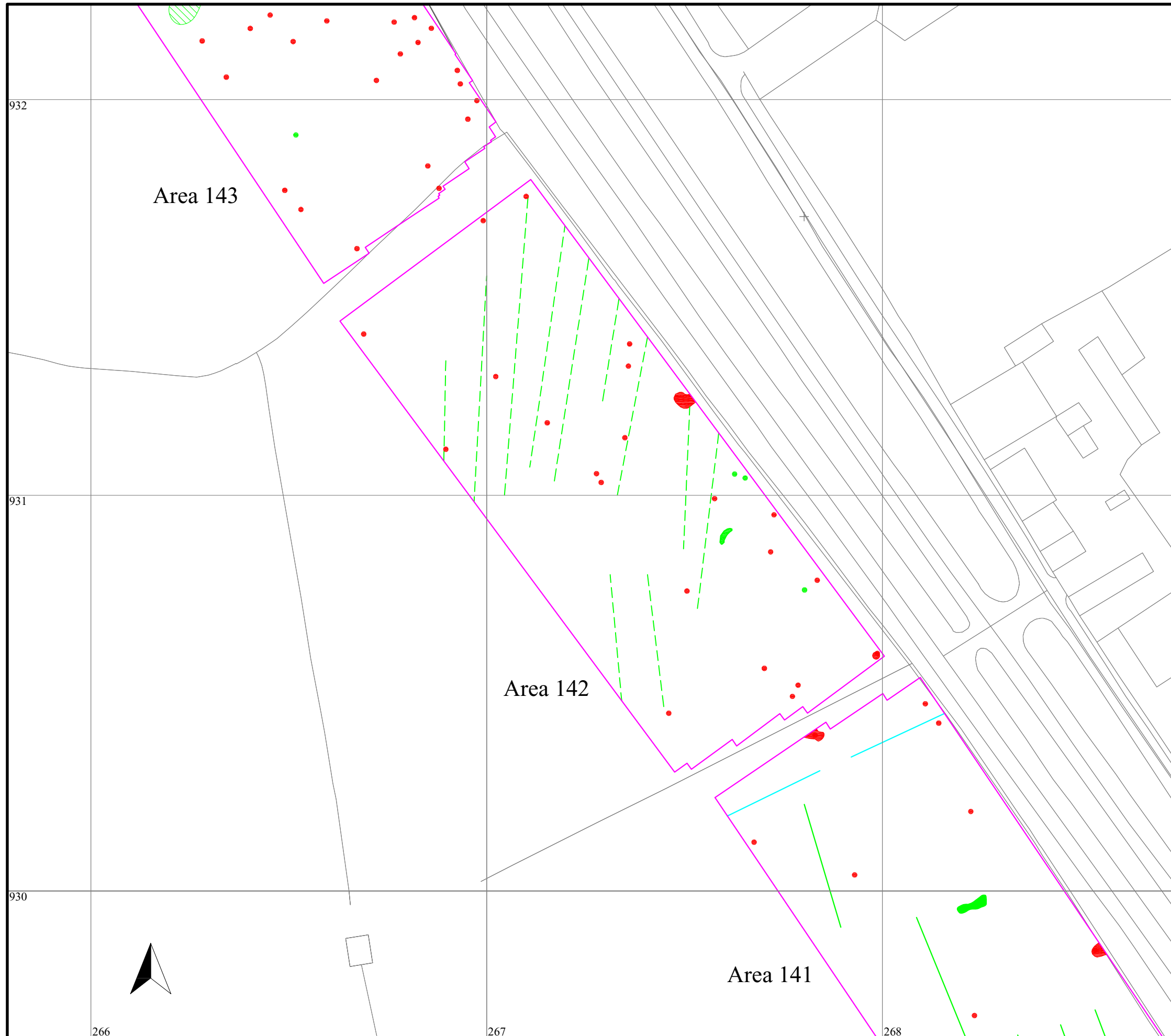


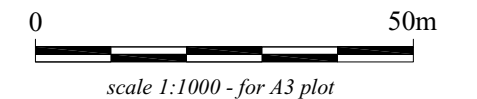
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

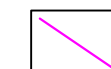
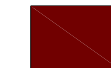



-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

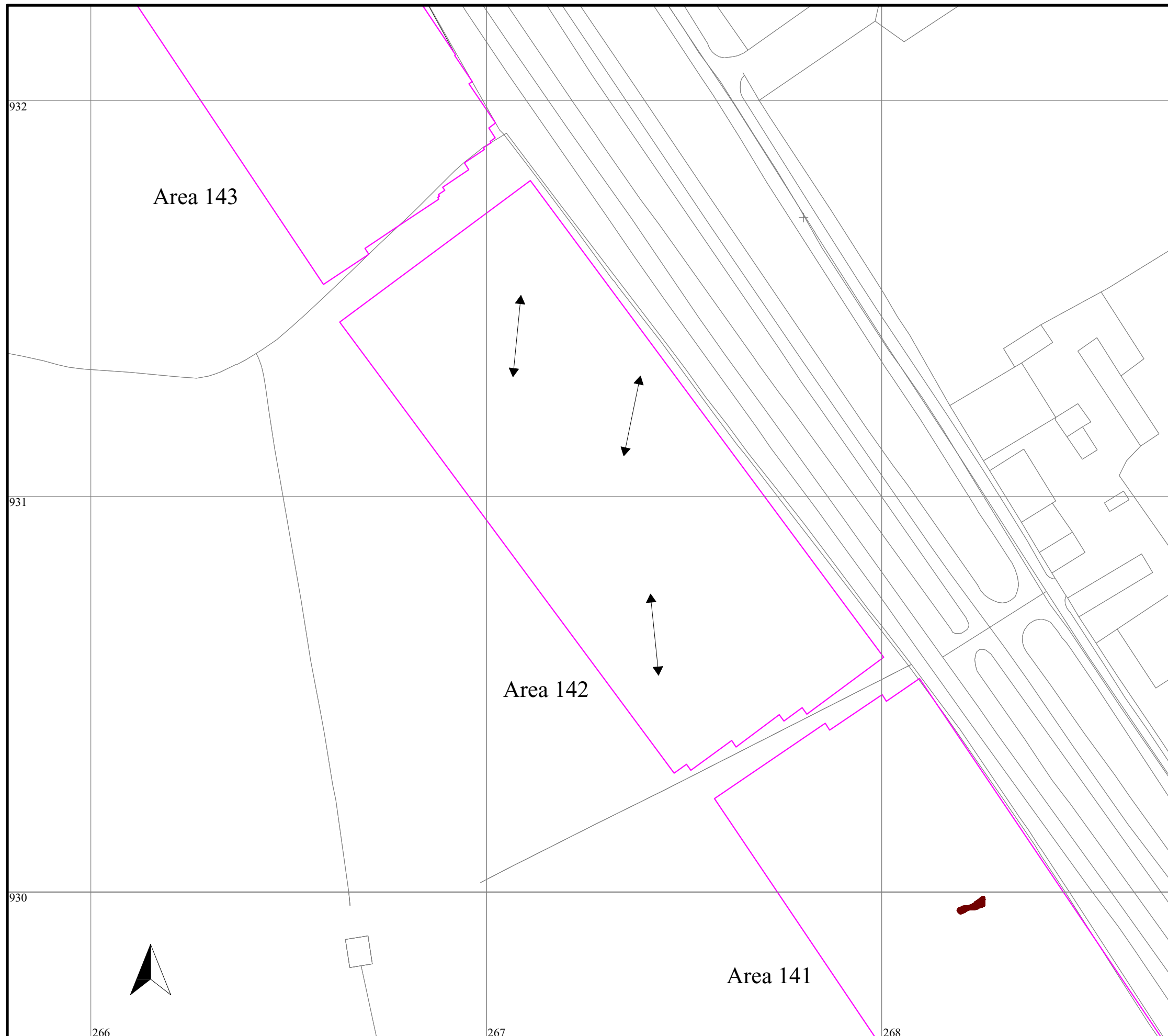
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

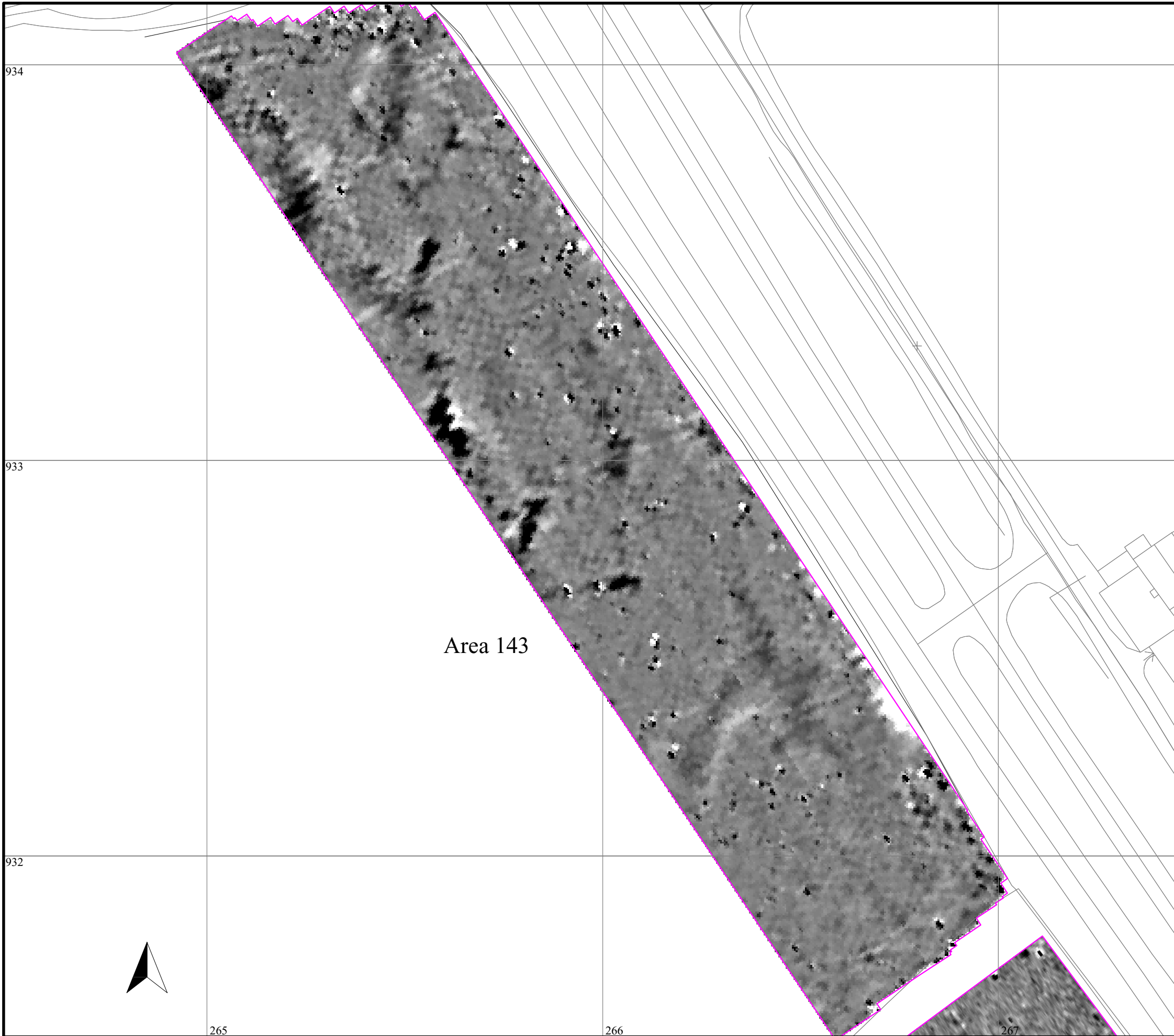




-  outline of Phase 2 survey area
-  soil-filled features
-  direction of ridge and furrow

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002





Archaeological Services
University of Durham

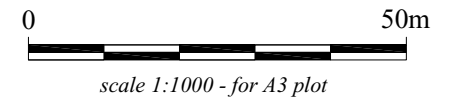
A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

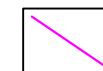
Figure 59

Geophysical survey of Area 143

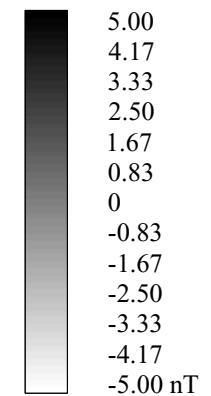
basemap courtesy of Faber Maunsell



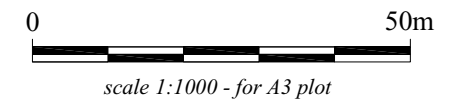
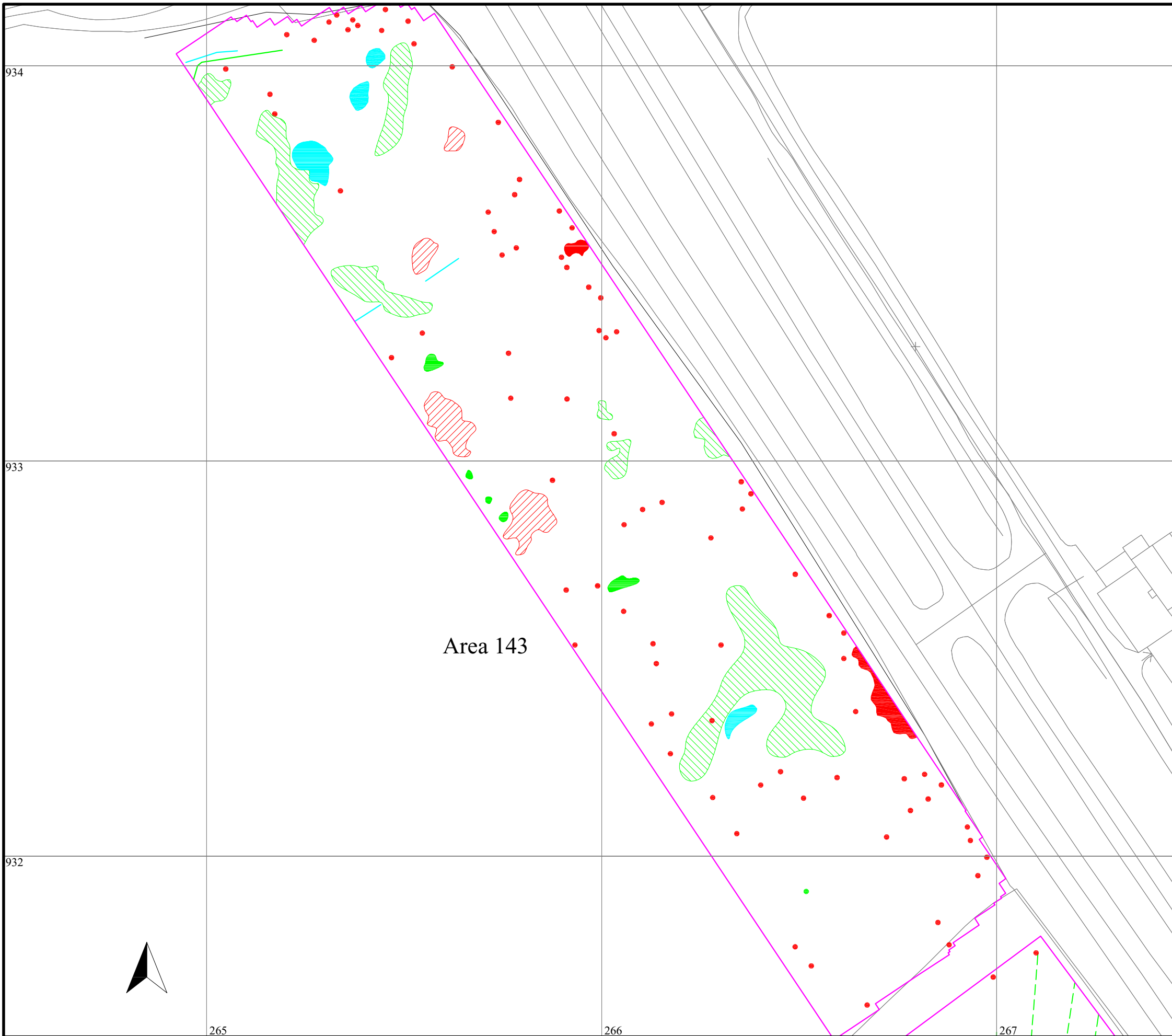
scale 1:1000 - for A3 plot

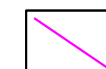

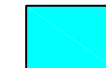



outline of Phase 2 survey area

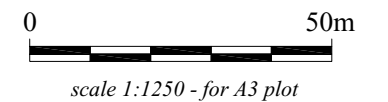


REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

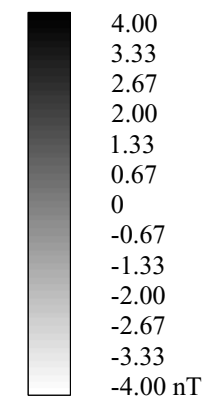
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



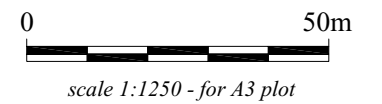
scale 1:1250 - for A3 plot







outline of Phase 2 survey area

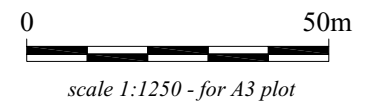
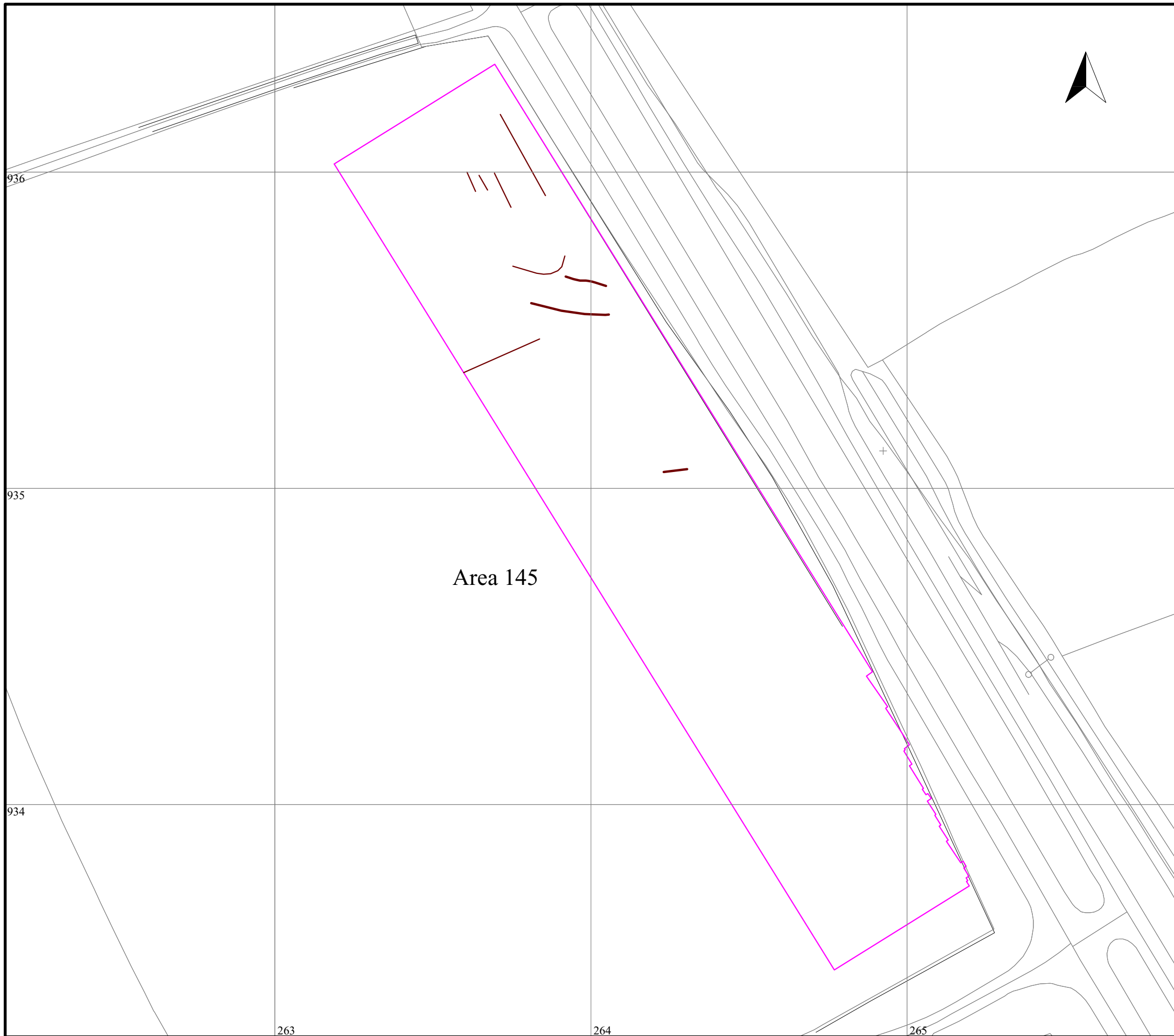




REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



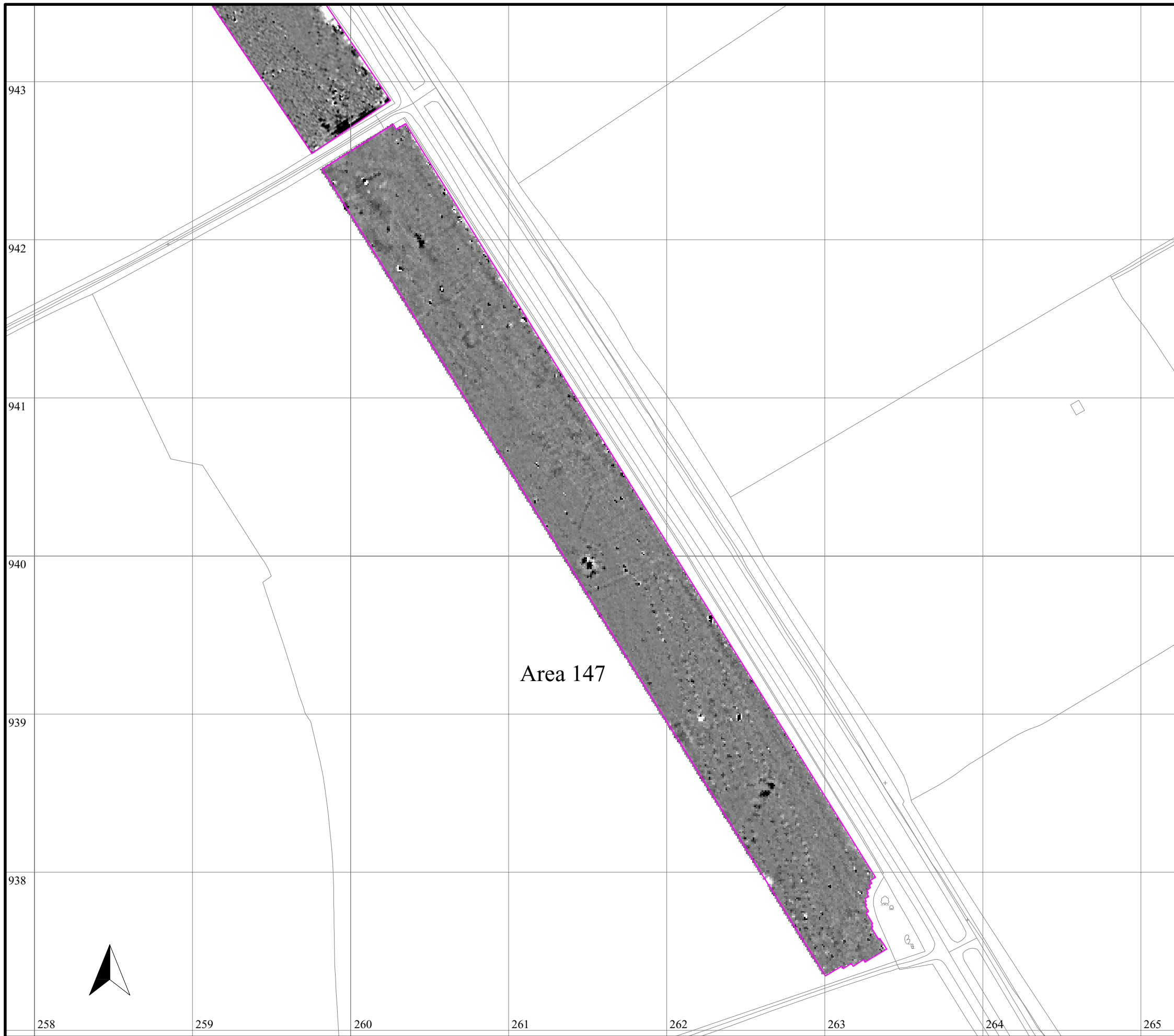
-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



-  outline of Phase 2 survey area
-  soil-filled features

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



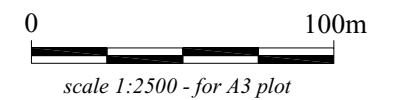
A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

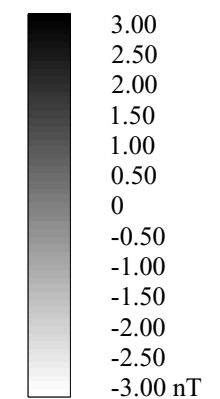
Figure 64

Geophysical survey of Area 147

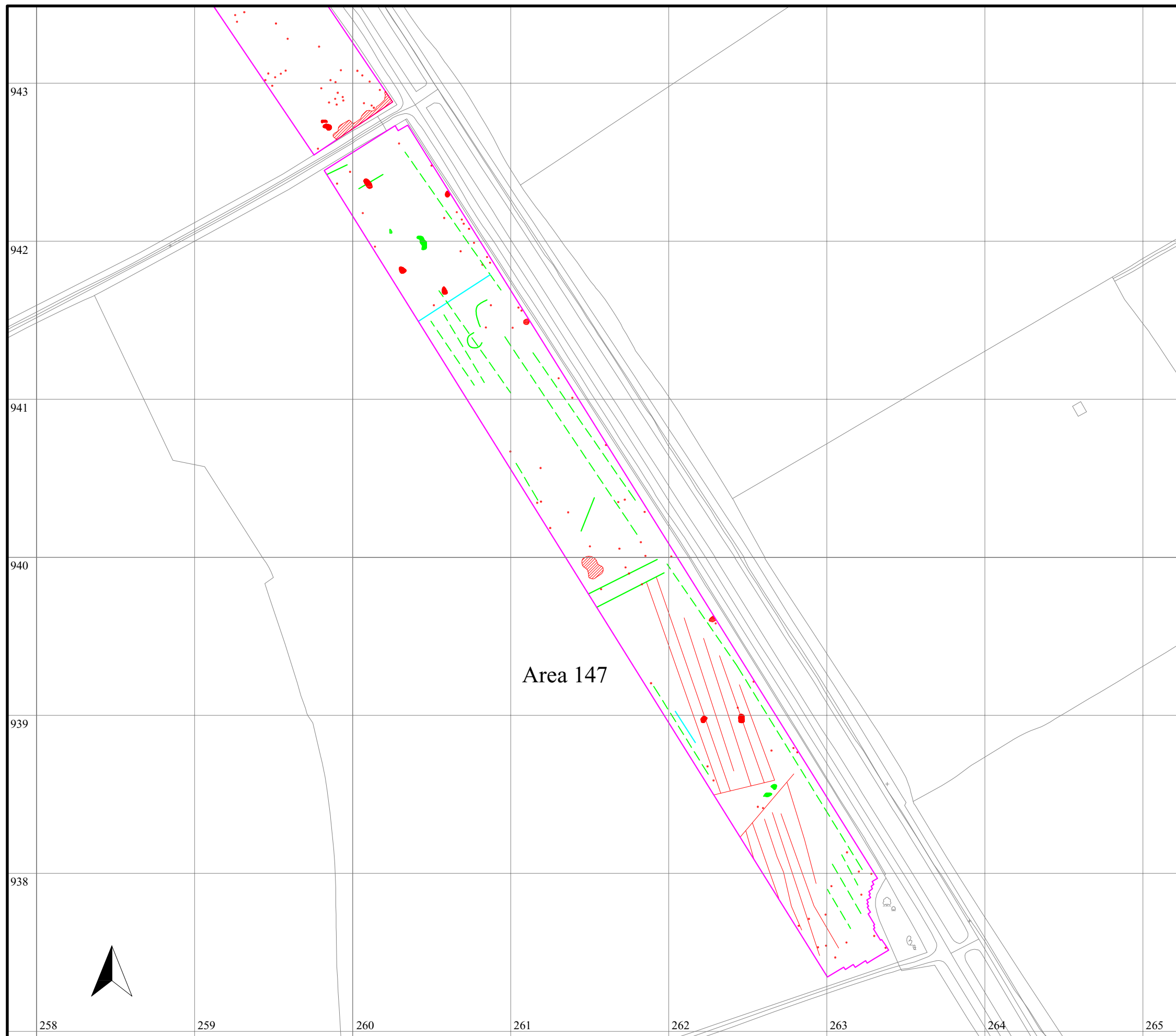
basemap courtesy of Faber Maunsell



 outline of Phase 2 survey area



REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



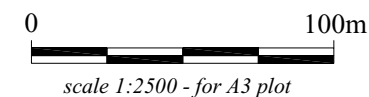
A1(T) Dishforth to Barton Improvement

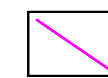
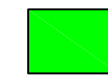
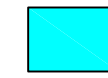

**Phase 2 geophysical surveys
Report 1368**

Figure 65

Geophysical interpretation of Area 147

basemap courtesy of Faber Maunsell



-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

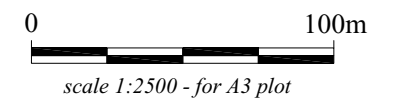
A1(T) Dishforth to Barton Improvement

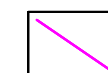


**Phase 2 geophysical surveys
Report 1368**

Figure 66

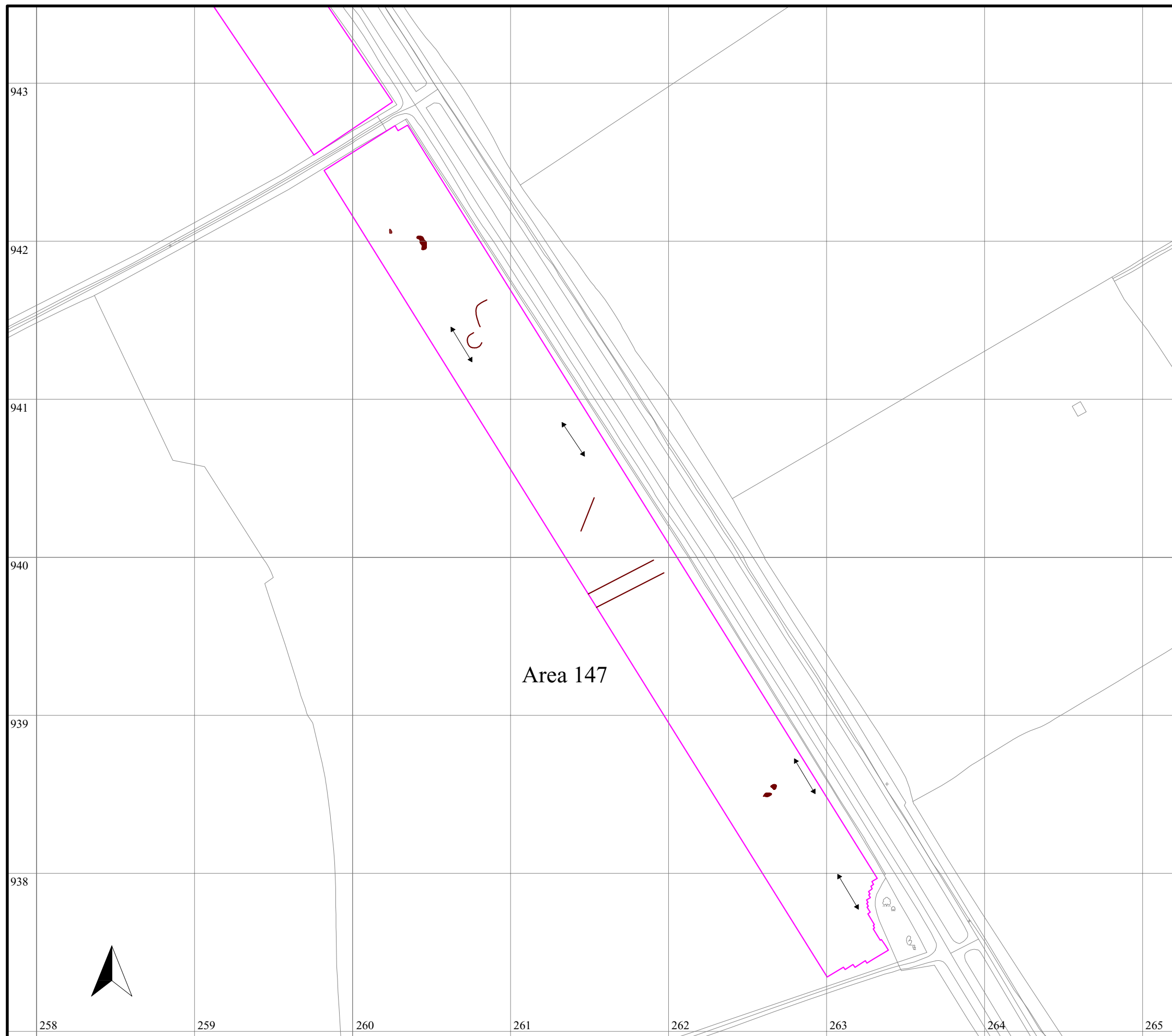
Archaeological interpretation of Area 147

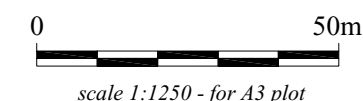
basemap courtesy of Faber Maunsell



-  outline of Phase 2 survey area
-  soil-filled features
-  direction of ridge and furrow

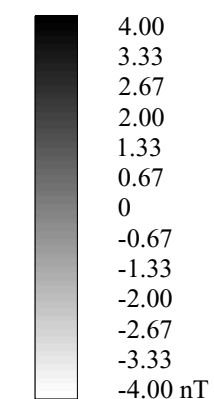
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002



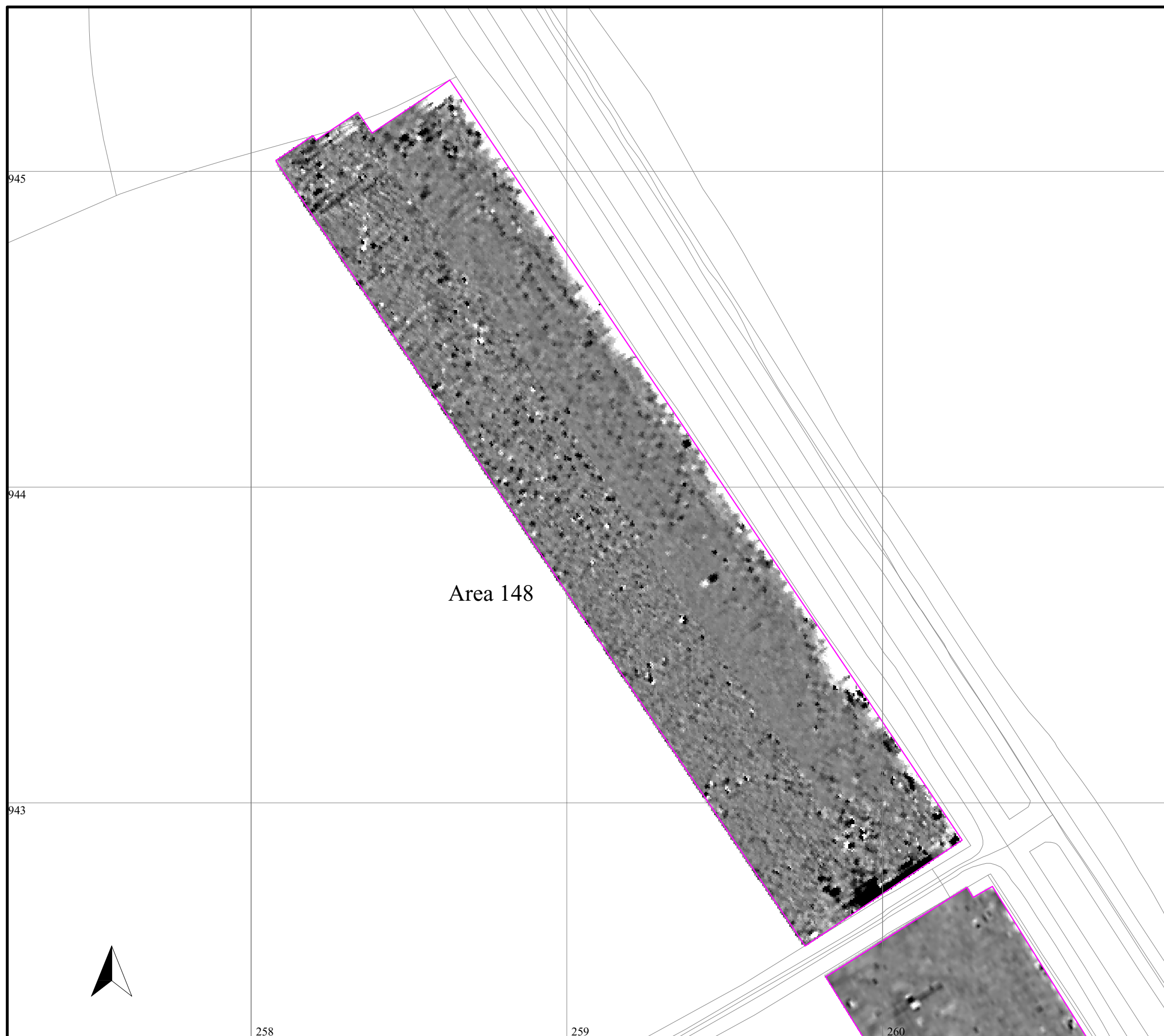


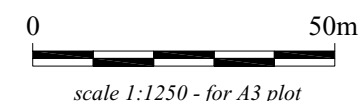
scale 1:1250 - for A3 plot





 outline of Phase 2 survey area



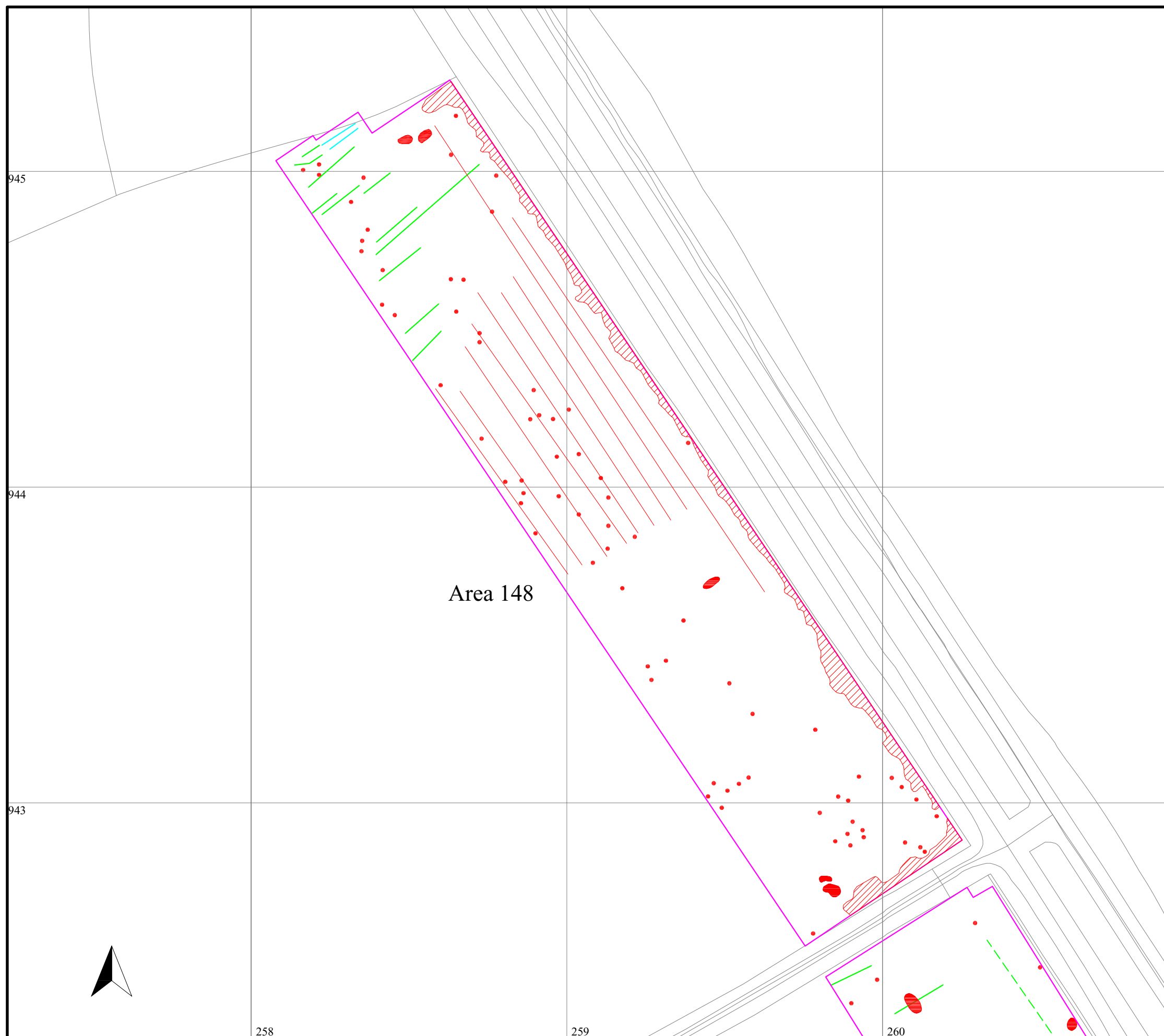
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

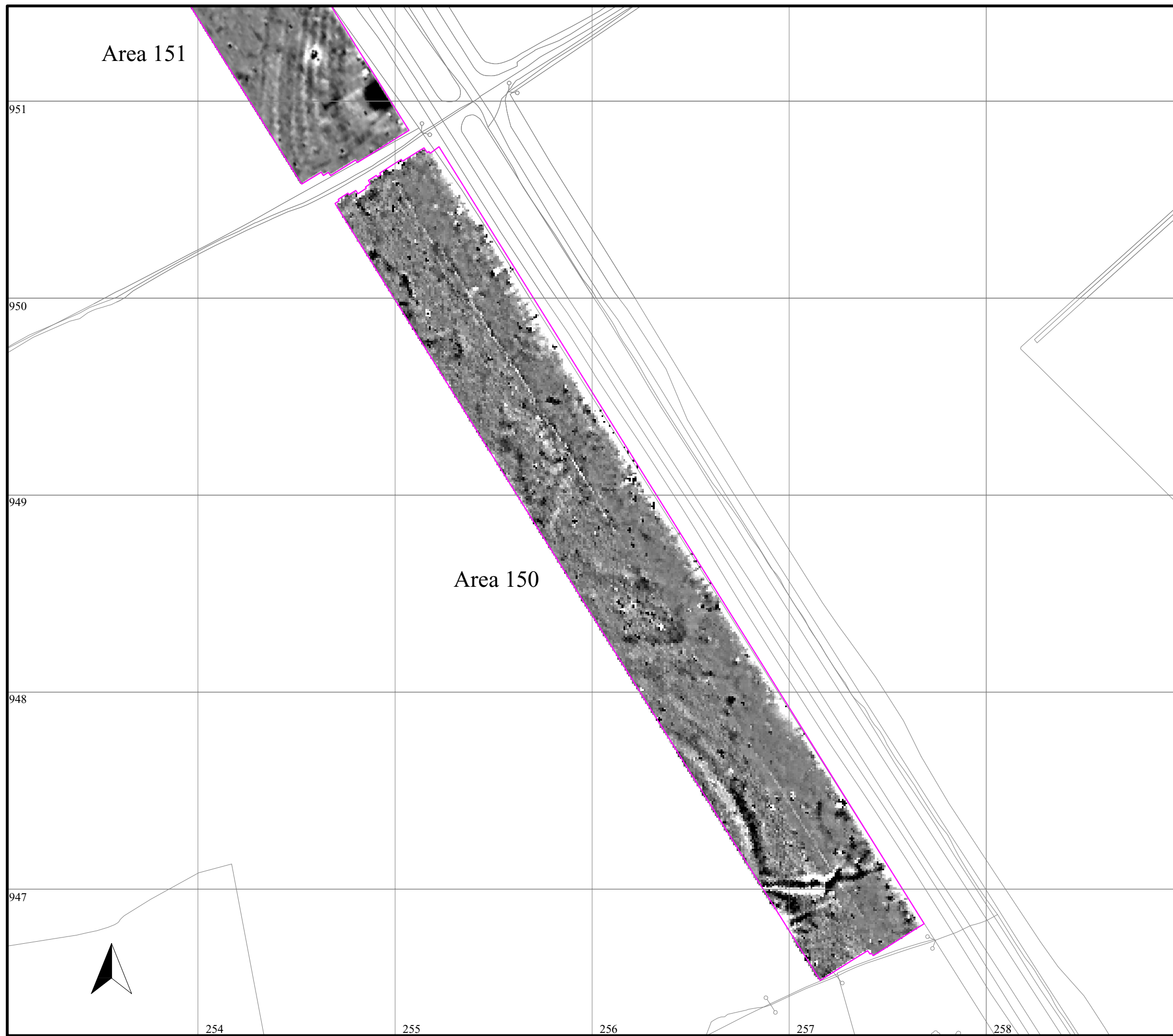




-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002





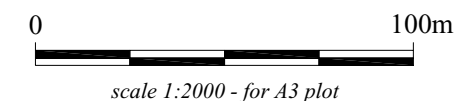
A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

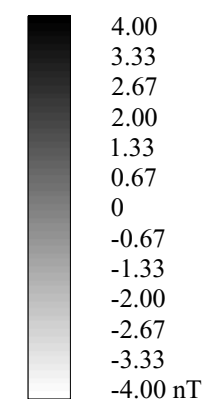
Figure 69

Geophysical survey of Area 150

basemap courtesy of Faber Maunsell




 outline of Phase 2 survey area



REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



Area 151

951

950

949

Area 150

948

947

254

255





256

257

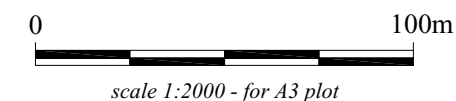
258







scale 1:2000 - for A3 plot

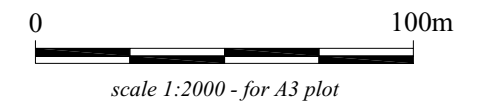
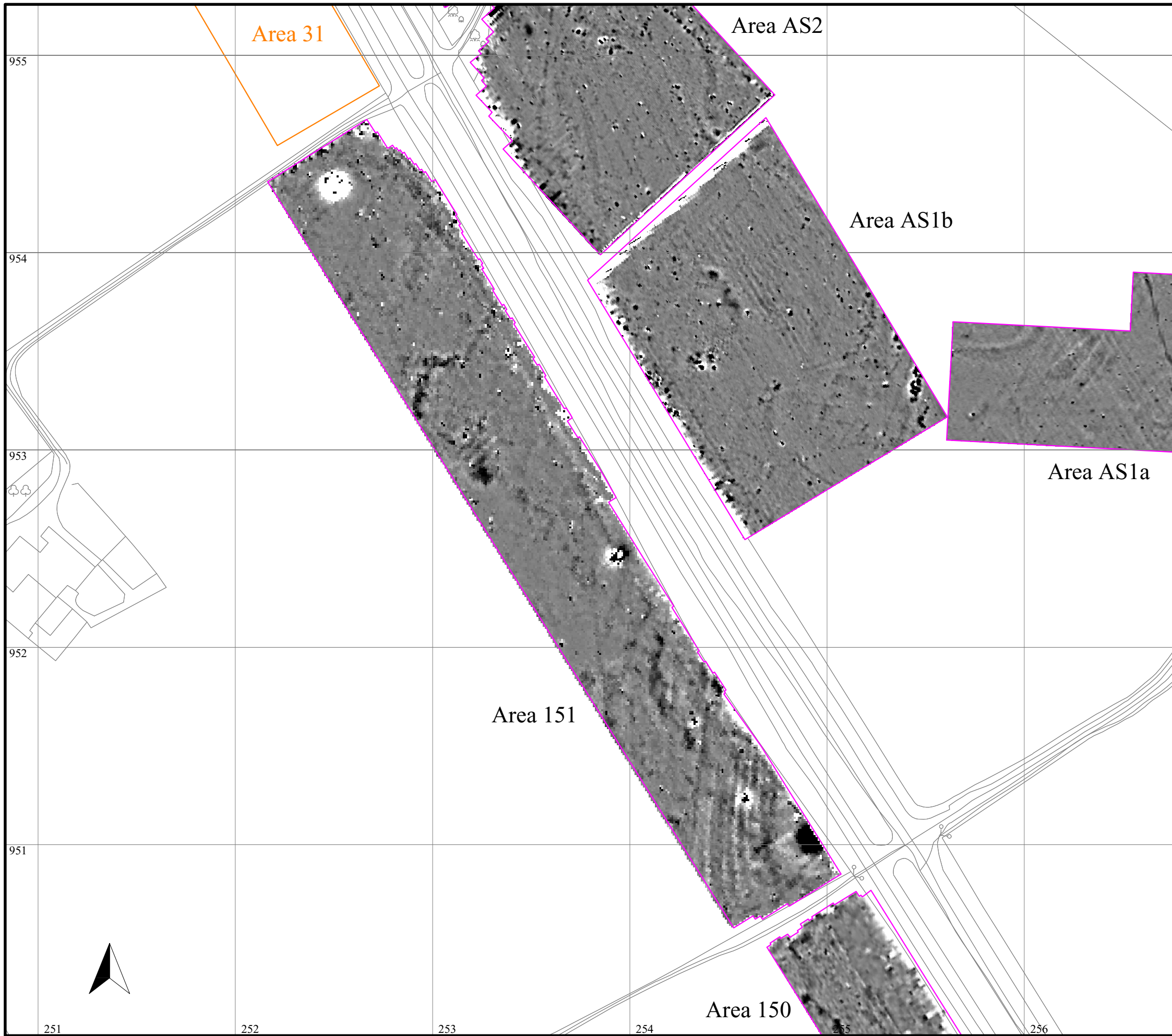
-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

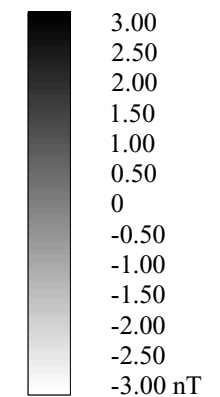


- 
outline of Phase 2 survey area
- 
soil-filled features
- 
open drain
- 
direction of ridge and furrow

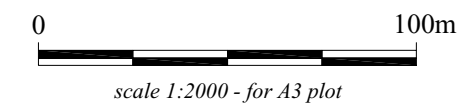
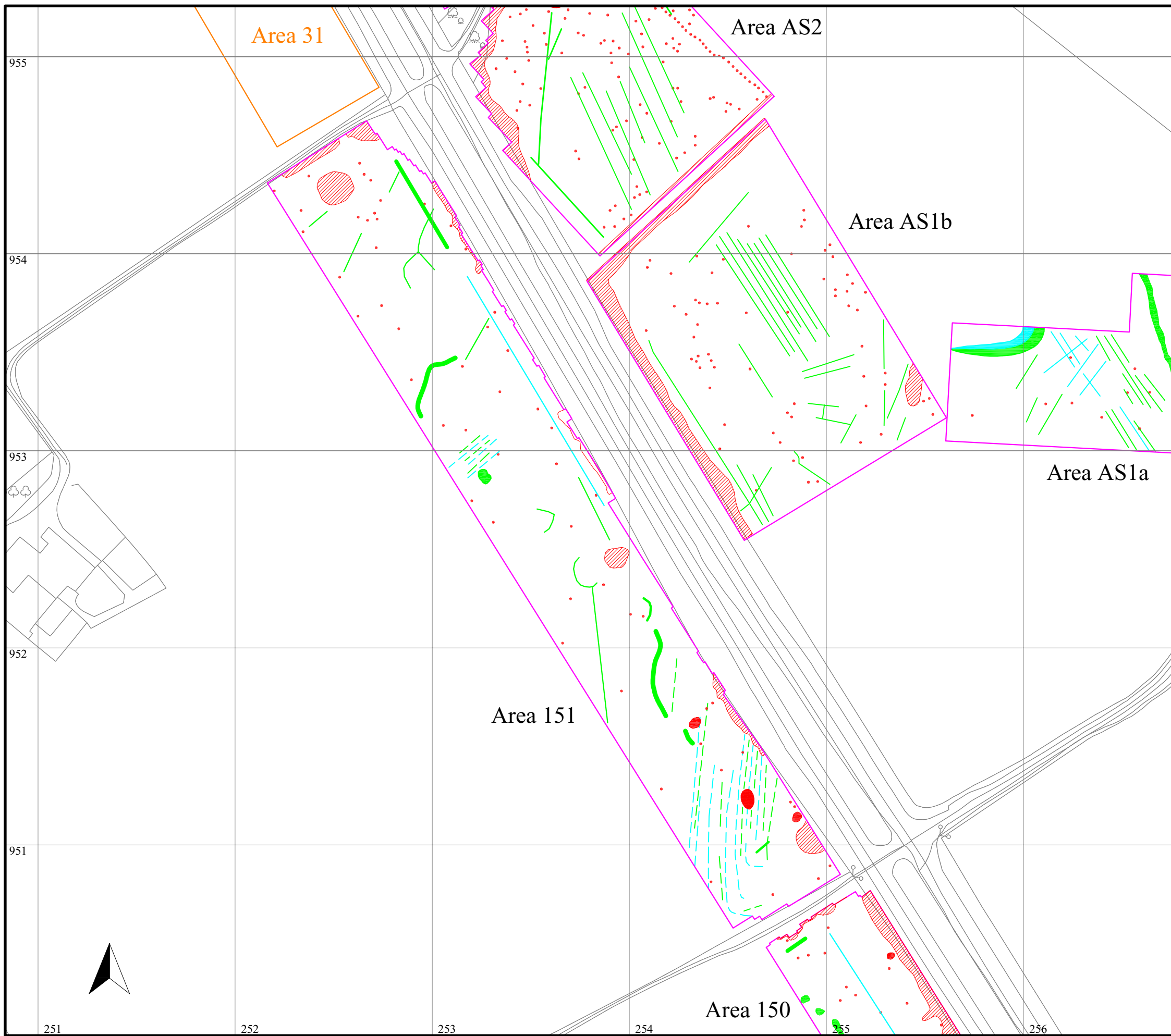
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002







 outline of Phase 2 survey area

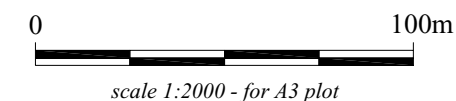
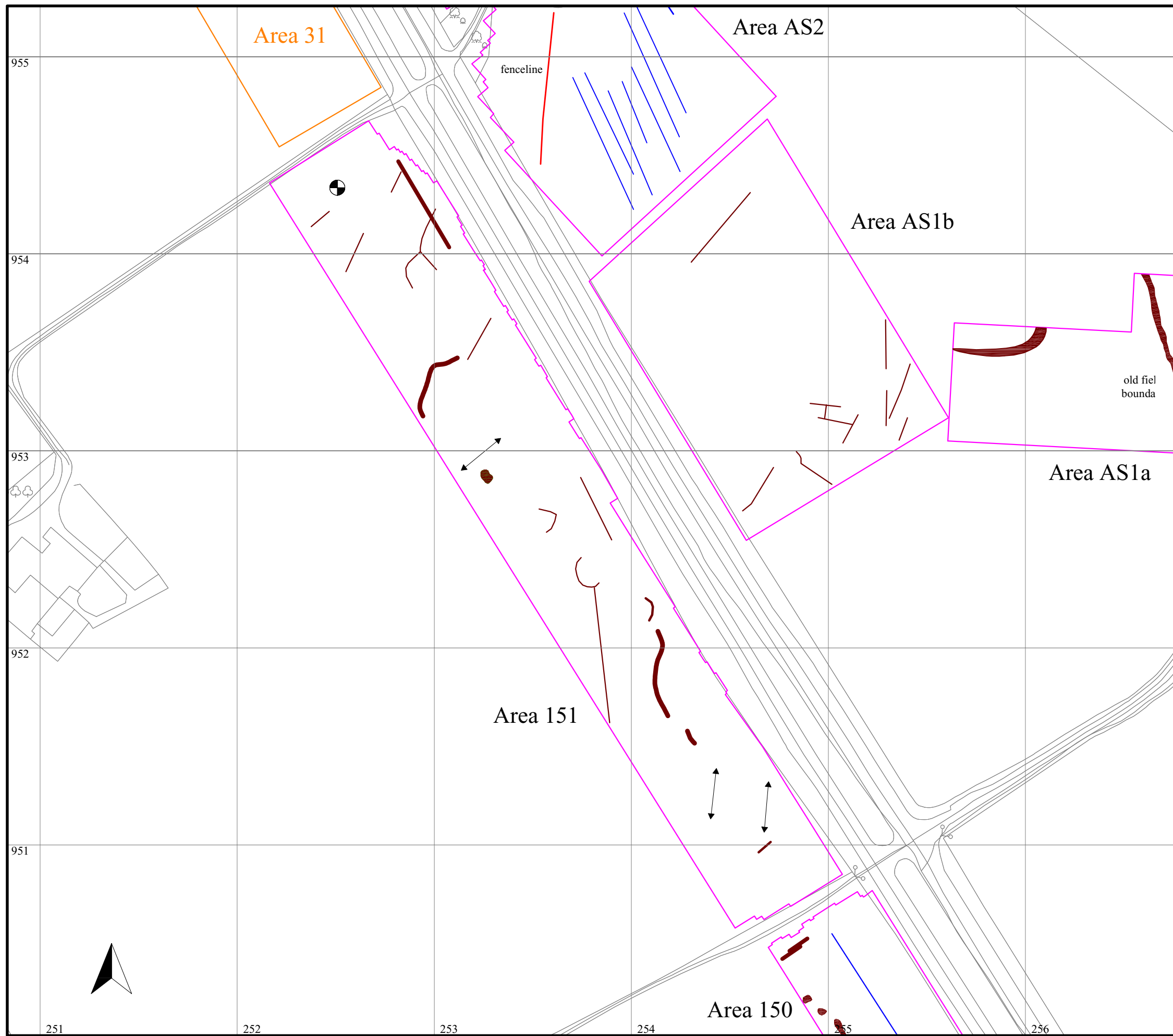


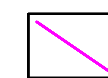
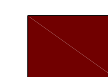


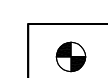
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



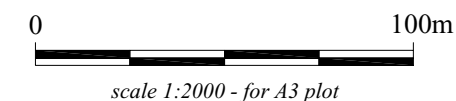
-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

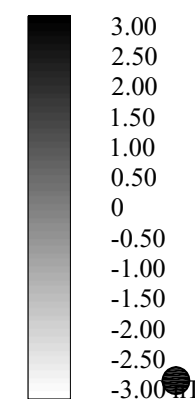


-  outline of Phase 2 survey area
-  soil-filled features
-  open drain
-  direction of possible ridge and furrow
-  telegraph pole

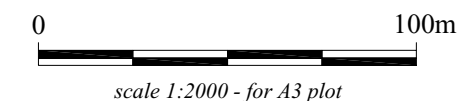
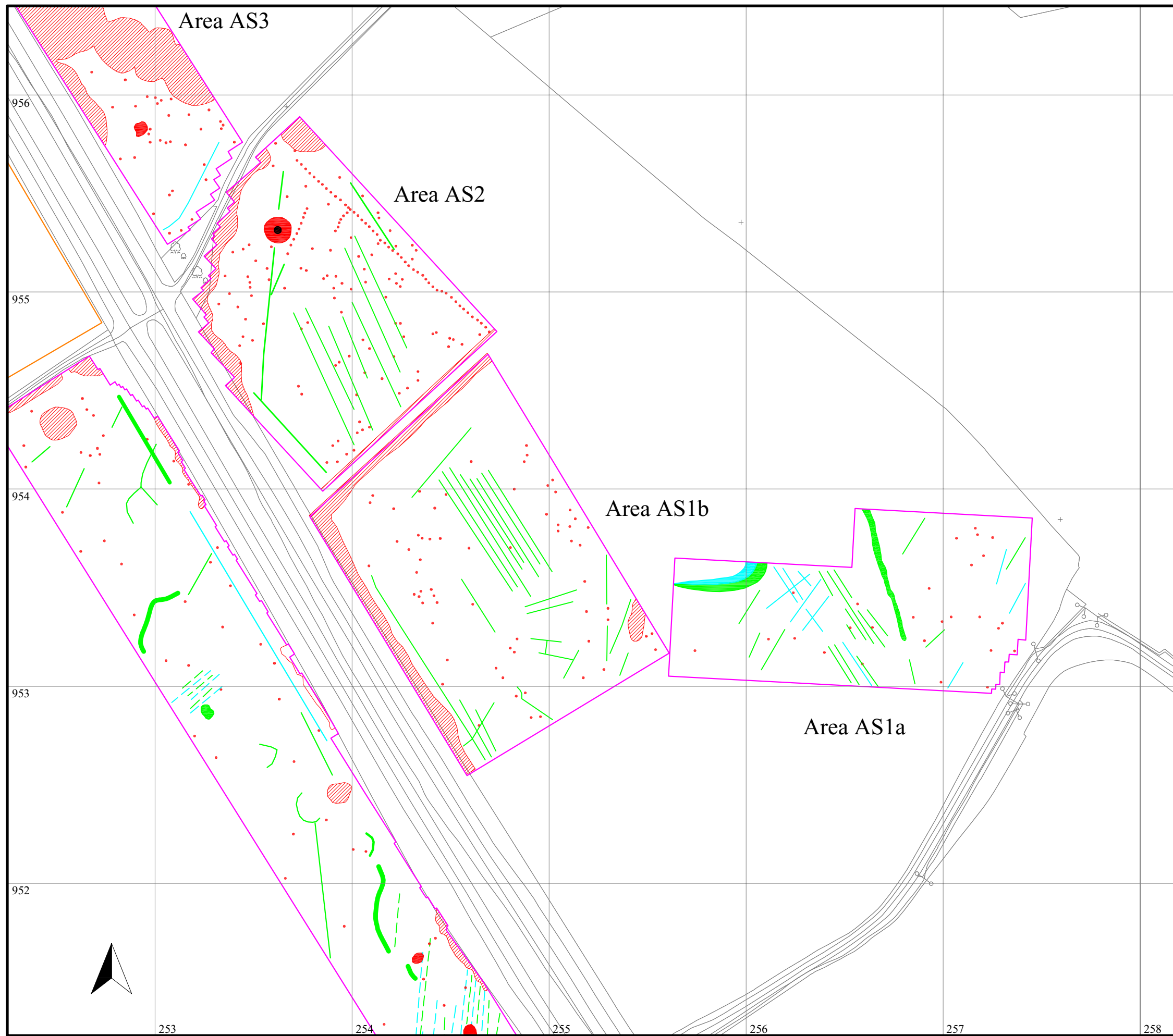
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002








 outline of Phase 2 survey area



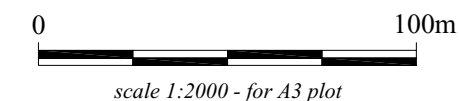
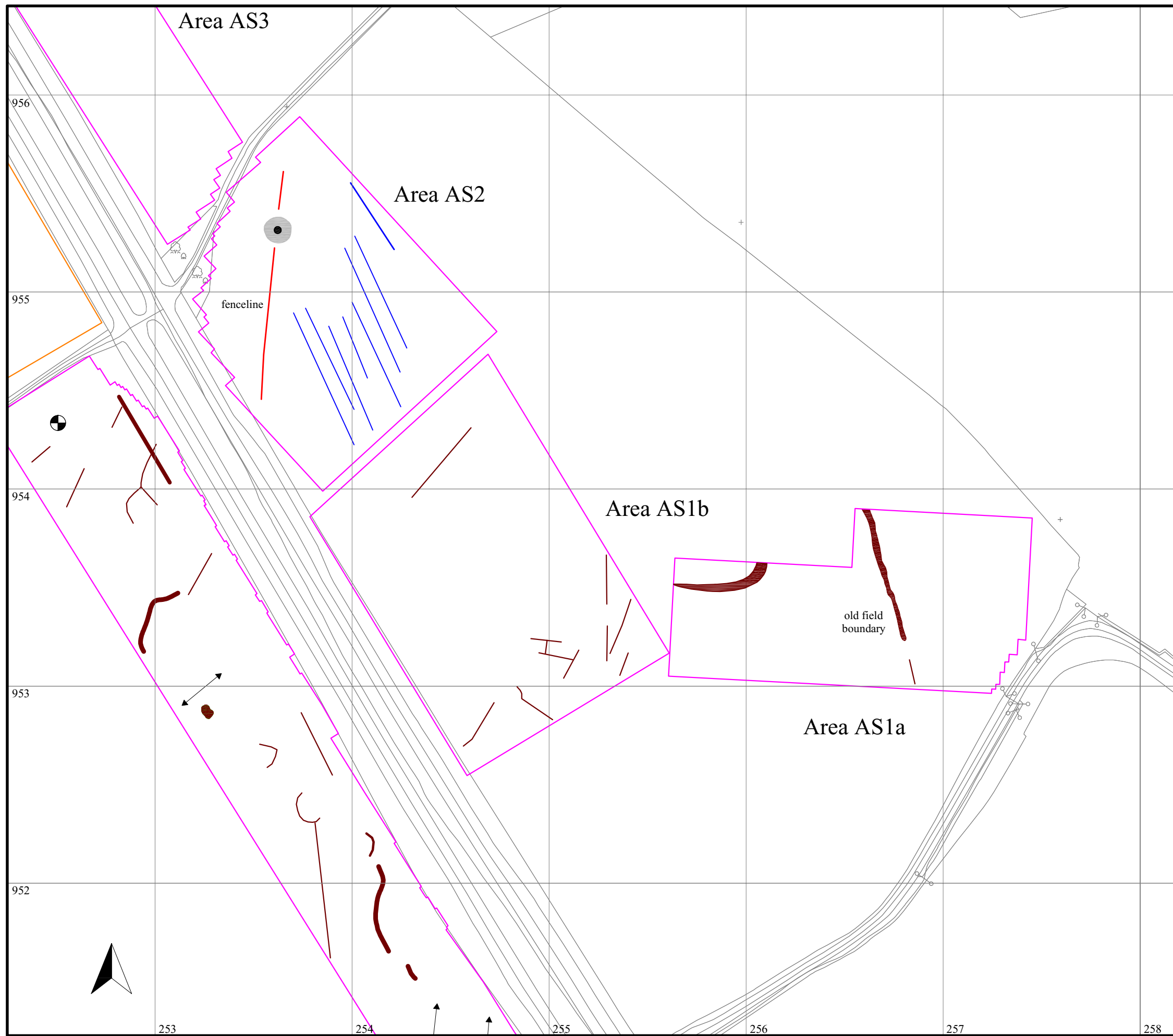
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002









-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

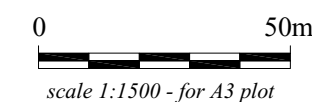


REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

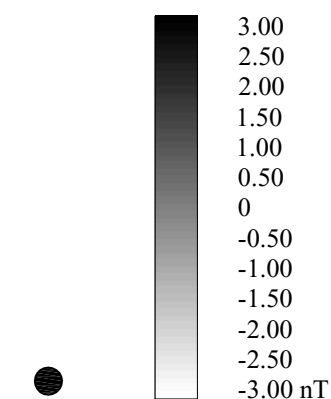


-  outline of Phase 2 survey area
-  soil-filled features
-  land drains
-  direction of ridge and furrow
-  pylon
-  borehole

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

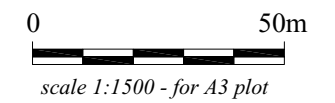


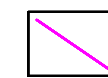
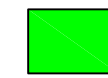
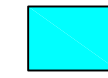


 outline of Phase 2 survey area



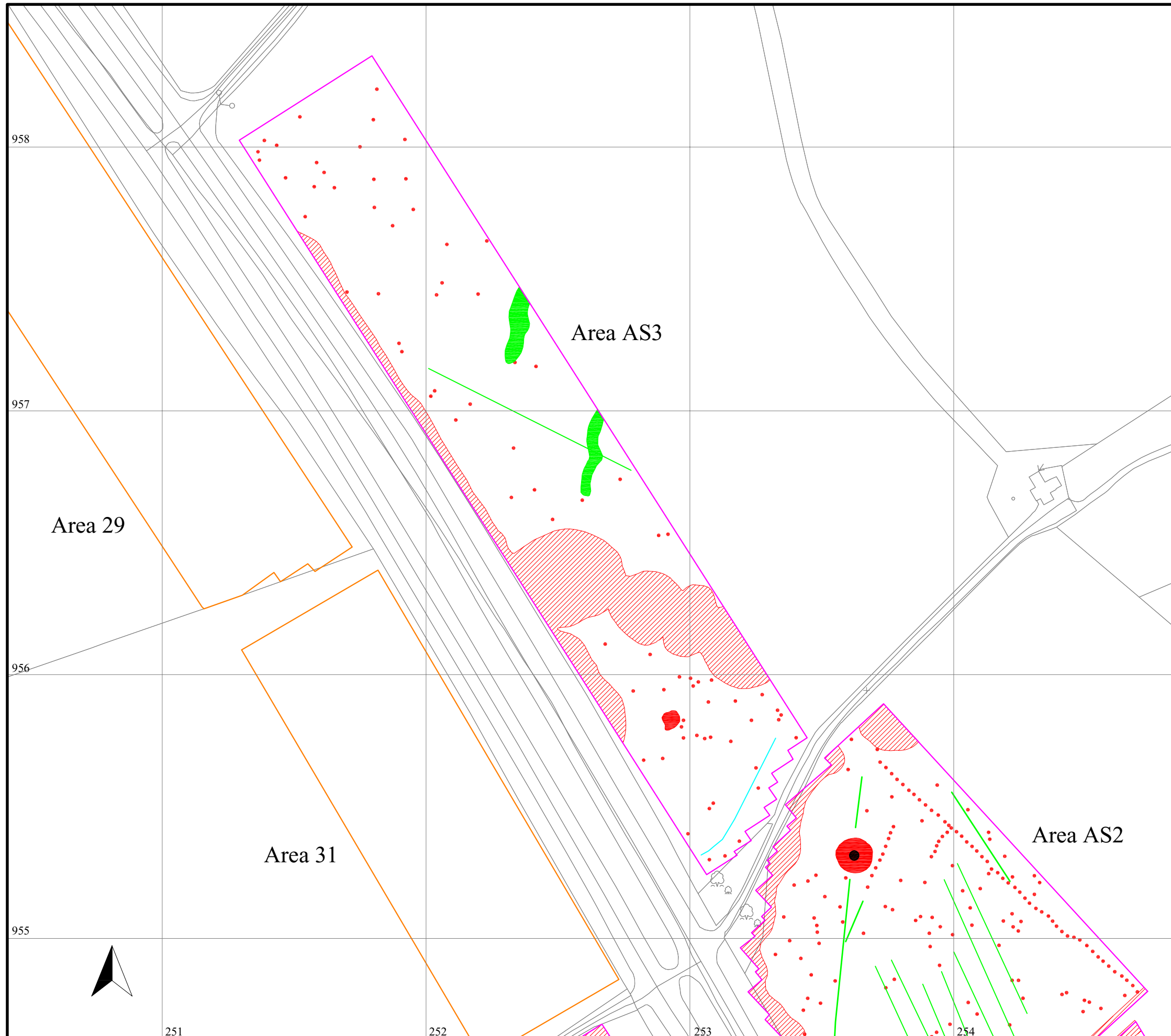
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

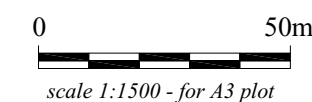









-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies
- 

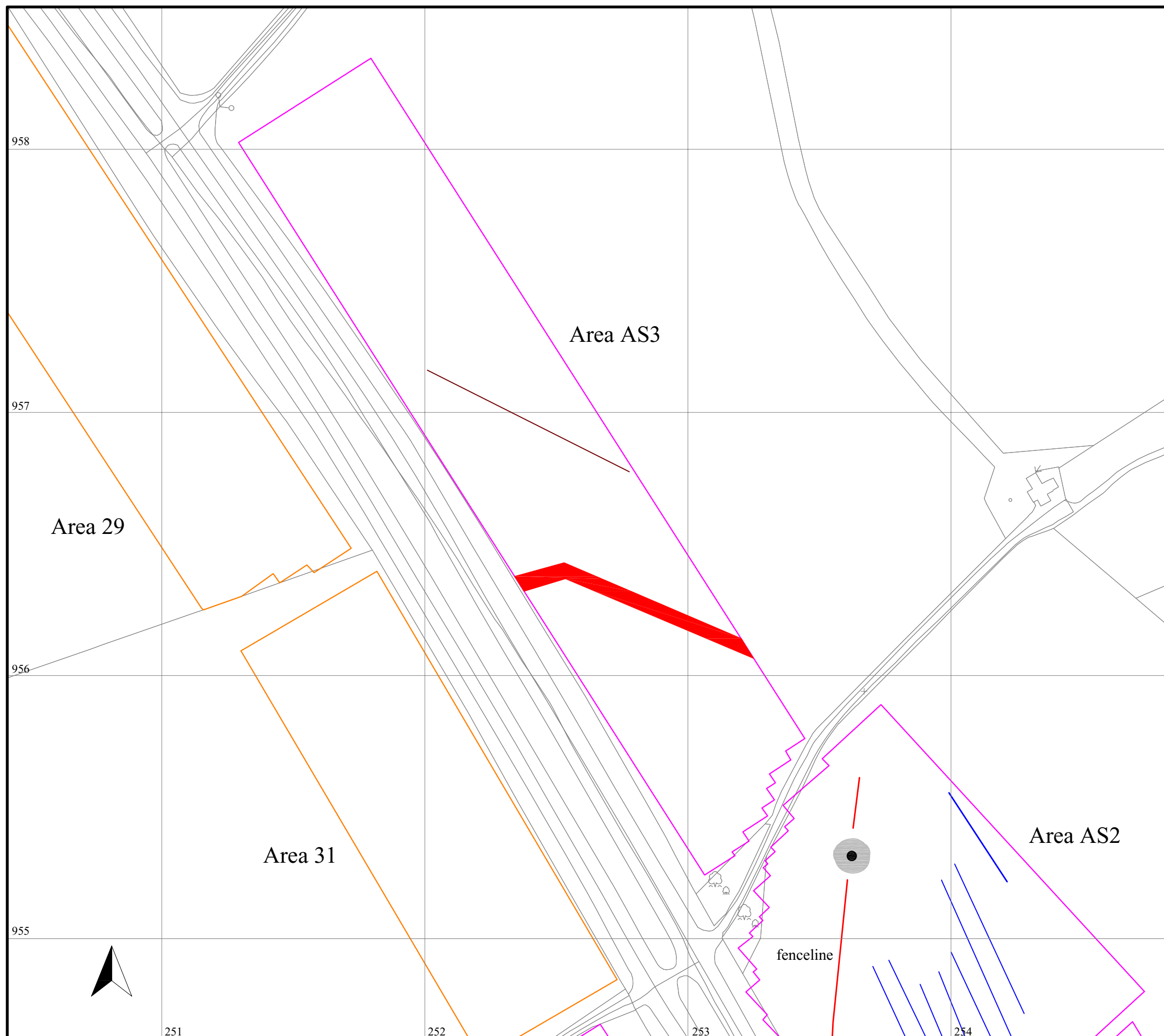
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002





-  outline of Phase 2 survey area
-  soil-filled features
-  field drain
-  service pipe
-  borehole

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



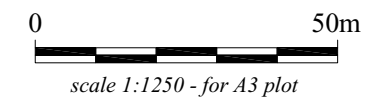
A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

Figure 81

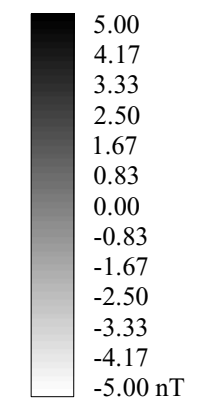
Geophysical survey of Areas 161 and 162

basemap courtesy of Faber Maunsell



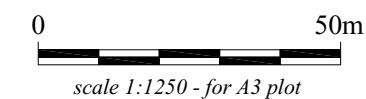
scale 1:1250 - for A3 plot

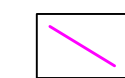

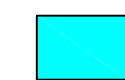
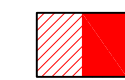
 outline of Phase 2 survey area



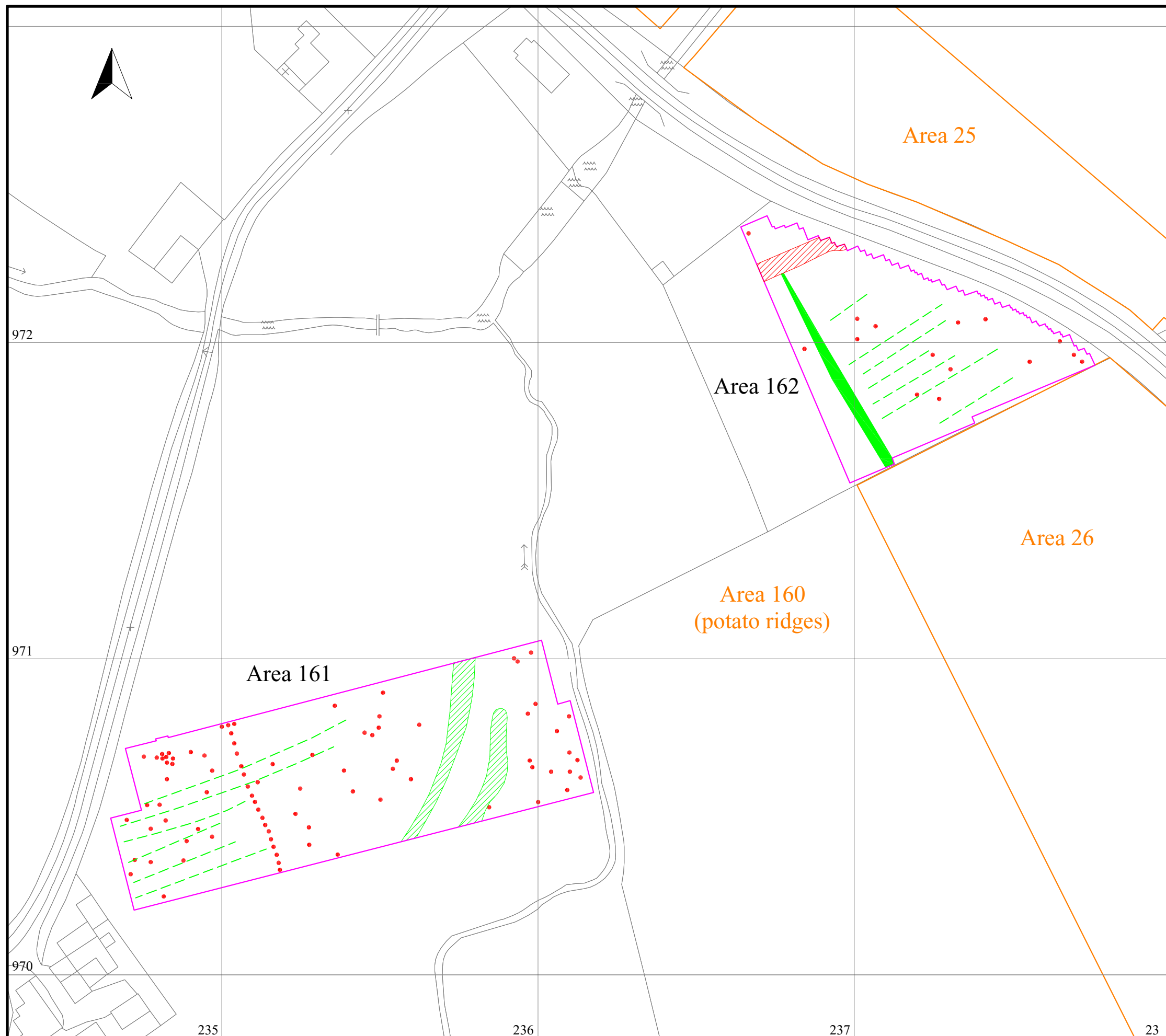
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

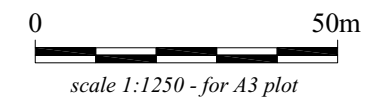


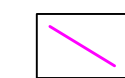

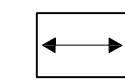
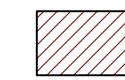


-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  negative magnetic anomalies
-  dipolar magnetic anomalies

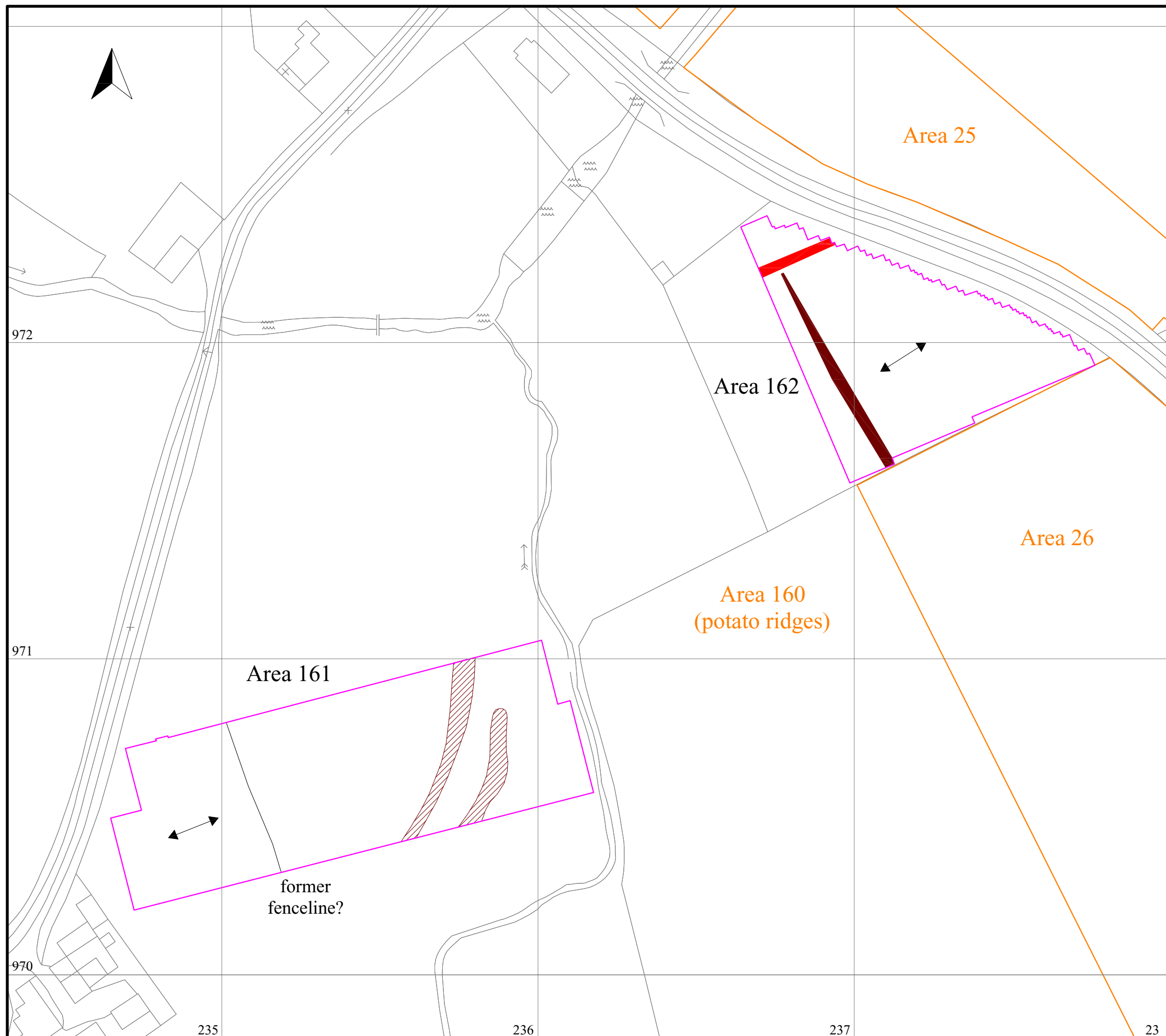
REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

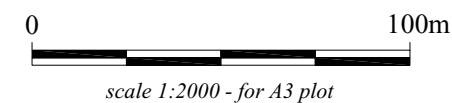




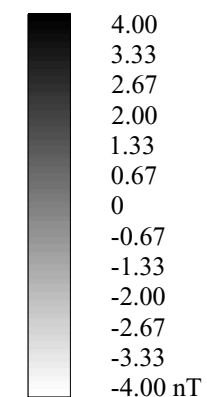
-  outline of Phase 2 survey area
-  service pipes
-  orientation of ridge and furrow
-  possible palaeochannels

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

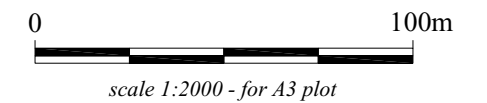


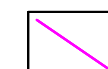

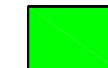



 outline of Phase 2 survey area

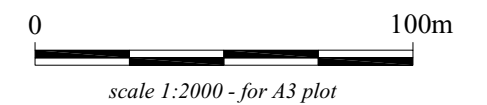


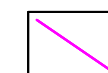

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



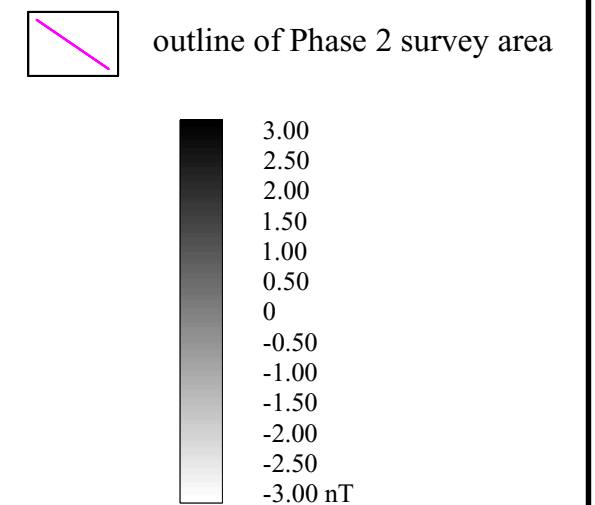
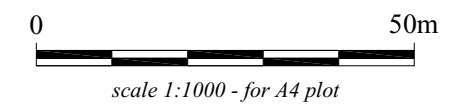
-  outline of Phase 2 survey area
-  dipolar magnetic anomalies
-  positive magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

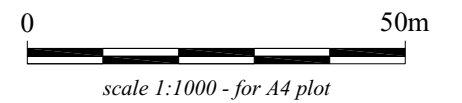
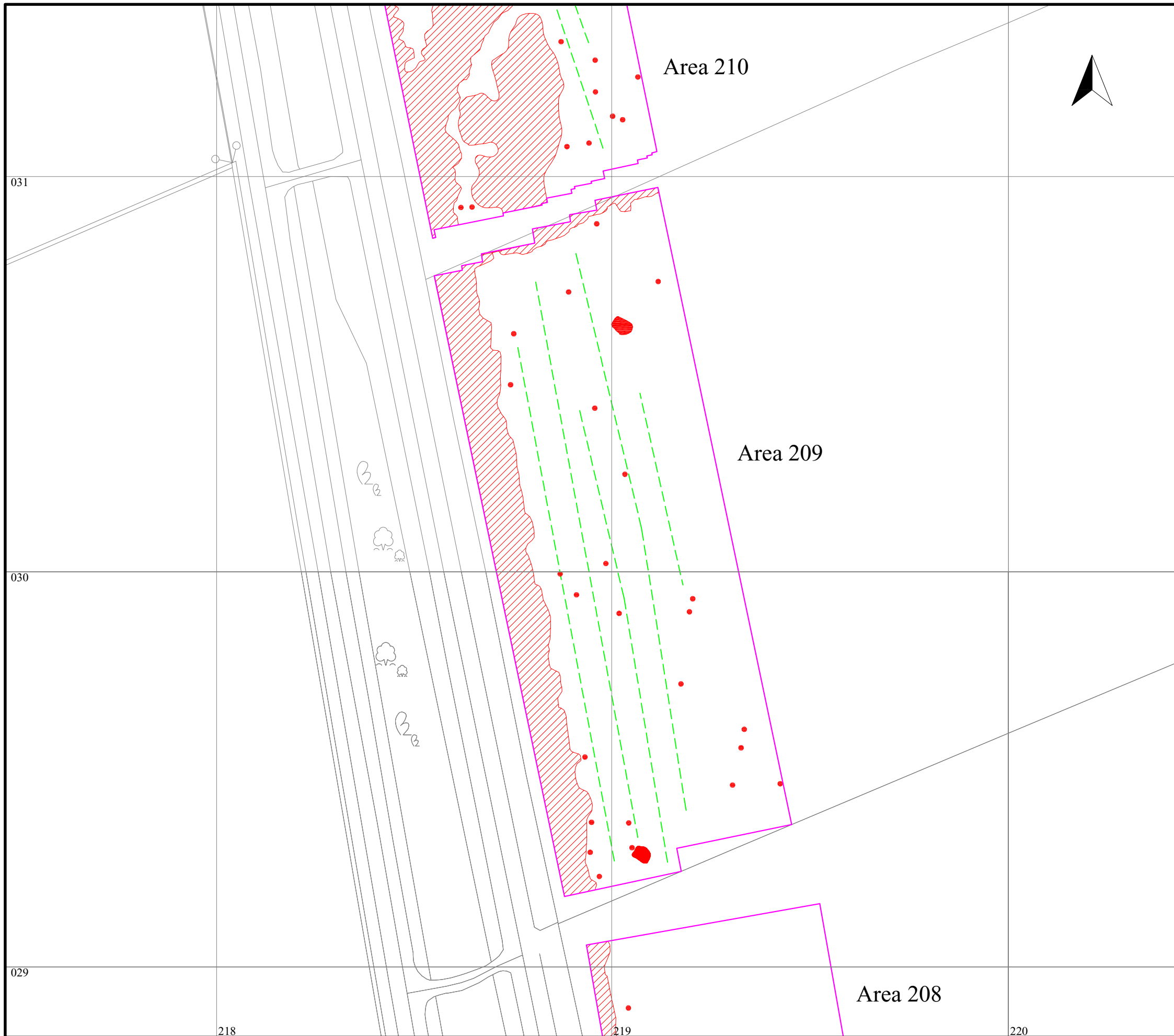


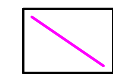


-  outline of Phase 2 survey area
-  possible ridge and furrow

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

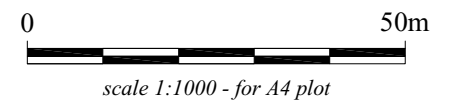


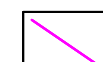


REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



-  outline of Phase 2 survey area
-  service pipes
-  direction of ridge and furrow

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



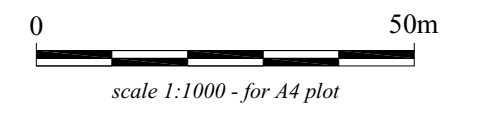
A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

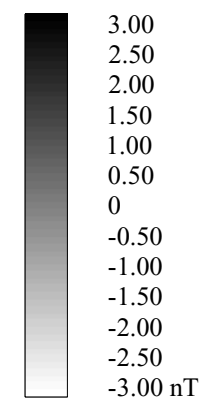
Figure 90

Geophysical survey of Area 210

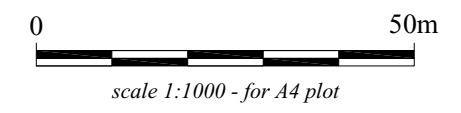
basemap courtesy of Faber Maunsell

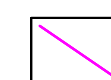





 outline of Phase 2 survey area

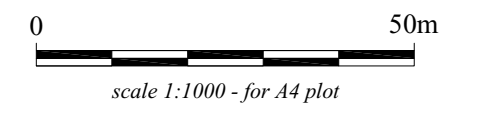
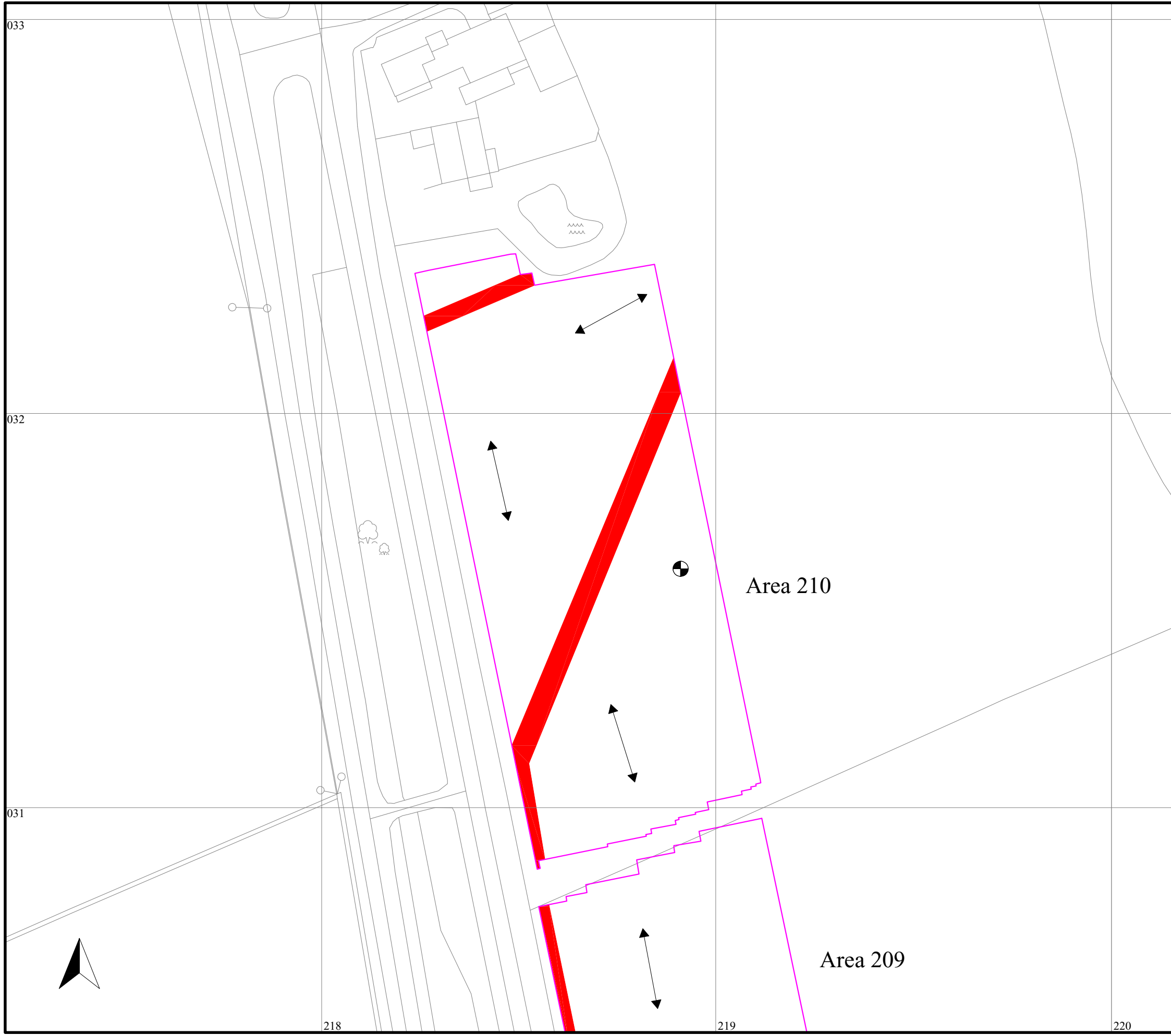


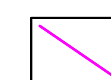

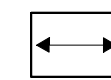
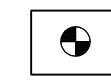
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



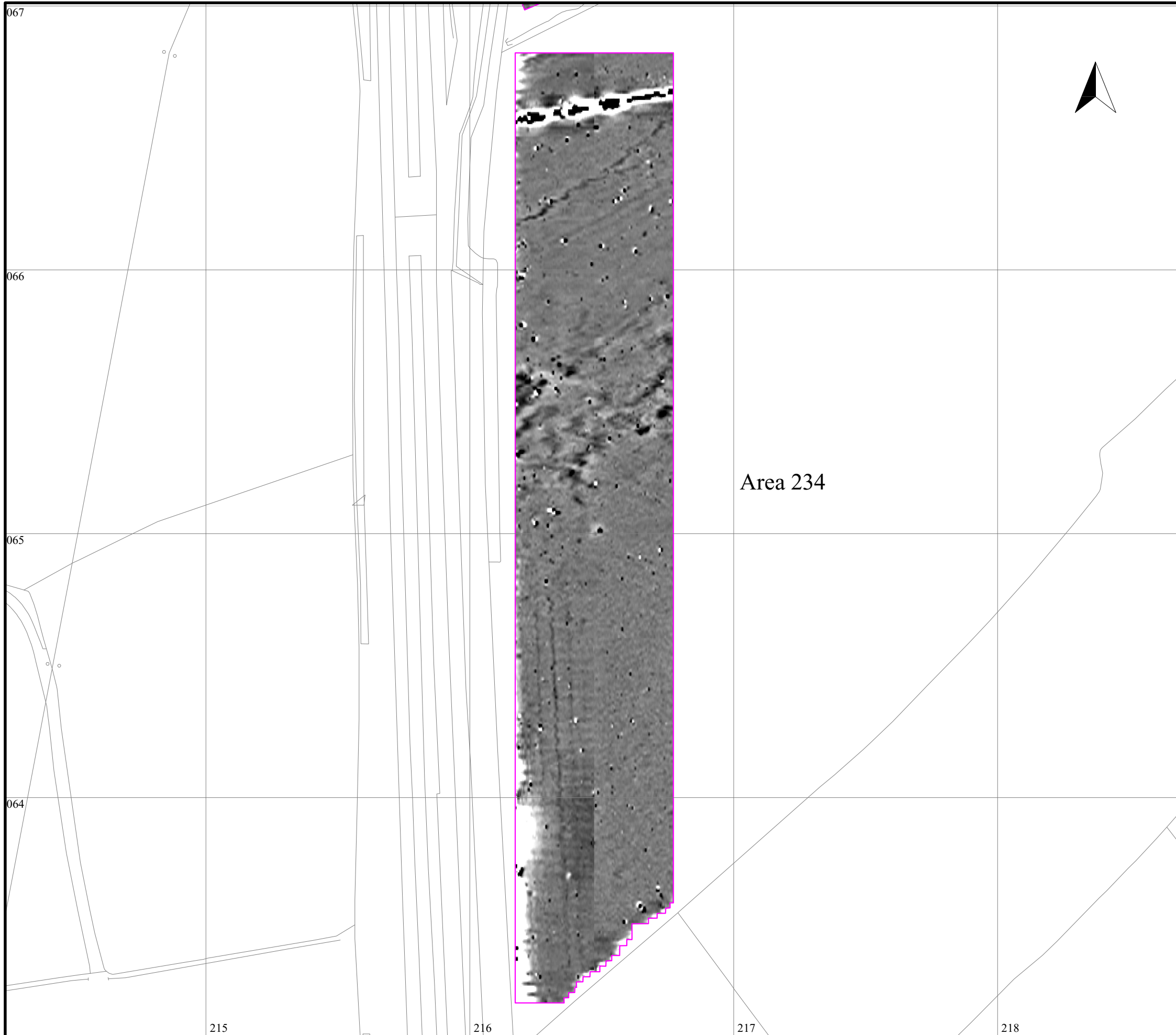
-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



-  outline of Phase 2 survey area
-  service pipes
-  direction of ridge and furrow
-  geotechnical borehole

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002



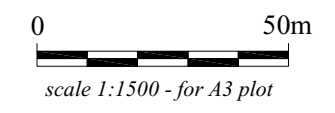
A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

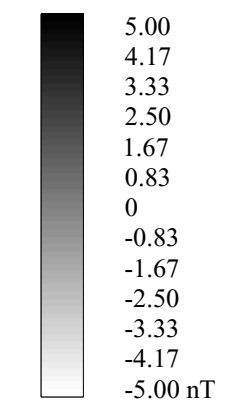
Figure 93

Geophysical survey of Area 234

basemap courtesy of Faber Maunsell



 outline of Phase 2 survey area



REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

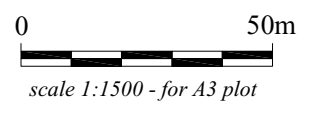





A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

Figure 94
Geophysical interpretation of Area 234

basemap courtesy of Faber Maunsell



-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

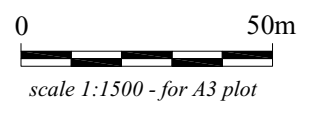







A1(T) Dishforth to Barton Improvement

**Phase 2 geophysical surveys
Report 1368**

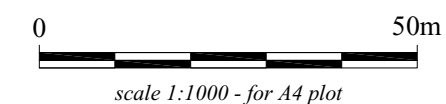
Figure 95

*Archaeological interpretation of Area 234
basemap courtesy of Faber Maunsell*

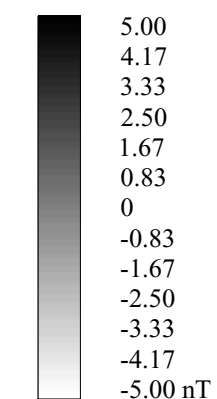


-  outline of Phase 2 survey area
-  soil-filled features
-  service pipe
-  direction of ridge and furrow
-  land drains

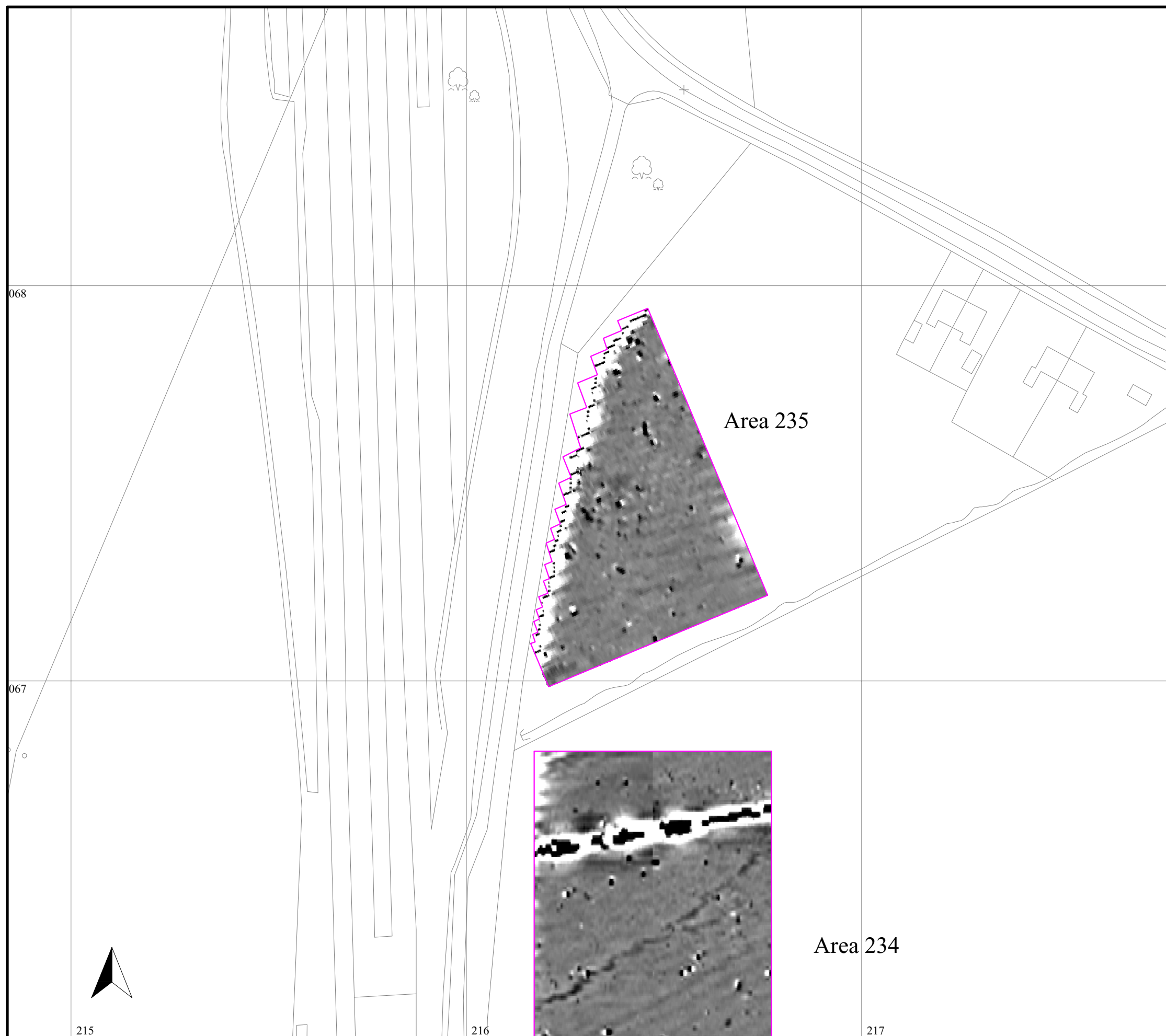
REPRODUCED FROM THE ORDNANCE SURVEY
 MAP WITH THE PERMISSION OF ORDNANCE
 SURVEY ON BEHALF OF THE CONTROLLER OF
 HER MAJESTY'S STATIONERY OFFICE,
 © CROWN COPYRIGHT, HIGHWAYS AGENCY
 LICENCE NO. GD 272663 - 2002

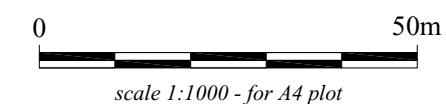





 outline of Phase 2 survey area



REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

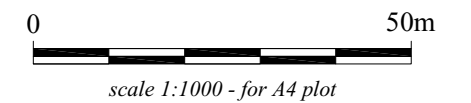


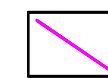
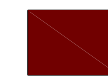
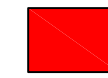
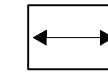


-  outline of Phase 2 survey area
-  positive magnetic anomalies
-  dipolar magnetic anomalies

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002





-  outline of Phase 2 survey area
-  soil-filled features
-  service pipe
-  direction of ridge and furrow

REPRODUCED FROM THE ORDNANCE SURVEY
MAP WITH THE PERMISSION OF ORDNANCE
SURVEY ON BEHALF OF THE CONTROLLER OF
HER MAJESTY'S STATIONERY OFFICE,
© CROWN COPYRIGHT, HIGHWAYS AGENCY
LICENCE NO. GD 272663 - 2002

