

# **Land at the Down Ampney Estate, Gloucestershire and Wiltshire**

## **geophysical surveys**

*for*

**Scott Wilson Ltd**

*on behalf of*

**Hanson Quarry Products Europe Ltd**

**Report 2131**

December 2008

---

***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](http://www.durham.ac.uk/archaeological.services)***

---



# Land at the Down Ampney Estate, Gloucestershire and Wiltshire

## geophysical surveys

### *Report 2131*

December 2008

*Archaeological Services Durham University*

for

*Scott Wilson Ltd*

*West One, Wellington Street, Leeds LS1 1BA*

on behalf of

*Hanson Quarry Products Europe Ltd*

---

## Contents

1. Summary . . . . .	1
2. Project background . . . . .	2
3. Archaeological and historical background . . . . .	3
4. Landuse, topography and geology . . . . .	3
5. Geophysical survey . . . . .	4
6. Conclusions . . . . .	12
7. Sources . . . . .	12
Appendix: Specification for survey . . . . .	14

### **Figures** (inside back cover)

Figure 1: Site location

Figure 2: Phased survey plan

Figure 3: Overview of results

Figure 4: Geophysical surveys, Phase 1 & 2

Figure 5: Geophysical interpretations, Phase 1 & 2

Figure 6: Archaeological interpretations, Phase 1 & 2

Figure 7: Geophysical surveys, Phase 3

Figure 8: Geophysical interpretations, Phase 3

Figure 9: Archaeological interpretations, Phase 3



Figure 10: Geophysical surveys, Phase 4  
Figure 11: Geophysical interpretations, Phase 4  
Figure 12: Archaeological interpretations, Phase 4  
Figure 13: Geophysical surveys, Phase 5 & 6 (NE)  
Figure 14: Geophysical interpretations, Phase 5 & 6 (NE)  
Figure 15: Archaeological interpretations, Phase 5 & 6 (NE)  
Figure 16: Geophysical surveys, Phase 5 & 6 (SW)  
Figure 17: Geophysical interpretations, Phase 5 & 6 (SW)  
Figure 18: Archaeological interpretations, Phase 5 & 6 (SW)  
Figure 19: Geophysical surveys, Phase 7 (N)  
Figure 20: Geophysical interpretations, Phase 7 (N)  
Figure 21: Archaeological interpretations, Phase 7 (N)  
Figure 22: Geophysical surveys, Phase 7 (S) & 8  
Figure 23: Geophysical interpretations, Phase 7 (S) & 8  
Figure 24: Archaeological interpretations, Phase 7 (S) & 8  
Figure 25: Geophysical surveys, Phase 9 & 10  
Figure 26: Geophysical interpretations, Phase 9 & 10  
Figure 27: Archaeological interpretations, Phase 9 & 10  
Figure 28: Trace plots of geomagnetic data



## **1. Summary**

### ***The project***

- 1.1 This report presents the results of geophysical surveys conducted in advance of proposed quarrying at the Down Ampney Estate, which straddles the counties of Gloucestershire and Wiltshire. The works comprised the geomagnetic survey of approximately 154ha.
- 1.2 The works were commissioned by Hanson Quarry Products Europe Ltd and conducted by Archaeological Services Durham University in accordance with instructions from Scott Wilson Ltd.

### ***Results***

- 1.3 The technique has proved very effective over the soils and gravels at the site, detecting a range of both features and materials.
- 1.4 Features that were typically detected across the study area include soil-filled ditches (some defining enclosures and trackways, roundhouses and barrows); traces of former ridge and furrow cultivation; old field boundaries; drains and palaeochannels (particularly in the east near the River Thames ).
- 1.5 Some of the detected features correspond to cropmarks recorded on aerial photographs but many were previously unknown and have provided added value to existing knowledge.
- 1.6 Concentrations of probable archaeological features, which might be regarded as being of more than local significance, were detected in Phase 5 Area B, Phase 6 Area B, Phase 7 Areas A and E, and Phase 9 Areas A and B.



## **2. Project background**

### ***Location*** (Figures 1 & 2)

- 2.1 The study area comprised land on the Down Ampney Estate, between Cirencester and Swindon, straddling the counties of Gloucestershire and Wiltshire. Located east of Latton and the A419, the 250ha application area covers a number of fields forming an irregularly-shaped site aligned broadly east-west (NGR centre: 411515 195640). Twenty-nine geophysical surveys have been undertaken in a phased programme, covering approximately 154ha.

### ***Development proposal***

- 2.2 The development proposal comprises a quarry for gravel extraction and associated infrastructure.

### ***Objective***

- 2.3 The principal aim of the surveys was to assess the nature and extent of any sub-surface features of potential archaeological significance within the proposed development area, so that an informed decision may be made regarding the nature and scope of any further scheme of archaeological works that may be required in advance of development.

### ***Methods statement***

- 2.4 The surveys have been undertaken in accordance with a specification prepared by Scott Wilson Ltd, following consultation with Charles Parry and Melanie Pomeroy-Kellinger, the archaeological officers for Gloucestershire and Wiltshire County Councils respectively.
- 2.5 The surveys at the western end of Phase 7 (Areas E and F) covered part of a Scheduled Monument (no. WI901) and were undertaken with a licence granted by English Heritage under Section 42 of the Ancient Monuments and Areas Act 1979 (as amended by the National Heritage Act 1983).

### ***Dates***

- 2.6 Fieldwork was undertaken between 20<sup>th</sup> October and 1<sup>st</sup> December 2008. This report was prepared between the 27<sup>th</sup> October and 18<sup>th</sup> December 2008.

### ***Personnel***

- 2.7 Fieldwork was conducted by Jamie Armstrong, Matt Claydon, Edward Davies, David Graham, Andy Platell, Adam Rogers, Natalie Swann (Supervisor) and Richie Willis (Supervisor). This report was prepared by Duncan Hale, the Project Manager, with illustrations by Edward Davies, David Graham, Janine Wilson and Linda Bosveld (Graphics & Production Manager).

### ***Archive/OASIS***

- 2.8 The site code is **DAE08**, for **Down Ampney Estate 2008**. The survey archive will be supplied on CD to Scott Wilson for deposition with the project archive in due course. Archaeological Services is registered with the **Online Access** to



the Index of archaeological investigationS project (OASIS). The OASIS ID number for this project is **archaeol3-52719**.

### **3. Archaeological and historical background**

- 3.1 An archaeological desk-based assessment (DBA) of the proposed application area and its environs was conducted by Scott Wilson (2008). Summary information from that assessment is presented below:

“The desk-based assessment has identified extensive cropmark complexes across the proposed application area. The presence of these cropmarks indicates that there is a moderate to high potential for encountering archaeological remains dating to the prehistoric and Roman periods. These remains are likely to comprise agricultural and settlement activity dating to the Iron Age and Roman periods and funerary activity of Bronze Age date in the form of barrows. There is lower potential for medieval remains of an agricultural nature. A number of cropmarks of unknown date have also been identified within the proposed application area. Recent excavation on nearby sites has indicated that the presence of cropmarks does not necessarily infer the presence of archaeological features and that in general where archaeological remains do occur they have been impacted by ploughing from the medieval period onwards. Three sites adjacent to the proposed application area have been designated as Scheduled Ancient Monuments based on the density of the cropmarks present.

In addition, the desk-based assessment has identified one conservation area, four undesignated buildings, twenty-four grade II listed buildings, and one grade I listed building within 0.5km of the proposed application area.”

- 3.2 Part of the study area (Phase 9) is on land occupied by the disused Down Ampney airfield, which was opened in 1943 and used by aircraft involved in the Arnhem and D-Day operations.

### **4. Landuse, topography and geology**

- 4.1 The proposed development area comprises 29 fields of mixed agricultural land (see table below).
- 4.2 The study area occupies low-lying, predominantly flat land in the Upper Thames Valley. The mean elevation of the area is 80m OD, with minimum and maximum elevations of 78m and 82m OD.
- 4.3 At the time of survey, part of Phase 8 in the east, on the River Thames floodplain, were flooded with up to 0.5m of water and could not be surveyed.
- 4.4 The solid geology comprises Upper Jurassic Oxford Clay and Kellaways Beds. These are generally overlain by Pleistocene deposits of sand and gravel, with alluvium uppermost along the north bank of the Thames. The gravels, known as



the Upper Thames Gravels, typically formed terraces which have been variously re-worked by the meandering rivers that run through the area: the Thames, Churn, Coln, Swill Brook and Ampney Brook.

Phase	Size (ha)	Area - landuse
1	13.32	A - arable B - arable
2	9.18	A - pasture B - pasture
3	14.58	A - arable
4	16.02	A - pasture/marsh B - pasture/marsh C - pasture/marsh D - arable
5	20.79	A - arable B - arable C - arable
6	26.64	A - arable B - arable C - arable
7	19.80	A - pasture/marsh B - pasture/marsh C - pasture/marsh D - arable E - arable F - arable
8	19.53	A - pasture/marsh B - pasture/marsh
9	8.37	A - pasture B - pasture
10	5.49	A - arable B - arable

## 5. Geophysical survey

### *Standards*

- 5.1 The surveys and reporting were conducted in accordance with English Heritage guidelines *Geophysical survey in archaeological field evaluation, 2<sup>nd</sup> edition* (David, Linford & Linford 2008); the Institute of Field Archaeologists Technical Paper No.6, *The use of geophysical techniques in archaeological evaluations* (Gaffney, Gater & Ovenden 2002); and the Archaeology Data Service *Geophysical Data in Archaeology: A Guide to Good Practice* (Schmidt 2002).

### *Technique selection*

- 5.2 Geophysical survey enables the relatively rapid and non-invasive identification of sub-surface features of potential archaeological significance and can involve



a variety of complementary techniques such as magnetometry, earth electrical resistance, ground-penetrating radar and electromagnetic survey. Some techniques are more suitable than others in particular situations, depending on a variety of site-specific factors including the nature of likely targets; depth of likely targets; ground conditions; proximity of buildings, fences or services and the local geology and drift.

- 5.3 In this instance, it was known from aerial photographs that cut features such as ditches and pits would be present across parts of the study area, and that other types of feature such as trackways, wall foundations and fired structures (for example kilns and hearths) might also be present.
- 5.4 Given the anticipated shallowness of targets and the non-igneous geological environment of the study area a geomagnetic technique, fluxgate gradiometry, was considered appropriate for detecting the types of feature mentioned above. This technique involves the use of hand-held magnetometers to detect and record anomalies in the vertical component of the Earth's magnetic field caused by variations in soil magnetic susceptibility or permanent magnetisation; such anomalies can reflect archaeological features.

#### ***Field methods***

- 5.5 A 30m grid was established over each survey area as defined in the specification using a Trimble Pathfinder Pro XRS global positioning system (GPS) with real-time correction providing sub-metre accuracy.
- 5.6 Measurements of vertical geomagnetic field gradient were determined using Bartington Grad601-2 dual fluxgate gradiometers. 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.
- 5.7 Data were downloaded on site into a laptop computer for initial processing and storage and subsequently transferred to a desktop computer for processing, interpretation and archiving.

#### ***Data processing***

- 5.8 Geoplot v.3 software was used to process the geophysical data and to produce continuous tone greyscale images of the raw (unfiltered) data. In this instance trace plots are only presented for selected parts of the surveys. A problem with large surveys is that the sheer number of traverses needing to be displayed means that there is not enough space in the plotting area to distinguish one trace from the next. Thus, it is not always practical (with such large datasets) for a survey report to provide a trace plot of the unprocessed survey data in its entirety (see David, Linford & Linford 2008, p46).
- 5.9 The greyscale images and interpretations are presented in Figures 3-27; selected trace plots are provided in Figure 28. In the greyscale images, positive magnetic anomalies are displayed as dark grey and negative magnetic anomalies



as light grey. A palette bar relates the greyscale intensities to anomaly values in nanoTesla.

- 5.10 The following basic processing functions have been applied to each dataset:

<i>clip</i>	clips, or limits data to specified maximum or minimum values; to eliminate large noise spikes; also generally makes statistical calculations more realistic.
<i>zero mean traverse</i>	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.
<i>despike</i>	locates and suppresses iron spikes in gradiometer data.
<i>destagger</i>	corrects for displacement of anomalies caused by alternate zig-zag traverses.
<i>interpolate</i>	increases the number of data points in a survey to match sample and traverse intervals. In this instance the data have been interpolated to 0.25m x 0.25m intervals.

***Interpretation: anomaly types***

- 5.11 Colour-coded geophysical interpretation plans are provided. Three types of geomagnetic anomaly have been distinguished in the data:

<i>positive magnetic</i>	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.
<i>negative magnetic</i>	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.
<i>dipolar magnetic</i>	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.

***Interpretation: features***

**General comments**

- 5.12 Colour-coded archaeological interpretation plans are provided.
- 5.13 Except where stated otherwise in the text below, positive magnetic anomalies are taken to reflect relatively high magnetic susceptibility materials, typically sediments in cut archaeological features (such as furrows, ditches or pits) whose magnetic susceptibility has been enhanced by decomposed organic matter or by burning.



- 5.14 Series of regularly-spaced, parallel, slightly arcuate positive magnetic anomalies have been detected across large parts of the study area. These anomalies almost certainly reflect traces of former ridge and furrow cultivation.
- 5.15 Small, discrete dipolar magnetic anomalies have been detected in each survey area. These almost certainly reflect items of near-surface ferrous and/or fired debris, such as horseshoes and brick fragments, and in most cases have little or no archaeological significance. A sample of these is shown on the geophysical interpretation plans, however, they have been omitted from the archaeological interpretation plans and the following discussion.

#### **Phase 1 Area A**

- 5.16 The majority of the linear positive magnetic anomalies detected appear to reflect land drains, particularly those aligned north-west/south-east, being relatively straight and narrow and fairly regularly-spaced at between 18-22m intervals. More than one system of drainage may be present, evidenced by different alignments of probable drain features.
- 5.17 It is possible that the land drains aligned north-west/south-east were laid in the former furrows of ridge and furrow cultivation, however, a 'texture' of broader and weaker positive magnetic anomalies aligned north-east/south-west appear more likely to reflect ploughed-out ridge and furrow remains.
- 5.18 A weak and discontinuous positive magnetic anomaly also aligned north-west/south-east across the central part of this area corresponds to an old field boundary shown on Ordnance Survey (OS) maps up to 1960.
- 5.19 Additional positive magnetic anomalies not identified above are likely to reflect soil-filled features such as ditches. Parts of two possible droveways or trackways may be present crossing the field north-east/south-west. It is probably a part of one of these features which has previously been identified on aerial photographs (ref SWPN169 in DBA).
- 5.20 Diffuse magnetic anomalies in the north-eastern part of the survey probably reflect local geological variation, most likely deposits associated with palaeochannels.

#### **Phase 1 Area B**

- 5.21 A chain of intense magnetic anomalies was detected along the length of this survey; this corresponds to a former field boundary shown on early OS editions. Additional discrete, intense anomalies in the north-central part of the survey may be associated with the remains of 19<sup>th</sup>-century stables and paddocks depicted here.
- 5.22 A broad, strong linear anomaly at the north-western end of the survey area almost certainly reflects a soil-filled ditch or former field boundary. Further positive magnetic anomalies in the south-central part of the area, though weak and diffuse, could possibly reflect ditch remains.



- 5.23 Very weak anomalies aligned north-west/south-east could reflect ploughed-out ridge and furrow remains.

**Phase 2 Area A**

- 5.24 A few broad and diffuse areas of weakly enhanced magnetic susceptibility were detected here, the more prominent ones being identified on the interpretation plans. These anomalies may reflect local geological variation, most probably deposits associated with palaeochannels.

**Phase 2 Area B**

- 5.25 A number of linear anomalies here correspond to shallow linear hollows noted on the ground surface; two of these may contain an electrical cable and another may contain a plastic or stone drain. Other linear positive magnetic anomalies could reflect former ditches.
- 5.26 There are very faint traces of probable ridge and furrow aligned north-west/south-east, as in the adjacent survey to the north.
- 5.27 There are also a number of very weak discrete positive magnetic anomalies which could reflect pit-like features, but are considered more likely to reflect natural variation.

**Phase 3 Area A**

- 5.28 Two sets of former ridge and furrow remains are evident in the data, both gently curving. The furrows aligned north-west/south-east are at approximately 8m intervals whilst those aligned north-east/south-west are approximately 14m apart. A probable former trackway runs between the two alignments.
- 5.29 A number of other positive magnetic anomalies detected here correspond to former field boundaries as shown on early OS editions. Differential ploughing to the south-east of one former boundary has virtually removed all traces of ridge and furrow there. Other linear positive magnetic anomalies could reflect former ditches.
- 5.30 A broad, mixed band of positive and negative magnetic anomalies curving from south to east almost certainly reflects deposits associated with palaeochannels.

**Phase 4 Areas A - D**

- 5.31 A ferrous service pipe lies parallel to the south-western boundary of Areas A – C. The magnetic effect of the pipe extends some distance into each survey, though the pipe itself is only just clipped by Areas A and B. A second service pipe is also present in Areas B and C.
- 5.32 Several very weak and irregularly-shaped anomalies in these surveys almost certainly reflect magnetic susceptibility contrasts between different palaeochannel deposits associated with former courses of Ampney Brook.
- 5.33 Some positive magnetic anomalies in Area C appear more regular and could possibly reflect archaeological ditch features, though they are very weak and diffuse.



**Phase 5 Areas A - B**

- 5.34 An intense linear magnetic anomaly crossing the central part of these surveys from south-west to north-east corresponds to a large drain along a former field boundary shown on OS maps up to 1960. In Area A the drain collects water from several other land drains to the north-west. In Area B other smaller land drains also join the main drain, however, their associated anomalies are very weak, indicating the use of less magnetic materials.
- 5.35 There are possibly eight relatively small circular positive magnetic anomalies in the northern/north-western quarter of Area B. These could reflect ring-ditches, up to 18m in diameter, possibly associated with round barrows or roundhouses. Two similar features have previously been identified on aerial photographs as possible Bronze Age barrows (ref SWPN12 in DBA).
- 5.36 The modern plough regime is evident as a magnetic 'texture' aligned north-north-west/south-south-east in Area A and north-east/south-west in Area B; in each case this may overlie former ridge and furrow on the same axis.
- 5.37 Irregular anomalies in the north-eastern quarter of Area B almost certainly reflect varied palaeochannel deposits.

**Phase 5 Area C**

- 5.38 The current plough direction has again been detected as a texture across the survey, aligned north-east/south-west, and again this may overlie earlier ridge and furrow cultivation.
- 5.39 Occasional ditch features and former field boundaries have almost certainly been detected, most notably in the south-western part of the survey. A number of features identified on aerial photographs here include a possible double-ditched trackway and a rectilinear enclosure (ref SWPN165 in DBA).
- 5.40 A number of land drains are present in the north-eastern part of the survey.

**Phase 6 Area A**

- 5.41 Recent ploughing has again been detected, aligned north-east/south-west.
- 5.42 Weak linear anomalies, probably reflecting land drains, have been detected aligned east-south-east/west-north-west. A large drain, now buried but depicted on early OS editions, has been recorded as a series of intense anomalies in the southern part of the area aligned north-east/south-west.
- 5.43 A number of other features have also been detected including two possible trackways, each defined by two parallel ditches about 7-9m apart, and at least one long ditch, possibly an early land boundary. One of the tracks and the long boundary ditch have previously been identified on air photographs (ref SWPN217 in DBA), however, a number of other cropmarked features are not readily identified in the geophysical survey. Some anomalies in the general area



of the cropmarks are interpreted here as land drains and deposits associated with palaeochannels.

#### **Phase 6 Area B**

- 5.44 The double-ditched trackway aligned east-north-east/west-south-west, which was detected in Area A, continues across the northern part of this survey. A second possible trackway has been detected crossing the southern part of the area aligned north-west/south-east.
- 5.45 To the immediate north of the northern track are two chains of intense dipolar magnetic anomalies which almost certainly reflect ferrous pipes; a non-magnetic material is used for part of one of the pipes as it heads south-east.
- 5.46 A number of positive magnetic anomalies have been detected in this area. One such anomaly corresponds to the location of a former path from Alex Farm to the (now disused) Eisey Lock on the former Thames & Severn Canal. Parallel to and south of the path is a relatively intense linear anomaly which may reflect a substantial sub-surface drain; this anomaly is aligned with an existing open drain next to the farm, however, the anomaly could similarly reflect high magnetic susceptibility soils within a ditch, possibly an old field boundary. Two further anomalies, both perpendicular to and south of this main feature, appear to be associated with it and to reflect further drains or former ditched boundaries. Several weaker linear anomalies are also likely to reflect ditches. Some of these features are also evident as cropmarks (ref SWPN180 in DBA).
- 5.47 A group of probable soil-filled ditches has been detected in the east-central part of the survey. These comprise a bean-shaped enclosure and the remains of a number of smaller ring-ditches, possibly associated with roundhouses or barrows (ref SWPN48 in DBA).
- 5.48 Probable traces of ridge and furrow cultivation have been detected aligned north-west/south-east, parallel to one of the trackways.
- 5.49 The modern plough regime is also evident, aligned north-east/south-west

#### **Phase 6 Area C**

- 5.50 As above, probable traces of ridge and furrow cultivation have been detected aligned north-west/south-east, perpendicular to the modern plough regime, which is aligned north-east/south-west.
- 5.51 The survey has detected a considerable number of other linear anomalies here, the majority of which are straight and narrow and relatively intense. These are interpreted as drains, several of which appear to join an existing surface drain.
- 5.52 Other positive magnetic lineations could reflect former ditches, while more irregular anomalies almost certainly reflect palaeochannel deposits, particularly in the northern half of the survey.

#### **Phase 7 Areas A - B**



- 5.53 Traces of former ridge and furrow cultivation have been detected across both these areas, the furrows being spaced between 9 and 14m apart, with a headland and possible track in the east. This former field boundary is shown as a substantial drain on early OS maps.
- 5.54 A number of probable ditch features and palaeochannel deposits have also been detected. The features in Area A appear to include a double-ditched trackway and possible ring-ditches, which could be associated with the scheduled settlement to the west (ref SWPN46 in DBA).

#### **Phase 7 Areas C - D**

- 5.55 No features of potential archaeological significance have been detected in these areas. The majority of anomalies here are interpreted as reflecting re-worked gravels and silts associated with palaeochannels. Former watercourses in Area D are particularly well-defined.

#### **Phase 8 Areas A - B**

- 5.56 With the exception of two possible ditch features, one in Area A and one in B, all the other broad positive and negative magnetic anomalies are again interpreted as reflecting deposits associated with palaeochannels. Some former courses of the River Thames are relatively well-defined in these areas.
- 5.57 Indeed, heavy rainfall during fieldwork created a temporary river through Area B, aligned broadly north-east/south-west, corresponding to an earlier course of the river detected by the survey.

#### **Phase 9 Areas A - B**

- 5.58 A palimpsest of features has been detected across about one hectare of land in the central part of Area A. The features are generally interpreted as soil-filled ditches forming a complex of smaller enclosures, some overlapping, within one much larger enclosure. The site appears to continue into Area B (on the other side of the former runway), particularly the outer enclosing ditch, though the features are presumably heavily truncated in this field with only occasional features surviving; the modern plough regime is more evident in the data here, aligned broadly north-south.
- 5.59 There is a relatively high concentration of small, intense dipolar magnetic anomalies within some of the small enclosures. These and a few large dipolar anomalies may reflect some industrial activity here, however, this may not be contemporary with the enclosures since a considerable amount of brick and concrete rubble was noted on the surface of this field.
- 5.60 Very broad ridge and furrow remains are evident in Area A, aligned north-east/south-west.
- 5.61 The remains of a tree-lined road, shown on OS maps up to 1921, are evident as two parallel ditches near the south-eastern limit of Area A.

#### **Phase 10 Area A**



- 5.62 This area contains a high concentration of ferrous and/or fired materials, particularly to the north of centre, which corresponds to the approximate location of a mound on the 1975 OS map.
- 5.63 Possible soil-filled ditches have been identified in the north-west of the area, where traces of ridge and furrow have also been detected.

#### **Phase 10 Area B**

- 5.64 Several probable drains have been detected here, possibly linked to a central drain/land division crossing the area north-east/south-west. Two possible ditches have been identified, though these could also be drains.
- 5.65 Broad, weak positive magnetic anomalies are likely to reflect variation in the natural subsoil.

### **6. Conclusions**

- 6.1 Geomagnetic surveys were undertaken over approximately 154ha of land at the Down Ampney Estate, straddling both Gloucestershire and Wiltshire, prior to proposed gravel extraction.
- 6.2 The technique has proved very effective over the soils and gravels at the site, detecting a range of both features and materials.
- 6.3 Features that were typically detected across the study area include soil-filled ditches (some defining enclosures and trackways, roundhouses and barrows); traces of former ridge and furrow cultivation; old field boundaries; drains and palaeochannels (particularly in the east near the River Thames ).
- 6.4 Some of the detected features correspond to cropmarks recorded on aerial photographs but many were previously unknown and have provided added value to existing knowledge.
- 6.5 Concentrations of probable archaeological features which might be regarded as being of more than local significance, were detected in Phase 5 Area B, Phase 6 Area B, Phase 7 Areas A and E, and Phase 9 Areas A and B.

### **7. Sources**

- David, A, Linford, N, & Linford, P, 2008 *Geophysical survey in archaeological field evaluation*, 2<sup>nd</sup> edition, English Heritage
- Gaffney, C, Gater, J, & Ovenden, S, 2002 *The use of geophysical techniques in archaeological evaluations*, Technical Paper 6, Institute of Field Archaeologists
- Schmidt, A, 2002 *Geophysical Data in Archaeology: A Guide to Good Practice*, Archaeology Data Service, Arts and Humanities Data Service



Scott Wilson 2008 *Land at the Down Ampney Estate, Cultural Heritage Desk-based Assessment*. Unpublished report for Hanson Aggregates.



## **Appendix: Specification for survey**



Hanson Aggregates

---

### **Down Ampney**

#### **Land at the Down Ampney Estate: Specification for Detailed Magnetometry Survey**

**Specification**  
September 2008





Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



## Revision Schedule

### Land at the Down Ampney Estate: Specification for Detailed Magnetometry Survey September 2008

Rev	Date	Details	Prepared by	Reviewed by	Approved by
01	September 2008	Draft 1	David Aspden Archaeological Consultant	Neil Macnab Principal Archaeologist	Annette Roe Technical Director
02	September 2008	Draft 2	David Aspden Archaeological Consultant	Neil Macnab Principal Archaeologist	Annette Roe Technical Director
03	September 2008	Final	David Aspden Archaeological Consultant	Neil Macnab Principal Archaeologist	Annette Roe Technical Director

This document has been prepared in accordance with the scope of Scott Wilson's appointment with its client and is subject to the terms of that appointment. It is addressed to and for the sole and confidential use and reliance of Scott Wilson's client. Scott Wilson accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided. No person other than the client may copy (in whole or in part) use or rely on the contents of this document, without the prior written permission of the Company Secretary of Scott Wilson Ltd. Any advice, opinions, or recommendations within this document should be read and relied upon only in the context of the document as a whole. The contents of this document do not provide legal or tax advice or opinion.

© Scott Wilson Group PLC 2007

Scott Wilson  
West One  
Wellington Street  
Leeds  
LS1 1BA

Tel 0113 204 5000  
Fax 0113 204 5001

[www.scottwilson.com](http://www.scottwilson.com)



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



## Table of Contents

1	Introduction .....	1
2	Site Description and Location .....	1
3	Archaeological Background .....	2
4	Project Objectives .....	5
5	Survey Areas .....	5
6	Methodology .....	7
7	Reporting .....	8
8	Dissemination .....	9
9	Archive Deposition .....	9
10	Monitoring .....	10
11	Confidentiality and Publicity .....	10
12	Copyright .....	10
13	Resources and Timetable .....	11
14	Insurances and Health and Safety .....	11
15	Access Arrangements and Site Information .....	12
16	General Provisions .....	12
17	References .....	13

## Figures

- Figure 1 – Site Location Plan
- Figure 2 – Geophysical Survey Phasing Plan
- Figure 3 – Magnetometry Survey Grid Phase 1
- Figure 4 – Magnetometry Survey Grid Phase 2
- Figure 5 – Magnetometry Survey Grid Phase 3
- Figure 6 – Magnetometry Survey Grid Phase 4
- Figure 7 – Magnetometry Survey Grid Phase 5
- Figure 8 – Magnetometry Survey Grid Phase 6
- Figure 9 – Magnetometry Survey Grid Phase 7
- Figure 10 – Magnetometry Survey Grid Phase 8
- Figure 11 – Magnetometry Survey Grid Phase 9
- Figure 12 – Magnetometry Survey Grid Phase 10

## Appendices

- Appendix 1 – Archaeological Standards and Guidelines



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



## 1 Introduction

- 1.1 Scott Wilson has been commissioned by Hanson Quarry Products Europe Ltd to undertake a detailed magnetometry survey of the site of a proposed quarry. The programme of investigation will contribute to the baseline for an environmental statement and inform a strategy for archaeological trial trench evaluation in advance of the production of the environmental statement.

## 2 Site Description and Location

- 2.1 The application area for the proposed quarry is located to the east of Latton and south of Down Ampney, and straddles the Counties of Gloucestershire and Wiltshire (Figure 1). It encompasses a number of irregularly shaped fields forming a roughly linear pattern running west-east centred on NGR 411515, 195640. The total area of the proposed quarry application is approximately 250ha. To the north lies the disused airfield of Down Ampney and to the west the village of Latton and the A419. Open fields lie to the south of the application area, with further fields and the upper reaches of the River Thames to the east.
- 2.2 The majority of the application area is currently agricultural land, with some wooded areas. In addition, the application area covers the southernmost portion of the disused airfield.
- 2.3 Topographically the area occupies a low-lying, flat section of the Upper Thames Valley. The solid geological deposits comprise Middle Oolite deposits of Corallian, Oxford Clay and Kellaways Beds. These are overlaid by superficial deposits of sand and gravel forming free-draining gravel terraces, known as the Upper Thames Gravels.
- 2.4 The gravel terraces were deposited in a series by the rivers that run through the area, the Thames, Churn, Coln, Swill Brook, and Ampney Brook. The rivers have since cut down through the gravel terraces into the underlying strata, leaving the terraces fragmentally preserved on the sides of the river valleys.



### 3 Archaeological Background

- 3.1 The landscape in which the proposed application lies is known to have been exploited and settled since the early prehistoric period and previous archaeological investigations in the Cotswold Waterpark area have identified sites and finds indicating human activity from the palaeolithic to the modern day.
- 3.2 Within the proposed application area, however, no evidence for either Palaeolithic or Mesolithic activity has been identified.
- 3.3 For the Neolithic period, known sites in the vicinity include a cursus extending between two Neolithic settlement sites at Lechlade and a possible henge known at Shorncliffe. Neolithic settlements, identified from pit alignments, postholes and pottery, have been recorded at Shorncliffe, Siddington, Fairford and Lechlade. There appears to have been a particular focus for Neolithic settlement and ritual activity around Lechlade where a number of waterways joined the Thames, providing access to the surrounding area. A causewayed camp has been identified from cropmark evidence at Charnock Wood near Down Ampney near the northwestern edge of the site, a Neolithic pit has been excavated on the line of the A419 to the southeast of Latton and two Neolithic ditches have been recorded to the west of Eysey.
- 3.4 Bronze Age evidence surrounding the site predominantly comprises cropmarks of ring-ditches indicating the presence of barrows. Several have been excavated to the east of the site and the results of the fieldwork generally indicate poor survival due to the impacts of post-medieval and modern ploughing. The ring-ditches are generally clustered to the south of Marston Meysey and north of the River Thames with a further group around Down Ampney. Two ring ditches have been identified from cropmarks within the northeastern corner of the site.
- 3.5 During the Iron Age the area was occupied by the *Dobunni* tribe, who had their 'capital' at what is now Cirencester. Cropmarks in the area surrounding the site suggest the presence of settlement to the southwest of Marston Meysey, north of Cricklade, northeast of Down Ampney, and within a scheduled area immediately to the southeast of Latton.
- 3.6 A possible prehistoric or Romano-British farmstead with enclosures, ditches, a pit and hut circles is indicated within the southern bounds of the former Down Ampney Airfield and is included within the site. In addition, the majority of the central portion of the site covers a series of possible prehistoric or Romano-British settlements with hut circles, enclosures and track-way. This activity extends beyond the southern boundary of the site with further probable prehistoric or Romano-British enclosures, hut circles, field boundaries and a drove road known in fields to the north of Eysey.
- 3.7 To the west of the site, fields designated as a Scheduled Monument contain cropmarks of a potential barrow. To the east of the site a second scheduled area incorporates a possible prehistoric or Roman farmstead with field boundaries, ditches, hut circle and enclosures. A further complex of cropmarks indicating enclosures, track-ways, hut circles, pits and field boundaries extends through fields running north to south between Marston Meysey and the disused Down Ampney Airfield.



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



- 3.8 Evidence for Roman settlement has been recorded at Cricklade, with a potential Roman river port settlement identified on the west side of the A419, which generally respects the line of Ermine Street. A possible Roman villa is known at Court Farm on the outskirts of Latton, where excavation in advance of road construction revealed 22 Roman pits. This hypothesis is supported by finds of brick and tile from the surrounding area.
- 3.9 The extensive cropmarks surrounding the site include evidence of Roman occupation and land-use. The cropmark complex to the west and south of Marston Meysey comprises possible Roman field boundaries, field system, trackway, enclosures and ditches; a probable Roman road with associated roadside extraction pits; and two potential track-ways running perpendicular to one another west of Wetstone Bridge. Their proximity to a possible Roman road in Latton parish suggests that they could be contemporary with that feature and have so been ascribed a Roman date. A further section of possible Roman road is indicated to the south of these. Beyond this, cropmarks within a scheduled area on the north side of the Thames indicate the presence of a possible field system, enclosures, ring ditches and pits of probable Roman date.
- 3.10 The cropmark complex that extends through the central portion of the site contains a possible Roman road extending west beyond the western boundary of the site, passing immediately south of Alex Farm. It seems likely that this road links Roman occupation around Fairford with Ermine Street.
- 3.11 Extensive cropmarks attributed to the Roman period are located within the scheduled area immediately to the southeast of Latton. These provide evidence of settlement containing a substantial building (possibly a villa) enclosures, field boundaries, pits and a track-way; together with a further two buildings, a triple-ditched enclosure and track-way. An undated track-way runs approximately west to east that may connect the settlement to the line of Ermine Street. To the northwest of Latton a double ditched rectangular enclosure has been identified. Within Latton itself are the remains of two Roman columns, one of which may have been used as a font since they reputedly came from Water Eaton church.
- 3.12 With the exception of the Saxon *burh* of Cricklade, early medieval activity is sparsely represented in the area, limited to only a few drainage ditches to the west and south of Eysey. No early medieval remains are known to exist within the proposed quarry site.
- 3.13 Recorded archaeological evidence dating to the medieval period is concentrated around the current settlements of Marston Meysey, Down Ampney, Latton and Cricklade. This suggests that the current settlement pattern of the area was established at this time. Several cropmarks around Marston Meysey probably represent the remains of gravel extraction during the medieval period. To the south of the village a wide scatter of stone tile and medieval pottery may indicate the presence of a building. To the northeast of this scatter, cropmarks indicate the presence of medieval or possibly later field boundaries. The cropmarks of a potential medieval track-way lie to the south. Probable medieval gravel pits are also indicated by cropmarks around Down Ampney. To the east of the village archaeological evaluation at Broadway Farm has recorded medieval field systems. Cropmarks to the west indicate the presence of a medieval or later drainage system. In addition the cropmark of a possible tree enclosure ring of medieval or later date is visible to the south of Down Ampney. Further enclosures of medieval or possibly post-medieval date are visible as earthworks on air photographs on the southern outskirts of Down Ampney and probably represent evidence for



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



---

an earlier phase or shrunken settlement. Latton also contains the earthwork remains of its medieval predecessor including enclosures, building platforms and track-way. There is evidence to suggest that Eysey was a larger settlement during the medieval period as cropmarks and earthworks in fields surrounding the current buildings indicate the presence of medieval settlement activity. The presence of an earlier settlement at Eysey would appear to be confirmed by the known site of a medieval church that was demolished in 1953.

- 3.14 The most notable recent changes to the area have been the construction of the Thames and Severn Canal, which runs to the south of the site and the construction of Down Ampney Airfield.
- 3.15 Areas surrounding the site are currently subject to mineral extraction, with lagoons to the west of the A419, the result of extensive quarrying.



## 4 Project Objectives

4.1 The objectives of the detailed magnetometer survey are:

- to establish the presence or absence of any archaeological anomalies within the areas of proposed development;
- to further investigate the presence of archaeological remains indicated by cropmarks
- to define the extent of any such anomalies;
- to characterise, if possible, any such anomalies; and
- to provide information to inform a subsequent strategy for archaeological trial trench evaluation.

## 5 Survey Areas

5.1 The detailed magnetometer survey will cover the areas defined in Figure 2. The survey grid for each phase is detailed in Figures 3 to 12. To enable the accurate positioning of survey grids, the NGR co-ordinates to establish a grid baseline for each phase have been provided. The total area to be surveyed measures 153.72ha, with each phase comprising survey areas based on 30m x 30m grid squares.

5.2 For the purposes of the programme of archaeological investigation the site has been divided into 10 phases:

- Phase 1 – 13.32ha
- Phase 2 – 9.18ha
- Phase 3 – 14.58ha
- Phase 4 – 16.02ha
- Phase 5 – 20.79ha
- Phase 6 – 26.64ha
- Phase 7 – 19.80ha
- Phase 8 – 19.53ha
- Phase 9 – 8.37ha
- Phase 10 – 5.49ha

5.3 This is to facilitate the commencement of archaeological trial trenching to follow the geophysical survey. The location of the trial trenches for each phase will be informed by the interim results of the geophysical survey in consultation with the Archaeologists for Gloucestershire and Wiltshire County Councils.



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



- 
- 5.4 If there are any areas that cannot be surveyed the Archaeological Contractor will inform Scott Wilson immediately and details of these will be provided in the interim report.
- 5.5 Phase 7 includes the survey of a corridor across a Scheduled Monument. Scott Wilson will apply to English Heritage in order to obtain a Section 42 licence for this work to proceed.



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



## 6 Methodology

- 6.1 This specification defines the methodologies to be used and adhered to. It has been produced in consultation with Charles Parry and Melanie Pomeroy-Kellinger, archaeological officers for Gloucestershire and Wiltshire County Council respectively. All work shall be carried out in accordance with the Standards and Guidance and Code of Conduct of the Institute of Field Archaeologists (1999), guidelines outlined in *Geophysical Survey in Archaeological Field Evaluation* (English Heritage 2008), and other current and relevant best practice and standards and guidance (Appendix 1).
- 6.2 A detailed magnetometer survey will be carried out over the designated survey areas using either a Geoscan FM 36 Fluxgate Gradiometer or a Bartington GRAD 601 Fluxgate Gradiometer (or similar electronic instrument). Readings should be taken at 0.25m intervals on traverses 1m apart within 30m by 30m grids.
- 6.3 The data should be downloaded at regular intervals on site onto a laptop computer for initial processing and storage. This will ultimately be transferred to a desktop computer for further processing, interpretation and archiving. Geoplot v.3 software (or comparable) will be used to interpolate the data to form an array of regularly spaced values at 0.25m x 0.25m intervals. Continuous tone greyscale images of raw data and an x/y trace plot will also be produced. Palette bars relating the greyscale intensities to anomaly values in ohms will be included with the images. Any algorithms used in processing the data should be detailed within the report.
- 6.4 The raw and processed data will be presented in the report. The processed drawings should be accurately located and presented in relation to the Ordnance Survey base plan for the site and the survey markers should be accurately plotted to aid in the laying out of subsequent evaluation or excavation areas, if deemed necessary. Interpretation plots will be included in the report.
- 6.5 An experienced operator will undertake the survey in order to provide consistent results with regard to pattern recognition and to provide initial screening of noise resulting from recent ferrous disturbance and local magnetic pollution.
- 6.6 During the survey a record should be made of surface conditions and sources of modern geophysical interference that may have a bearing on subsequent interpretation of field data.
- 6.7 The survey grid/transects must be established by electronic means (using an EDM Total station or similar instrument). This must be accurately tied in with the National Grid. This should be internally accurate to  $\pm 10$  cm, and the grid locatable on the 1: 2500 Ordnance Survey map.
- 6.8 The Archaeological Contractor will place permanent survey markers at the site such that the location of the survey can be easily re-established.



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



## 7 Reporting

- 7.1 Verbal progress reports will be provided to Scott Wilson on request and upon completion of each phase of the geophysical survey works. For each phase an interim grey-scale plot, interpretation plot and short statement of results will be submitted to Scott Wilson within 48 hours of completing the survey for that phase.
- 7.2 An assessment report will be submitted within 2 weeks of the completion of fieldwork. The report will include the following and will follow those guidelines set by English Heritage (1995, 5):
- a non-technical summary;
  - site location;
  - archaeological and historical background;
  - methodology;
  - aims and objectives;
  - results (to include full description, assessment of condition, quality and significance of results identified);
  - general and detailed plans showing the location of the surveyed areas accurately positioned on an Ordnance Survey map base (to a known scale);
  - colour/grey scale plots to aid interpretation. The plots will be contoured (if appropriate) to allow trends to be shown superimposed over data without obscuring it;
  - an interpretative plot;
  - statement of potential with recommendations for future survey; and
  - conclusions.
- 7.3 One copy of the complete report will be submitted to Scott Wilson as a draft. In finalising the report the comments of Scott Wilson will be taken into account.
- 7.4 Seven bound hard copies, one unbound master-copy and a digital version of the report and illustrations will be produced within one week of the receipt of comments on the draft report. The digital report shall comprise a CD containing a complete version of the report in PDF format and separate digital text (in Microsoft Word format) and CAD mapping files (in ESRI GIS or AutoCAD format) and any other illustrations or plates.
- 7.5 The raw and processed data will be presented in the report. The processed drawings will be accurately located and presented in relation to the Ordnance Survey base plan for the area and the survey markers should be accurately plotted to aid in the laying out of subsequent surveys.



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



## 8 Dissemination

- 8.1 Gloucestershire and Wiltshire County Councils support the Online Access to Index of Archaeological Investigations (OASIS) Project. The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large-scale developer funded fieldwork.
- 8.2 The Archaeological Contractor must therefore complete the online OASIS form at <http://ads.ahds.ac.uk/project/oasis/> within 3 months of completion of the work. When filling out the form the Archaeological Contractor must make reference to the Regional Research Framework. The Archaeological Contractor is advised to ensure that adequate time and costings are built into their tenders to allow the forms to be filled in.
- 8.3 Technical advice should be sought in the first instance from OASIS ([oasis@ads.ahds.ac.uk](mailto:oasis@ads.ahds.ac.uk)) and not from Gloucestershire and Wiltshire County Councils.
- 8.4 Once a report has become a public document by submission to or incorporation into the Sites and Monuments Record, Gloucestershire and Wiltshire County Council Sites and Monument Record Teams will validate the OASIS form thus placing the information into the public domain on the OASIS website.

## 9 Archive Deposition

- 9.1 The Archaeological Contractor will liaise with an appropriate museum to obtain agreement in principle of the acceptance of the documentary archive for long term storage and curation. The archive will be produced to the standards outlined by Management of Archaeological Projects Second Edition (MAP2) (English Heritage 1991) and Management of Research Projects in the Historic Environment (English Heritage 2006).



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



---

## 10 Monitoring

- 10.1 The Archaeological Contractor will be subject to regular monitoring by Scott Wilson who will be given full access to site records or any other information.
- 10.2 Scott Wilson will liaise with the Archaeologists for Gloucestershire and Wiltshire County Councils to inform them of the commencement of site works and to offer them the opportunity to visit and monitor the work in progress.

## 11 Confidentiality and Publicity

- 11.1 All communication regarding this project is to be directed through Scott Wilson. The Archaeological Contractor will refer all inquiries to Scott Wilson without making any unauthorised statements or comments.
- 11.2 The Archaeological Contractor will not disseminate information or images associated with the project for publicity or information purposes without the prior written consent of Scott Wilson.

## 12 Copyright

- 12.1 The Archaeological Contractor will assign copyright in all reports and documentation/images produced as part of this project to Scott Wilson. The Archaeological Contractor retains the right to be identified as the author/originator of the material. This applies to all aspects of the project.
- 12.2 The Archaeological Contractor may apply in writing to use/disseminate any of the project archive or documentation (including images). Such permission will not be unreasonably withheld.
- 12.3 The results of the survey will be submitted to the Archaeologists for Gloucestershire and Wiltshire County Councils in hard-copy format by Scott Wilson and will ultimately be made available for public access.



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



## 13 Resources and Timetable

- 13.1 All archaeological personnel involved in the project should be suitably qualified and experienced professionals. The Archaeological Contractor will provide Scott Wilson with staff details including CVs of the Project Manager, Site Supervisor and Site Assistants.
- 13.2 The fieldwork will take place during September 2008. An interim report for each phase including greyscale plots, interpretation plots and a short statement of results will be submitted to Scott Wilson within 48 hours of the completion of each phase.
- 13.3 The date for submission of the final report will be 2 weeks after the completion of the survey. Scott Wilson should be informed at the earliest opportunity if this is not achievable.

## 14 Insurances and Health and Safety

- 14.1 The Archaeological Contractor will provide Scott Wilson with details of public and professional indemnity insurance prior to fieldwork commencing.
- 14.2 The Archaeological Contractor will have their own Health and Safety policies compiled using national guidelines and which conform to all relevant Health and Safety legislation. A copy of the Health and Safety policy will be submitted to Scott Wilson in advance of fieldwork.
- 14.3 The Archaeological Contractor will undertake a risk assessment detailing project specific Health and Safety requirements. The risk assessment will be submitted to Scott Wilson in advance of commencement of site work. If amendments are made to the assessment during the works, Scott Wilson must be provided with the amended version at the earliest opportunity. Health and Safety will take priority over archaeological issues.
- 14.4 If available Scott Wilson will provide information regarding the approximate location of known services within the area of investigation. The Archaeological Contractor will, however, be responsible for identifying any buried or overhead services and take the necessary precautions to avoid damage to such services, prior to investigation.



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



---

## 15 Access Arrangements and Site Information

- 15.1 Scott Wilson will arrange access to the survey areas, and provide contact details for project personnel as necessary.

## 16 General Provisions

- 16.1 The Archaeological Contractor will undertake the works to the specification issued by Scott Wilson and in any subsequent written variations. No variation from, or changes to, the specification will occur except by prior agreement with Scott Wilson who will consult with the Archaeologists for Gloucestershire and Wiltshire County Council.
- 16.2 All communication on archaeological matters will be directed through Scott Wilson.



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



---

## 17 References

English Heritage, 2008, *Geophysical Survey in Archaeological Field Evaluation*

Scott Wilson, 2008, Land at the Down Ampney Estate, Cultural Heritage Desk-based Assessment  
(*unpublished*)



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



## Figures



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



## Appendix 1

### Archaeological Standards and Guidelines



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



---

### Archaeological Standards and Guidelines

- Bewely, R., Donoghue, D., Gaffney, V., Van Leusen, M., Wise, M., 1998, *Archiving Aerial Photography and Remote Sensing Data: A Guide to Good Practice*. Archaeology Data Service
- Brown, A. and Perrin, K., 2000, *A Model for the Description of Archaeological Archives*. English Heritage Centre for Archaeology
- Cowton, J., 1997, *Spectrum. The UK Museums Documentation Standard*. Second edition. Museums Documentation Association
- Darvill, T. and Atkins, M., 1991, *Regulating Archaeological Works by Contract* (IFA Technical Paper No 8)
- Eiteljorg, H., Fernie, K., Huggett, J. and Robinson, D., 2002, *CAD: A Guide to Good Practice*. Archaeology Data Service
- EH, 1991, *The Management of Archaeological Projects*. Second Edition (MAP2) English Heritage (London)
- EH, 2000, *Managing Lithic Scatters. Archaeological guidance for planning authorities and developers*. English Heritage (London)
- EH, 2003, *Where on Earth Are We? The Global Positioning System (GPS) in Archaeological Field Survey*. English Heritage (London)
- EH, 2006b, *Management of Research Projects in the Historic Environment. The MoRPHE Project Managers' Guide*. English Heritage (London)
- EH, 2008, *Geophysical Survey in Archaeological Field Evaluation*. English Heritage Research and Professional Services Guidelines No 1 (second edition)
- Ferguson, L. and Murray, D., 1997, *Archaeological Documentary Archives*. Institute of Field Archaeologists Paper 1
- Gaffney, C. and Gater, J., with Ovenden, S., 2002, *The Use of Geophysical Techniques in Archaeological Evaluations*. Institute of Field Archaeologists Technical Paper 9
- Gillings, M. and Wise, A., 1998, *GIS: A Guide to Good Practice*, Archaeology Data Service
- IFA, 2002, *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*. (and subsequent revisions). Institute of Field Archaeologists
- IFA, 2001, *Standard and Guidance for Archaeological Field Evaluation*. (and subsequent revisions). Institute of Field Archaeologists
- IFA, 2001, *Standard and Guidance for Archaeological Watching Brief*. (and subsequent revisions). Institute of Field Archaeologists
- IFA, 2001, *Standard and Guidance for Archaeological Excavation* (and subsequent revisions). Institute of Field Archaeologists
- IFA, 2001, *Standard and Guidance for Archaeological Desk based Assessment* (and subsequent revisions). Institute of Field Archaeologists
- IFA, 2001, *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials* (and subsequent revisions). Institute of Field Archaeologists
- MDA & SMA 2000, *Standards in Action: Working with Archaeology Guidelines*. Museum Documentation Centre & Society of Museum Archaeologists. Museums Documentation Association & Society of Museum Archaeologists
- MGC, 1992, *Standards in the Museum Care of Archaeological Collections*. Museums and Galleries Commission
- Owen, J., 1995, *Towards an Accessible Archaeological Archive. The Transfer of Archaeological Archives to Museums: Guidelines for Use in England, Northern Ireland, Scotland and Wales*. Society of Museum Archaeologists



Hanson Quarry Products Europe Ltd  
Down Ampney  
D120526



- 
- RCHME, 1999, *Recording Archaeological Field Monuments: A Descriptive Specification*.
- Richards, J. and Robinson, D. (eds), 2001, *Digital Archive From Excavation and Fieldwork A Guide to Good Practice*. Archaeology Data Service
- Schmidt, A., 2001, *Geophysical Data in Archaeology*. Archaeology Data Service
- SMA, 1993, *Guidelines on the Selection, Retention and Dispersal of Archaeological Collections*. Society of Museum Archaeologists
- SMA, 1995, *Towards an Accessible Archaeological Archive – the Transference of Archaeological Archives to Museums: Guidelines for use in England, Northern Ireland, Scotland and Wales*. Society of Museum Archaeologists
- UKIC, 1990, *Guidelines for the Preparation of Excavation Archives for long-term Storage*. (United Kingdom Institute for Conservation Archaeology Section)





Archaeological Services  
University of Durham

Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire  
geophysical surveys

Report 2131

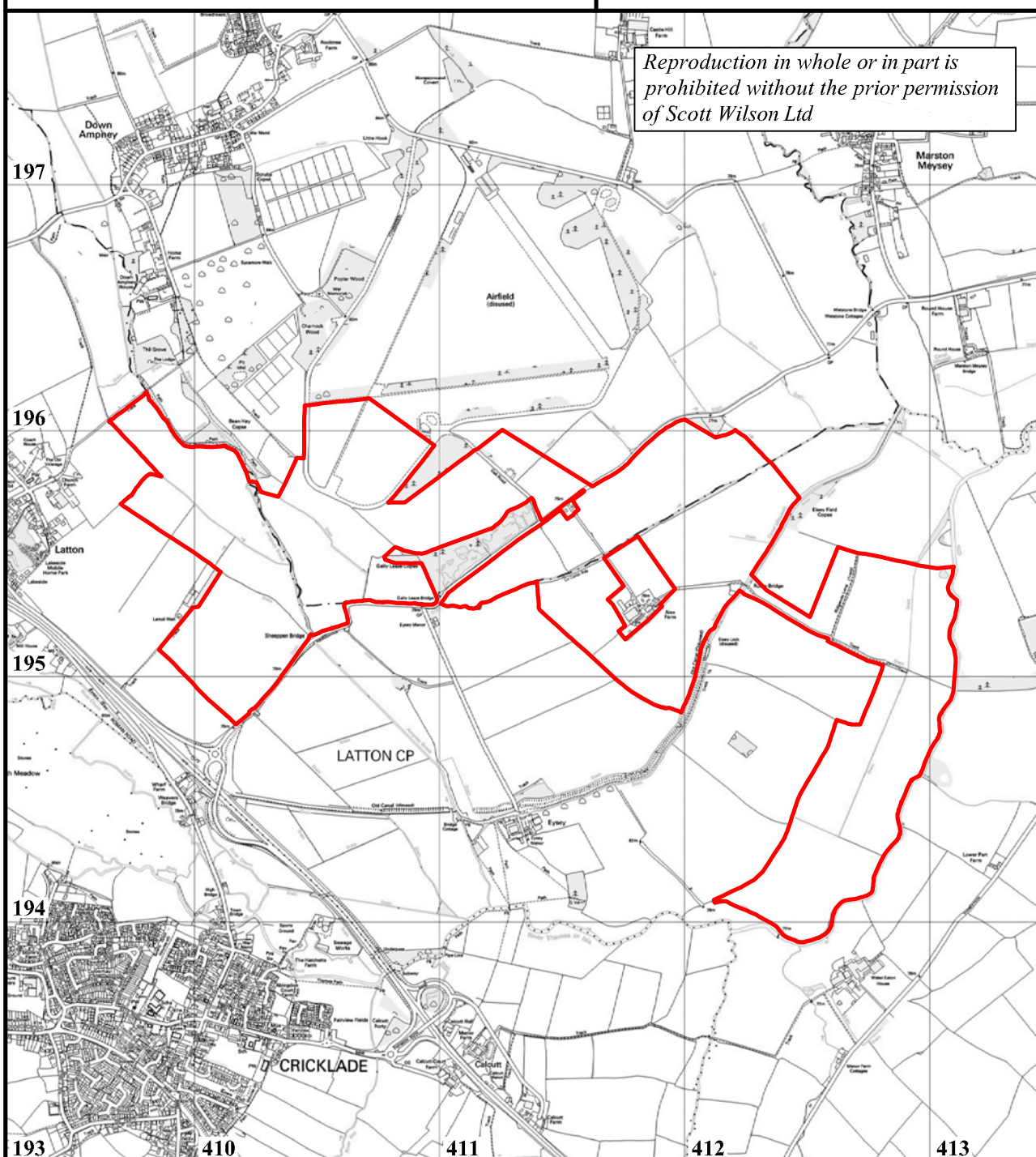
Figure 1

Site location

for  
**Scott Wilson Ltd**

on behalf of  
**Hanson Quarry Products  
Europe Ltd**

*Reproduction in whole or in part is  
prohibited without the prior permission  
of Scott Wilson Ltd*



site boundary

0 1km  
scale 1:25 000 - for A4 plot





**Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire**

geophysical surveys

Report 2131

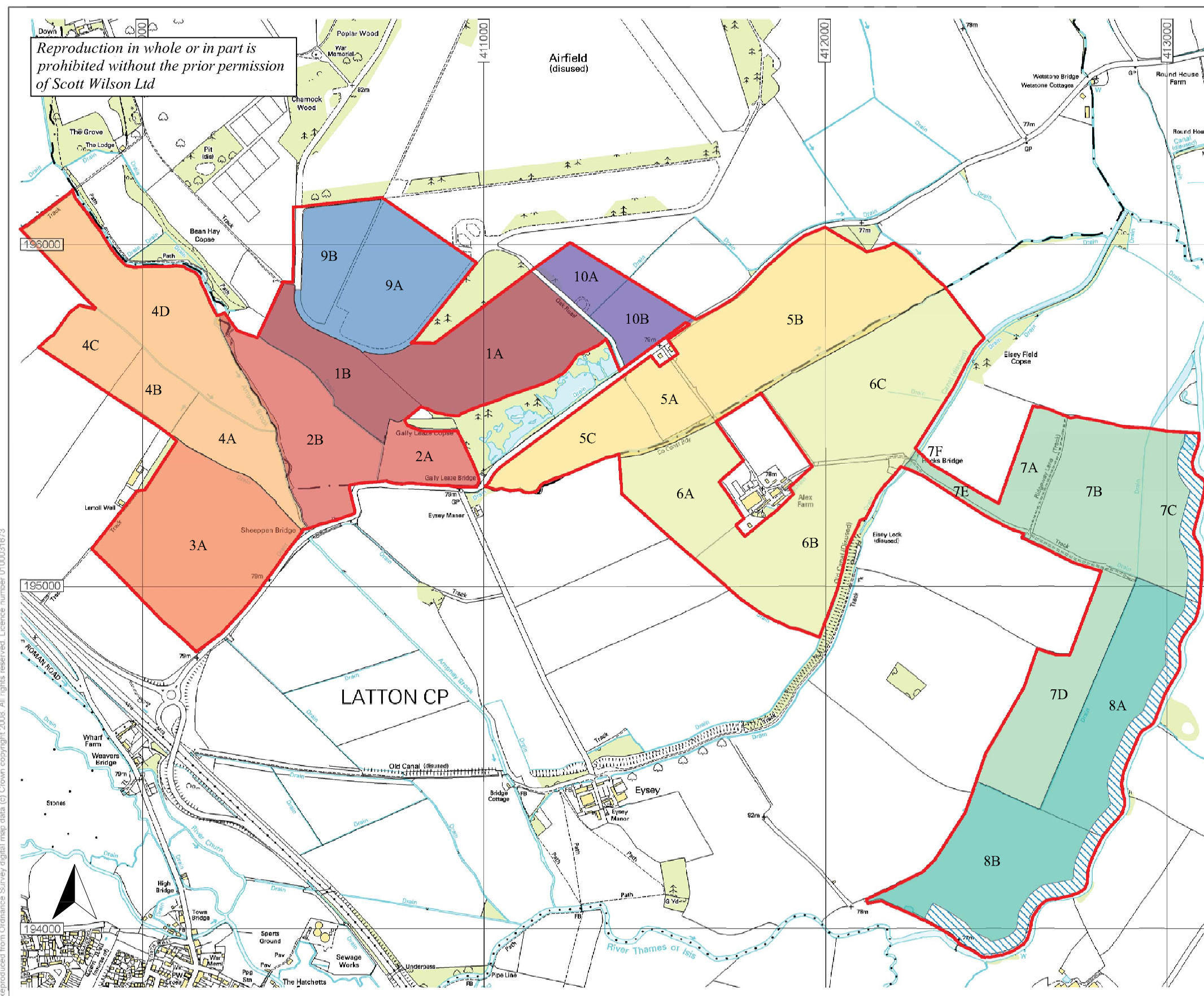
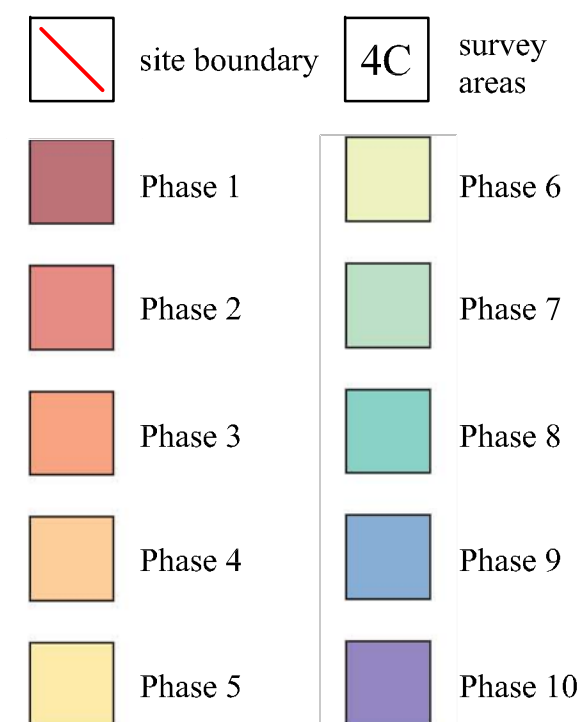
Figure 2

*Phased survey plan*

for  
**Scott Wilson Ltd**

on behalf of  
**Hanson Quarry Products  
Europe Ltd**

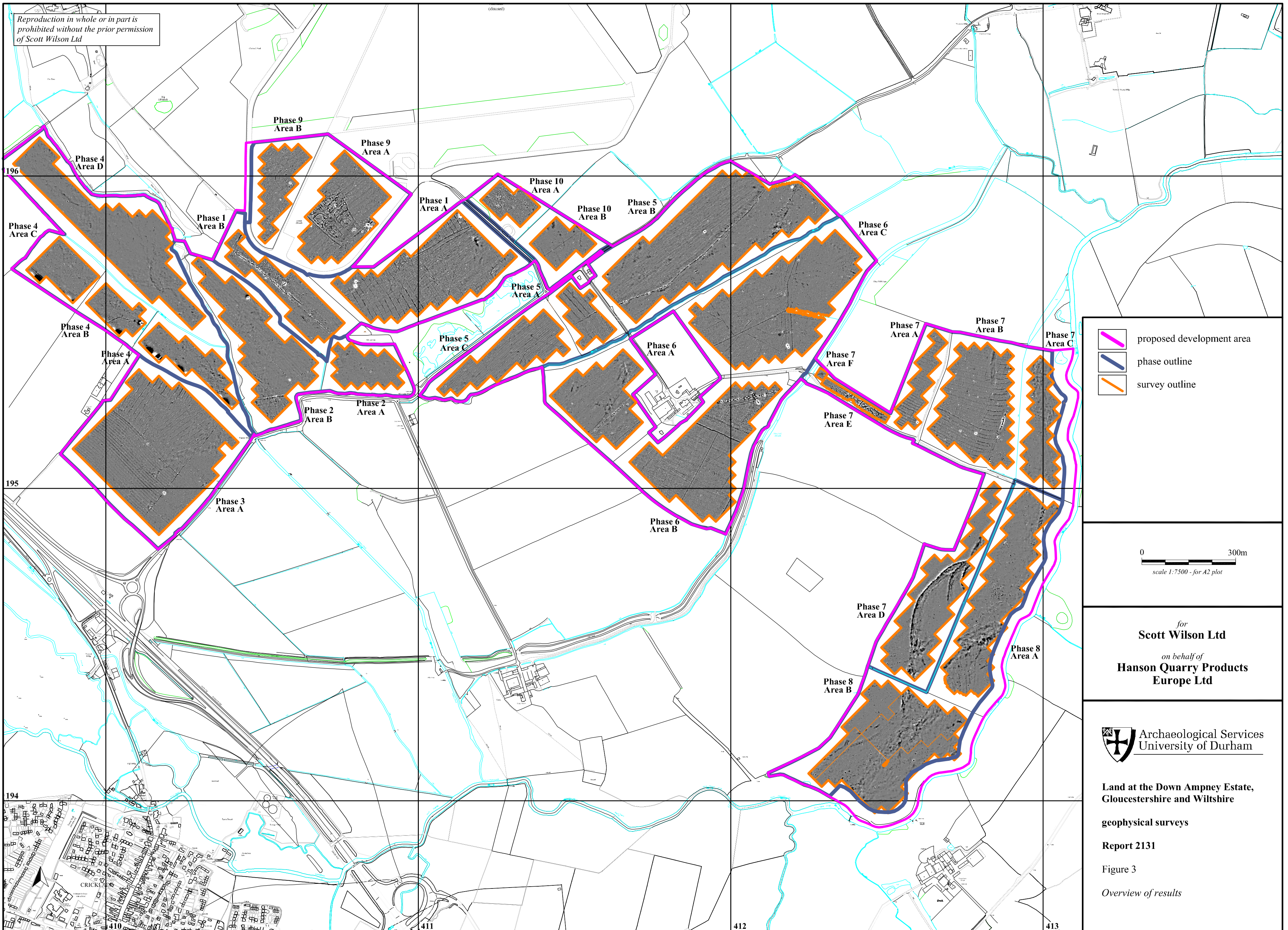
0 500m  
scale 1:12 500 - for A3 plot



Reproduction in whole or in part is  
prohibited without the prior permission  
of Scott Wilson Ltd



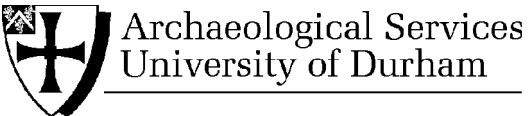
Reproduction in whole or in part is prohibited without the prior permission of Scott Wilson Ltd



- proposed development area
- phase outline
- survey outline

0 300m  
scale 1:7500 - for A2 plot

for  
**Scott Wilson Ltd**  
on behalf of  
**Hanson Quarry Products  
Europe Ltd**



**Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire**

**geophysical surveys**

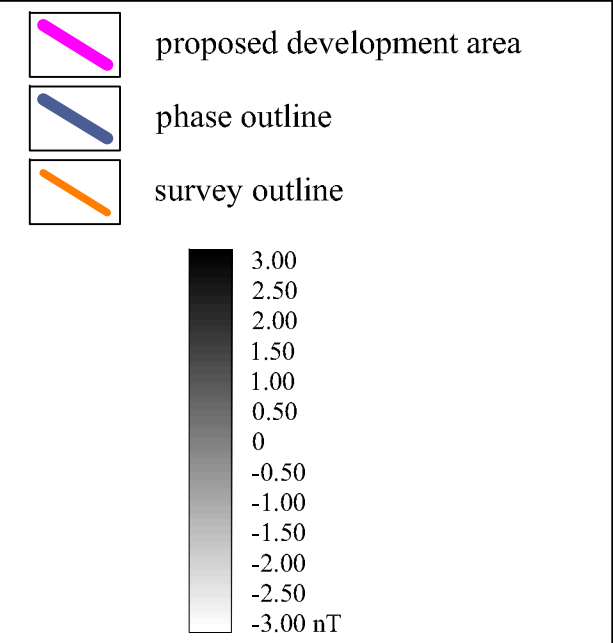
**Report 2131**

Figure 3

Overview of results



Reproduction in whole or in part is prohibited without the prior permission of Scott Wilson Ltd



for  
**Scott Wilson Ltd**  
on behalf of  
**Hanson Quarry Products Europe Ltd**

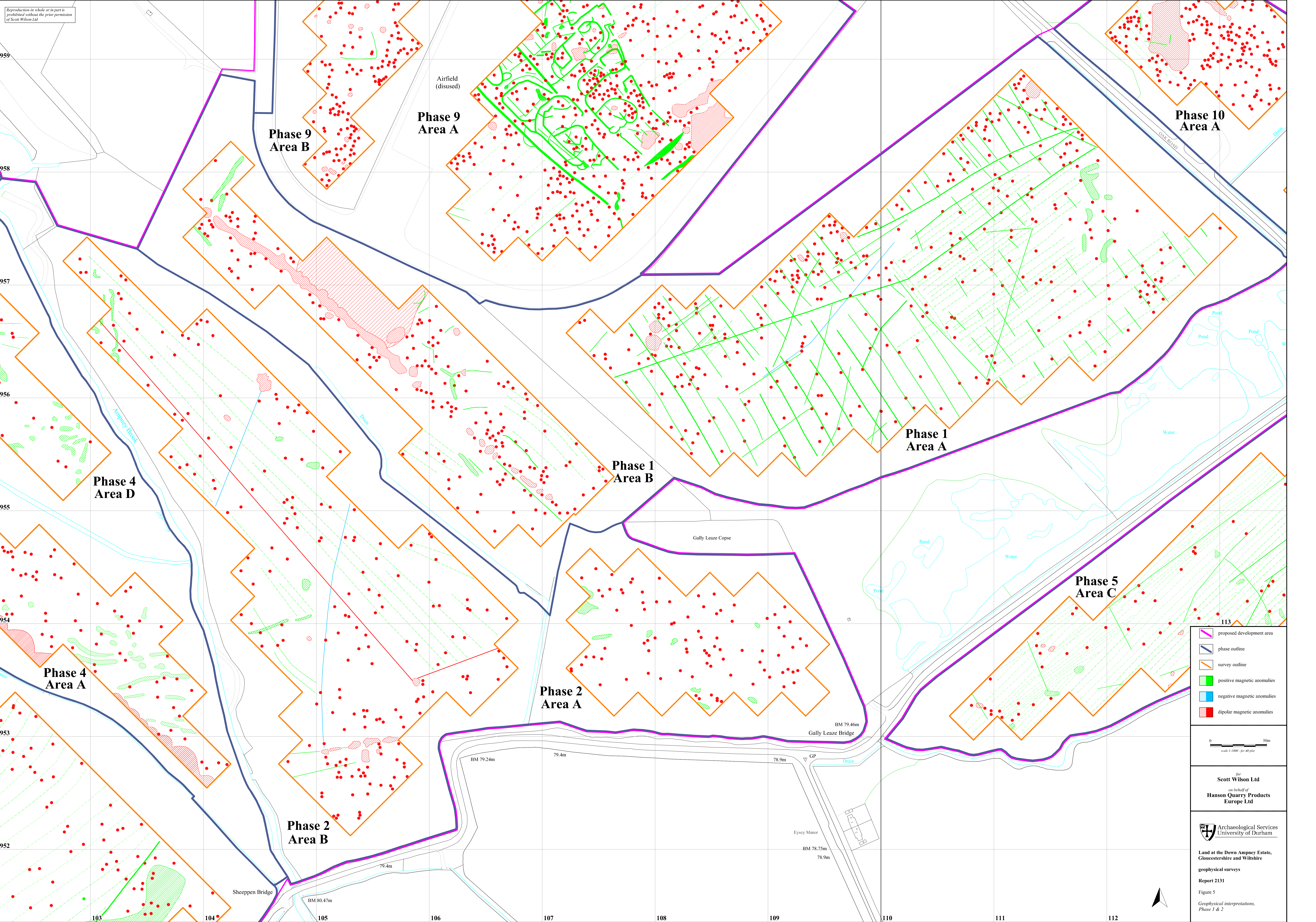
**Archaeological Services**  
University of Durham

Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire

geophysical surveys  
Report 2131

Figure 4  
Geophysical surveys, Phase 1 & 2





- proposed development area
- phase outline
- survey outline
- positive magnetic anomalies
- negative magnetic anomalies
- dipolar magnetic anomalies

0 50m  
scale 1:1000 - for A0 plot

for  
**Scott Wilson Ltd**  
on behalf of  
**Hanson Quarry Products  
Europe Ltd**

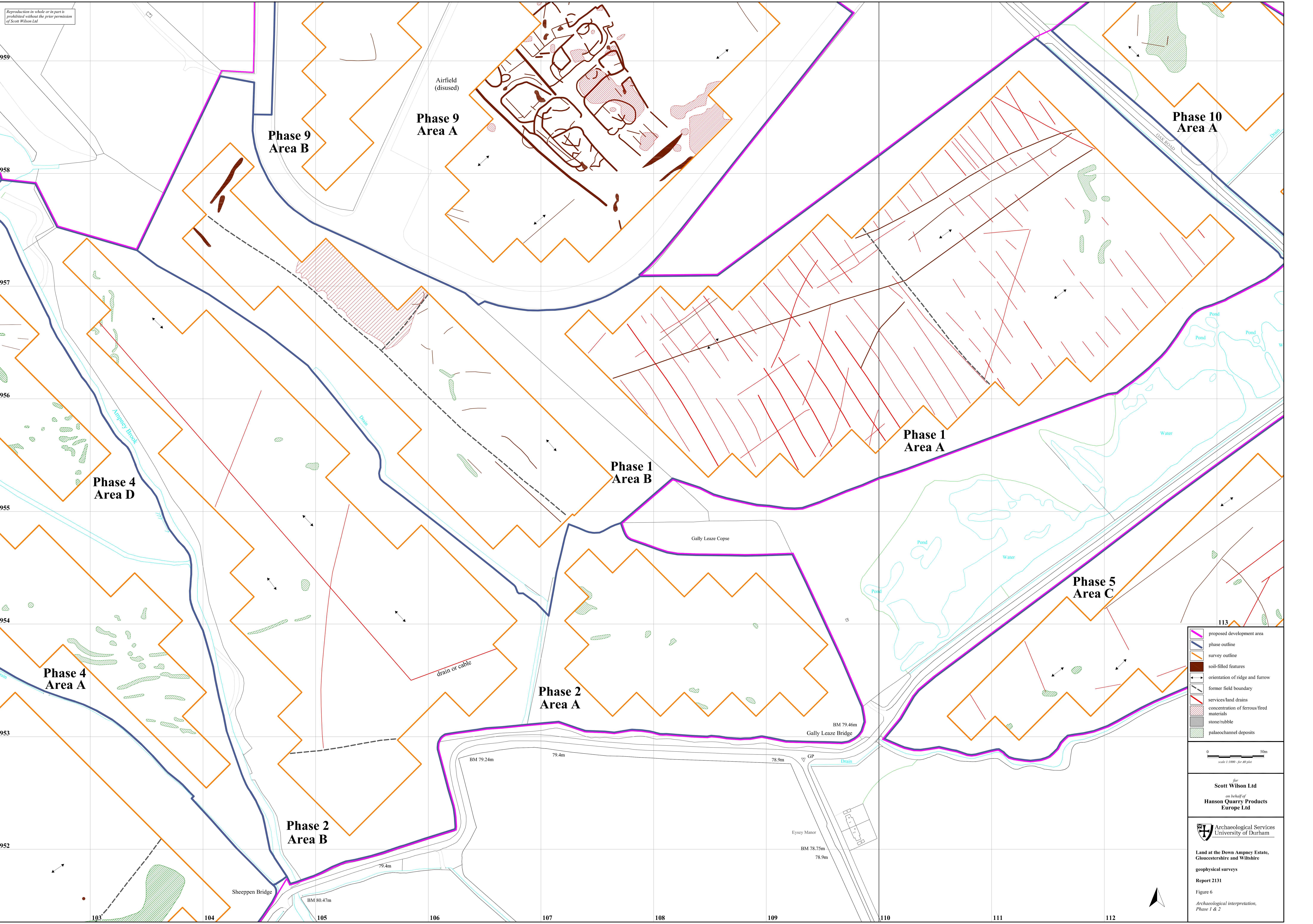


Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire  
geophysical surveys  
Report 2131

Figure 5  
Geophysical interpretations,  
Phase 1 & 2

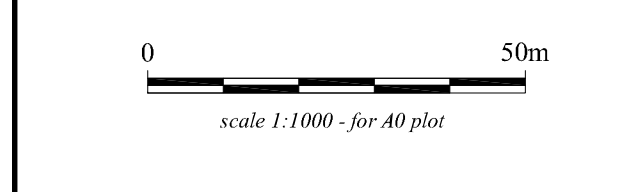




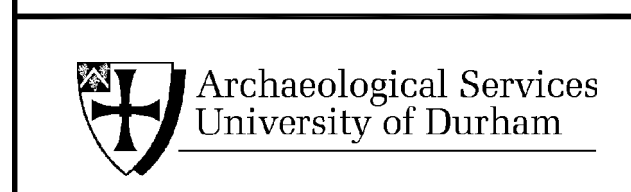


Reproduction in whole or in part is prohibited without the prior permission of Scott Wilson Ltd

- proposed development area
- phase outline
- survey outline
- soil-filled features
- orientation of ridge and furrow
- former field boundary
- services/land drains
- concentration of ferrous/fired materials
- stone/rubble
- palaeochannel deposits



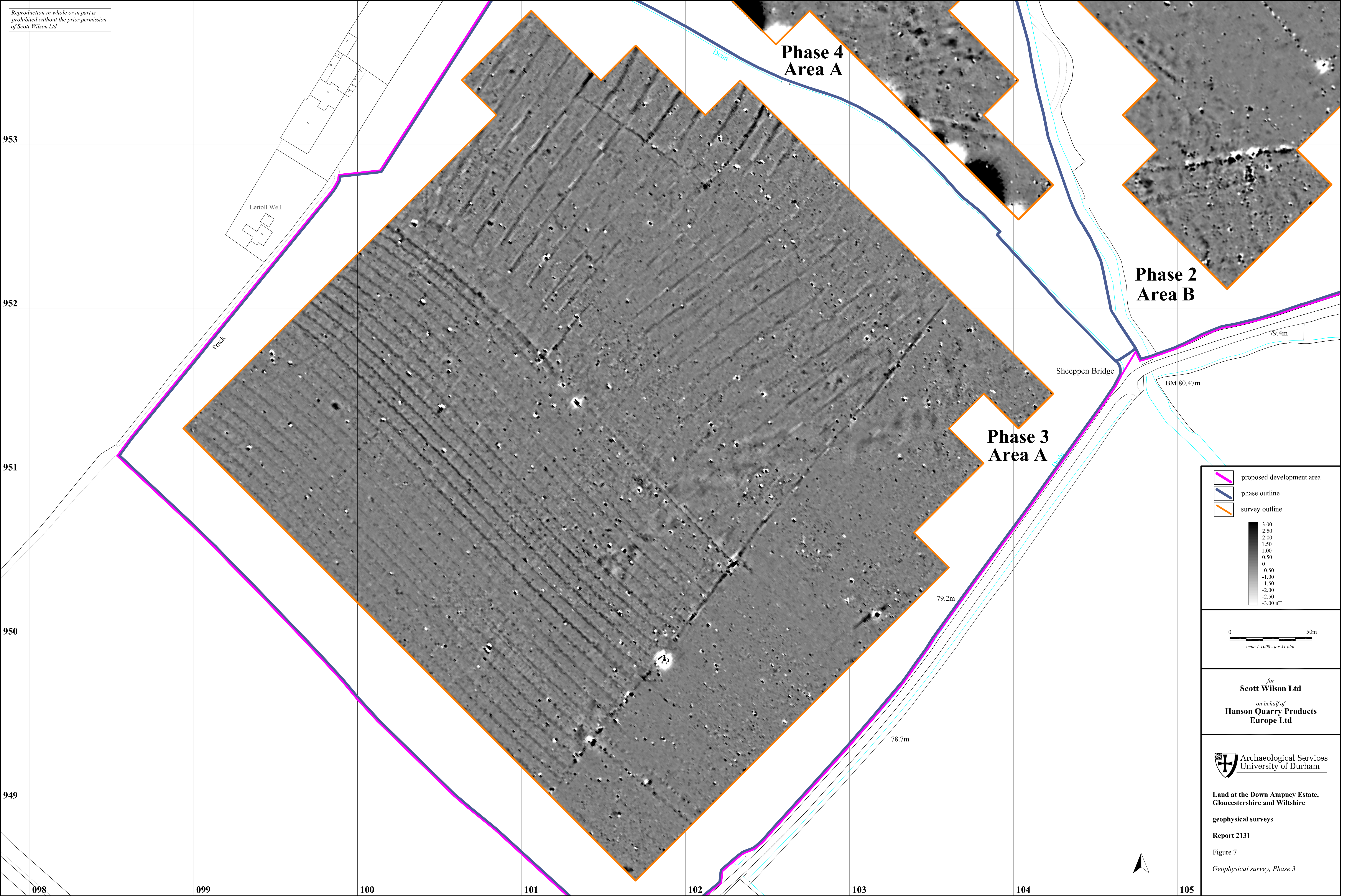
for  
**Scott Wilson Ltd**  
on behalf of  
**Hanson Quarry Products Europe Ltd**



Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire  
geophysical surveys  
Report 2131

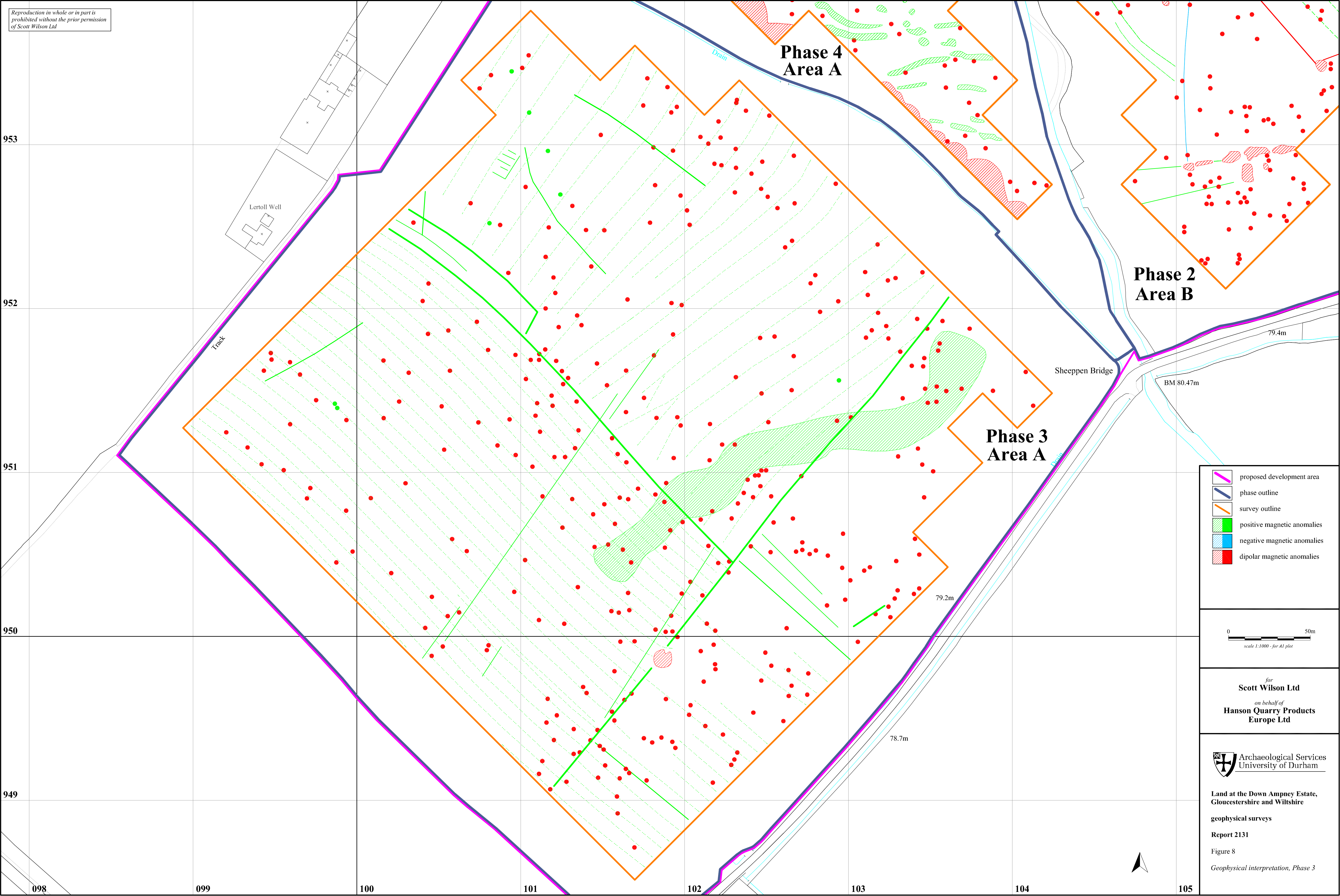
Figure 6  
Archaeological interpretation,  
Phase 1 & 2



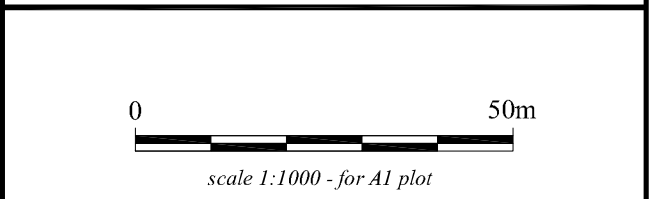





Reproduction in whole or in part is prohibited without the prior permission of Scott Wilson Ltd



- proposed development area
- phase outline
- survey outline
- positive magnetic anomalies
- negative magnetic anomalies
- dipolar magnetic anomalies

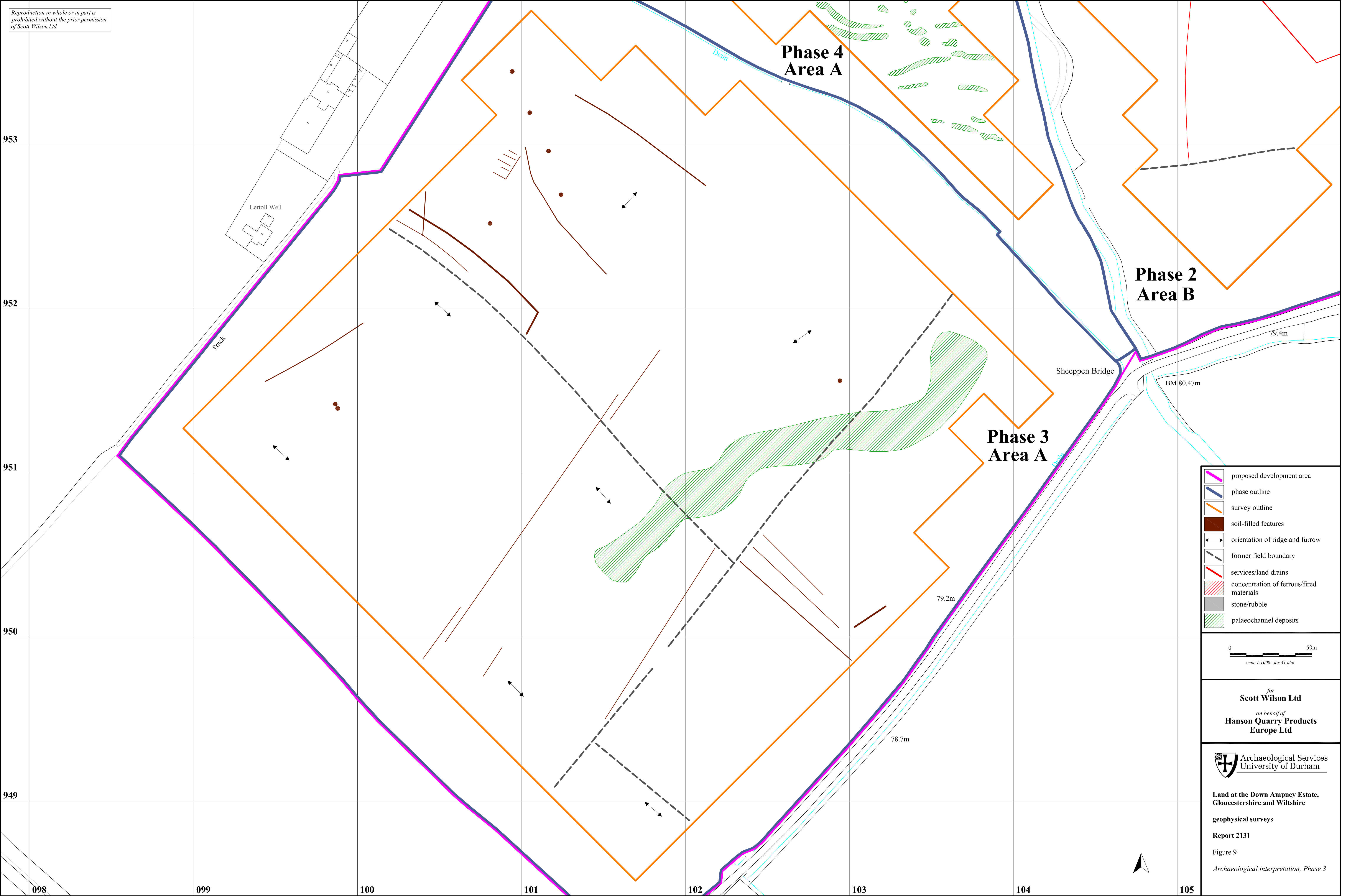


for  
**Scott Wilson Ltd**  
on behalf of  
**Hanson Quarry Products  
Europe Ltd**

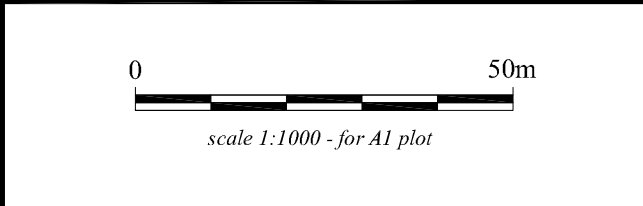
 **Archaeological Services  
University of Durham**

**Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire**  
**geophysical surveys**  
**Report 2131**  
Figure 8  
*Geophysical interpretation, Phase 3*






- proposed development area
- phase outline
- survey outline
- soil-filled features
- orientation of ridge and furrow
- former field boundary
- services/land drains
- concentration of ferrous/fired materials
- stone/rubble
- palaeochannel deposits



for  
**Scott Wilson Ltd**  
on behalf of  
**Hanson Quarry Products  
Europe Ltd**

 **Archaeological Services  
University of Durham**

**Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire**

**geophysical surveys**

**Report 2131**

Figure 9

*Archaeological interpretation, Phase 3*

















Reproduction in whole or in part is prohibited without the prior permission of Scott Wilson Ltd

proposed development area

phase outline

survey outline

3.00

2.50

2.00

1.50

1.00

0.50

0

-0.50

-1.00

-1.50

-2.00

-2.50

-3.00 aT

0

50m


scale 1:1000 - for A0 plot

for

Scott Wilson Ltd

on behalf of

Hanson Quarry Products Europe Ltd

 Archaeological Services  
University of Durham

Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire

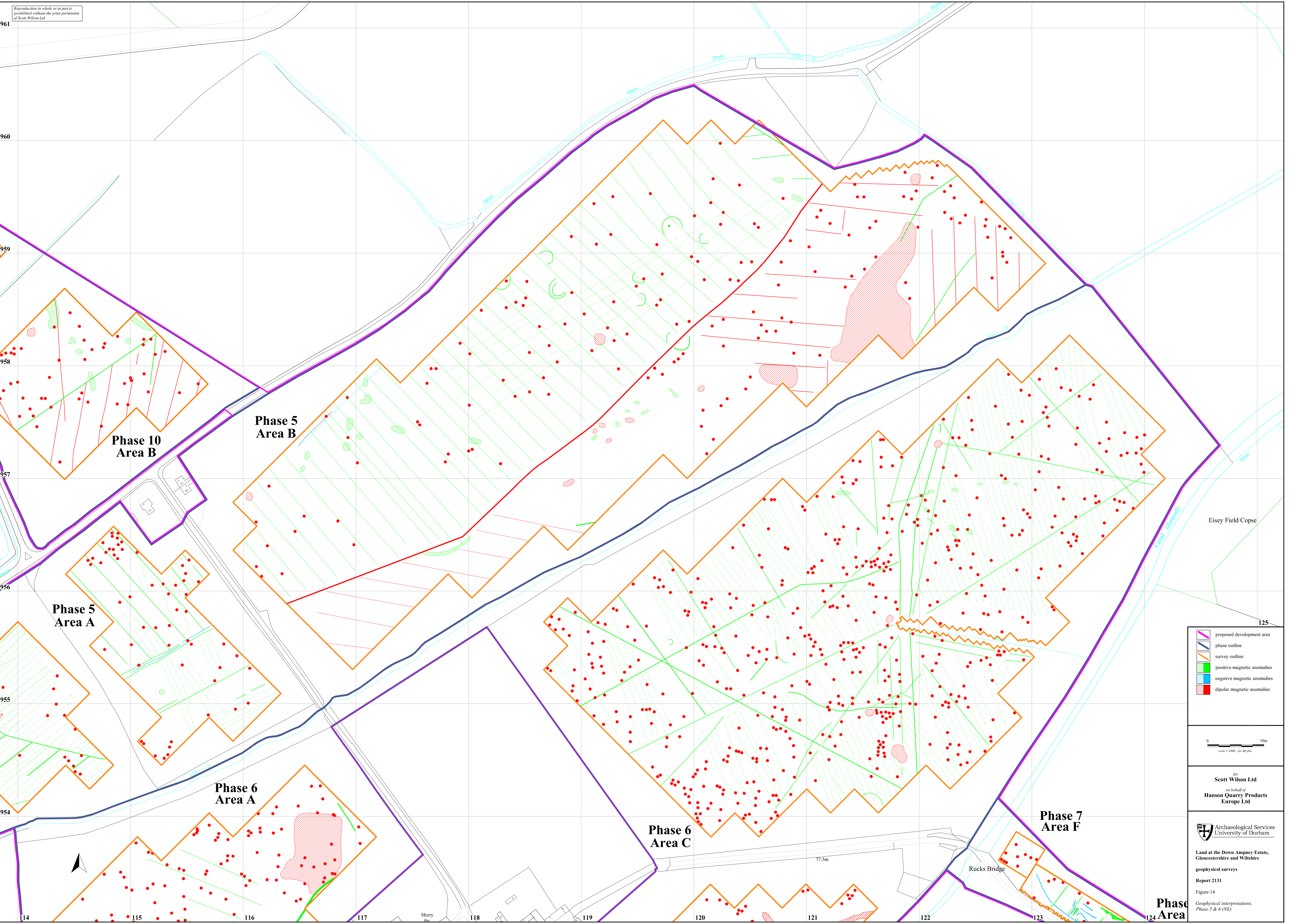
geophysical surveys

Report 2131

Figure 13

Geophysical surveys, Phase 5 & 6 (NE)





Reproduction in whole or in part is prohibited without the prior permission of Scott Wilson Ltd

961

960

959

958

957

956

955

954

114

115

116

117

118

119

120

121

122

123

124

125

Phase 10  
Area B

Phase 5  
Area B

Phase 5  
Area A

Phase 6  
Area A

Phase 6  
Area C

Phase 7  
Area F

Phase 8  
Area

- proposed development area
- phase outline
- survey outline
- positive magnetic anomalies
- negative magnetic anomalies
- dipolar magnetic anomalies

0 50m  
scale 1:1000 - for A0 plot

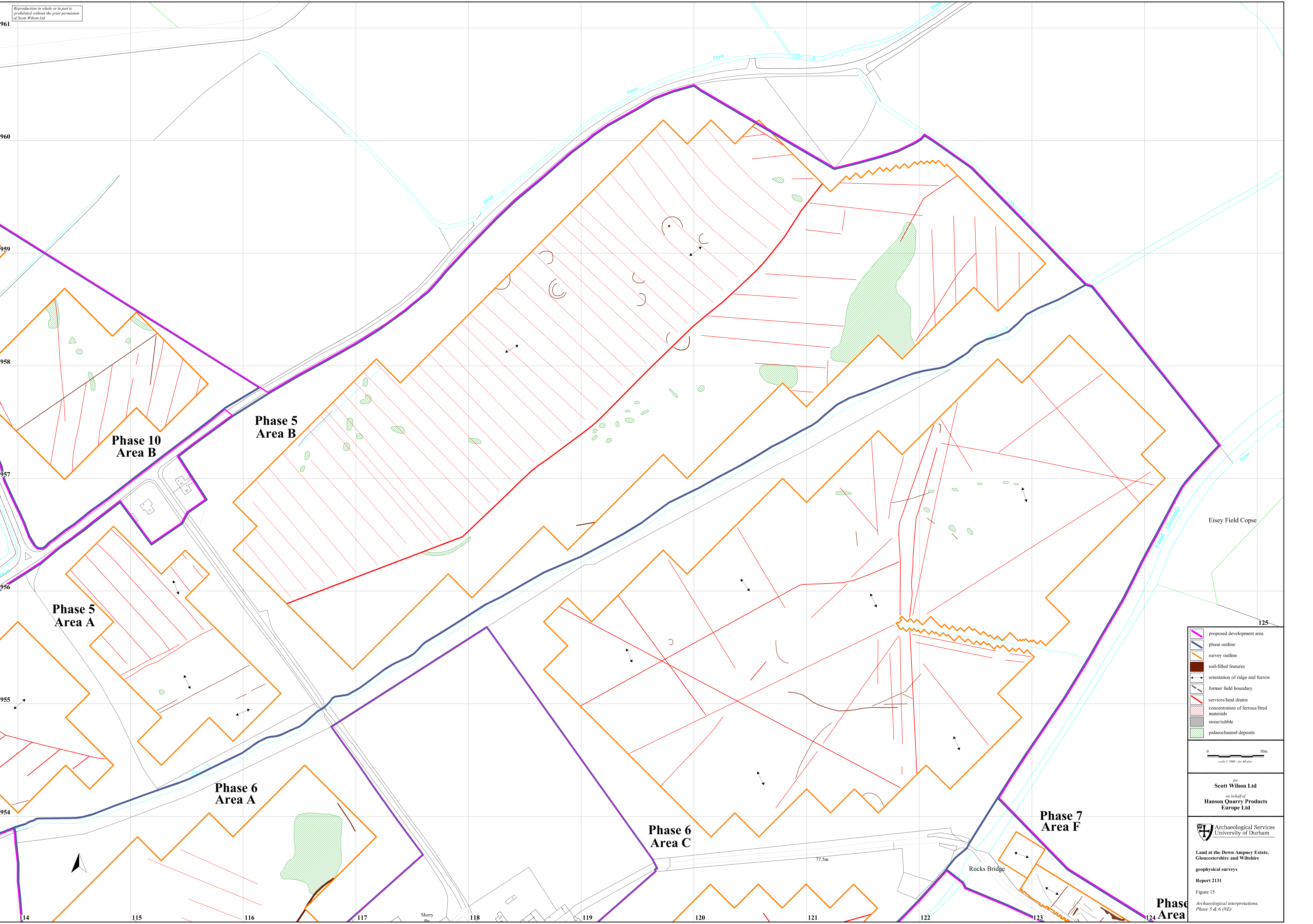
for  
Scott Wilson Ltd  
on behalf of  
Hanson Quarry Products  
Europe Ltd

Archaeological Services  
University of Durham

Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire  
geophysical surveys  
Report 2131

Figure 14  
Geophysical interpretations,  
Phase 5 & 6 (NE)





Reproduction in whole or in part is prohibited without the prior permission of Scott Wilson Ltd

proposed development area

phase outline

survey outline

soil-filled features

orientation of ridge and furrow

former field boundary

services/land drains

concentration of ferrous/fired materials

stone/rubble

palaeochannel deposits

050m


scale 1:1000 - for A3 plot

for

Scott Wilson Ltd

on behalf of

Hanson Quarry Products Europe Ltd

 Archaeological Services  
University of Durham

Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire

geophysical surveys

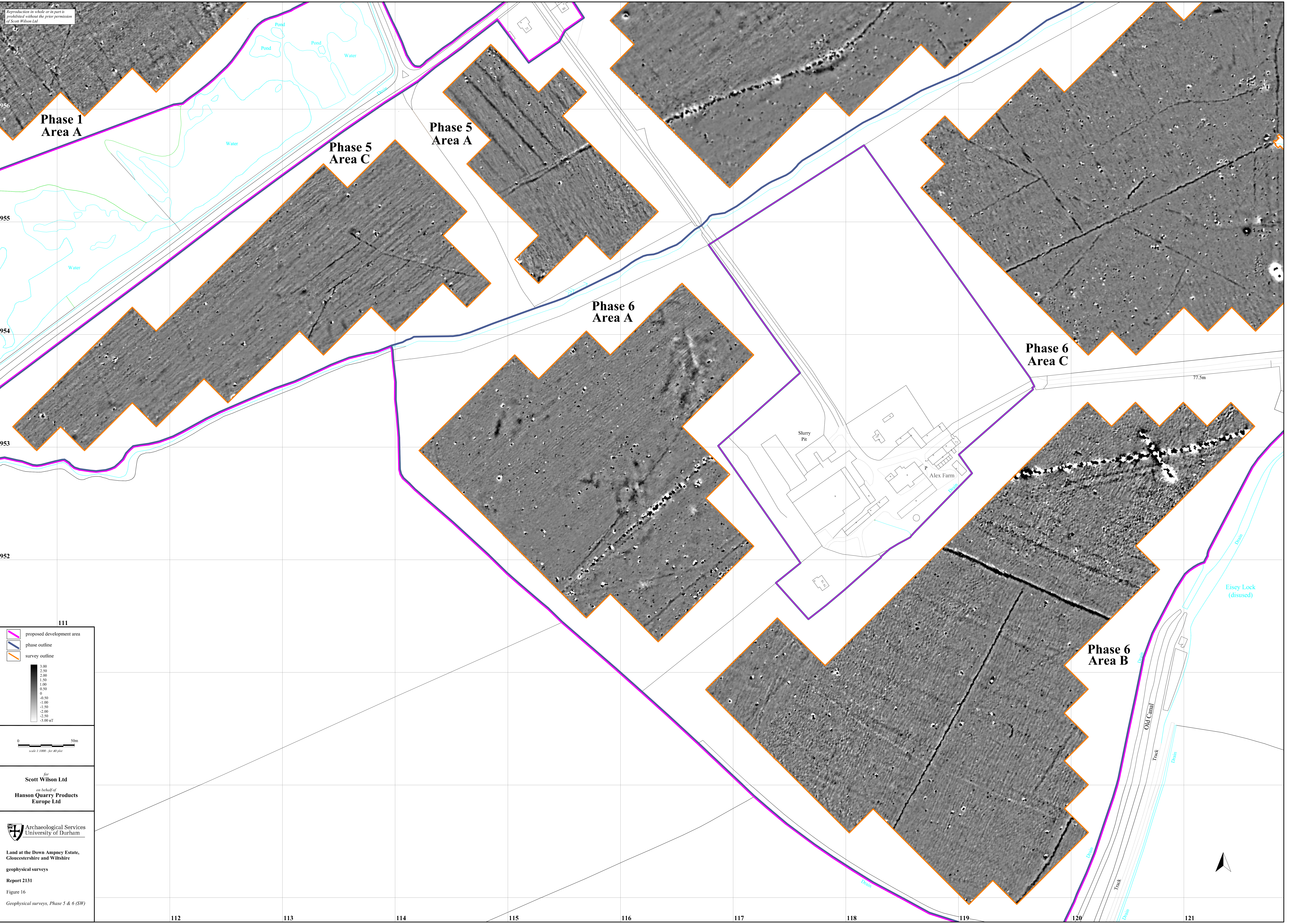
Report 2131

Figure 15

Archaeological interpretations,  
Phase 5 & 6 (NE)

Phase 5 Area A





Reproduction in whole or in part is prohibited without the prior permission of Scott Wilson Ltd

proposed development area

phase outline

survey outline

3.00

2.50

2.00

1.50

1.00

0.50

0

-0.50

-1.00

-1.50

-2.00

-2.50

-3.00 mT

0

50m

scale 1:1000 - for A3 plot

for

Scott Wilson Ltd

on behalf of

Hanson Quarry Products Europe Ltd

Archaeological Services

University of Durham

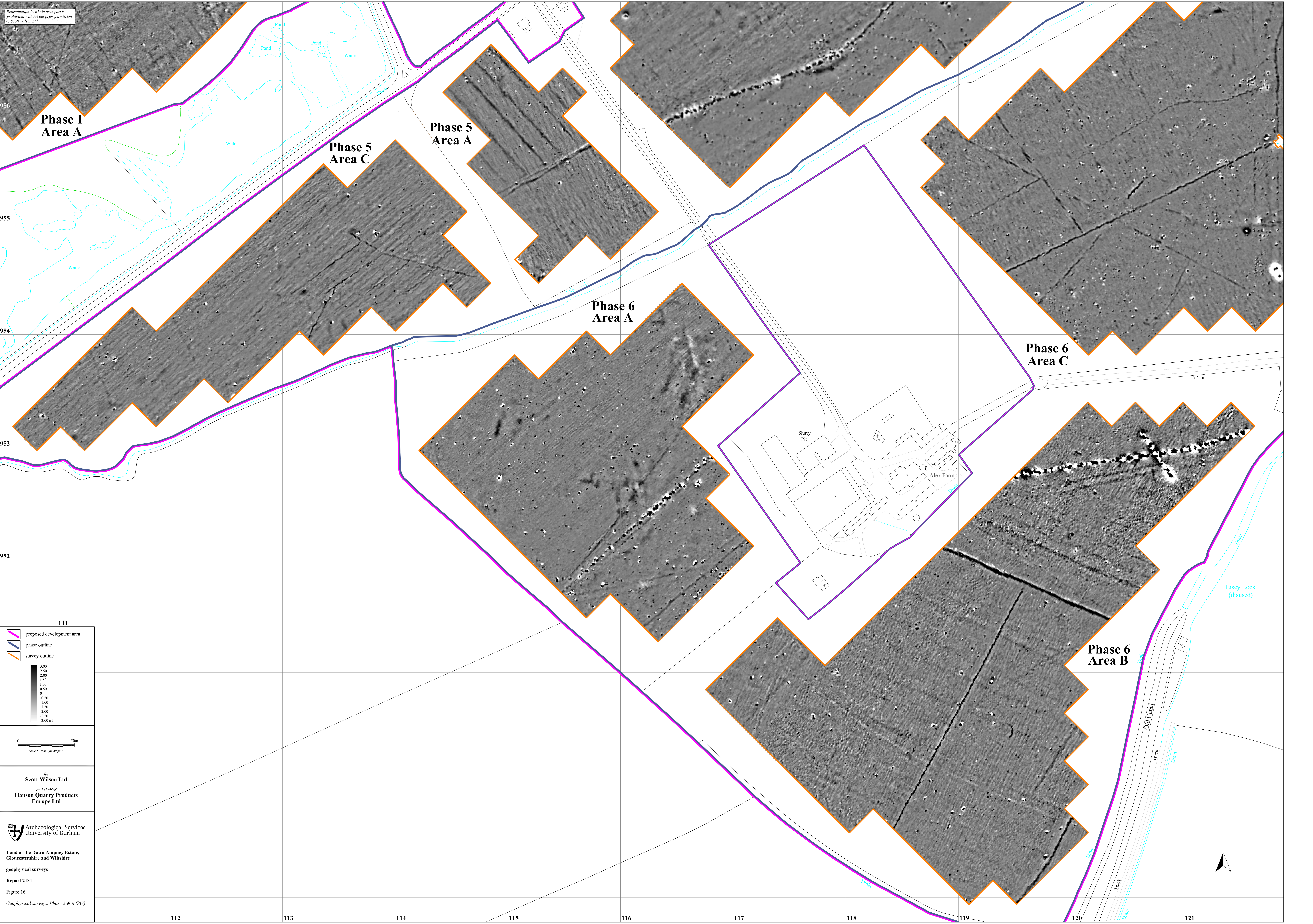
Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire

geophysical surveys

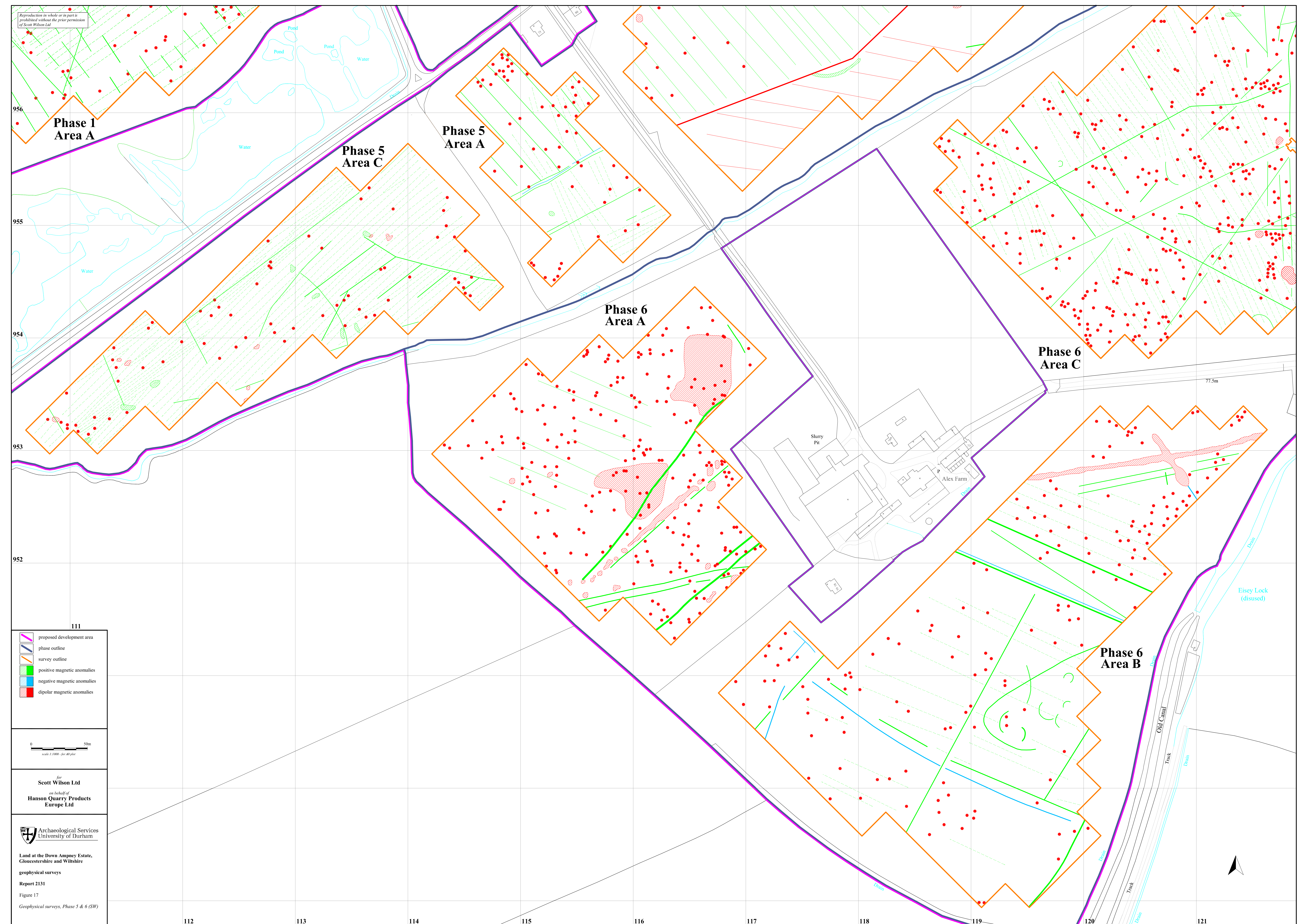
Report 2131

Figure 16

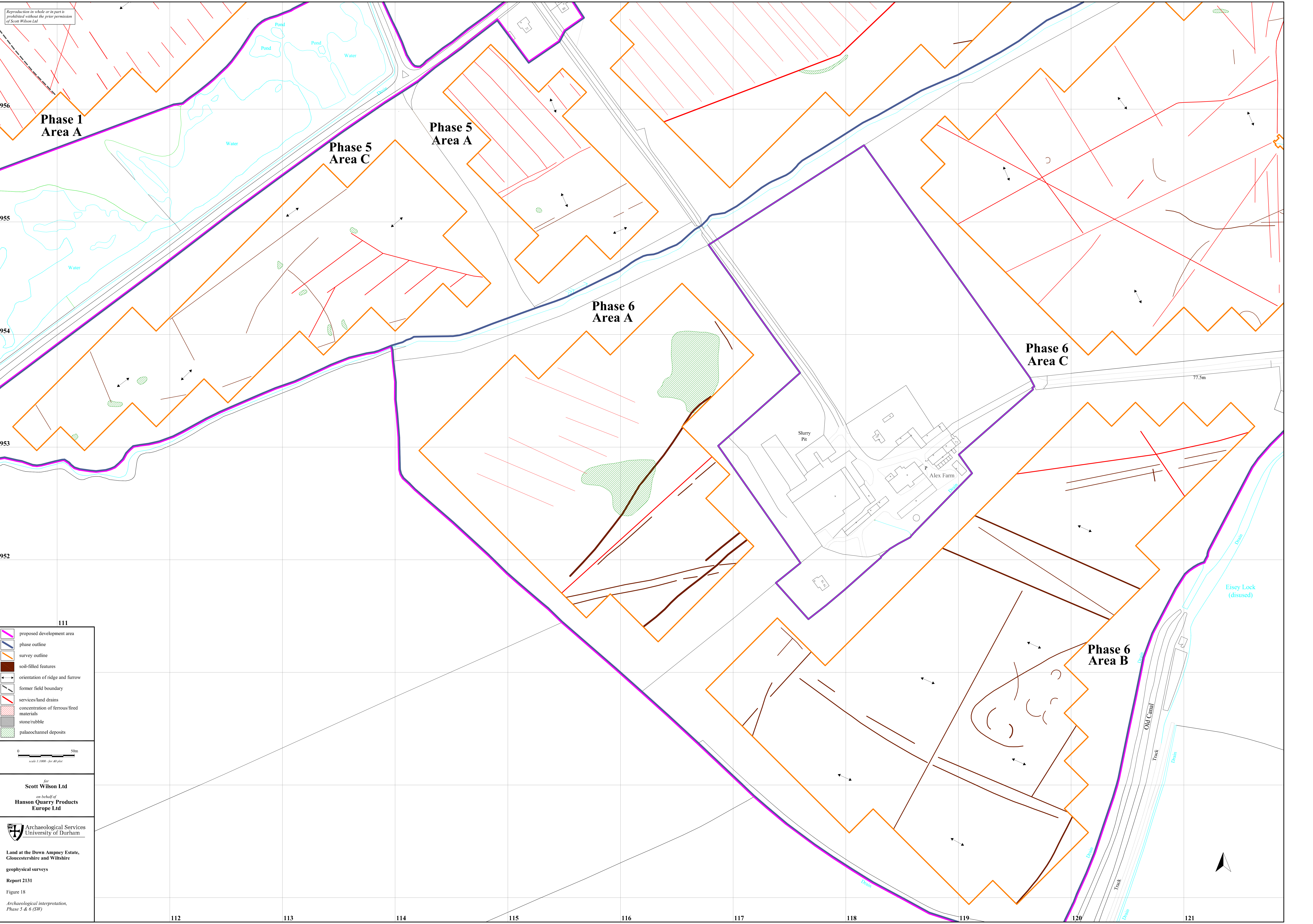
Geophysical surveys, Phase 5 & 6 (SW)











Reproduction in whole or in part is prohibited without the prior permission of Scott Wilson Ltd.

050m

0


scale 1:1000 - for A0 plot

for

Scott Wilson Ltd

on behalf of

Hanson Quarry Products Europe Ltd

 Archaeological Services  
University of Durham

Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire

geophysical surveys

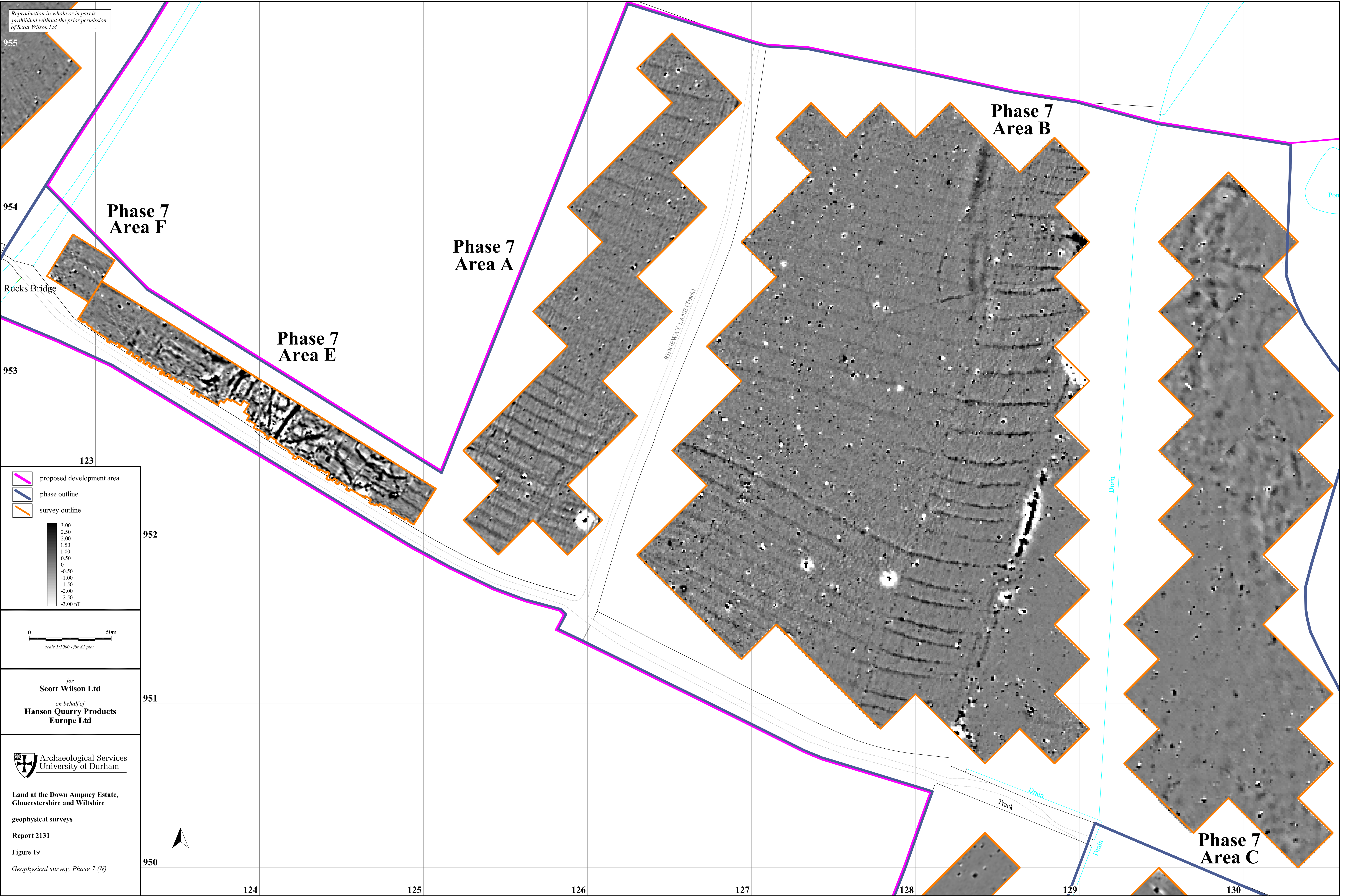
Report 2131

Figure 18

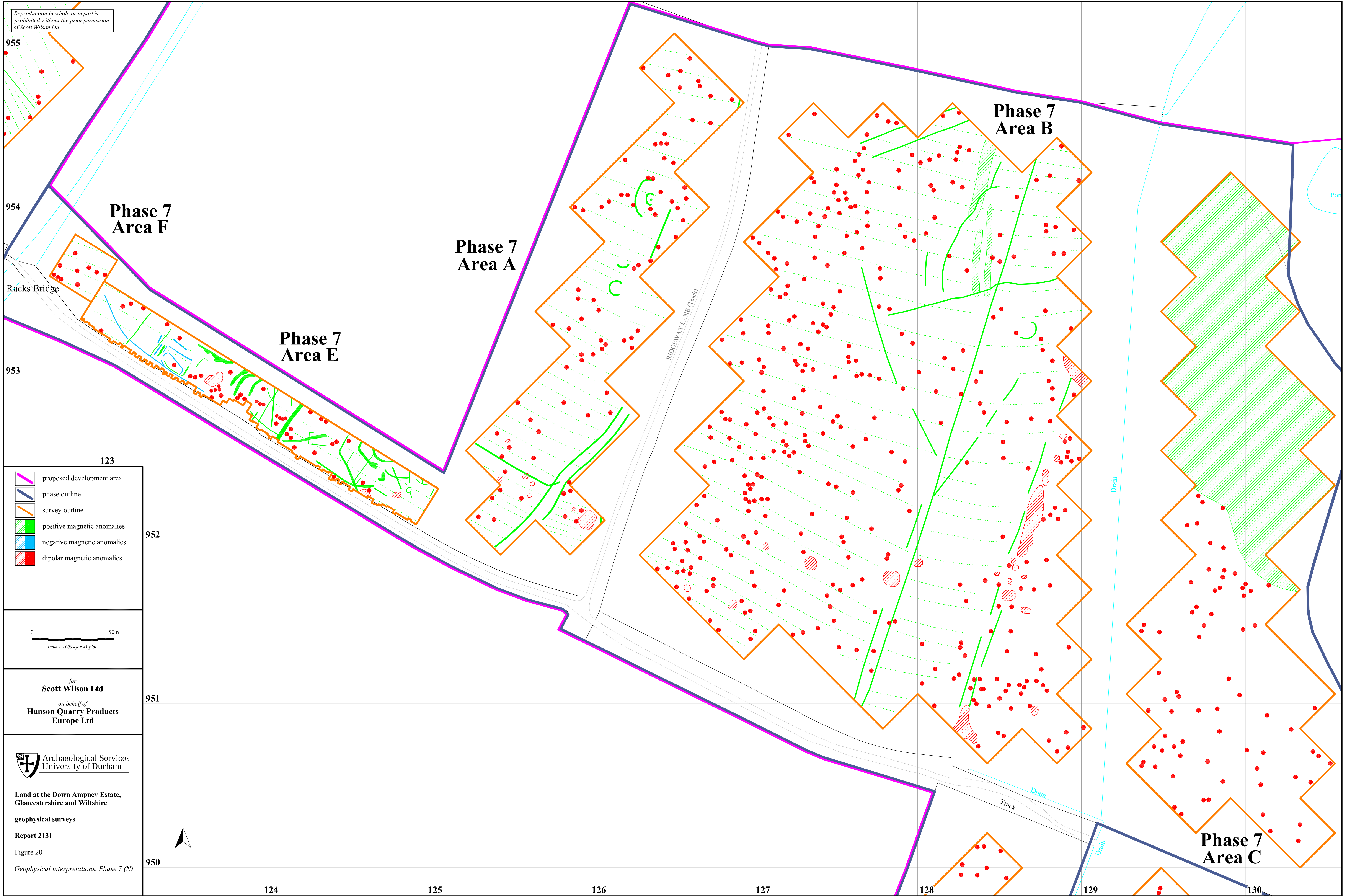
Archaeological interpretation,  
Phase 5 & 6 (SW)













Reproduction in whole or in part is prohibited without the prior permission of Scott Wilson Ltd

955

954

953

123

952

951

950

124

125

126

127

128

129

130

Phase 7 Area F

Phase 7 Area E

Phase 7 Area A

Phase 7 Area B

Phase 7 Area C

Rucks Bridge

RIDGEWAY LANE (Track)

Drain

Track

Drain

Drain

0 50m  
scale 1:1000 - for A1 plot

for  
Scott Wilson Ltd  
on behalf of  
Hanson Quarry Products  
Europe Ltd

Archaeological Services  
University of Durham

Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire

geophysical surveys

Report 2131

Figure 21

Archaeological interpretations,  
Phase 7 (N)

proposed development area

phase outline

survey outline

soil-filled features

orientation of ridge and furrow

former field boundary

services/land drains

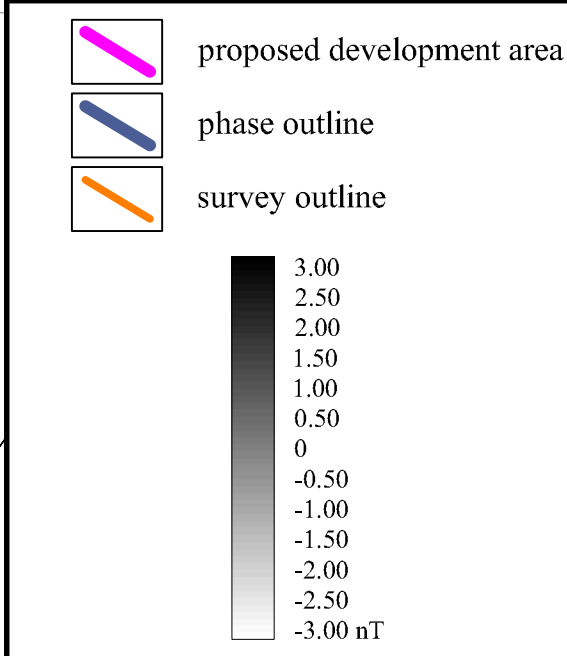
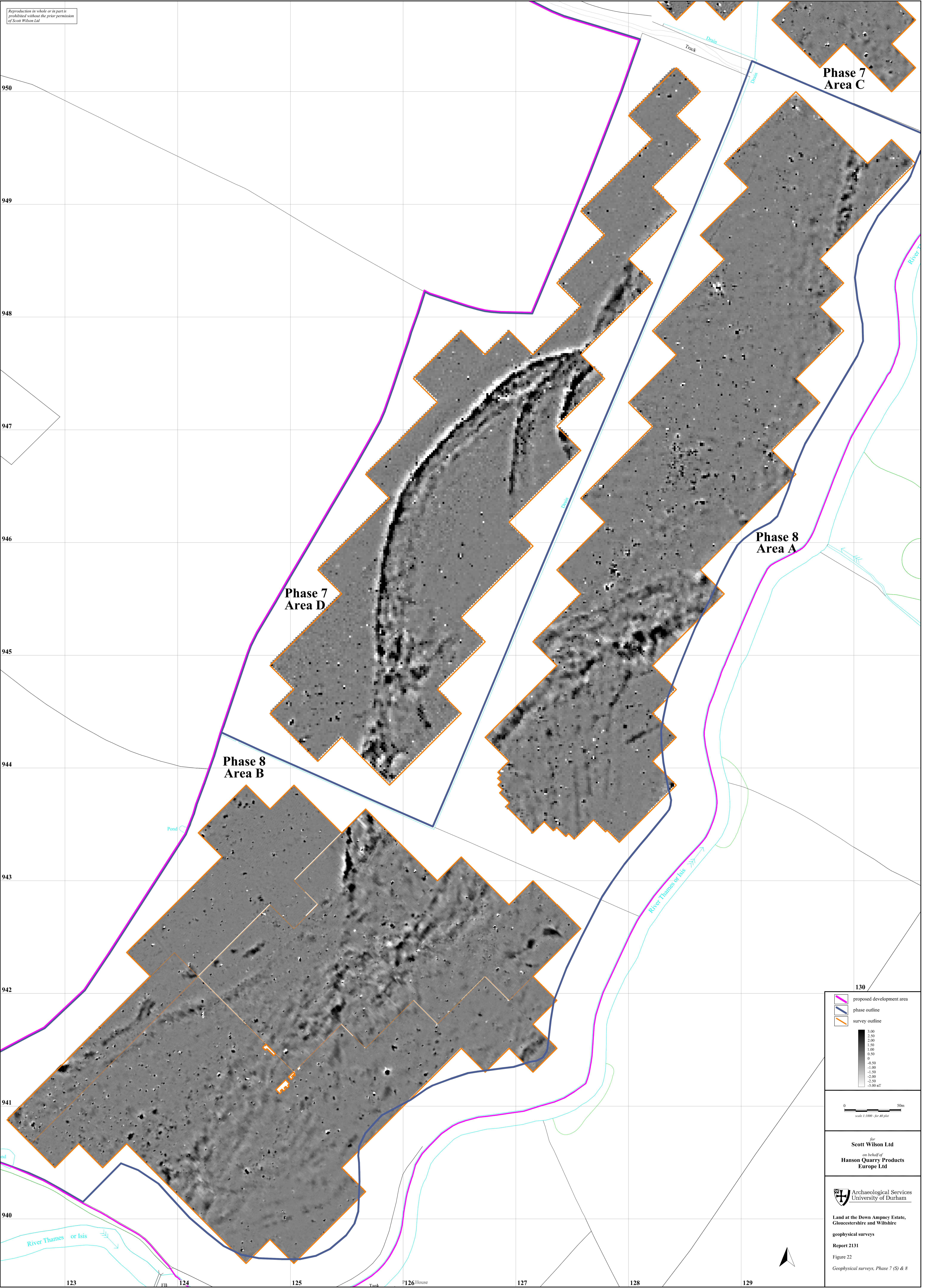
concentration of ferrous/fired materials

stone/rubble

palaeochannel deposits



Reproduction in whole or in part is prohibited without the prior permission of Scott Wilson Ltd



for  
**Scott Wilson Ltd**  
on behalf of  
**Hanson Quarry Products  
Europe Ltd**

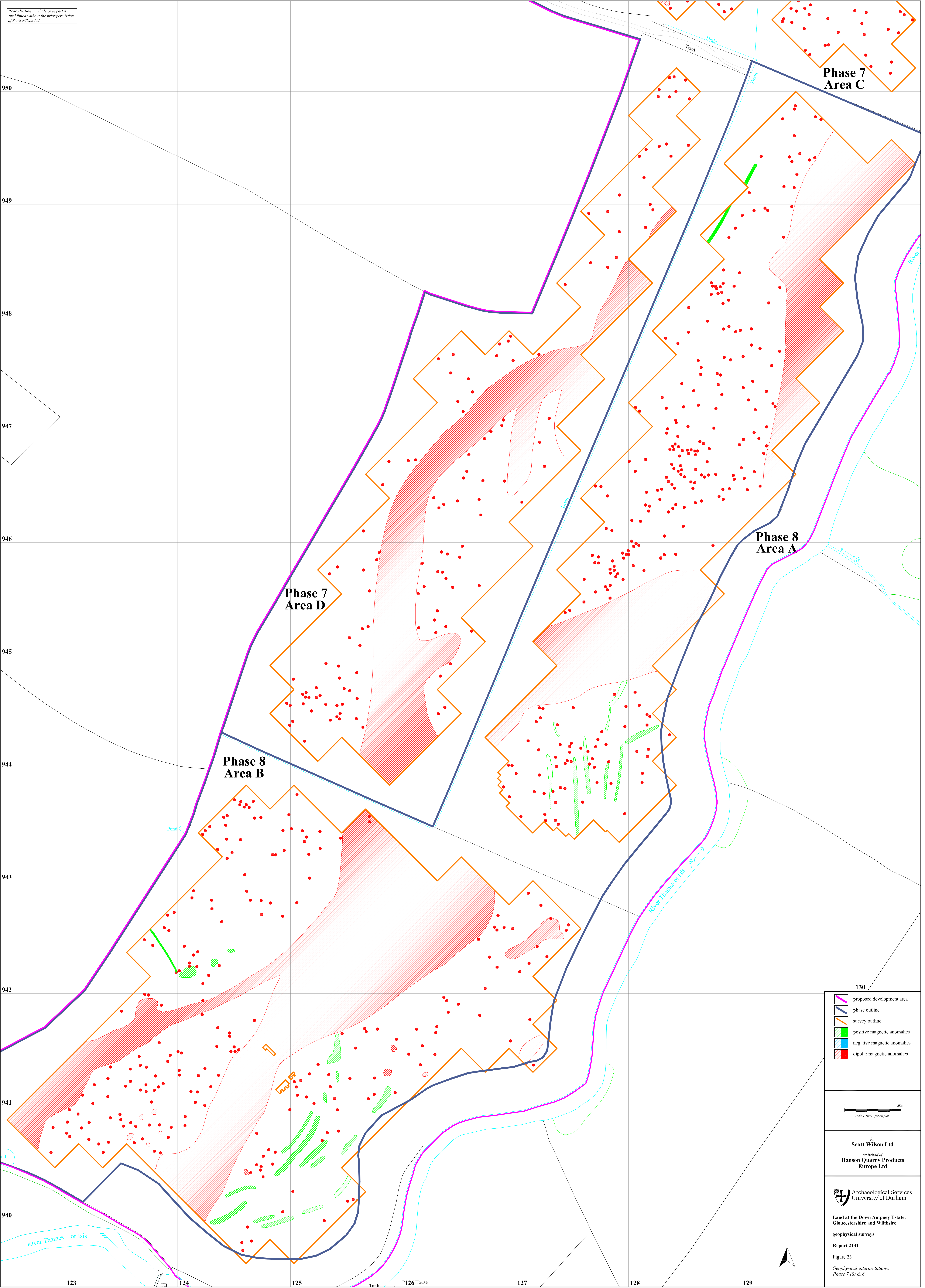
Archaeological Services  
University of Durham

Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire

geophysical surveys  
Report 2131

Figure 22  
Geophysical surveys, Phase 7 (S) & 8





proposed development area  
phase outline  
survey outline  
positive magnetic anomalies  
negative magnetic anomalies  
dipolar magnetic anomalies

0 50m  
scale 1:1000 - for A0 plot

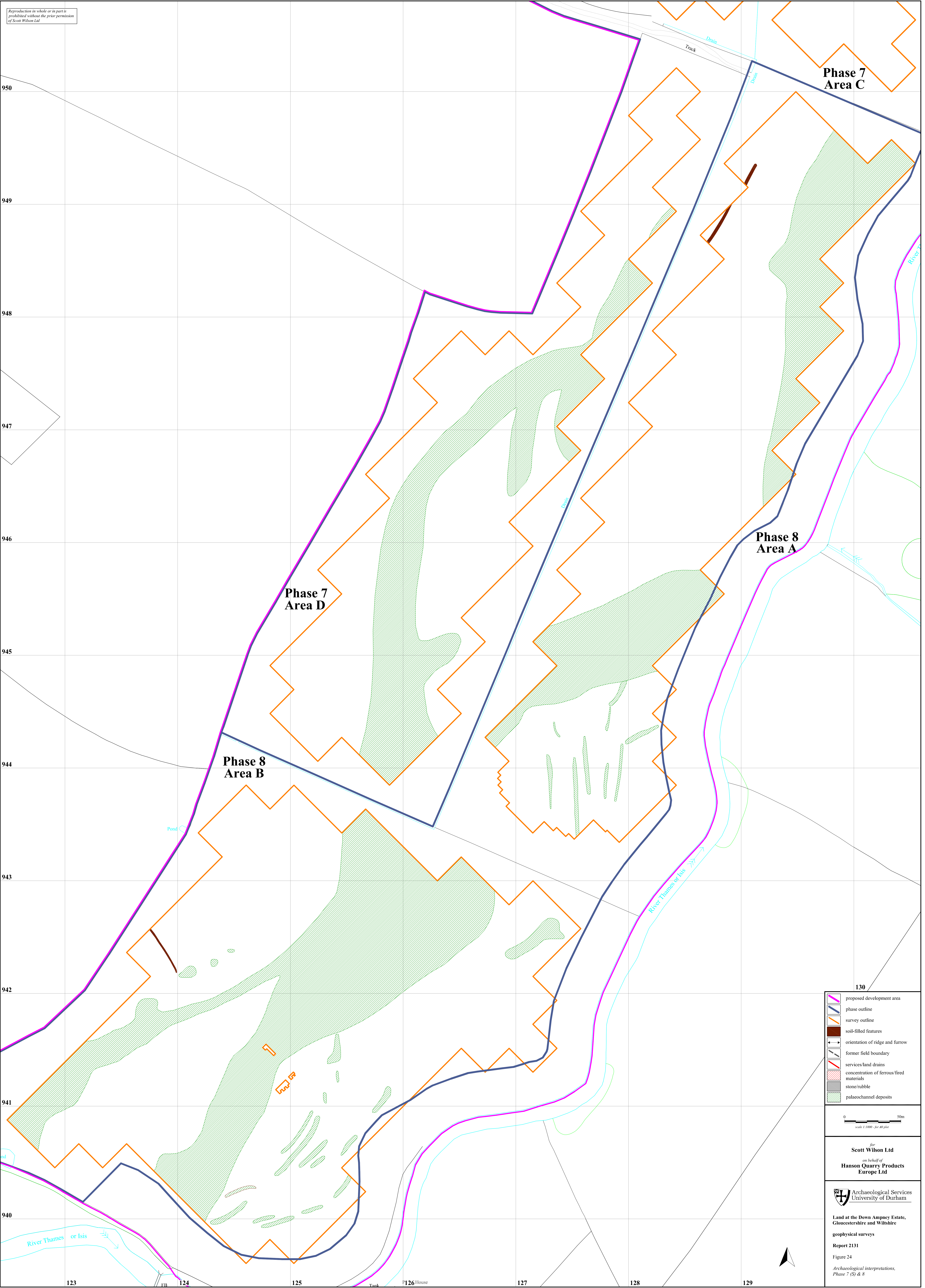
for  
**Scott Wilson Ltd**  
on behalf of  
**Hanson Quarry Products Europe Ltd**

Archaeological Services  
University of Durham

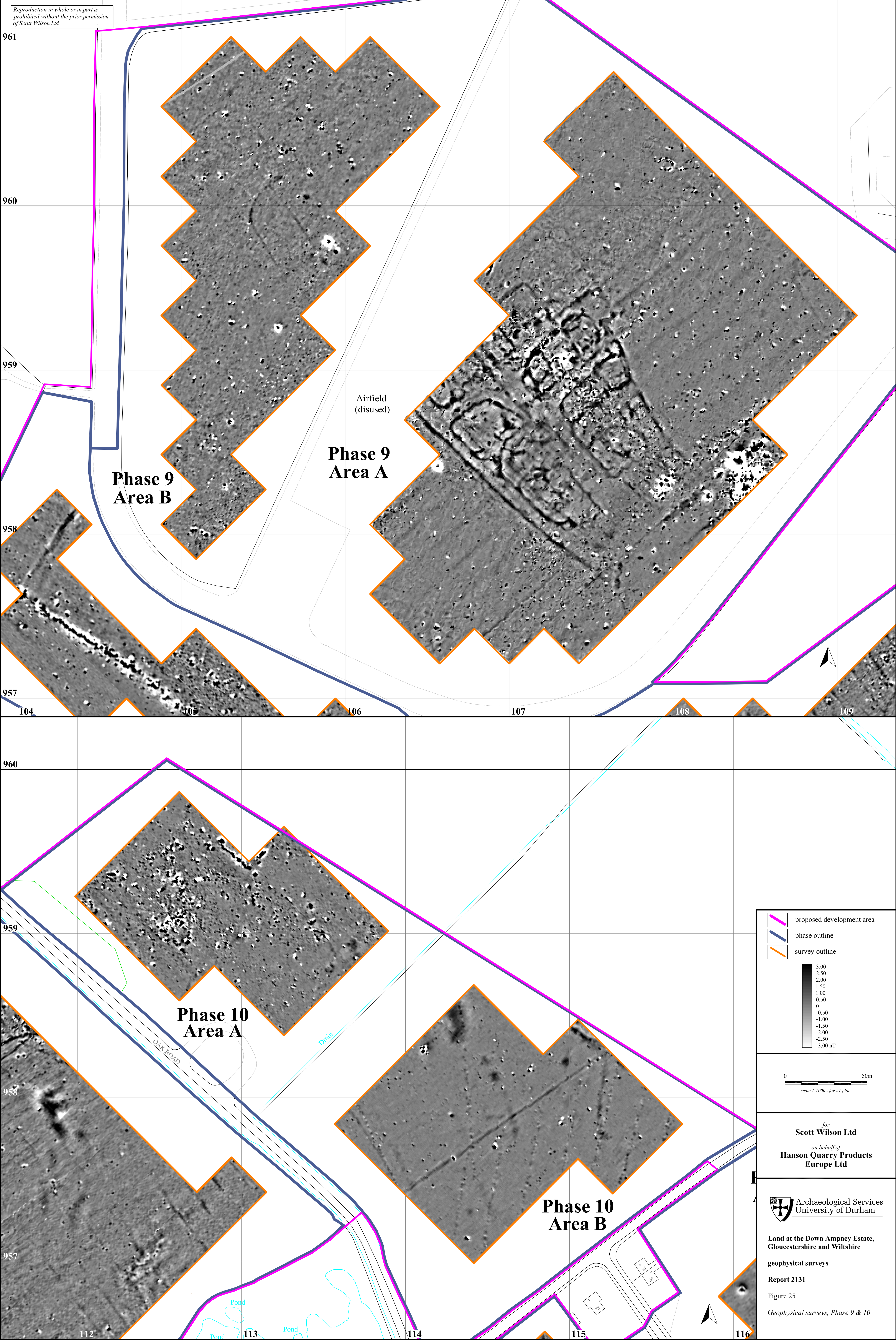
Land at the Down Ampney Estate,  
Gloucestershire and Wiltshire

geophysical surveys  
Report 2131  
Figure 23  
Geophysical interpretations,  
Phase 7 (S) & 8

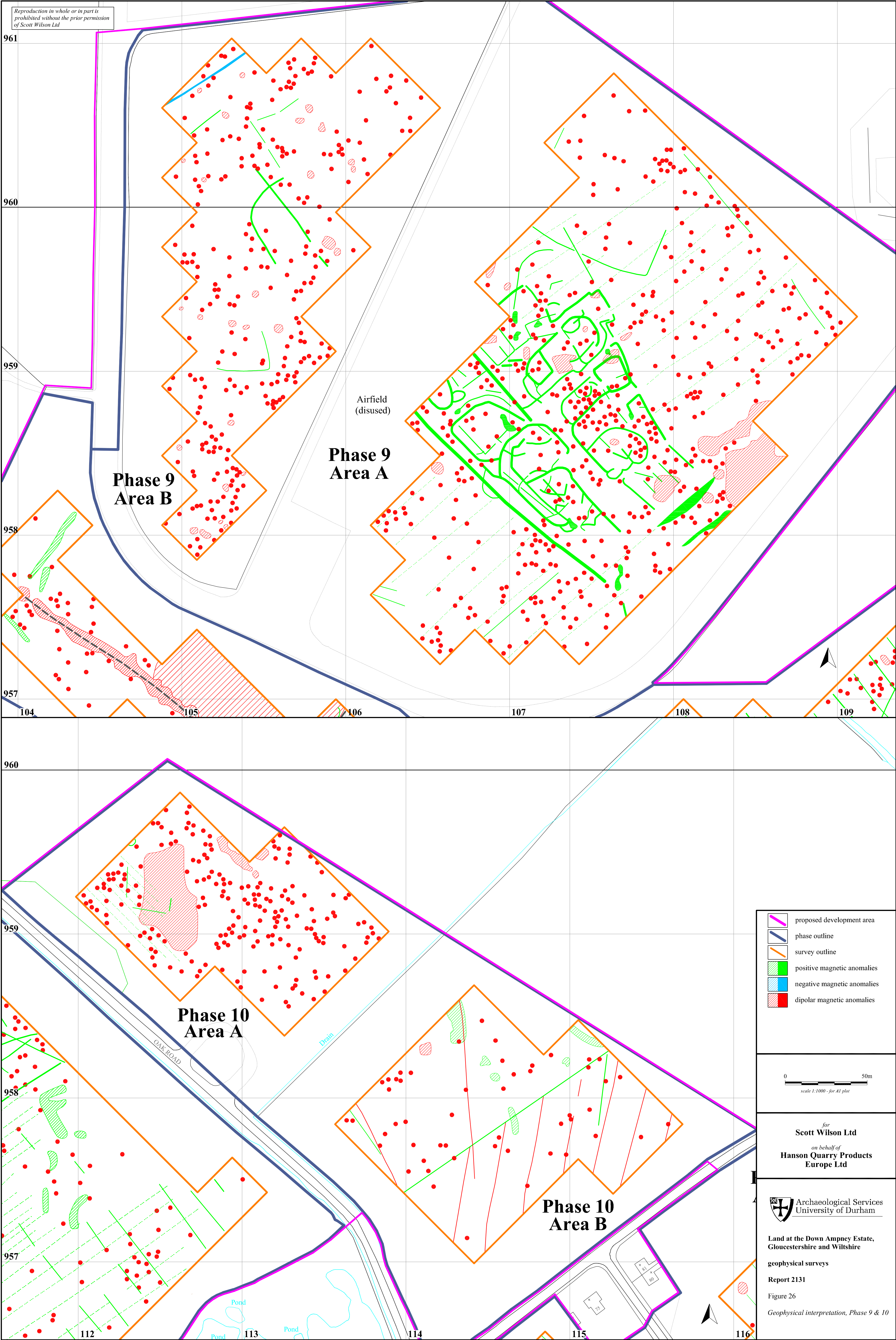














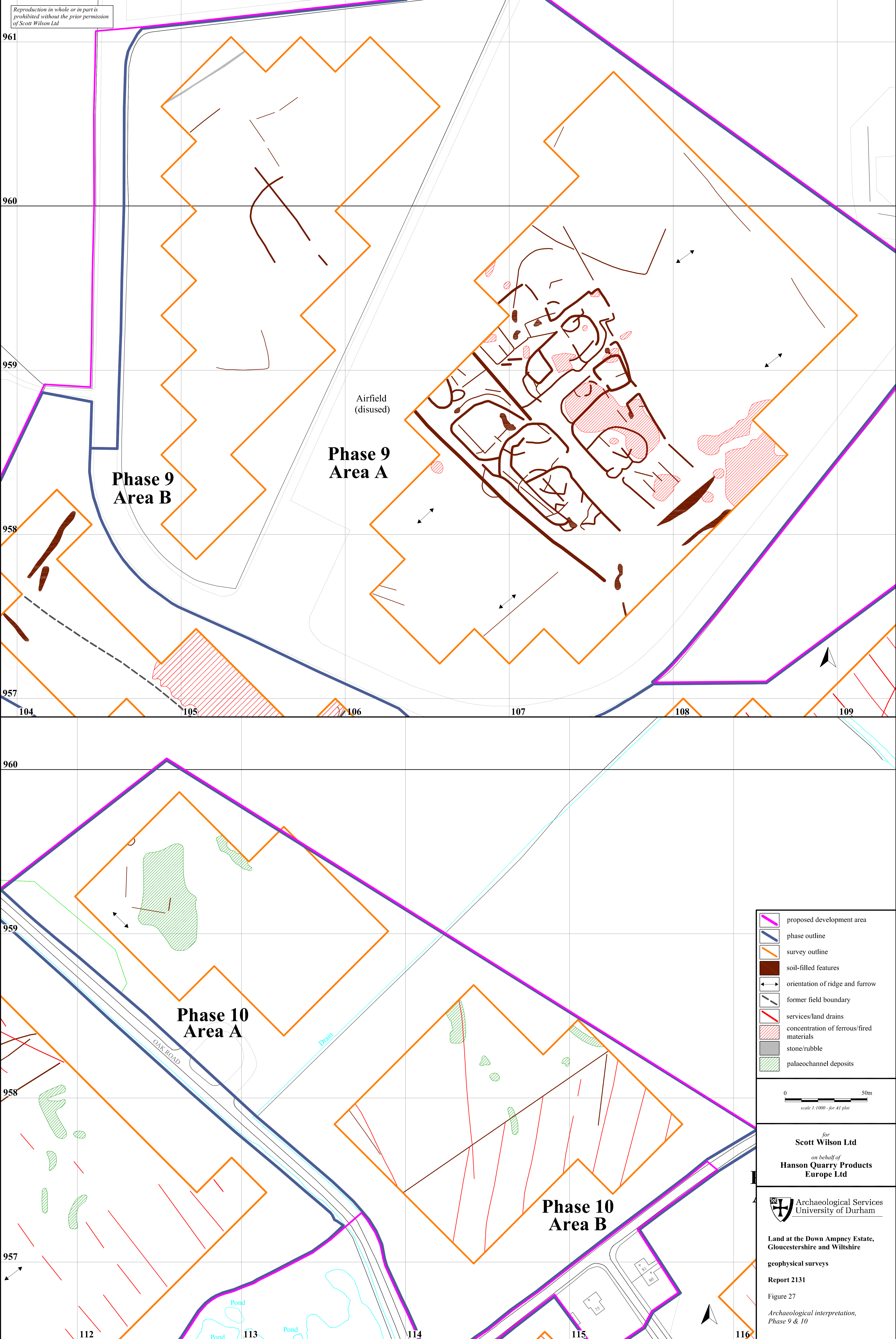
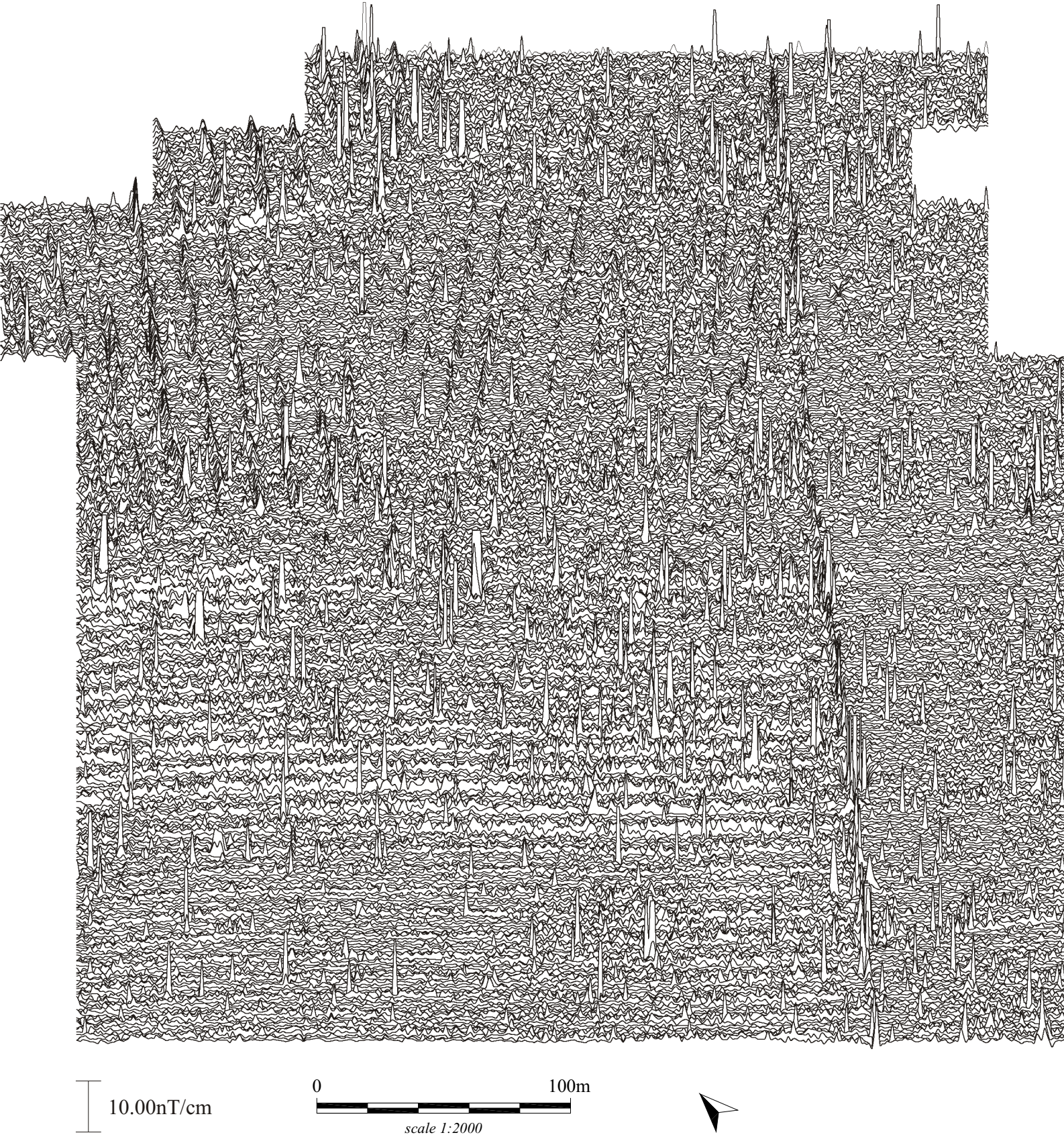


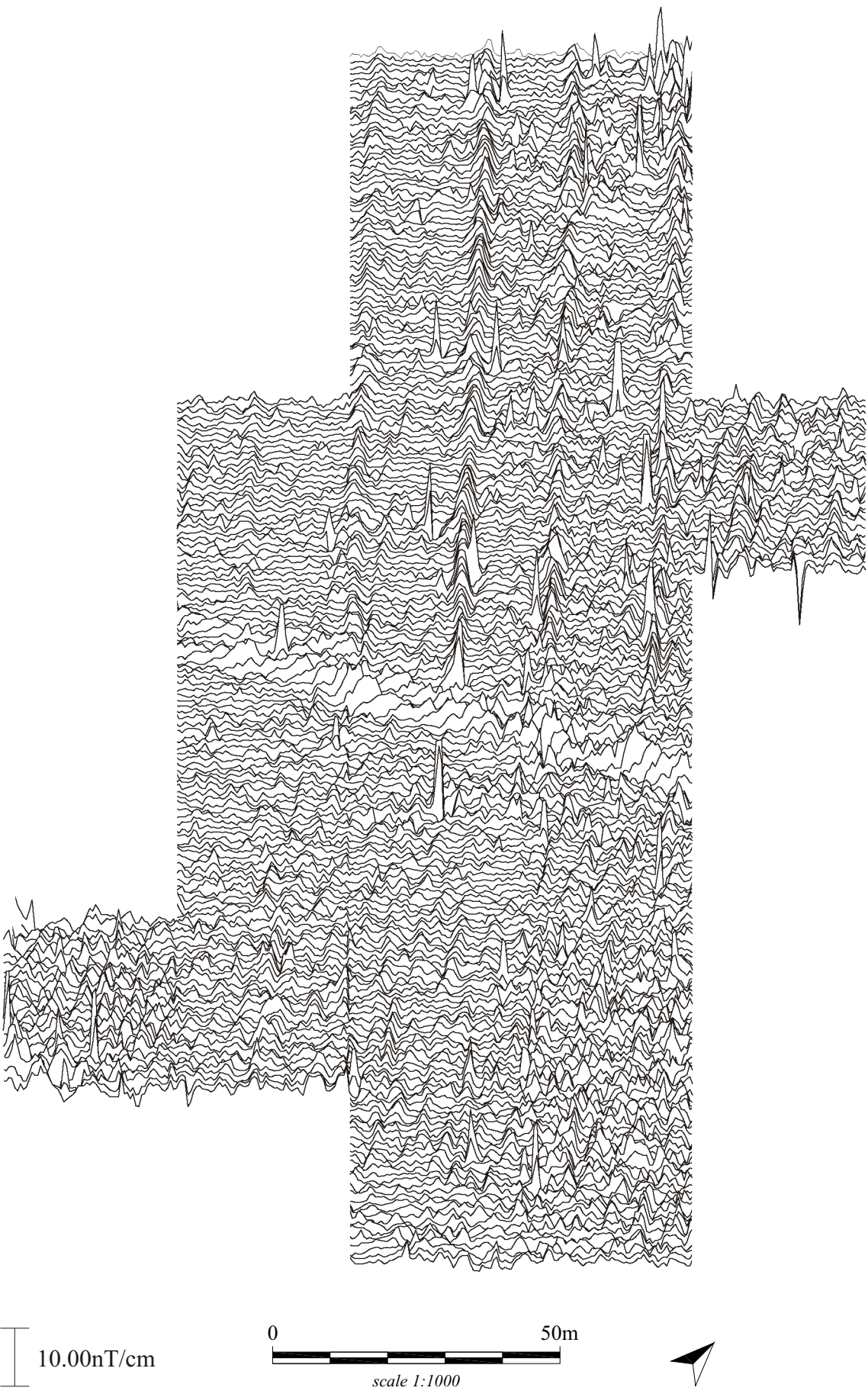


Figure 28 Trace plots of geomagnetic data

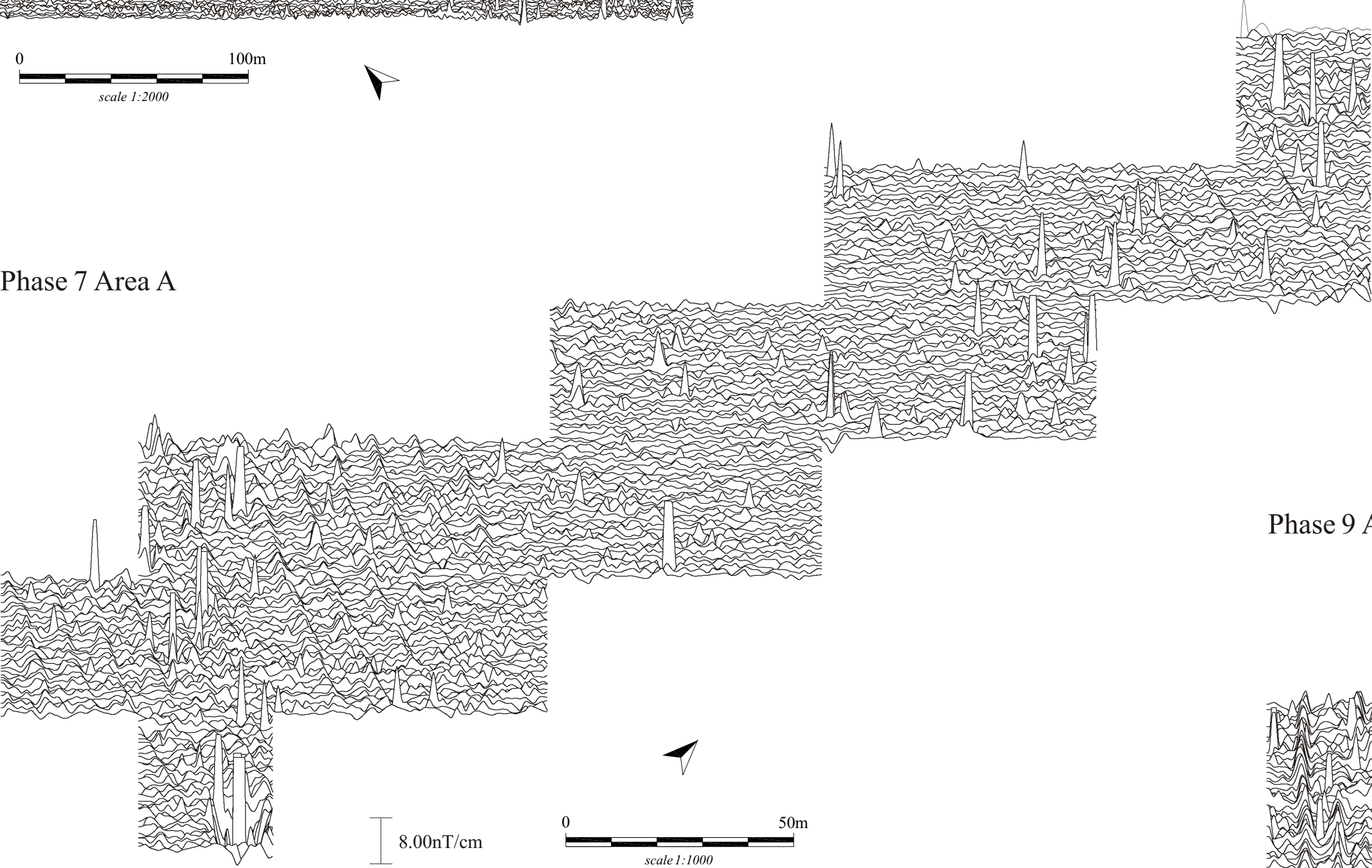
Phase 3 Area A



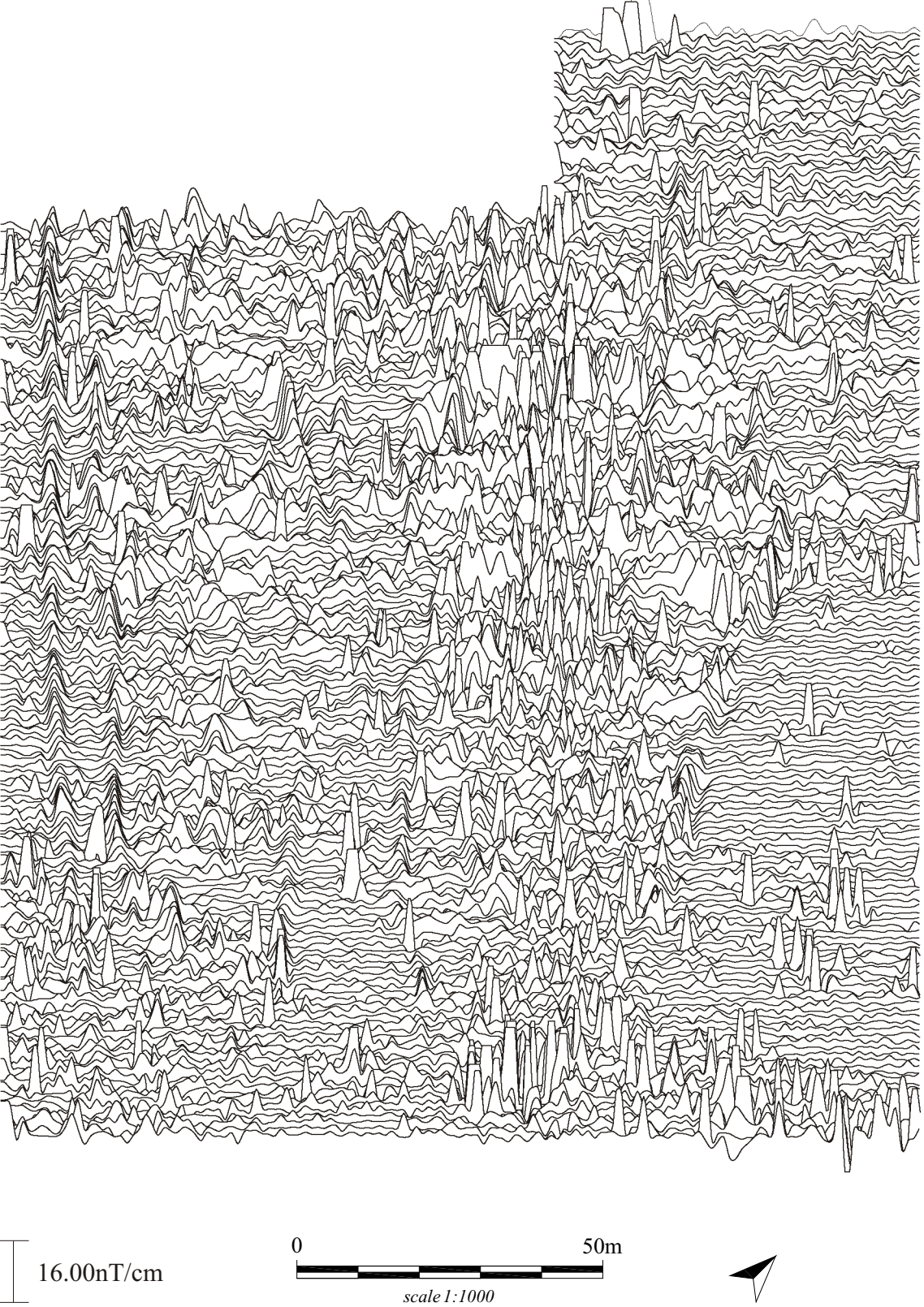
Phase 5 Area A



Phase 7 Area A



Phase 9 Area A



Phase 7 Area E

