ARCHAEOLOGICAL STRIP, MAP AND SAMPLE AT NORTON FARM, BIRMINGHAM ROAD, BROMSGROVE, WORCESTERSHIRE.

Worcestershire Archaeology
Archive and Archaeology Service
The Hive, Sawmill Walk,
The Butts, Worcester
WR1 3PB

Status: Revision 2
Date: 21st March 2014
Author: Andrew Mann, amann@worcestershire.gov.uk
Illustrator: Carolyn Hunt
Project reference: P4223
Report reference: 3000
HER reference: WSM 55832

Contents

Archaeological strip, map and sample at Norton Farm, Bromsgrove, Worcestershire

Author Andrew Mann

Summary

An archaeological strip map and sample exercise was undertaken at Norton Farm, Bromsgrove (NGR 396510, 272280). It was undertaken on behalf of CgMs Consulting, whose client JJ Gallagher intends to develop the site. An outline application for residential development has been submitted to and approved by Bromsgrove District Council (planning reference B/12/09709/OUT).

A geophysical survey previously carried out at the site had identified various anomalies and it was proposed that three areas be stripped of topsoil and the features sampled. In the event, however, removal of topsoil revealed that the anomalies were related to changes in the natural substrate. The only archaeological feature identified on site was a small ditch that is likely to be a recently removed field boundary.

Report

1 Background

1.1 Reasons for the project

An archaeological strip map and sample was undertaken at Norton Farm, Bromsgrove (NGR 396510, 272280) (Fig 1). It was commissioned by CgMs Consulting, whose client JJ Gallagher intends to develop the site. An outline application for development of the site comprising residential dwellings, with associated public open space, surface water attenuation ponds and associated works was approved by Bromsgrove District Council (planning reference B/12/09709/OUT).

The site has been the subject of a Heritage Assessment (CgMs 2012) and to a geophysical survey (Bartlett Clark Consultancy 2011) which identified three areas of possible archaeological potential (Area J, K and L (Fig 2)). The full geophysical report can be seen in Appendix 2. A Written Scheme of Investigation (CgMs 2013) set out a methodology a Strip Map and Sample exercise to be carried out on the three areas and this was approved by Aisling Nash of the Planning and Advisory Service, Worcestershire County Council.

This project conforms to the Written Scheme of Investigation and to *Standards and guidance for archaeological excavation* (IfA 2008) and *Standards and guidelines for archaeological projects in Worcestershire* (WCC 2010).

The event reference for this project, given by the HER is WSM 55832.

2 Aims

The aims of strip map and sample are:

- To determine, as far as reasonably practicable, the location, extent, date, character, condition, significance and quality of any surviving archaeological remains within the areas subject to development.
- To establish the ecofactual and environmental potential of archaeological deposits and features encountered.

3 Methods

3.1 Personnel

The project was undertaken by Andrew Mann (MSc); who joined Worcestershire Archaeology in 2004 and has been practicing archaeology since 2001. The project manager responsible for the quality of the project was Tom Rogers (MSc). Illustrations were prepared by Carolyn Hunt.

3.2 Documentary research

An archaeological desk-based assessment (DBA) was undertaken by CgMs in 2013 (CgMs 2013) and included an HER search and map regression. This suggested that there was low potential for significant archaeological remains to exist in the development area. The DBA summaries the potential of the development site as follows;

"There are no designated heritage assets (Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Battlefields or Registered Parks and Gardens) on Site. There are five Listed Buildings within a 750m radius of the Site. Geophysical survey (Bartlett Clark 2011) has identified three clusters of potentially archaeological remains which will be impacted on by the proposed development".

3.3 Fieldwork strategy

Fieldwork strategy followed the methodology set out in the Written Scheme of Investigation (CgMs 2013). Fieldwork was undertaken between 24th February and 1st March 2014. The site reference number and site code is WSM 55832.

It was intended that three areas (areas J, K and L), be stripped of topsoil to investigate the location of potential features (Figure 2). In the event, however, the intended areas were only partially evaulated when it became clear that the geophysical anomalies were of natural origin (Figure 3). This decision was taken in consultation with Cathy Patrick (CgMs Consulting) and Aisling Nash (Worcestershire County Council Archaeological Planning Officer).

Deposits considered not to be significant were removed using a 360º tracked excavator, employing a toothless bucket and under archaeological supervision. Subsequent excavation was undertaken by hand. Clean surfaces were inspected and selected deposits were excavated to retrieve artefactual material and environmental samples, as well as to determine their nature although in the event no environmental samples were taken. Deposits were recorded according to standard Worcestershire Archaeology practice (WA 2012a). On completion of excavation, the areas were reinstated by replacing the excavated material.

3.4 Structural analysis

All fieldwork records were checked and cross-referenced. Analysis was effected through a combination of structural, artefactual and ecofactual evidence, allied to the information derived from other sources.

3.5 Artefact methodology

3.5.1 Artefact recovery policy

The artefact recovery policy conformed to standard Service practice (CAS 1995, appendix 4). No finds were recovered from site and only one small sherd of modern china was identified from the topsoil.

3.6 Statement of confidence in the methods and results

The methods adopted allow a high degree of confidence that the aims of the project have been achieved.

4 The application site

4.1 Topography, geology and archaeological context

The 17.5ha site lies to the north of Bromsgrove and to the south of the M42 and Lickey End and is underlain by sandstone. The site undulates significantly and varies in height between 114m AOD and 130m AOD. It is currently two large pasture fields but had previously been sub-divided into seven smaller fields. These field boundaries had been removed post 1980.

5 Structural analysis

The areas are shown in Figure 3. The results of the structural analysis are presented in Appendix 1.

Area J (16.0m x 47.80m) (Plates 1 and 2)

This trench was positioned to investigate a number of discrete geophysical anomalies thought to be pits and postholes. The topsoil and subsoil in this trench was up to 0.34m and 0.60m thick respectively. No archaeological features were identified and it is thought that that charcoal spreads (former modern fire locations) at the base of the topsoil may account for the geophysical signals. It

is also possible that sandy clay patches within the natural may also account for the geophysical anomalies.

Area K (5.0m x 19.80m) (Plate 3)

This trench was positioned to investigate a linear geophysical anomaly thought to be a 2.5m wide ditch aligned north to south. The topsoil and subsoil was up to 0.32m and 0.42m respectively. No archaeological features were identified and it is thought that the anomaly may have been caused by a linear band of sandstone only 0.25m below the current ground surface.

Area L (No1. 5.0m x 19.80m, No2. 3.6m x 19.80m) (Plate 4)

These trenches were positioned to investigate another linear geophysical anomaly also thought to be a 2.5m wide ditch aligned north-east to south-west. The topsoil and subsoil in these trenches was up to 0.38m and 0.55m thick respectively. No archaeological remains were identified within Trench L1, but an irregular root damaged linear feature was identified in Trench L2 [204]. This did not continue into trench L1 and is likely to be an old field boundary identified in the geophysical survey.

6 Synthesis

The lack of archaeological features in the geophysical survey, in the excavation trenches and the lack of general background artefacts in the topsoil indicates that there is a low potential for archaeological remains within the development area.

7 Publication summary

Worcestershire Archaeology has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, Worcestershire Archaeology intends to use this summary as the basis for publication through local or regional journals. The client is requested to consider the content of this section as being acceptable for such publication.

An archaeological strip map and sample exercise was undertaken at Norton Farm, Bromsgrove (NGR 396510, 272280). It was undertaken on behalf of CgMs Consulting, whose client intends to develop the site. An outline application for residential development has been submitted to and approved by Bromsgrove District Council.

A geophysical survey previously carried out at the site had identified various anomalies and it was proposed that three areas be stripped of topsoil and the features sampled. In the event, however, removal of topsoil revealed that the anomalies were related to changes in the natural substrate. The only archaeological feature identified on site was a small ditch which is likely to be a recently removed field boundary.

8 Acknowledgements

Worcestershire Archaeology would like to thank the following for their kind assistance in the successful conclusion of this project, Cathy Patrick (CgMs Consulting) and Aisling Nash (Archaeological Planning Officer).

9 Bibliography

Bartlett, A (2011) Norton Farm, Bromsgrove, Worcestershire, Report on Archaeological Geophysical Survey.

CgMs Consulting (2012) Heritage Assessment, Norton farm, Bromsgrove, Worcestershire, CgMs Consulting unpublished report, CP/12792

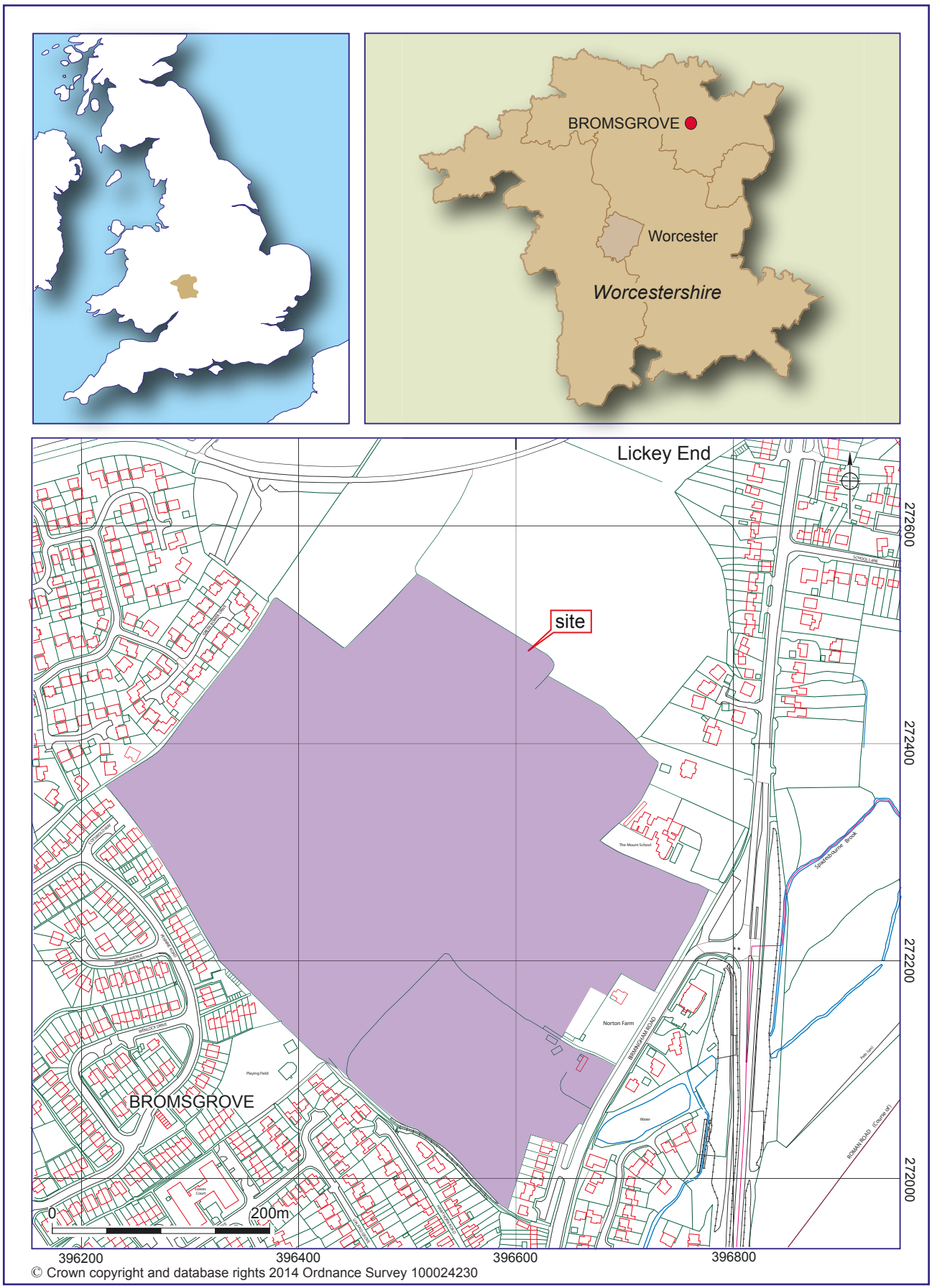
CgMs Consulting (2013) Archaeological project design and specification in respect of Norton Farm, Birmingham Road, Bromsgrove CP 12792

IfA 2008 *Standard and guidance for archaeological excavation*, Institute for Archaeologists

WA 2012a Manual of service practice, recording manual, Worcestershire Archaeology, Worcestershire County Council, report **1842**

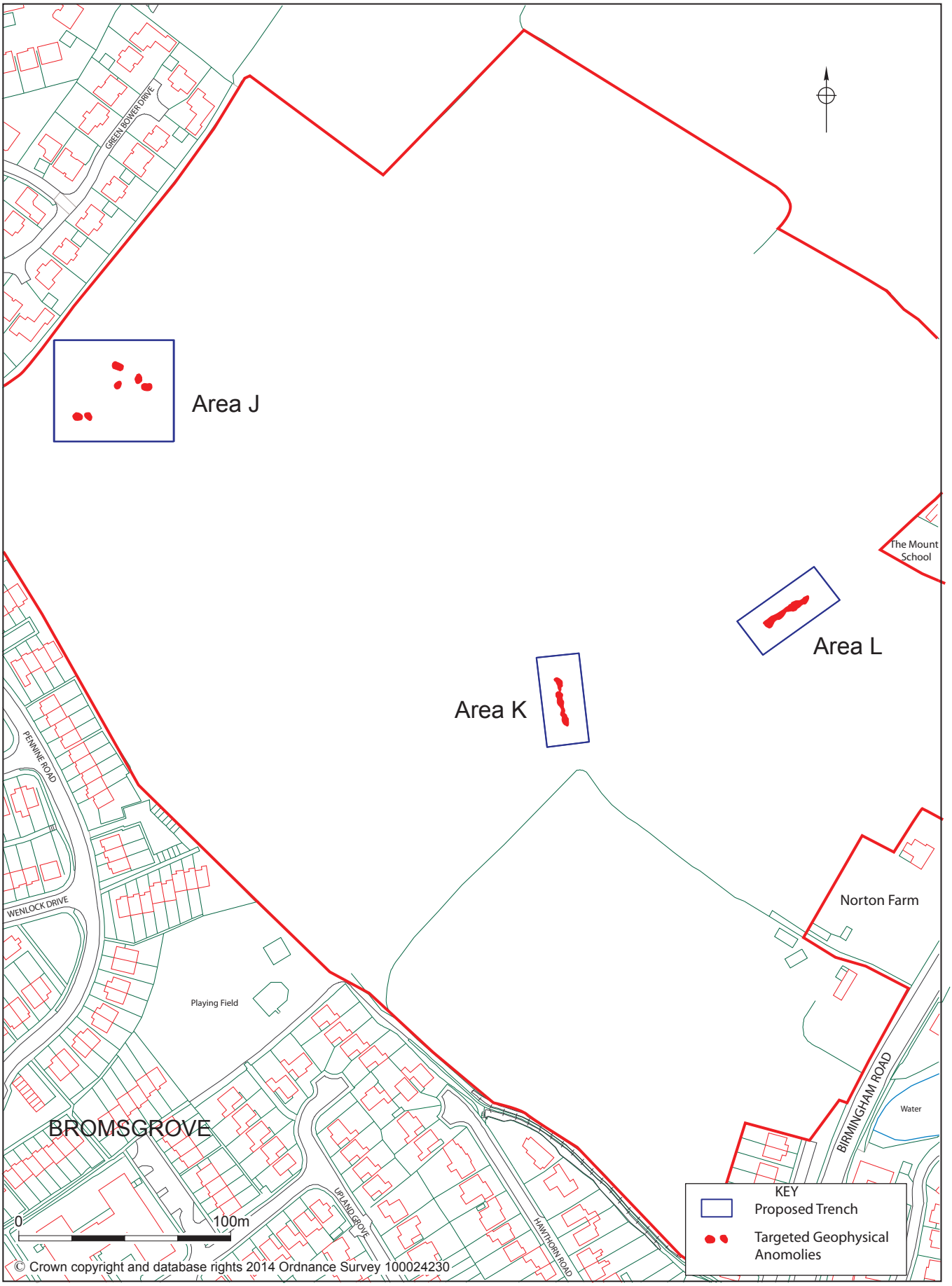
WCC 2010 *Standards and guidelines for archaeological projects in Worcestershire*, Planning Advisory Section, Worcestershire Archive and Archaeology Service, Worcestershire County Council unpublished report **604**, amended July 2012

Figures

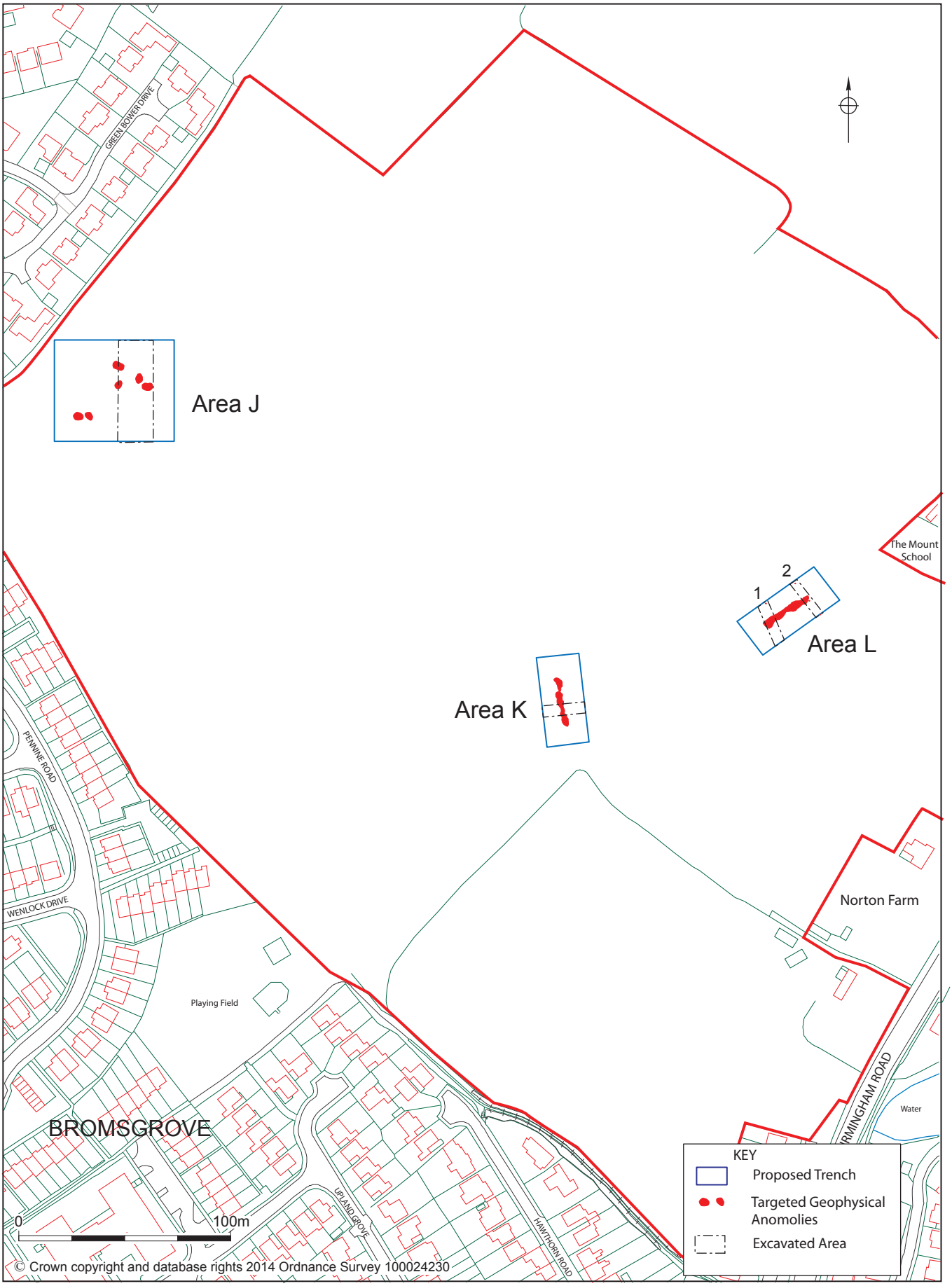


Location of the site

Figure 1



Proposed excavation areas *Figure 2*



Excavated areas

Figure 3

Plates

Plate 1 Trench J facing south

Plate 2 Trench J profile

Plate 3 Trench K facing west

Plate 4 Trench L2 profile and cut 204

Appendix 1 Trench descriptions

Trench J

Maximum dimensions: Length: 47.80m Width: 16.0m Depth: 0.95m

Orientation: N-S

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
400	Topsoil	Dark reddish brown clay sand. Occasional small rounded stones and frequent roots.	0.00-0.0.35m
401	Subsoil	Mid reddish orange, clay sand. Moderate small to medium rounded stones. Occasional charcoal flecks.	0.35-0.90m
402	Natural	Light orange to yellow sand firm and cohesive. With patches of pink sandy clay.	0.95m+

Trench K

Maximum dimensions: Length: 19.80m Width: 5.0m Depth: 0.80m

Orientation: E-W

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
100	Topsoil	Dark reddish brown clay sand. Occasional small rounded stones and frequent roots.	0.00-0.32m
101	Subsoil	Mid reddish orange, clay sand. Moderate small to medium rounded stones. Occasional charcoal flecks.	0.32-0.72m
102	Natural	Sandstone bedrock and firm and cohesive yellow sand.	0.72m+

Trench L1

Maximum dimensions: Length: 19.80m Width: 5.0m Depth: 0.95m

Orientation: NW-SE

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
100	Topsoil	Dark reddish brown clay sand. Occasional small rounded stones and frequent roots.	0.00-0.38m
101	Subsoil	Mid reddish orange, clay sand. Moderate small to medium rounded stones. Occasional charcoal flecks.	0.38-0.93m
102	Natural	Soft mid-pinkish red sand with sandy clay patches. Firm and cohesive.	0.93m+

Trench L2

Maximum dimensions: Length: 19.80m Width: 3.6m Depth: 0.82m

Orientation: NW-SE

Main deposit description

Context	Classification	Description	Depth below ground surface (b.g.s) – top and bottom of deposits
200	Topsoil	Dark reddish brown clay sand. Occasional small rounded stones and frequent roots.	0.00-0.32m
201	Subsoil	Mid reddish orange, clay sand. Moderate small to medium rounded stones. Occasional charcoal flecks.	0.32-0.78m
202	Natural	Soft mid-pinkish red sand with sandy clay patches. Firm and cohesive.	0.78m+
203	Fill	Fill of cut 204. Mid reddish orange, clay sand. Moderate small to medium rounded stones. Occasional charcoal flecks.	
204	Ditch	Irregular sided in plan with moderate sides breaking gradually to a flattish base. Heavily root damaged throughout. 1.06m wide and 0.24m deep.	

Appendix 2 Geophysical report

NORTON FARM, BROMSGROVE, WORCESTERSHIRE

Report on Archaeological Geophysical Survey 2011

A. Bartlett

Surveyed by:

Bartlett-Clark Consultancy

25 Estate Yard, Cuckoo Lane,
North Leigh,
Oxfordshire OX29 6PW
01865 200864

for:

CgMs Consulting
43 Temple Row,
Birmingham B2 5LS

Land at Norton Farm, Birmingham Road, Bromsgrove
Report on Archaeological Geophysical Survey, 2011

Summary

This geophysical survey forms part of an archaeological evaluation of a site to the north of Bromsgrove, Worcestershire. The survey was commissioned from Bartlett Clark Consultancy, Specialists in Archaeogeophysics of Oxford, by the Birmingham office of CgMs Consulting. Fieldwork for the survey was done on 5-8 September 2011.

Site Location and Description

The site is centred at NGR SP 965723 at Norton Farm to the west of the A38 and 1km south of the M42. The evaluation area measures 17.5ha in total extent, and is currently pasture used for sheep grazing. It is mentioned in notes supplied to us by CgMs that the land undulates with levels varying from 130m AOD at the northern boundary to 114m AOD at the eastern boundary.

The site is on a bedrock of Triassic sandstone, and appears to be free of drift deposits. We are told there are no known previously recorded archaeological findings from the site, which appears to be of low archaeological potential. There is a possible burnt mound near watercourses on lower ground to the east of the site, together with a conjectured Roman road and medieval remains, also at some distance to the east. CgMs have supplied a sequence of historic maps (of dates 1577 – 2006) which record various alterations to field boundaries within the survey area. The maps also indicate that parts of the site have at different times been planted as orchards. (Extracts from two of the maps are inset in figure 4.)

Survey procedure

The method used for the geophysical survey was a full recorded magnetometer survey supplemented by background magnetic susceptibility testing.

Magnetometer survey

Readings for the magnetometer survey were collected using Bartington 1m fluxgate magnetometers, and are plotted at 25cm intervals along transects 1m apart. The results of the survey are shown as a grey scale plot at 1:2000 scale in figure 1, and as a graphical (x-y trace) plot two parts at 1:1250 in figures 2-3. The grey scale and graphical plots display the detected magnetic anomalies in plan and profile respectively. The x-y plots represent the readings after minimal pre-processing operations. These include adjustment for irregularities in line spacing caused by heading errors (direction sensitivity in the

instrument zero setting), and truncation of extreme values. The grey scale plots show a processed version after additional low pass filtering to control background noise levels.

The magnetometer responds to cut features such as ditches and pits when they are silted with topsoil, which usually has a higher magnetic susceptibility than the underlying natural subsoil. It also detects the thermoremanent magnetism of fired materials, notably baked clay structures such as kilns or hearths, and so responds preferentially to the presence of ancient settlement or industrial remains. The readings are also strongly affected by ferrous and other debris of recent origin.

Magnetic susceptibility survey

We usually supplement a magnetometer survey with background magnetic susceptibility readings, which in this case were taken at 30m intervals, using a Bartington MS2 meter with a field detector loop. Susceptibility measurements can provide a broad indication of areas in which archaeological debris, and particularly burnt material associated with past human activity, has become dispersed in the soil. They are also affected by non-archaeological factors, including geology, past and present land use, and modern disturbances, and so provide evidence relating to soil and site conditions which can be of help in interpreting the magnetometer survey. The results are presented as a shaded plot of the initial readings inset in figure 4. A second plot shows the readings after treatment with a median filter, which emphasises broad trends in the data.

Presentation

An interpretation of the findings is shown superimposed on the graphical plots (figures 2-3), and is reproduced separately to provide a summary of the findings in figure 4. Features as marked include a small number findings of potential archaeological significance (in red). Broken lines are used to indicate features which may be visible in the grey scale plot, which are too weak or discontinuous to be outlined in detail.

Weak magnetic anomalies of probably natural or non-archaeological origin are outlined in light brown. Magnetic disturbances associated with tracks or boundaries which can be identified on historic maps are shown in grey. Probable recent or non-archaeological disturbances are indicated in a darker brown and ferrous debris in blue. Apparent cultivation effects are indicated in green.

Survey location

The survey was located by reference to a temporary site grid which was set out and tied to national grid co-ordinates by means of a differential GPS system. OS co-ordinates of map locations can be read from the AutoCAD 2007 version of the plans which can be supplied with this report.

Results

Conditions at the site appear to be favourable for a magnetic investigation of this kind, but the survey has produced only limited findings. The magnetic susceptibility readings are

relatively high (mean = 34 x 10^{-5} SI), and perhaps unusually so for a site on a sandstone bedrock. It would therefore be expected that any substantial features containing silted earth fill should be detectable, but few are identifiable in the survey plots.

The most conspicuous findings are strong disturbances corresponding to former field boundaries in the eastern half of the site. The linear features A and B (as labelled on figure 4) correspond to boundaries visible on maps dated 1840-1980, and probably represent ditches filled with rubble or other modern debris. The similarly strong feature C is a former trackway still visible in 1980. A further track (D) extending to the western boundary disappears from maps after 1972, and is less clearly marked. This was perhaps an earth or gravel farm track lacking a hardcore surface. Two areas of disturbed ground at E and F correspond to structures shown on a 1971 1:2500 map (although only F is visible in the 1972 map inset in figure 4).

Pipes (blue) appear to approach each building (E and F). Another pipe extends across the NE side of the site at G. This is marked by a continuous magnetic anomaly probably indicating a steel-reinforced concrete sewer pipe. Other pipes are marked by intermittent magnetic anomalies characteristic of sections of iron water pipe.

Other findings include strong recent magnetic disturbances which are commonly found near field boundaries and entrances, and which are most concentrated at the east of the site in the vicinity of Norton Farm. This part of the site also gave high magnetic susceptibility readings (as seen particularly in the median filtered plot; figure 4). Ferrous anomalies (blue) are also rather more numerous in this area. They are otherwise dispersed across the site, with no concentrations to suggest the site has been subject to any substantial recent disturbance.

It is not impossible that an ancient burnt mound (if present) could contribute to the magnetic activity around Norton Farm, but any such effect would be difficult to distinguish from more recent disturbances. Some of the more active areas at the east of the site (as at H) could perhaps be investigated with this possibility in mind, but it remains probable that most of the magnetic disturbances are recent.

Green lines in figure 4 indicate the orientation of weak linear markings visible in the grey scale plot. These may relate to past cultivation. Trees were present in different fields at various dates (as seen in the 1928 and 1972 maps inset in figure 4), but they do not appear to correspond to any clearly identifiable magnetic disturbances.

A few features which could be interpreted as isolated silted pits or ditches (and which in an appropriate context could be of archaeological interest) are outlined in red. Some are located within an area of slightly enhanced magnetic activity towards the NW of the survey at J (where there is also a small susceptibility anomaly, as visible in the raw data plot in figure 4). Most of the magnetic anomalies here are weak and could be natural (as indicated in light brown), but a few stronger ones could represent silted pits. There are also rather ill-defined short ditch-like features at K and L. These features are all weak and isolated, and of uncertain significance.

Conclusions

Soils at the site appear to be magnetically responsive, but there are few distinct findings other than features which can be identified with historic field boundaries, or other recent disturbances.

A few magnetic anomalies which could indicate pits or ditches of potential archaeological interest are indicated (in red on figure 4), but they are weak and isolated, and not necessarily of archaeological origin. Burnt mounds are often detectable in a magnetometer survey, but any which are present here are likely to be on the lower ground in the eastern part of the site, where they will be difficult to distinguish from more recent disturbances around Norton Farm.

Report by:

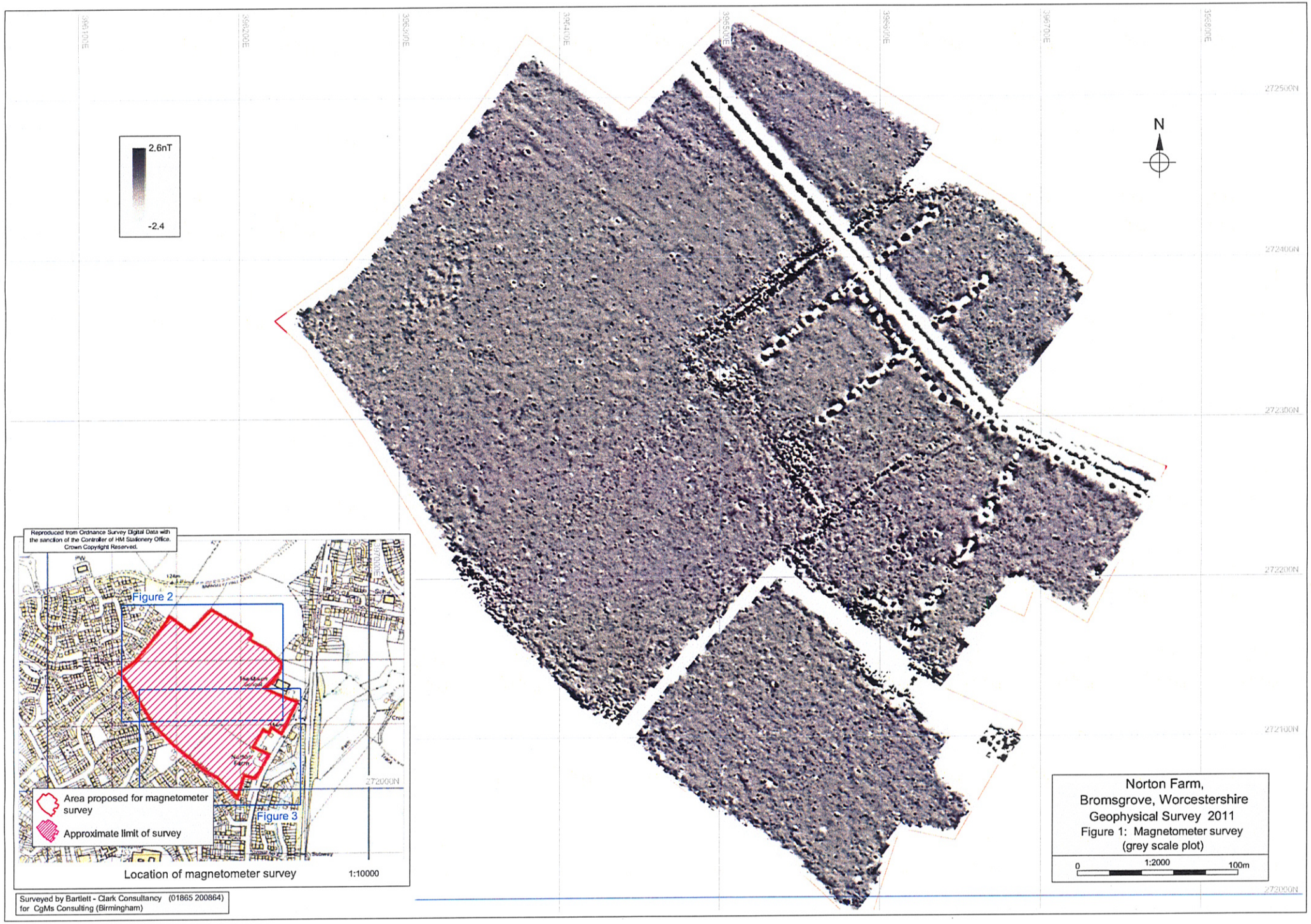
A. Bartlett BSc MPhil

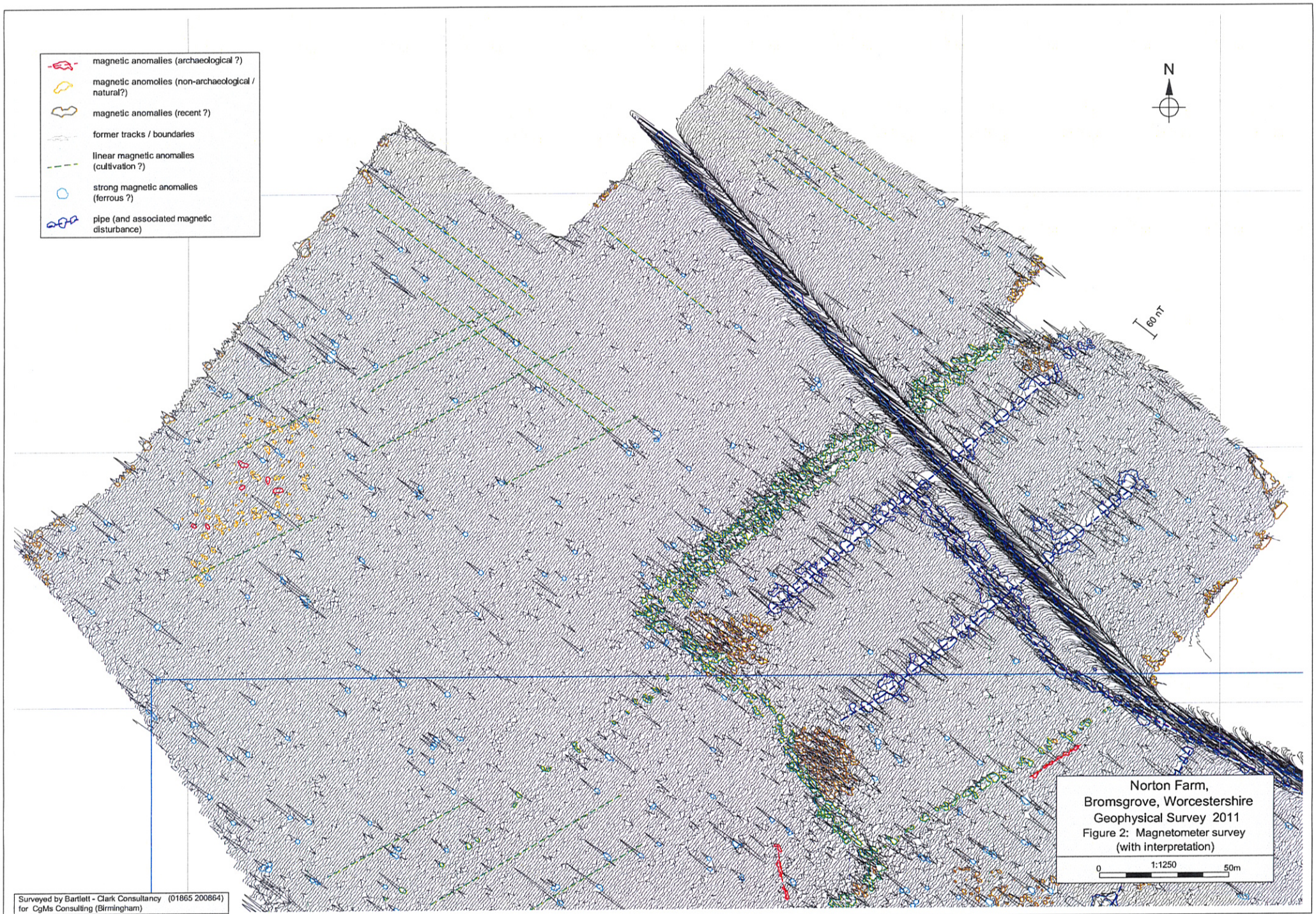
Bartlett-Clark Consultancy
Specialists in Archaeogeophysics
25 Estate Yard
Cuckoo Lane
North Leigh
Oxfordshire OX29 6PW

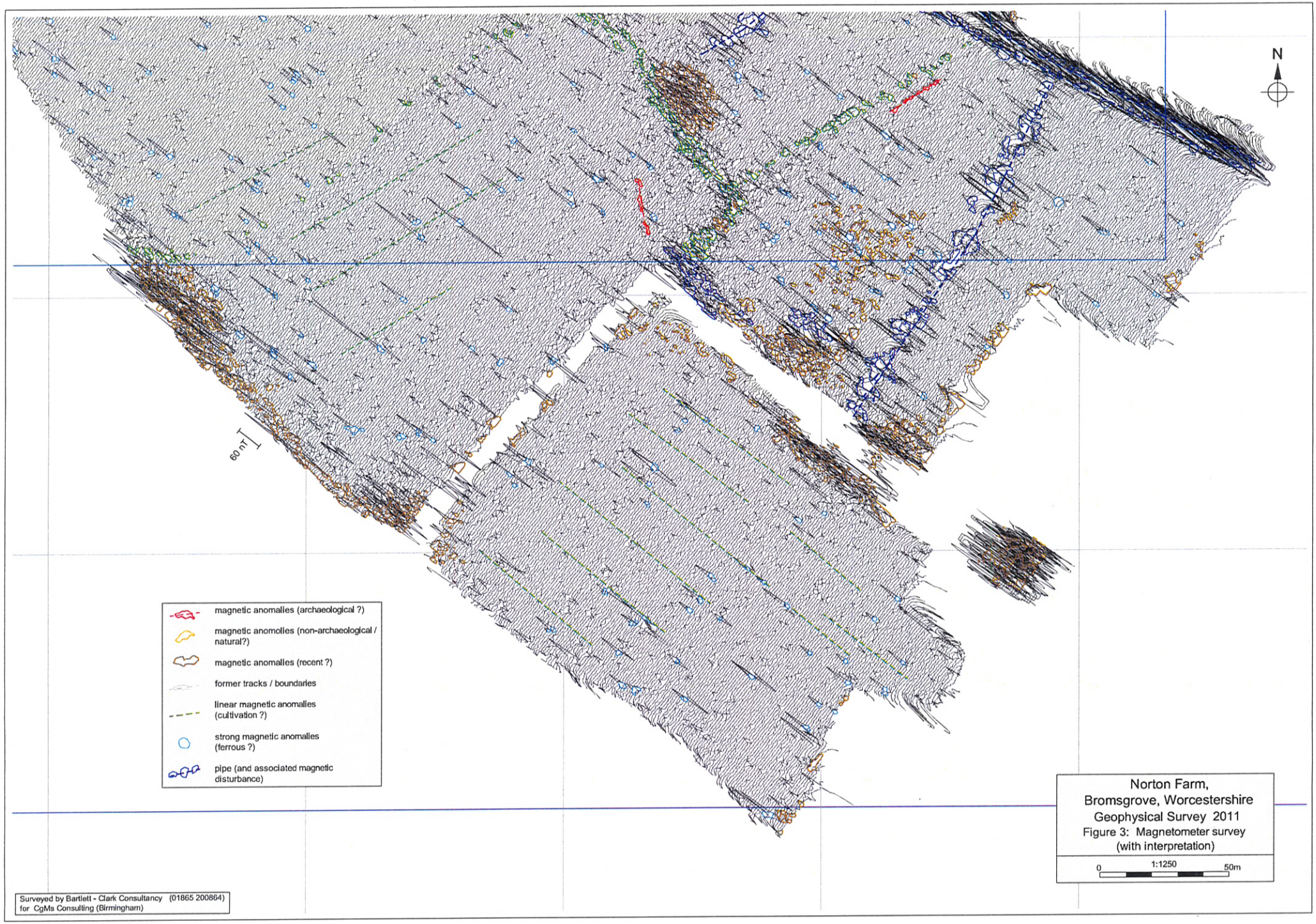
01865 200864
email: bcc123@ntlworld.com

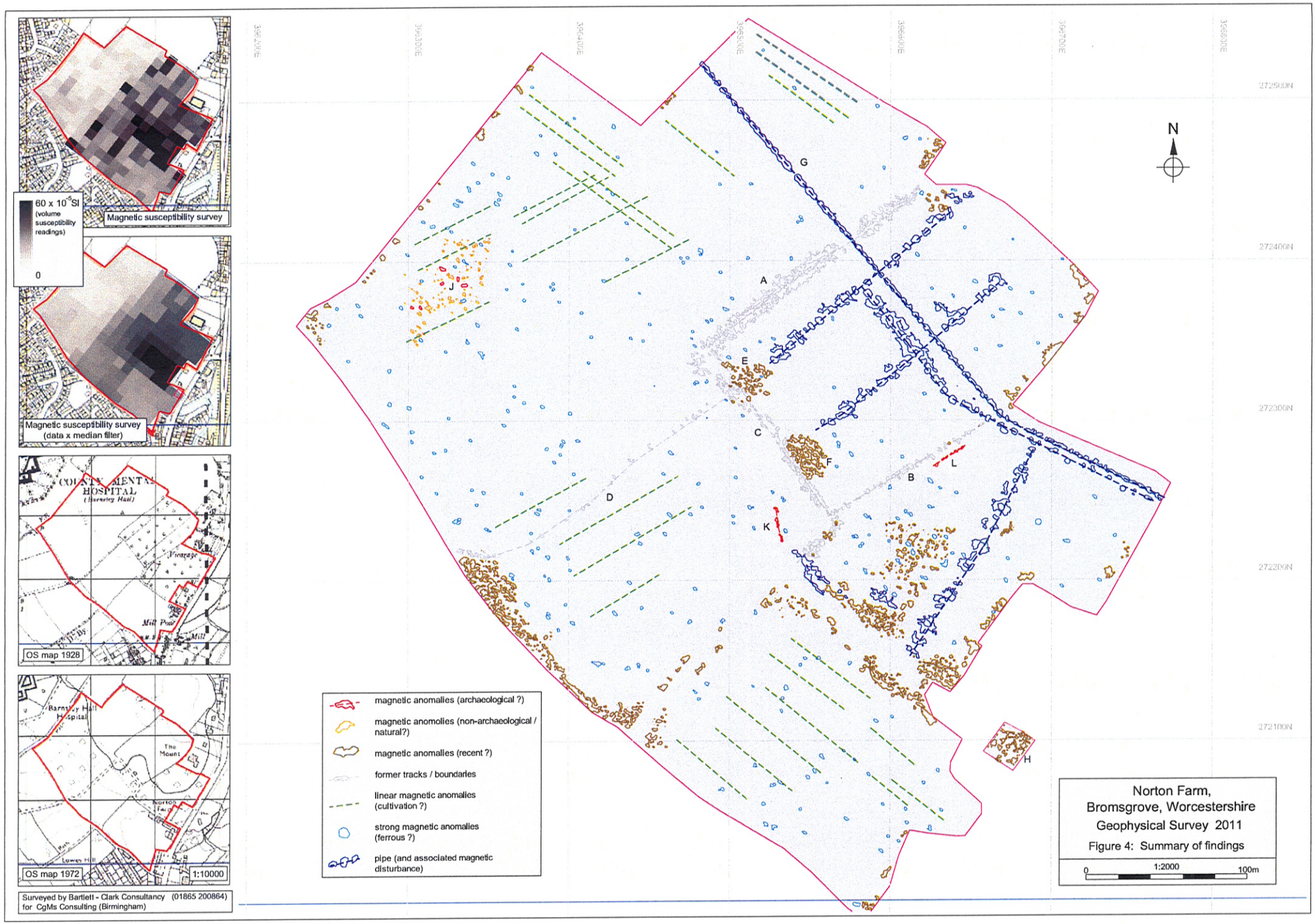
19 September 2011

The fieldwork and data processing for this project were done by P. Cottrell and F. Prince.


2.6nT
-2.4
N
Figure 2
Figure 3
Area proposed for magnetometer survey
Approximate limit of survey
Location of magnetometer survey
1:10000
Reproduced from Ordnance Survey Digital Data with the sanction of the Controller of HM Stationery Office. Crown Copyright Reserved.
Surveyed by Bartlett - Clark Consultancy (01865 200864) for CgMs Consulting (Birmingham)
Norton Farm,
Bromsgrove, Worcestershire
Geophysical Survey 2011
Figure 1: Magnetometer survey
(grey scale plot)
0
1:2000
100m


magnetic anomalies (archaeological ?)
magnetic anomolies (non-archaeological / natural?)
magnetic anomalies (recent ?)
former tracks / boundaries
linear magnetic anomalies (cultivation ?)
strong magnetic anomalies (ferrous ?)
pipe (and associated magnetic disturbance)
N
60 nT
Norton Farm,
Bromsgrove, Worcestershire
Geophysical Survey 2011
Figure 2: Magnetometer survey
(with interpretation)
0
1:1250
50m
Surveyed by Bartlett - Clark Consultancy (01865 200864)
for CgMs Consulting (Birmingham)


N
60 nT
magnetic anomalies (archaeological ?)
magnetic anomolies (non-archaeological / natural?)
magnetic anomalies (recent ?)
former tracks / boundaries
linear magnetic anomalies (cultivation ?)
strong magnetic anomalies (ferrous ?)
pipe (and associated magnetic disturbance)
Norton Farm,
Bromsgrove, Worcestershire
Geophysical Survey 2011
Figure 3: Magnetometer survey
(with interpretation)
0
1:1250
50m
Surveyed by Bartlett - Clark Consultancy (01865 200864)
for CgMs Consulting (Birmingham)


Magnetic susceptibility survey
60 x 10⁻⁵SI (volume susceptibility readings)
0
Magnetic susceptibility survey (data x median filter)
OS map 1928
OS map 1972
1:10000
Barnsley Hall Hospital
The Mount
Norton Farm
Lower Hill
Mill Pool
Mill
Vicarage
N
A
B
C
D
E
F
G
H
J
K
L
magnetic anomalies (archaeological ?)
magnetic anomolies (non-archaeological / natural?)
magnetic anomalies (recent ?)
former tracks / boundaries
linear magnetic anomalies (cultivation ?)
strong magnetic anomalies (ferrous ?)
pipe (and associated magnetic disturbance)
Norton Farm,
Bromsgrove, Worcestershire
Geophysical Survey 2011
Figure 4: Summary of findings
0
1:2000
100m
Surveyed by Bartlett - Clark Consultancy (01865 200864)
for CgMs Consulting (Birmingham)

Appendix 3 Technical information

The archive (site code: WSM 55832)

The archive consists of:

3 Field progress reports AS2

1 Photographic records AS3

103 Digital photographs

4 Trench record sheets AS41

1 CD-Rom/DVDs

1 Copy of this report (bound hard copy)

The project archive is intended to be placed at:

Worcestershire County Museum
Museums Worcestershire
Hartlebury Castle
Hartlebury
Near Kidderminster
Worcestershire DY11 7XZ
Tel Hartlebury (01299) 250416