

ARCHAEOLOGICAL  
SERVICES  
DURHAM UNIVERSITY

Commissioned by CgMs Consulting  
on behalf of Generator Group LLP

Lingwood Road  
Blofield  
Norfolk

geophysical survey

report 3022  
November 2012

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## **1. Summary**

### **The project**

- 1.1 This report presents the results of a geophysical survey conducted in advance of proposed development at Lingwood Road, Blofield, Norfolk. The works comprised the geomagnetic survey of approximately 3.6ha of land.
- 1.2 The works were commissioned by CgMs Consulting on behalf of Generator Group LLP and conducted by Archaeological Services Durham University.

### **Results**

- 1.3 A few anomalies were detected which could reflect soil-filled features of potential archaeological origin. With the exception of a possible narrow ditched trackway, these generally comprise short possible remnants of former ditches.
- 1.4 Probable former field boundaries were identified in Area 2, broadly corresponding to those shown on early maps.
- 1.5 The former presence and removal of fruit trees and bushes across most of the area in recent years may have impacted on any archaeological resource present. Aerial photographs taken between 2003-2007 show that most of the proposed development area, except the southern half of Area 1, contained fruit trees and bushes until recently.
- 1.6 The majority of anomalies detected comprise the current plough regime and relatively recent ferrous and/or fired materials such as building rubble.
- 1.7 A ferrous pipe was detected traversing the northern edge of Area 1.
- 1.8 Two boreholes also gave rise to strong anomalies in Area 1.

## 2. Project background

### Location (Figure 1)

- 2.1 The proposed development area was located on land at Lingwood Road, Blofield, to the east of Norwich, Norfolk (NGR centre: TG 33931 09669). Three surveys were conducted in three land parcels divided by wide hedges. The site is bounded to the north by Yarmouth Road, by open fields to the east, by Lingwood Road to the south and Fox Lane to the west.

### Development proposal

- 2.2 The development proposal is for up to 105 residential units, together with associated accesses, public open space and a community facility (Application Number 20121587).

### 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 relation to the development.

### Methods statement

- 2.4 The surveys have been undertaken in accordance with a brief from Norfolk County Council Historic Environment Service (NCCHEs; Appendix I), a written scheme of investigation prepared by Archaeological Services Durham University and approved by NCCHEs, and in line with national standards and guidance (see para. 5.1 below).

### Dates

- 2.5 Fieldwork was undertaken on 23rd and 24th October 2012. This report was prepared for 7th November 2012.

### Personnel

- 2.6 Fieldwork was conducted by Ashley Hayes and Natalie Swann (Supervisor). Geophysical data processing and report preparation was by Duncan Hale (the Project Manager), with illustrations by David Graham.

### Archive/HES/OASIS

- 2.7 The site code is **NBL12**, for **Norfolk Blofield Lingwood Road 2012**. The survey archive will be supplied on CD to the client for deposition with the project archive at Norfolk Museums and Archaeology Service in due course.

HES Reference CNF44554

NHER Number ENF129975

Archaeological Services Durham University is registered with the **Online Access** to the **Index of archaeological investigationS** project (**OASIS**). The OASIS ID number for this project is **archaeol3-137025** (Appendix 4).

### **3. Historical and archaeological background**

#### **Previous archaeological works**

- 3.1 An archaeological desk-based assessment has been conducted for the proposed development area (Gailey 2012); the summary results of that assessment are presented below.
- 3.2 There are no designated archaeological assets on or close to the site and no known archaeological assets are recorded on the site.
- 3.3 Based on the HER evidence and other relevant material, the site has a low to moderate potential for archaeological remains, particularly isolated artefacts, dating to the Neolithic to Medieval periods and a moderate to good potential for remains dating to the Post-Medieval period. Remains of no more than a local significance are anticipated.
- 3.4 The site has been in agricultural use since at least the Medieval period and phases of agricultural activity will have had a moderate but widespread impact on any underlying archaeological deposits.

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

- 4.1 At the time of survey the proposed development area comprised three arable fields, all ploughed north-south. Two geotechnical boreholes were present in Area 1. A slight hollow in Area 3 contained standing water; this hollow had previously been deeper but was backfilled by the farmer using bonfire waste and rubble. A mound of building rubble was present in the south of Area 3 and farm machinery flanked the eastern side of this area.
- 4.2 The proposed development area occupies a very slight south-facing slope, with elevations between approximately 18m OD in the south and 26m OD in the north.
- 4.3 The underlying solid geology of the area comprises Pliocene-Pleistocene sand and gravel of the Crag Group, which is overlain by sand in the north and diamicton in the south.

### **5. Geophysical survey**

#### **Standards**

- 5.1 The surveys and reporting were conducted in accordance with English Heritage guidelines, *Geophysical survey in archaeological field evaluation* (David, Linford & Linford 2008); the Institute for Archaeologists (IfA) *Standard and Guidance for archaeological geophysical survey* (2011); the IfA Technical Paper No.6, *The use of geophysical techniques in archaeological evaluations* (Gaffney, Gater & Ovenden 2002); and the Archaeology Data Service *Guide to Good Practice: Geophysical Data in Archaeology* (Schmidt & Ernenwein 2011).

#### **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 suite of complementary techniques such as magnetometry, earth electrical resistance,

ground-penetrating radar, electromagnetic survey and topsoil magnetic susceptibility survey. Some techniques are more suitable than others in particular situations, depending on 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 considered possible that cut features such as ditches and pits might be present on the site, 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 nature and depth of targets and the local geology it was considered that geomagnetic survey (fluxgate gradiometry) was an appropriate technique in this instance. Fluxgate gradiometry involves the use of hand-held magnetometers to detect and record anomalies in the vertical component of the Earth's magnetic field which are 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 across each survey area and related to known, mapped Ordnance Survey (OS) points and the National Grid using a Leica GS15 global navigation satellite system (GNSS) with real-time kinematic (RTK) corrections typically providing 10mm 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 nominally 0.03nT, the sample interval was 0.25m and the traverse interval was 1m, thus providing 3,600 sample measurements per 30m grid unit.
- 5.7 In order to demonstrate the repeatability of the results, one grid was surveyed twice each day, once at the start of survey and once at the end, for comparative purposes. The raw data from these grids are presented in Appendix II.
- 5.8 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**

- 5.9 Geoplot v.3 software was used to process the geophysical data and to produce continuous tone greyscale images of the raw and minimally processed data. The raw data are presented in Appendix III. The greyscale images and interpretations of minimally processed (non-filtered) data are presented in Figures 2-4; trace plots are provided in Figure 5. In the greyscale images, positive magnetic anomalies are displayed as dark grey and negative magnetic anomalies as light grey. Palette bars relate the greyscale intensities to anomaly values in nanoTesla.
- 5.10 The following basic processing functions have been applied to each dataset:

<i>clip</i>	clips 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>destagger</i>	corrects for displacement of geomagnetic 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 A colour-coded geophysical interpretation plan is 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 A colour-coded archaeological interpretation is 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 ditches or pits) whose magnetic susceptibility has been enhanced by decomposed organic matter or by burning.
- 5.14 Narrow, parallel, positive and negative magnetic anomalies have been detected across the survey areas, aligned north-south. These anomalies reflect the current plough regime.
- 5.15 Small, discrete dipolar magnetic anomalies have been detected in each of the survey areas. These may 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 anomalies is shown on the geophysical interpretation plan, however, they have been omitted from the archaeological interpretation plan

and the following discussion. High concentrations of similar anomalies are discussed below.

### **Area 1**

- 5.16 A chain of large and intense dipolar magnetic anomalies has been detected along the northern edge of the survey. This almost certainly reflects a ferrous pipe.
- 5.17 Two large dipolar magnetic anomalies in the south-central part of the survey correspond to geotechnical boreholes.
- 5.18 A few, generally weak, positive magnetic anomalies have been detected in the survey area. These could possibly reflect soil-filled features of archaeological interest. Two such anomalies aligned broadly east-west in the south-eastern part of the survey could reflect drainage ditches either side of a former narrow track. The other anomalies are generally short in length but could reflect the partial remains of former ditches.

### **Area 2**

- 5.19 Some linear positive magnetic anomalies in this area appear to correspond to former field boundaries shown on a tithe map of 1845 and early OS map editions.
- 5.20 The concentration of intense dipolar magnetic anomalies in the southern part of the area corresponds to metal fences and building rubble (see below).

### **Area 3**

- 5.21 A mound of bricks and other building rubble was present at the southern edge of this survey area. A concentration of similar materials appears to spread out from the mound, beneath the ground surface, giving rise to the dipolar anomalies detected both here and in the southern part of Area 2.
- 5.22 A concentration of intense dipolar magnetic anomalies in the northern part of this area corresponds to a hollow noted on the ground. Anecdotal evidence from the farmer indicates that this hollow used to be deeper but was backfilled with bonfire waste and building rubble.
- 5.23 There is a relatively high concentration of small intense anomalies across this area, which almost certainly reflects further near-surface ferrous/fired litter here.

## **6. Conclusions**

- 6.1 Geomagnetic survey was undertaken across a 3.6ha proposed development area at Lingwood Road, Blofield, Norfolk.
- 6.2 A few anomalies were detected which could reflect soil-filled features of potential archaeological origin. With the exception of a possible narrow ditched trackway, these generally comprise short possible remnants of former ditches.
- 6.3 Probable former field boundaries were identified in Area 2, broadly corresponding to those shown on early maps.



- 6.4 The former presence and removal of fruit trees and bushes across most of the area in recent years may have impacted on any archaeological resource present. Aerial photographs taken between 2003-2007 show that most of the proposed development area, except the southern half of Area 1, contained fruit trees and bushes until recently.
- 6.5 The majority of anomalies detected comprise the current plough regime and relatively recent ferrous and/or fired materials such as building rubble.
- 6.6 A ferrous pipe was detected traversing the northern edge of Area 1.
- 6.7 Two boreholes also gave rise to strong anomalies in Area 1.

## **7. Sources**

- Gailey, S, 2012 *Archaeological Desk Based Assessment: Land East of Blofield, Norfolk*. Unpublished report ref 14368, CgMs Consulting
- David, A, Linford, N, & Linford, P, 2008 *Geophysical Survey in Archaeological Field Evaluation*. English Heritage
- Gaffney, C, Gater, J, & Ovenden, S, 2002 *The use of geophysical techniques in archaeological evaluations*. Technical Paper 6, Institute of Field Archaeologists
- IfA 2011 *Standard and Guidance for archaeological geophysical survey*. Institute for Archaeologists
- Schmidt, A, & Ernenwein, E, 2011 *Guide to Good Practice: Geophysical Data in Archaeology*. Archaeology Data Service

## **Appendix I**

Brief for Archaeological Evaluation by Geophysical Survey at Lingwood Road, Blofield



BRIEF FOR  
ARCHAEOLOGICAL EVALUATION BY GEOPHYSICAL SURVEY  
AT

**LAND AT LINGWOOD ROAD  
BLOFIELD  
NORFOLK**

PLANNING AUTHORITY:	Broadland District Council
PLANNING APPLICATION NO.:	Preapplication
HES REFERENCE	CNF44554
ASSOCIATED.	Yes
NHER NO. FOR THIS PROJECT:	To be arranged
GRID REFERENCE:	TG 3395 0967
MAP EXTRACT ATTACHED:	No
DEVELOPMENT PROPOSAL:	Unspecified
AREA:	3.6ha
CURRENT LAND USE:	Arable
ISSUED BY:	James Albone Planning Archaeologist Norfolk Historic Environment Service Environment, Transport and Development Union House, Gressenhall Dereham, Norfolk NR20 4DR Tel: 01362 869279 (direct) james.albone@norfolk.gov.uk
DATE:	12 <sup>th</sup> Oct 2012



If you need this document in large print, audio, Braille, alternative format or in a different language please contact Ken Hamilton on 01362 869275 and we will do our best to help.

## **Summary**

An archaeological desk based assessment has been carried out for the proposed development site. The site lies within a wider landscape containing heritage assets of prehistoric and later date. No heritage assets have previously been recorded at the site itself and based on the existing data its archaeological potential has been considered as being low to medium. However, it is acknowledged that previously unidentified heritage assets with archaeological interest, may be present at the site and that the significance of such remains could be affected by any development.

Norfolk County Council Historic Environment Service has requested that the results of an archaeological evaluation (geophysical survey) are submitted prior to the determination of the planning application so that an informed and reasonable planning decision can be taken when the results of the evaluation have been considered.

Geophysical survey is required in the first instance to determine the nature and extent of any archaeological deposits beneath the ploughsoil. This survey may indicate a need for a further phase of archaeological evaluation and/or excavation or archaeological monitoring during the development if heritage assets of importance are found and these cannot be preserved *in situ*.

## **1. Policy Background**

The relevant planning policies can be found in :-

Broadland District Council, Norwich City Council and South Norfolk Council *Joint Core Strategy for Broadland, Norwich and South Norfolk* (Adopted March 2011) Policies 1 and 8

and

Department of Communities and Local Government *National Planning Policy Framework* (Adopted March 2012)

## **2. Archaeological Background**

A desk-based assessment undertaken for the proposed development site<sup>1</sup> identified that it lies within a wider landscape containing heritage assets of prehistoric and later date. No heritage assets have previously been recorded at the site itself and based on the existing data its archaeological potential has been considered as being low to medium. However, it is acknowledged that previously unidentified heritage assets with archaeological interest, may be present at the site and that the significance of such remains could be affected by any development.

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<sup>1</sup> Gailey, S. 2012 *Archaeological Desk Based Assessment: Land East of Blofield*

### 3. Planning Background

Norfolk County Council Historic Environment Service has requested that the results of an archaeological evaluation are submitted prior to the determination of the planning application for this development, in accordance with *National Planning Policy Framework para. 128*, so that an informed and reasonable planning decision can be taken when the results of the evaluation have been considered.

This Brief provides an outline of the first phase of a programme of archaeological work (PoAW), the results of which will be assessed by the Historic Environment Service to determine whether further investigations (trial trenching and/or excavation/monitoring) are necessary should archaeological remains be found to exist on the site and these cannot be preserved *in situ*.

### 4. Requirement for Work

Field survey by geophysical prospection is required to determine the extent and significance of subsurface features. A magnetometer survey will be conducted on a regular grid pattern, and will include a sampling interval of 1m x 0.25m.

Contractors must provide plots of raw data, as well as processed data, in line with English Heritage (2008) *Geophysical Survey in Archaeological Field Evaluation* Section 4.8. Please note that for the purposes of this exercise, zero median traverse processing does not constitute minimal processing.

Each day on site, the survey team must survey one grid twice, to demonstrate the repeatability of the results. The grid should not be surveyed twice in quick succession, but should be repeated at a later point in the day. The results of both surveys of the grids must be presented as an appendix to the site report as raw data.

A copy of the project archive must be prepared in line with Schmidt et al. (2001) *Geophysical Data in Archaeology: A Guide to Good Practice* (ADS), and lodged with Norfolk Museums and Archaeology Service.

The Archaeological Contractor will prepare a Method Statement or Specification for this phase of the PoAW and submit this to the Historic Environment Service for approval *before* costs are prepared for the commissioning client. The PoAW will include, as appropriate, background research, fieldwork, assessment, analysis, preparation of report, publication and deposition of the project archive.

The Archaeological Contractor will contact the HER Officer of the Historic Environment Service in advance of work starting to obtain a HER number for the site or, if a number is already given on the Brief, to ensure that it is still applicable.

The archaeological research aims and objectives of the project will be clearly stated, and the Method Statement or Specification will demonstrate how these will be met. Appropriate reference will be made to the :-

Medlycott, M (ed.) (2011) *Research and Archaeology Revisited: a revised framework for the East of England* East Anglian Archaeology Occasional Paper **24**

At the start of work (immediately before fieldwork commences) an OASIS online record <http://ads.ahds.ac.uk/project/oasis/> must be initiated and key fields completed on Details, Location and Creators forms.

When the project is completed, all parts of the OASIS online form must be completed for submission to the Norfolk Historic Environment Record. This will include an uploaded .pdf version of the entire report.

A copy of the OASIS form must be included with the final report.

Hard copies of the report must also be provided, as specified below.

## 5. Standards.

Method Statements or Specifications prepared by Archaeological Consultants or Contractors should state that all works will be carried out in full accordance with the appropriate sections of Gurney, D., 2003, '**Standards for Field Archaeology in the East of England**', as adopted by the Association of Local Government Archaeological Officers for the East of England Region and published as *East Anglian Archaeology Occasional Paper 14*. This is available as a PDF file on the web at [www.eaareports.org.uk](http://www.eaareports.org.uk)

Archaeological Contractors should note that the **Standards** document stipulates basic *methodological* standards. It is considered axiomatic that all contractors will strive to achieve the highest possible *qualitative* standards, with the application of the most advanced and appropriate techniques possible within a context of continuous improvement aimed at maximising the recovery of archaeological data and contributing to the development of a greater understanding of Norfolk's historic environment. Monitoring officers will seek and expect clear evidence of commitment to the historic resource of Norfolk, with specifications being drawn up within a context of added value.

## 6. Other matters

Archaeological Contractors are reminded that they should submit a copy of their Method Statement or Specification to the Historic Environment Service for approval, *before* costs are prepared for commissioning clients, in line with the Institute for Archaeologists' guidance.

The Method Statement or Specification should indicate the number of person

days allocated to the fieldwork stage of the project.

The Historic Environment Service will be responsible for monitoring progress and standards throughout the project. The archaeological contractor will give the Historic Environment Service not less than two week's written notice of the commencement of the work so that arrangements for monitoring the project can be made.

Any subsequent variation to a Detailed Project Specification or Method Statement must be agreed with the Historic Environment Service prior to its implementation.

This brief is valid for a period of one year from the date of issue. After that time, it may need to be revised to take account of new discoveries, changes in policy or the introduction of new working practices or techniques.

Three hard copies and PDF copy on CD of the Assessment Report and Updated Project Design should be supplied to the Historic Environment Service for the attention of the Senior Archaeologist (Planning) within the stipulated time-scale on the understanding that this will become a public document after an appropriate period of time (generally not exceeding six months). Three hard copies and a PDF copy of the draft publication report will be supplied to the Historic Environment Service for comments within stipulated or agreed time-scale for the completion of fieldwork. Contractors may wish to submit drafts for comments prior to sending the rest of the copies.

A fourth hard copy of both reports should be sent directly to the Regional Advisor for Archaeological Science, English Heritage, Brooklands House, 24 Brooklands Avenue, Cambridge CB2 8BU.

## **7. Notes for Applicants/developers**

The Historic Environment Service is responsible for safeguarding the County's archaeological heritage. The Historic Environment Service is consulted by Local Planning Authorities and provides specialist information and advice on the archaeological implications of development proposals.

An Archaeological Project will usually consist of one or more of the following:-

**Desk-based assessment:** a report drawing together existing information about a site from a wide range of sources.

**Survey:** usually fieldwalking and metal-detecting, sometimes non-intrusive geophysical surveys (e.g. magnetometer survey)

**Evaluation:** survey and/or trial-trenching or test-pitting.

**Excavation:** larger-scale excavation

**Watching brief or monitoring:** the presence of an archaeologist during the development to record any features exposed

**Post-excavation:** analysis, and the preparation of a report and archive of records and finds at the end of any archaeological project

A phased approach to fieldwork is frequently adopted, with one stage leading on to another (if necessary) after each phase is reported upon and reviewed.

If an evaluation is required before an application is determined or if Planning Permission is granted subject to a condition for a programme of archaeological work, the Historic Environment Service will provide a **Brief** for the archaeological project. This outline of the project is forwarded to you by the Historic Environment Service or the Planning Authority.

You should then ask one or more Archaeological Contractors to prepare a **Method Statement** or **Specification** which will detail how the project is to be undertaken, and how the brief will be fulfilled. This will be sent to the Historic Environment Service for approval on behalf of the Planning Authority, after which the Contractor will give you details of costs.

Details of archaeological contractors based in Norfolk and beyond may be found in the Institute for Archaeologists Yearbook & Directory, available from the I.F.A., University of Reading, 2 Earley Gate, PO Box 239, Reading RG6 6AU. Tel: 0118 931 6446. Fax: 0118 931 6448. Email: [admin@archaeologists.net](mailto:admin@archaeologists.net). Website: [www.archaeologists.net](http://www.archaeologists.net).

The Historic Environment Service does not see Contractors' costings, nor do we give advice on the costs of archaeological projects. This is between you and the archaeological contractor(s). You may wish to obtain a number of quotations or to employ the services of an archaeological consultant.

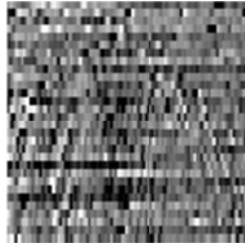
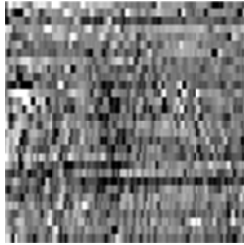
For further information or advice on any archaeological matters please contact the person issuing this report whose details are on Page1.



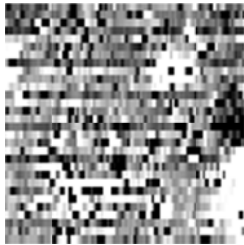
## Appendix II

Data comparison of repeated survey grids, to demonstrate repeatability

23rd October 2012, 30m grid in Area 1:



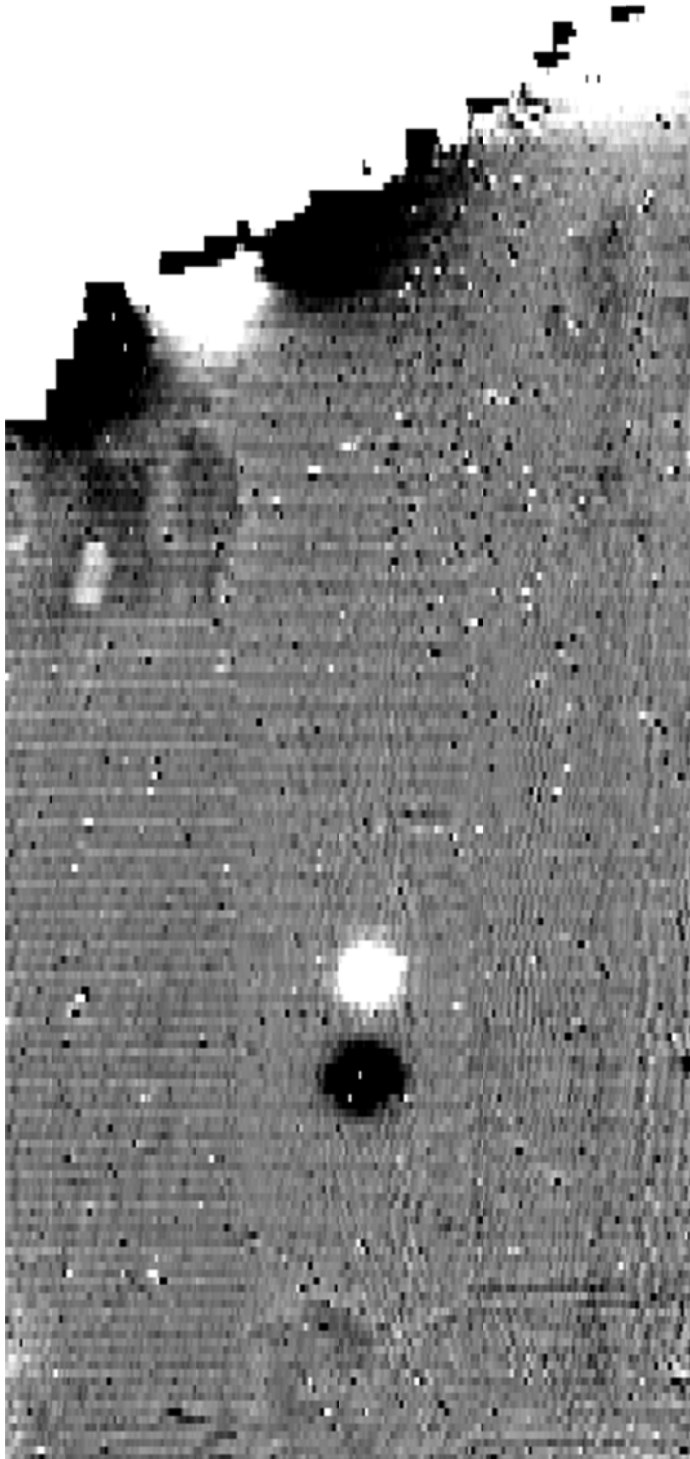
24th October 2012, 30m grid in Area 3:



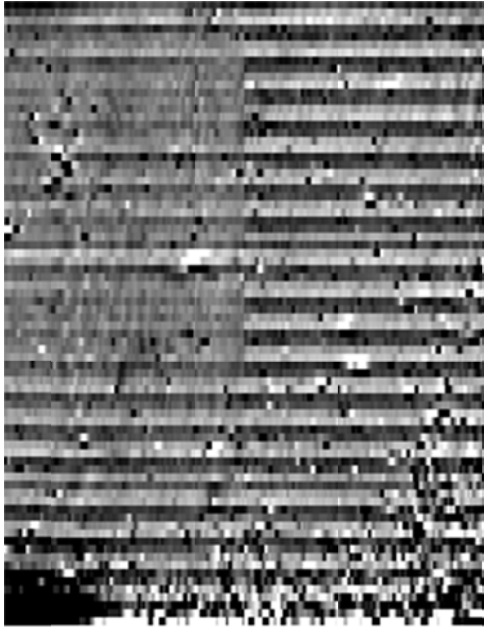
### Appendix III

Plots of raw geomagnetic data, data as downloaded

Area 1



Area 2



Area 3



## Appendix IV

OASIS form

OASIS DATA COLLECTION FORM: England

OASIS ID: archaeol3-137025

Project details

Project name LINGWOOD ROAD, BLOFIELD, NORFOLK: GEPHYSICAL SURVEYS

Short description of the project GEOMAG SURVEY OF 3.6HA, THREE AREAS

Project dates Start: 23-10-2012 End: 07-11-2012

Previous/future work Yes / Not known

Any associated project reference codes NBL12 - Sitecode

Any associated project reference codes REPORT 3022 - Contracting Unit No.

Type of project Field evaluation

Site status None

Current Land use Cultivated Land 4 - Character Undetermined

Monument type NONE None

Significant Finds NONE None

Methods & techniques "Geophysical Survey"

Development type MIXED USE

Prompt Direction from Local Planning Authority - PPS

Position in the planning process Between deposition of an application and determination

Solid geology (other) Pliocene-Pleistocene sand and gravel of the Crag Group

Drift geology (other) sand in the north and diamicton in the south

Techniques Magnetometry

Project location

Country England

Site location NORFOLK BROADLAND BLOFIELD LINGWOOD ROAD

Study area 3.60 Hectares

Site coordinates TG 33931 09669 52 1 52 38 01 N 001 27 26 E Point

Height OD / Depth Min: 18.00m Max: 26.00m

Project creators

Name of Organisation ARCHAEOLOGICAL SERVICES DURHAM UNIVERSITY

Project brief originator JAMES ALBONE, NORFOLK HISTORIC ENVIRONMENT SERVICE

Project design originator Duncan Hale

Project director/manager Duncan Hale

Project supervisor Natalie Swann

Type of sponsor/funding body Consultant

Name of sponsor/funding body CGMS CONSULTING

Project archives

Physical Archive Exists? No

Digital Archive recipient NORFOLK MUSEUMS and ARCHAEOLOGY SERVICE

Digital Contents "Survey", "other"

Digital Media available "Geophysics", "Images raster / digital photography", "Images vector", "Survey", "Text"

Paper Archive recipient NORFOLK MUSEUMS and ARCHAEOLOGY SERVICE

Paper Contents "Survey", "other"

Paper Media available "Miscellaneous Material", "Plan", "Report", "Survey", "Unpublished Text"

Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)

Title LINGWOOD ROAD, BLOFIELD, NORFOLK: GEOPHYSICAL SURVEYS  
Author(s)/Editor(s) HALE, D  
Other bibliographic details ARCHAEOLOGICAL SERVICES REPORT 3022  
Date 2012  
Issuer or publisher ARCHAEOLOGICAL SERVICES DURHAM UNIVERSITY  
Place of issue or publication ARCHAEOLOGICAL SERVICES DURHAM UNIVERSITY  
Description A4, wirebound, white covers  
Entered by Duncan Hale (d.n.hale@durham.ac.uk)  
Entered on 7 November 2012

Figure 1: Site location



 proposed development area

 survey area

0 1km  
scale 1:25 000 for A4 plot

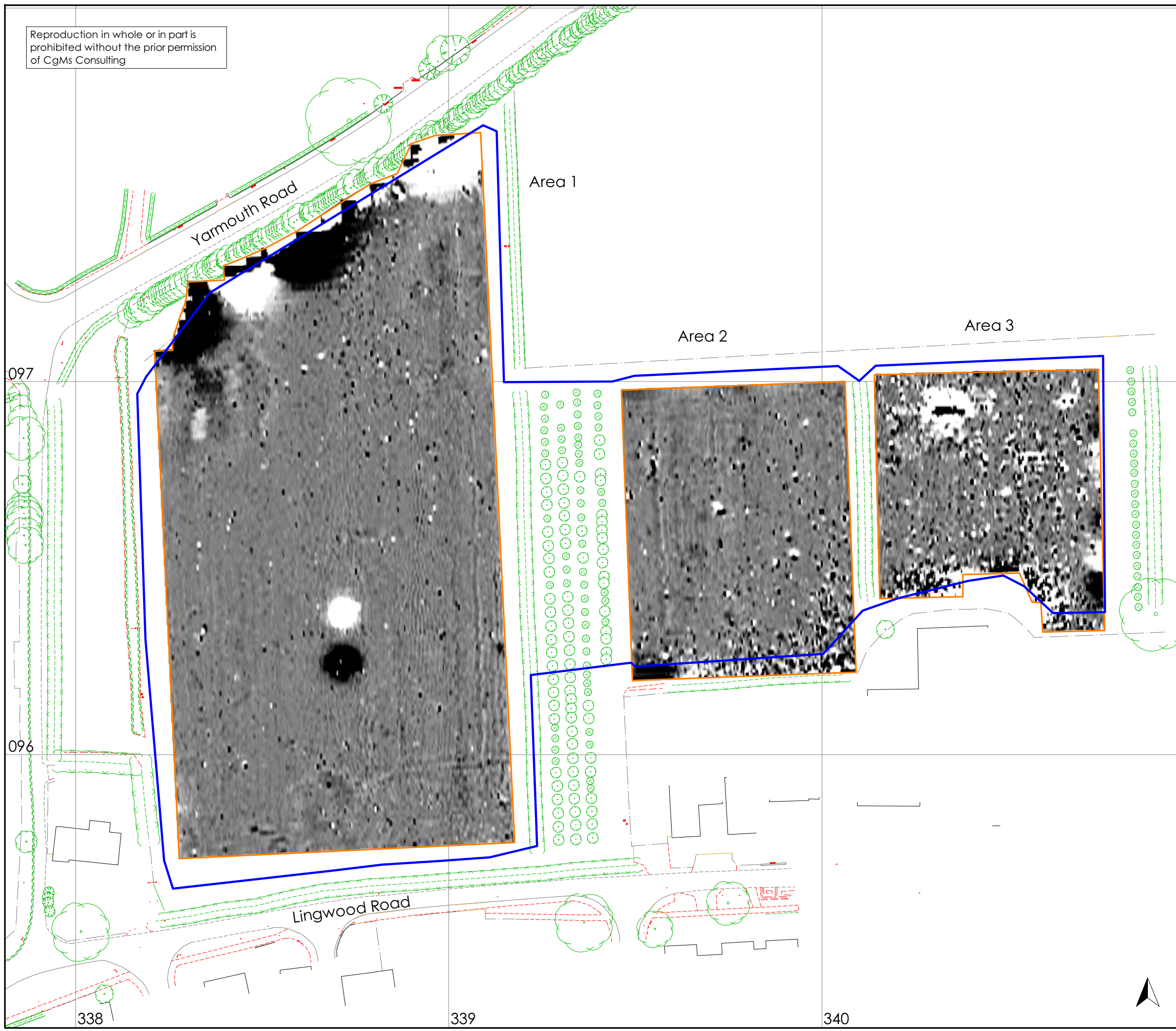
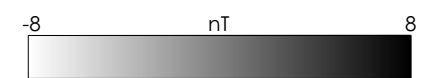
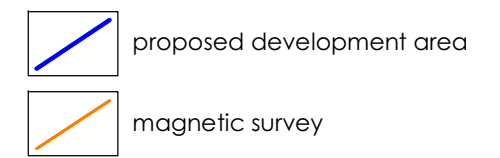
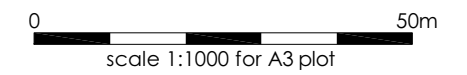
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on behalf of  
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Lingwood Road  
Blofield  
Norfolk

geophysical survey  
report 3022

Figure 2: Geophysical survey

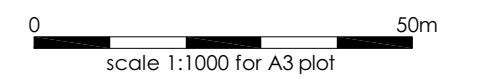


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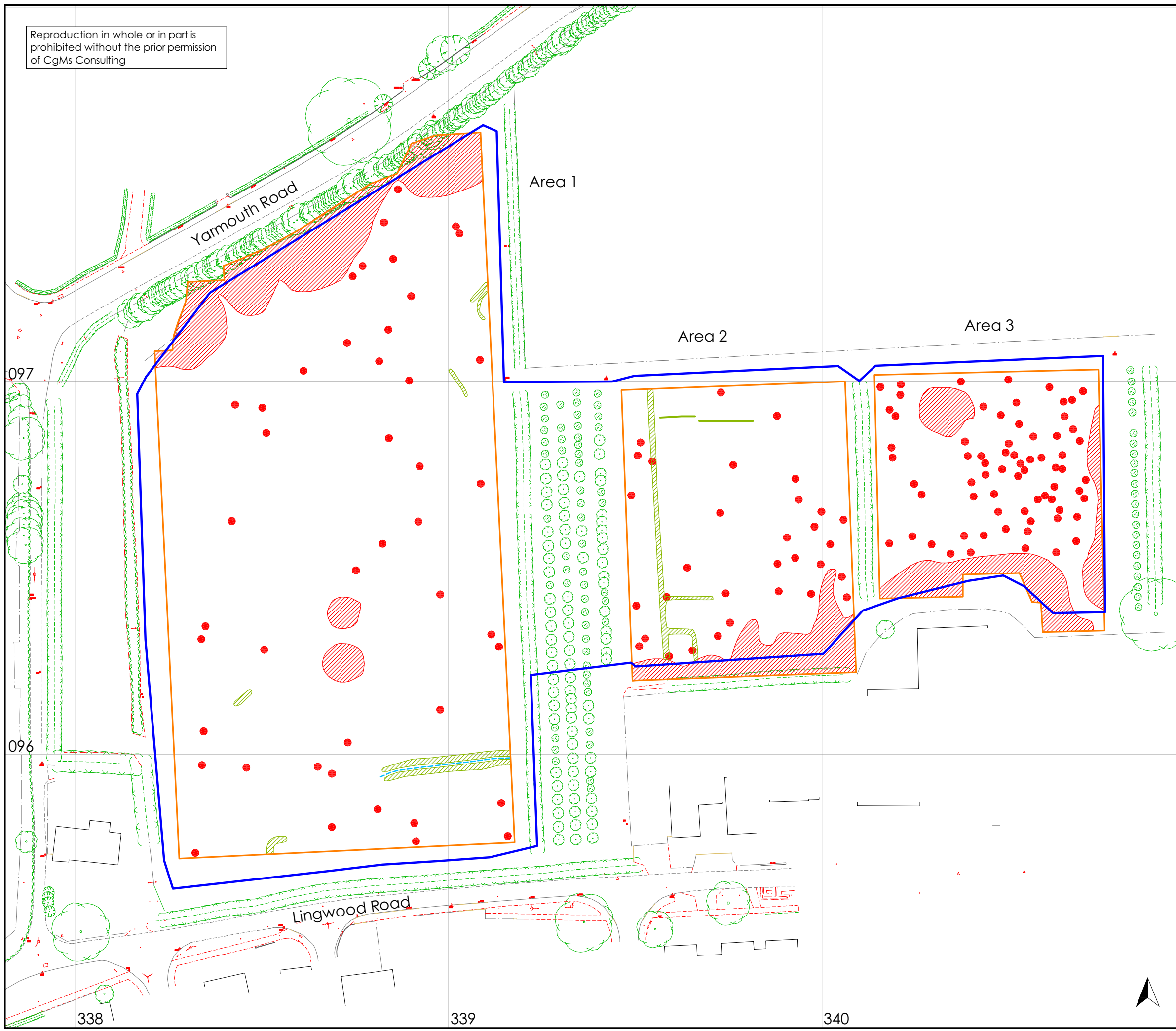
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Norfolk  
geophysical survey  
report 3022

Figure 3: Geophysical interpretation



- proposed development area
- magnetic survey
- dipolar magnetic anomaly
- positive magnetic anomaly
- negative magnetic anomaly



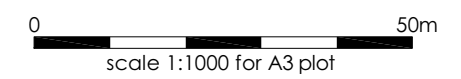


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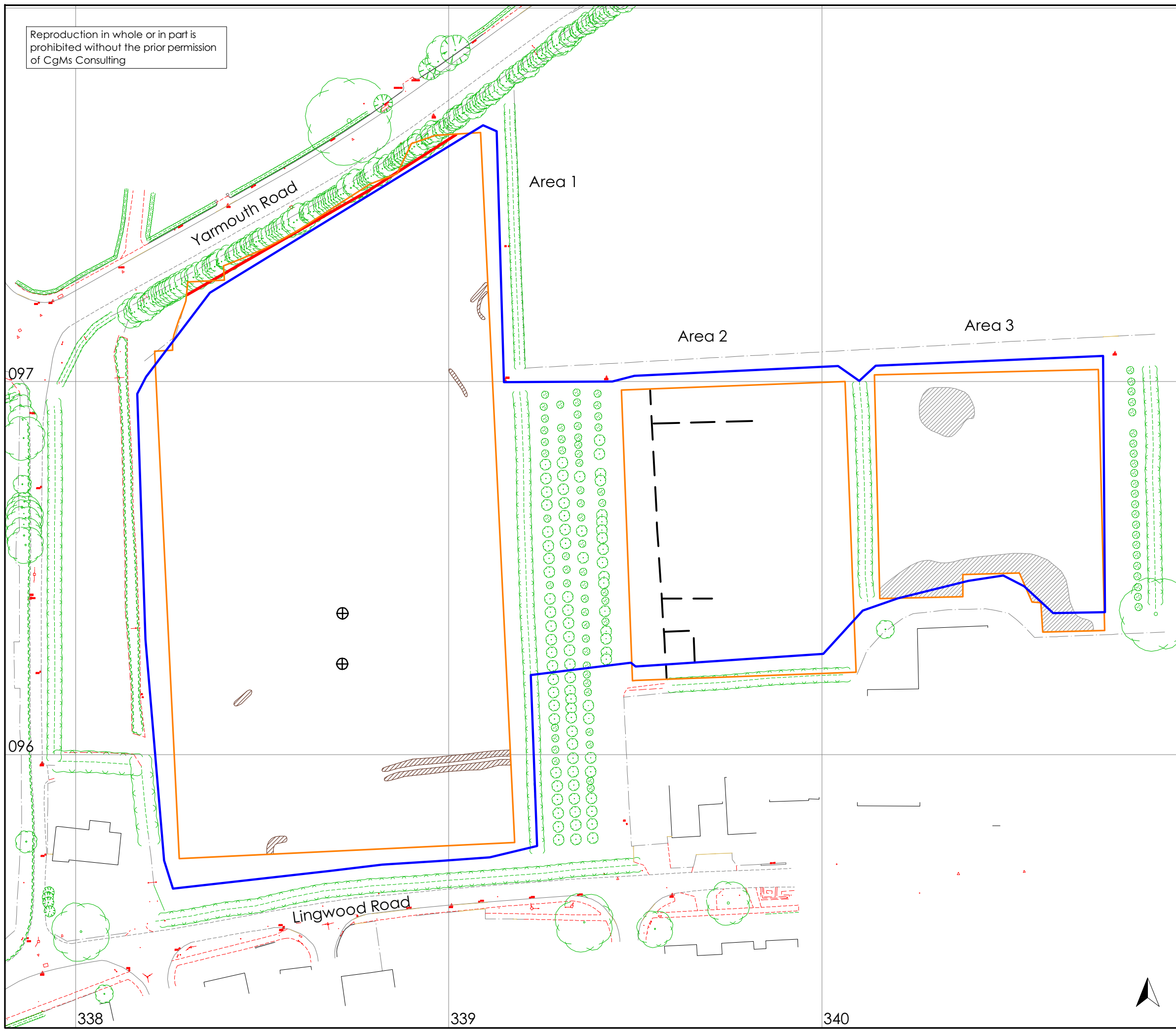
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Figure 4: Archaeological interpretation



- proposed development area
- magnetic survey
- soil-filled feature
- building rubble
- service pipe
- borehole
- former field boundary



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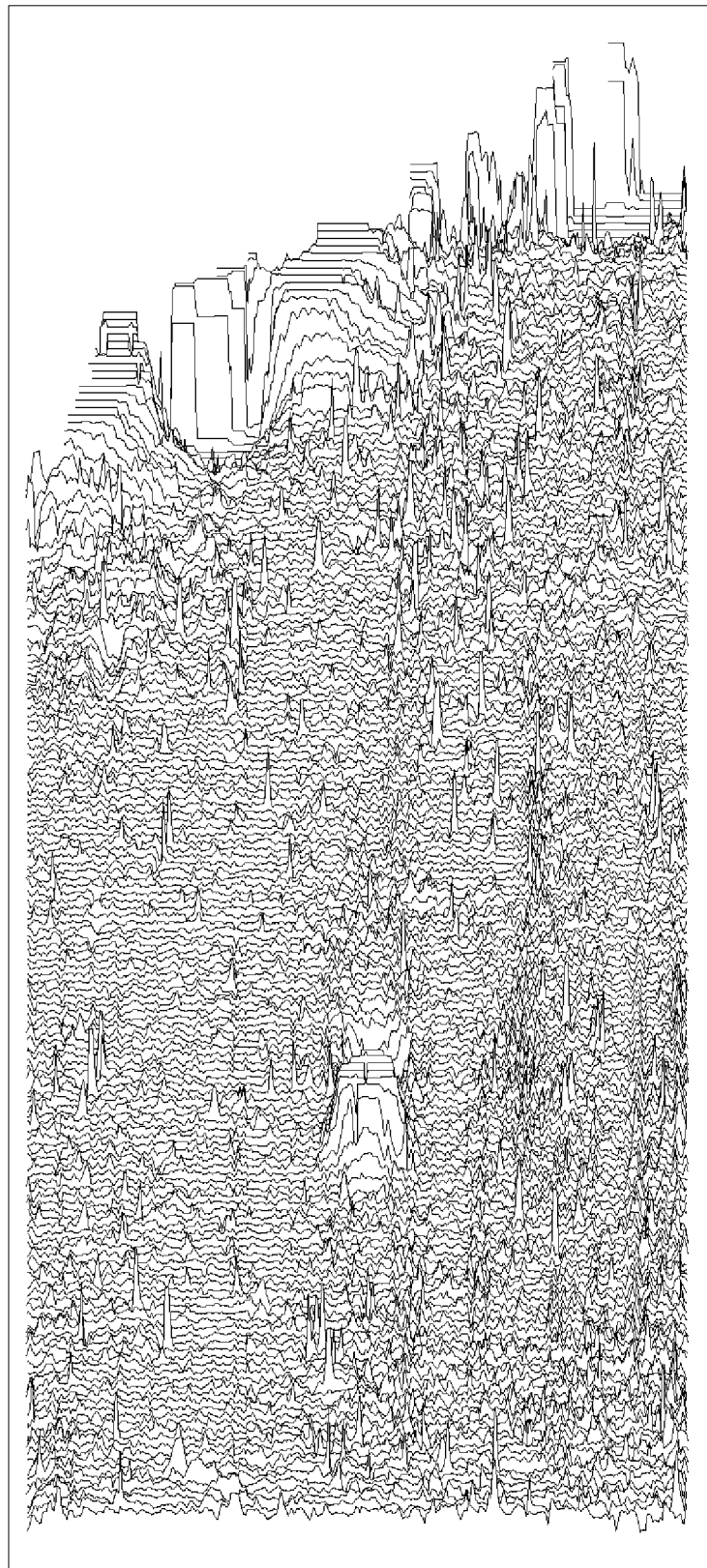
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Figure 5: Trace plots of geomagnetic data

0 50m  
scale 1:1000 for A3 plot

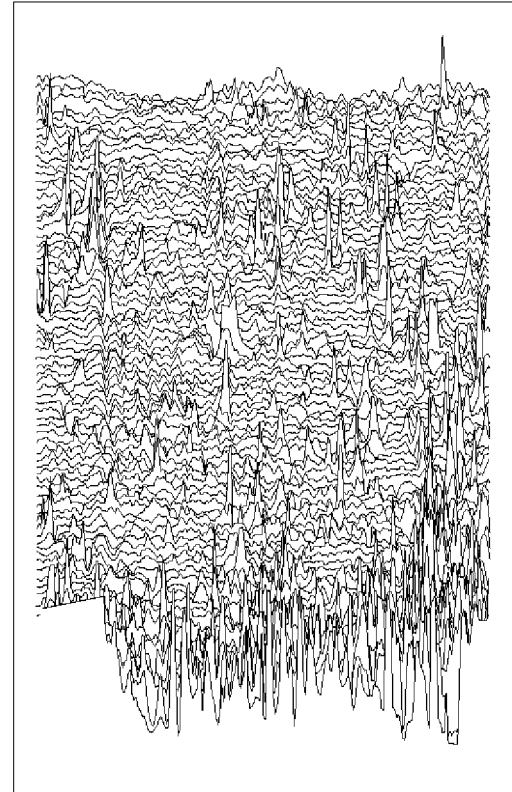
Area 1

20.10nT/cm



Area 2

20.00nT/cm



Area 3

24.20nT/cm

