



Northamptonshire Archaeology

A geophysical survey of land to the north west of
Cloud Hill Quarry
Leicestershire



Figure 2 Detailed Gradiometer Survey Results

Ian Fisher, Adrian Butler

22nd February 2005

Report 05/33

Northamptonshire Archaeology

2 Bolton House
Wootton Hall Park
Northampton NN4 8BE

w. www.northantsarchaeology.co.uk

t. 01604 700493/4

f. 01604 702822

e. sparry@northamptonshire.gov.uk



OASIS REPORT FORM

PROJECT DETAILS		
Project name	A geophysical survey on land to the north west of Cloud Hill Quarry, Leicestershire	
Short description (250 words maximum)	Northamptonshire Archaeology conducted a geophysical survey, on behalf of Oxford Archaeology, on land with an area of approximately 5ha at Cloud Hill Quarry, Leicestershire. The survey revealed evidence of contemporary activity within the survey area.	
Project type (eg DBA, evaluation etc)	Geophysical survey	
Site status (none, NT, SAM etc)	None	
Previous work (SMR numbers etc)		
Current Land use	None	
Future work (yes, no, unknown)	Unknown	
Monument type/ period	None	
Significant finds (artefact type and period)	None	
PROJECT LOCATION		
County	Leicestershire	
Site address (including postcode)	Clouds Hill Quarry, Breedon on the Hill	
Study area (sq.m or ha)	5ha	
OS Easting & Northing (use grid sq. numbers)	4408 3220	
Height OD		
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology	
Project brief originator	Richard Clark, Leicestershire County Council	
Project Design originator	Oxford Archaeology	
Director/Supervisor	Adrian Butler	
Project Manager	Adrian Butler	
Sponsor or funding body		
PROJECT DATE		
Start date	February 2005	
End date	February 2005	
ARCHIVES	Location (Accession no.)	Content (eg pottery, animal bone etc)
Physical		
Paper		
Digital		
BIBLIOGRAPHY		
Journal/monograph, published or forthcoming, or unpublished client report (NA report)		
Title		
Serial title & volume		
Author(s)		
Page numbers		
Date		

**NORTHAMPTONSHIRE ARCHAEOLOGY
NORTHAMPTONSHIRE COUNTY COUNCIL
FEBRUARY 2005**

**A GEOPHYSICAL SURVEY
ON LAND TO THE NORTH WEST OF
CLOUD HILL QUARRY
LEICESTERSHIRE
FEBRUARY 2005**

Report 05/33

STAFF

Project Manager Adrian Butler BSc MA AIFA
Fieldwork Adrian Butler, Ian Fisher BSc
Text and illustrations Ian Fisher, Adrian Butler

QUALITY CONTROL

	Print name	Date
Checked by	Pat Chapman	February 2005
Approved by	Andy Chapman	February 2005

CONTENTS

1	INTRODUCTION	1
2	TOPOGRAPHY AND GEOLOGY	1
3	ARCHAEOLOGICAL BACKGROUND	1
4	METHODOLOGY	2
5	SURVEY RESULTS	2
6	CONCLUSION	3
	BIBLIOGRAPHY	3

Figures

Fig 1 Site Location 1:2500

Fig 2 Detailed Gradiometer Survey Results 1:2500

Fig 3 Detailed Gradiometer Survey Results with Interpretation 1:2500

A GEOPHYSICAL SURVEY ON LAND TO THE NORTH WEST OF CLOUD HILL QUARRY, LEICESTERSHIRE, FEBRUARY 2005

ABSTRACT

Northamptonshire Archaeology conducted a geophysical survey, on behalf of Oxford Archaeology, on land with an area of approximately 5ha at Cloud Hill Quarry, Leicestershire. The survey revealed evidence of contemporary activity within the survey area.

1 INTRODUCTION

Northamptonshire Archaeology conducted geophysical survey in February 2005 on an area of land with an area of approximately 5ha to the northwest of the existing Cloud Hill Quarry, Leicestershire (NGR SK 408 220, Fig 1). The work was undertaken on behalf of Dave Thomason and Valerie Diaz of Oxford Archaeology (OA). Richard Clark, Senior Planning Archaeologist for Leicestershire, requested a phased approach to evaluating the area of the proposed tip extension. Geophysical survey was Stage 1 of the evaluation. The aim of the work was to identify the nature of any buried archaeological remains should they exist on the site (OA 2005).

2 TOPOGRAPHY AND GEOLOGY

Cloud Hill Quarry is situated approximately 1km south of Breedon on the Hill. The site is a proposed extension of the existing quarry located to the southeast of the A42, which runs northeast to southwest linking the M42 and M1 motorways. The survey area was bounded on the northwest by the A42 and the existing quarry tip to the southeast (Fig 1). To the southwest were arable fields.

The solid geology of the site comprises of a sequence of red clays and marls (Mercia Mudstone) of Triassic age, approximately 25m thick. The drift geology is glacial clays (OA 2005). The site was effectively flat, although a little uneven due to wheel ruts, and at the time of survey the field was apparently abandoned, covered in short rough vegetation.

3 ARCHAEOLOGICAL BACKGROUND

Cloud Hill Quarry is located approximately 1km to the south of the Scheduled Monument of Breedon on the Hill, the location of an Iron Age Hill Fort and surviving Saxon Church.

4 METHODOLOGY

The gradiometer survey was undertaken using Geoscan Research FM36 and FM256 fluxgate gradiometers. A total of 52 separate 30m x 30m grid-squares, totalling c5ha, were surveyed in detail. Each grid square was traversed at rapid walking pace via zigzag traverses spaced at 1m intervals. A sample trigger recorded readings every 0.25m along the traverse. All fieldwork was carried out in accordance with English Heritage and Institute of Field Archaeologists Guidelines (EH 1995 & Gaffney, Gater and Ovendon 2002).

The data were analysed using Geoplot 3.00p software. Low (negative) magnetism is shown as white and high (positive) magnetism as black in the resultant greyscale plots. The 'Zero Mean Traverse' algorithm was used in order to remove the variation between adjacent traverses. No other processing functions were employed. The processed data is presented here in the form of greyscale and interpretive plots (Figs 2 and 3 respectively).

5 SURVEY RESULTS

The entire survey area is covered in a scatter of magnetic 'ferrous litter' and larger sources of ferrous noise.

Regular linear anomalies are visible across the entire site both in the results and in the field. These apparently represent wheel ruts due to machines tracking over the site, the evidence of which was observed in the field.

On the east side of the survey area there is an area of positive and negative magnetism this indicates a former road that ran along the edge of the field and has since been buried with soil from the quarry. The road is evident where the hedgerow has been 'grubbed' out as road stone is visible in the disturbed ground.

Several small discrete positive anomalies were identified in the northern part of the survey area. These could reflect small pits or possibly buried pieces of magnesian limestone from the local quarries.

An area of negative magnetism is also evident on the east side, this is the effect of ferrous anomalies within a fenceline.

6 CONCLUSION

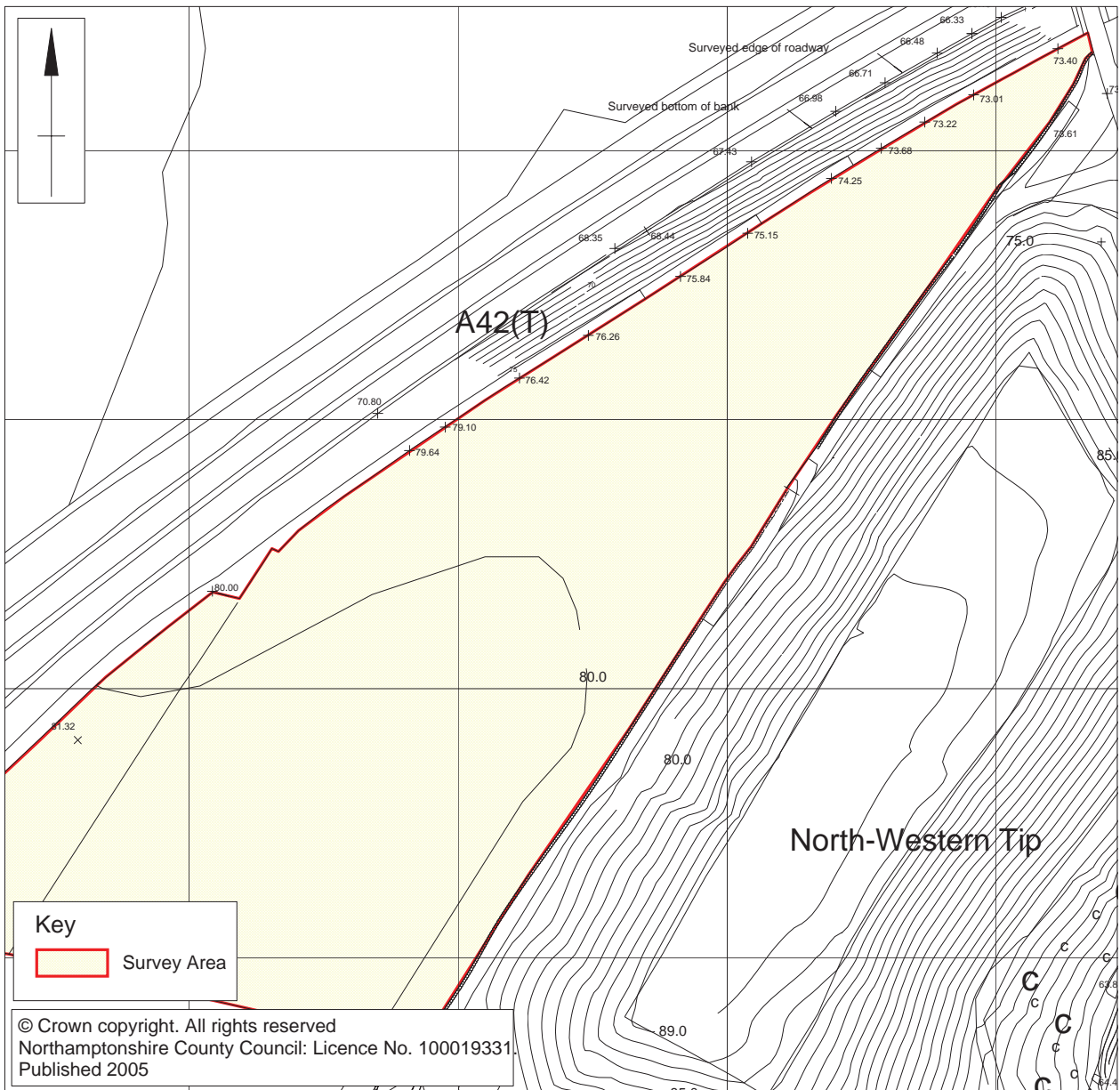
Approximately 5ha of fluxgate gradiometer survey was carried out northwest of Cloud Hill Quarry, Leicestershire. The results did not indicate archaeological remains, but highlighted modern day activity that is visible on the ground and in the data.

BIBLIOGRAPHY

English Heritage 1995 *Geophysical Survey in Archaeological Field Evaluation*, Research and Professional Services Guideline, **1**

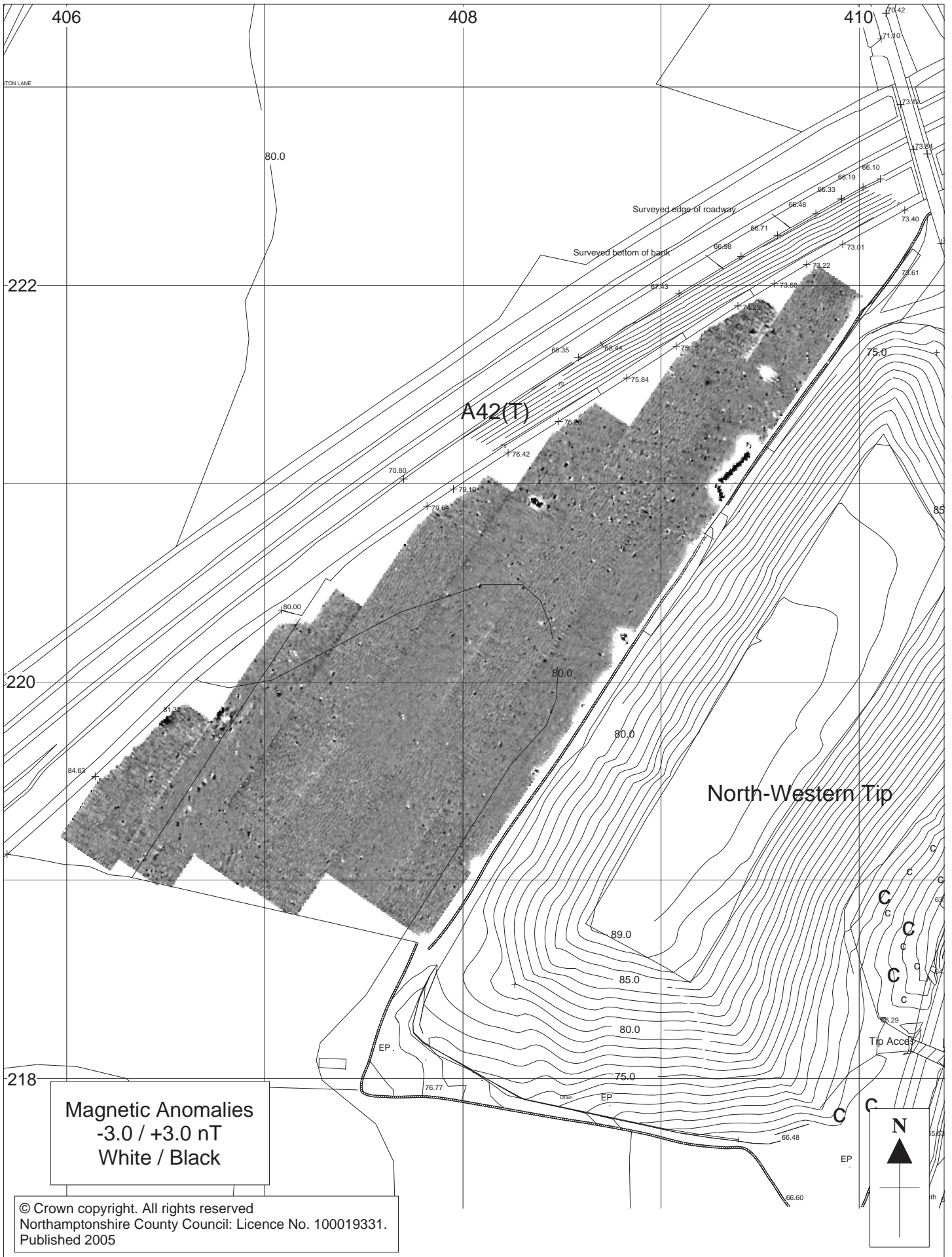
Gaffney, C, Gater, J, and Ovendon, S, 2002 *The Use of Geophysical Techniques in Archaeological Evaluations*, Institute of Field Archaeologists Technical Paper, **6**

OA 2005 *Northwest Tip Extension at Cloud Hill Quarry, Leicestershire Written Scheme of Investigation for an Archaeological Evaluation*, Oxford Archaeological Unit Ltd. January 2005



Scale 1:2500

Figure 1



Magnetic Anomalies
-3.0 / +3.0 nT
White / Black

© Crown copyright. All rights reserved
Northamptonshire County Council: Licence No. 100019331.
Published 2005

Figure 2 Detailed Gradiometer Survey Results



Figure 3 Detailed Gradiometer Survey Results with Interpretation