



University of Leicester

Archaeological Services

**An Archaeological Fieldwalking survey
on land to the south of Bosworth Road,
Kirkby Mallory, Peckleton, Leicestershire.
NGR: SK 443 008 centre**

Jon Coward



ULAS Report No 2010-046
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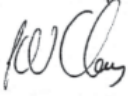
**An Archaeological Fieldwalking survey
on land to the south of Bosworth Road,
Kirkby Mallory, Peckleton, Leicestershire.**

(SK 443 008 centre)


Jon Coward

For Tarmac Ltd

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**An Archaeological Evaluation by Fieldwalking
on land to the south of Bosworth Road,
Kirkby Mallory, Peckleton, Leicestershire
(SK 443 008)**

1. Summary

An archaeological evaluation by fieldwalking was carried out in February 2010 by ULAS for Tarmac Ltd, on land to the south of Bosworth Road, Kirkby Mallory, Peckleton, Leicestershire (SK 443 008 centre) in advance of proposed development. The fieldwalking survey showed an unusually low amount of medieval or earlier material, and only two lithic pieces. The archive will be deposited with LMARS under accession code X.A30.2010 in due course.

2. Background

The proposed development area, an extension to Cadeby Quarry, is located at New Park Farm, Kirkby Mallory, Leicestershire, 1.2km north-west of Kirkby Mallory, and 2.2km south-east of Cadeby, in Peckleton parish, in the Hinckley and Bosworth district of Leicestershire (NGR SK 443 008). The application area (Figure 1) covers an area of c.21 ha over two adjacent fields. The larger field abuts the south side of Bosworth Road at c.125m AOD. The remainder of the application area is the northern part of the field to the south, this area slopes from north down to south (c.127m to 118m AOD).

3. Historical Background

An Archaeological Desk-based Assessment for the area was prepared by ULAS (Speed 2009). The Historic Environment Record (HER) for Leicestershire and Rutland indicates that there are no known archaeological sites located in the assessment area itself. However, the site is situated in an area rich in archaeological remains of prehistoric and Roman date.

4. Aims

The overall aim of the survey was to gather sufficient information to establish the extent, condition, character and date (as far as circumstances permit) of any archaeological features and deposits within the area targeted for evaluation.

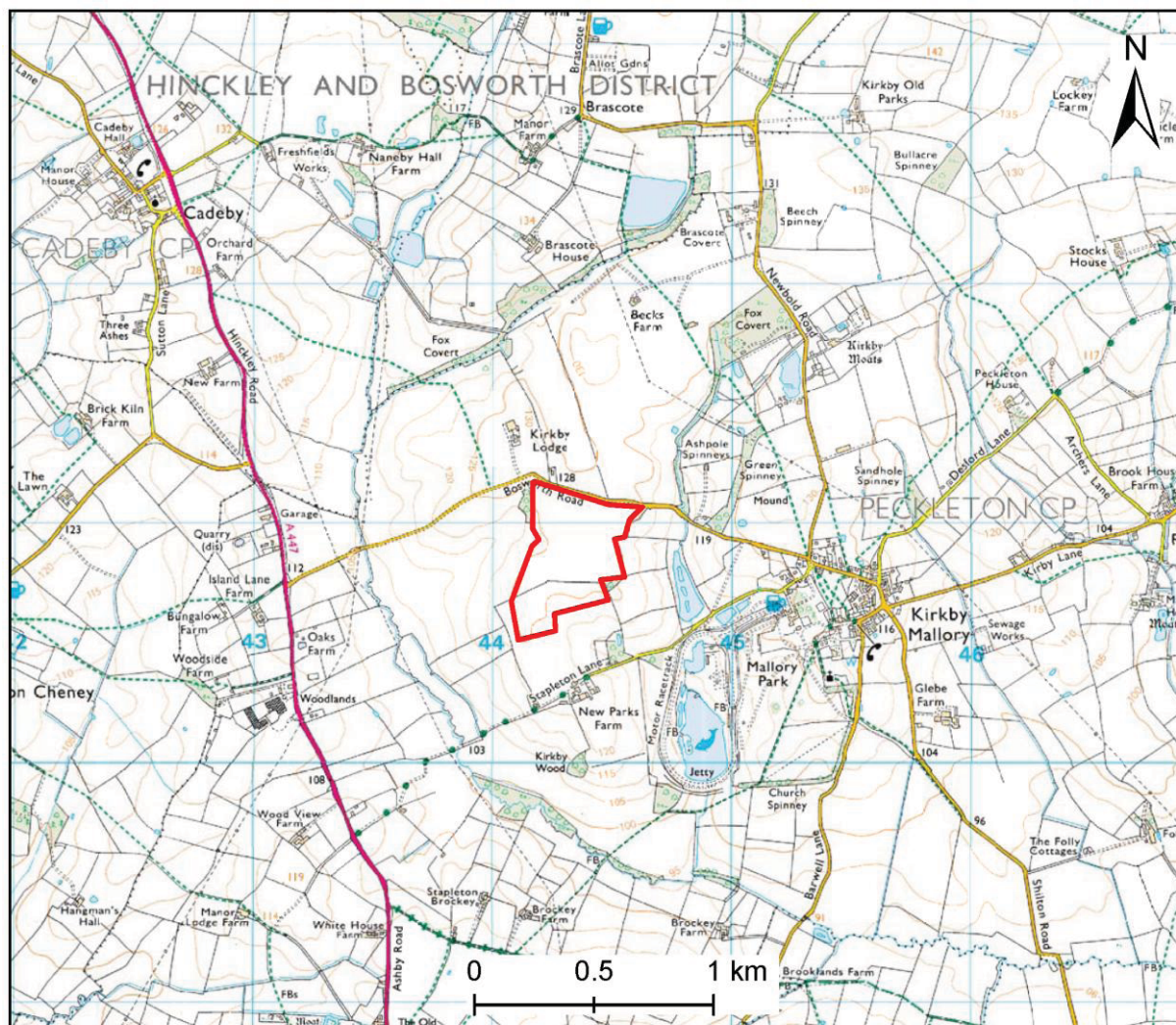


Figure 1 Survey area

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5. Methods

The Ordnance Survey Geological Survey of Great Britain, Sheet 155 indicated that the underlying geology was likely to consist of glacial-fluvial Pleistocene sand and gravel, with Mercia Mudstone in the immediate surrounding fields. The topsoil encountered in the two fields was very similar, being a sticky sandy clay with abundant small rounded pebbles. In places ploughing had cut into orangey gravel deposits lying close to the surface, and near the copse in the north-west corner of the study area some yellow to orange sand deposits were in evidence.

The area was walked at 20m transects, each transect being scanned for potential artefacts 1m either side of the transect line, giving a sample of *c.* 10% of the area. Finds were plotted using handheld GPS units which were showing an average accuracy of approximately 8-9 metres, although comparison with mapped field boundaries indicate that the actual accuracy was greater than indicated. Ground conditions were reasonable, the area having been ploughed some time previously and broken down. No crop was visible and light conditions were good, being bright but overcast.

6. Results

6.1 Prehistoric to early post-medieval material

Across the area as a whole, finds from the pre-historic to the early post-medieval periods (Figure 2) were very sparse. No Roman material was present. Whilst the proximity of the two recovered flint pieces may be significant, the low quantities of any of medieval pottery (seven sherds) may indicate that the area was rarely under cultivation during the medieval period.

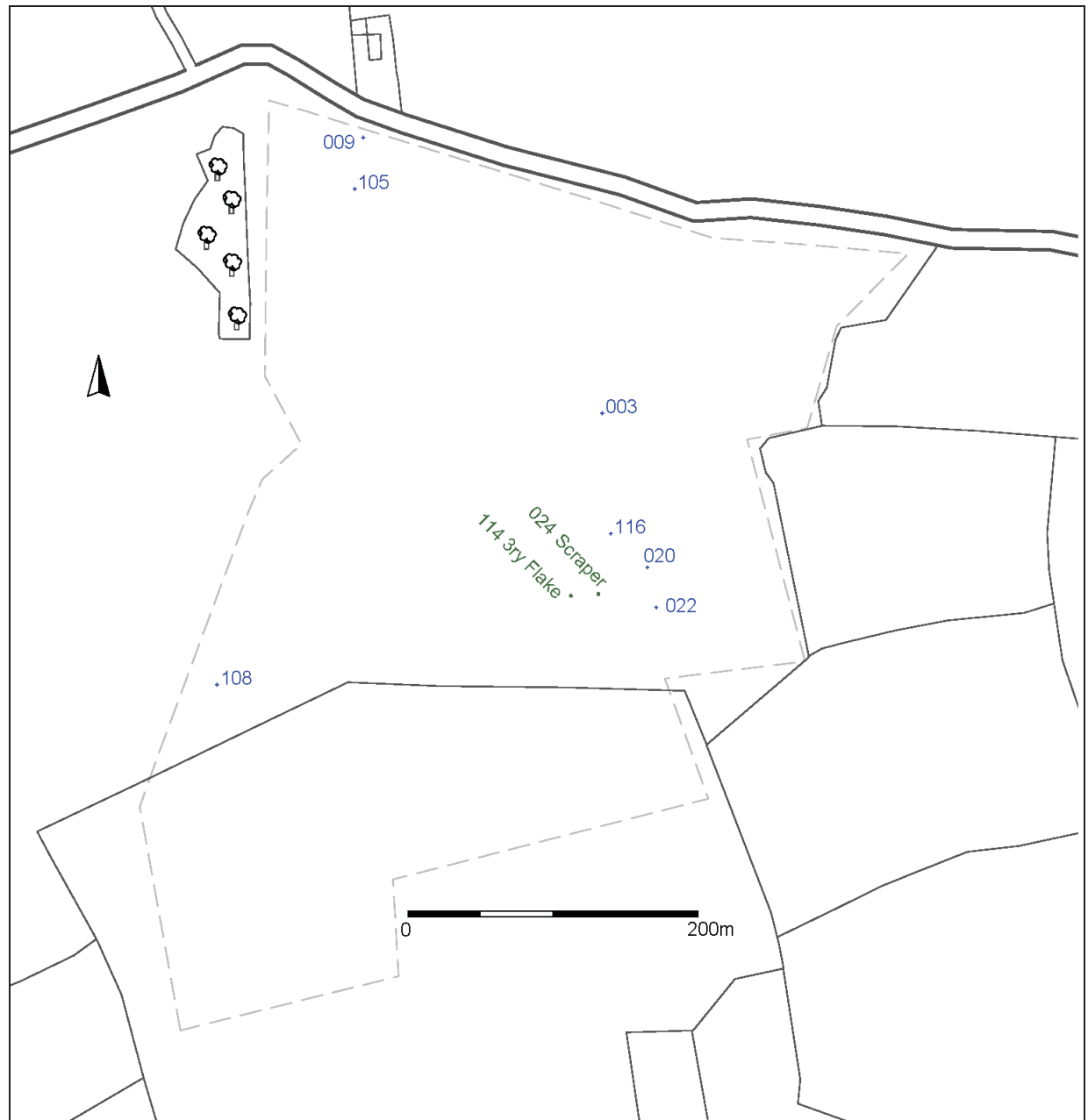


Figure 2 Lithics, plus early medieval to early post-medieval artefacts.
See finds report for detailed identifications.

6.2 Later material

Finds from the later post-medieval to modern period were more widespread (Figure 3). There was considerably more modern material than shown, as anything seen as obviously modern (e.g. 18th century onwards) was not collected. The more widespread scatter of later material presumably indicates that the area had been brought into arable cultivation in the post-medieval period.

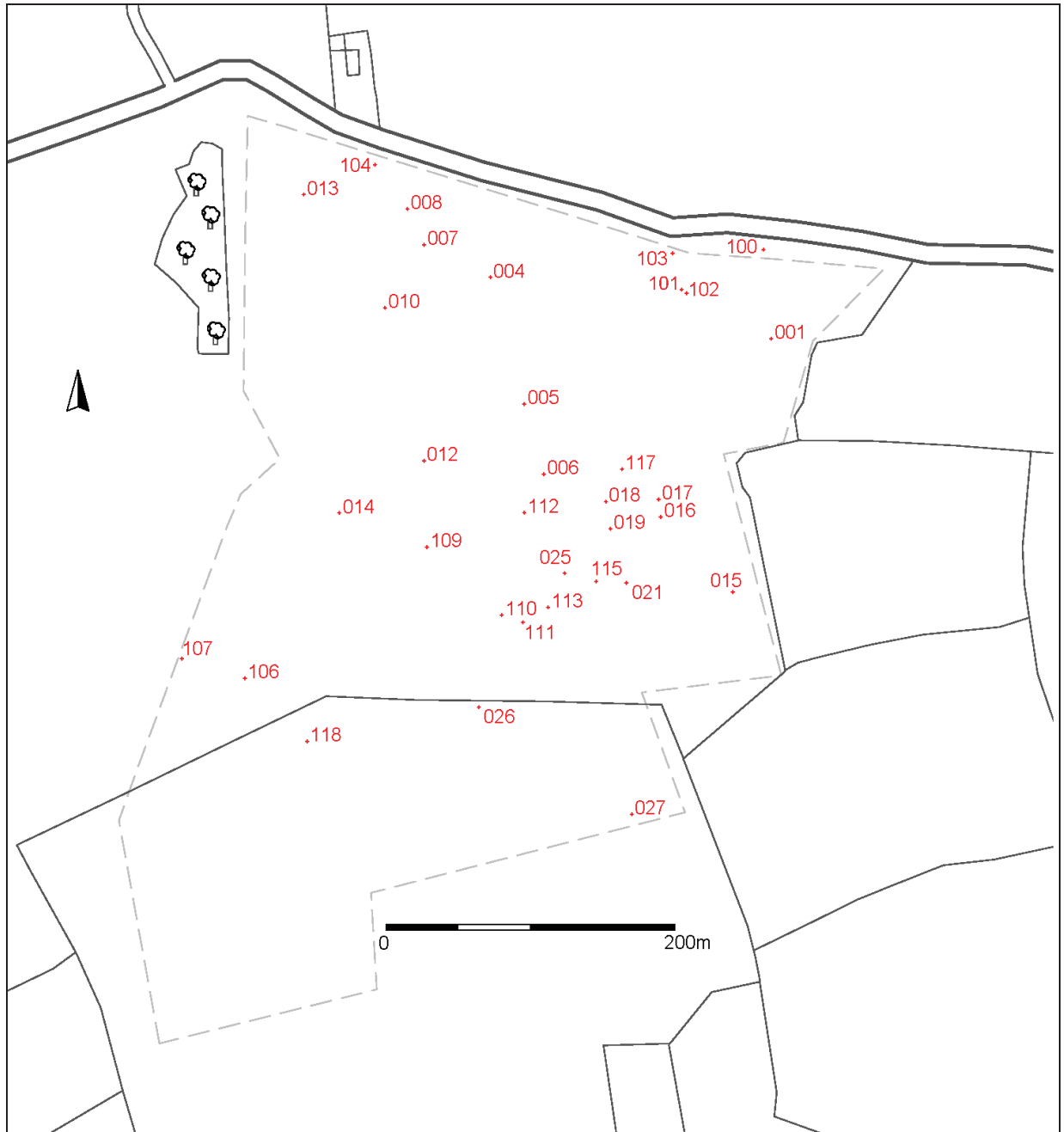


Figure 3 Post-medieval and modern artefacts
See finds report for detailed identifications

7. Archive

The archive consists of the finds, and a *pro-forma* fieldwalking survey diary sheet. It will be archived with Leicestershire County Council under accession code X.A30.2010 in due course.

The report is listed on the Online Access to the Index of Archaeological Investigations (OASIS) held by the Archaeological Data Service at the University of York.. Available at: <http://oasis.ac.uk/>

ID	OASIS entry summary
Project Name	Land south of Bosworth Road, Kirkby Mallory, Leicestershire
Summary	An archaeological evaluation by fieldwalking was carried out in February 2010 by ULAS for Tarmac Ltd, on land to the south of Bosworth Road, Kirkby Mallory, Leicestershire (SK 443 008 centre) in advance of proposed development. The fieldwalking survey showed an unusually low amount of medieval or earlier material, and only two lithic pieces. The archive will be deposited with LCC under accession code X.A30.2010 in due course.
Project Type	Fieldwalking
Project Manager	Patrick Clay
Project Supervisor	Jon Coward
Previous/Future work	Previous: desk-based assessment (Speed 2009) / Future: uncertain.
Current Land Use (2009)	Agricultural farmland
Development Type	Quarry extension
Reason for Investigation	PPG16
Position in the Planning Process	Pre-planning
Site Co ordinates	SK 443 008
Start/end dates of field work	21/01/2010 – 22/01/2010
Archive Recipient	Leicestershire County Council,
Study Area	21ha
Associated project reference codes	Museum accession ID: XA.30.2010 OASIS form ID:

8. Acknowledgements

The survey was carried out by Jon Coward and Mathew Morris. Project management was by Patrick Clay. We would like to thank Martin Clayton of Geoplan Ltd for his help and co-operation.

9. Bibliography

Speed, G., 2009 *An Archaeological Desk-Based Assessment in Advance of an Extension to Cadeby Quarry, on Land to the South of Bosworth Road, Kirkby Mallory, Leicestershire (SK 44377 00922)* ULAS Report 2009-172

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12.03.2010

Appendix 1: The finds

The Pottery and Miscellaneous finds

Deborah Sawday

The pottery 30 sherds, weighing 381 grams was catalogued with reference to the ULAS fabric series (Sawday 1989; Davies and Sawday 1999). The results are shown in Tables 1 – 3 below. The remaining finds comprised two prehistoric worked flints: one a scraper; the other a tertiary flake (L. Cooper, pers. comm.), a post-medieval or modern clay tobacco pipe stem, and ten fragments of post-medieval or modern ceramic building material.

Table 1: The medieval and later pottery by fabric, sherd numbers and weight (grams).

Fabric	Common Name	Sherds	Weight	% of Total sherds nos.
Medieval/Early Post Med				
PM	Potters Marston	1	9	
OS2	Oxidised Sandy ware 2	1	4	
CC1/2	Chilvers Coton 1/2	3	40	
MP	Midland Purple	1	13	
EA1	Earthenware 1	1	23	
Sub Totals		7	89	23.3
Post Med/Modern				
EA1/2, EA2	Earthenware 2	19	234	
EA6	Black ware	1	1	
EA7	Slip ware	1	8	
SW	Stoneware	2	49	
Sub Totals		23	292	76.6
Totals		30	381	99.9

The medieval and early post-medieval pottery accounted for approximately 23% of the site totals by sherd count, and included a range of wares typical of the region, including Potters Marston and the Chilvers Coton fabrics CC1 and CC2. The remaining 76% of the assemblage is made up of post medieval and modern material, whilst the Earthenwares EA6 and EA7 date from the 17th century most of the remaining Earthenware, EA2, which is predominantly a pancheon ware, dates primarily from the later 18th or 19th centuries.

The medieval and early post medieval pottery seems to be typically local in terms of their original place of manufacture. Kilns at Potters Marston, which lay only approximately 6km, or

less than 5 miles to the east, and Chilvers Coton, c.15km (approximately 10 miles) to the south west, were both major sources of pottery in the medieval period. The most likely origins of the later the Midland Purple fabric MP and Earthenwares 1 and 2 are also thought to be to the west of the county, including Chilvers Coton and Ticknall in Derbyshire, the latter lying c.20 km to the north west of the site.

Whilst most of the finds may be associated with the manuring of the fields in medieval and modern times, there is surprisingly little medieval pottery given the relative proximity of the site to two important local medieval pottery production centres. This perhaps suggests that the site was not cultivated and was under pasture during much of the historic period.

Bibliography

Connor, A., and Buckley, R., 1999 *Roman and Medieval Occupation in Causeway Lane, Leicester*, Leicester Archaeology Mon. **5**.

Davies, S., and Sawday, D., 1999 'The Post Roman Pottery and Tile' in A. Connor and R. Buckley, 1999, 165-213.

Sawday, D., 1989 'The post Roman pottery', 28-41 in J.N. Lucas, 'An excavation in the north east quarter of Leicester: Elbow Lane, 1977', *Trans. Leicestershire Archaeol. and Hist. Soc.* **63**, 18-47.

Site/ Parish: New Park Farm, Kirkby Mallory Accession No.: XA30 2010 Document Ref: Kirkby mallory1.docx Material: pot/flint/cbm Site Type: open fields	Submitter: J. Coward Identifier: pot – D. Sawday/ Flint – L. Cooper Date of Identification: 11.3.10 Method of Recovery: field walking Job Number: 105 - 79
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Table 2: Key to Pottery/Ceramic Building Material Fabrics and to Date ranges

Fabric	Ware	Date Code	Period	Date Range
OS2	Oxidised Sandy 2	EM	Early Med	c.1100/1250
PM	Potters Marston	EM	Early Med	c.1100/1250
CC1/2	Chilvers Coton 1/2	MED	Medieval	c.1250-1400
MP	Midland Purple	LM	Late Medieval	c.1375/1400 - 1500/50
EA1	Earthenware 1	EPM/PM	Early Post Med/Post Med	c.1500/50-1750
EA2	Earthenware 2	PM/MOD	Post Med/Mod	c.1500/50-1900+
EA6	Earthenware 6	LPM	Post Med	c.1650-1750
EA7	Slipware	LPM	Post Med	c.1600/1650-c.1750
EA	Earthenware	PM/MOD	Post Med/Mod	c.1500-1900+
SW	Stoneware	MOD	Modern	c.1750-1900+

Table 3: The Finds

Find No.	Fabric	Nos	Grams	Date Range	Comments
All pot/ceramic building material (CBM) unless stated otherwise.					
1	EA	1	15	MOD	CBM
3	PM	1	9	EM	abraded
4	EA	1	36	MOD	CBM
5	EA	1	40	MOD	CBM
6	EA	1	11	PM/MOD	CBM
7	EA2	1	7	PM/MOD	
8	EA2	1	2	PM	Fine, hollow ware

9	CC2	1	20	MED	
10	EA1/2	1	75	EPM/PM	Wide mouthed bowl rim
12	EA2	1	10	PM	
13	EA	1	33	PM/MOD	CBM
14	EA	1	65	MOD	CBM
15	EA1/2	1	5	EPM/PM	
16	EA2	1	8	PM/MOD	
17	EA2	1	4	PM	Fine, hollow ware
18	SW	1	10	PM/MOD	?jug base
19	EA2	1	3	PM	Fine, hollow ware
20	CC1	1	4	MED	Highly fired/reduced grey
21	EA2	1	2	PM/MOD	
22	OS2	1	4	EM	
24	Flint	1		Prehistoric	Scraper
25	EA	1	57	MOD	CBM
26	EA6	1	1	LPM	Fine ware cup/bowl rim – atypical fabric
27	EA7	1	8	LPM	Feathered slip ware
100	EA2	1	4	PM	Fine, hollow ware
101		1	4	PM	Fine, hollow ware, brown glazed
102	EA2	1	9	PM/MOD	
103	EA2	1	14	PM/MOD	
104	EA	1	108	PM/MOD	CBM
105	CC1	1	16	MED	Highly fired/reduced grey/olive glaze
106	EA2	1	20	EPM/PM	Jar/bowl rim
107	EA	1	8	MOD	CBM
108	EA1	1	23	EPM	Purple glaze on interior wall
109	EA1/2	1	7	EPM/PM	
110	EA2	1	36	PM/MOD	
111	China clay	1		PM/MOD	Tobacco pipe stem
112	EA	1	26	PM/MOD	CBM - abraded
113	EA2	1	11	PM/MOD	Bowl/jar rim
114	Flint	1		Prehistoric	Tertiary flake
115	SW	1	39	MOD	Strap handle
116	MP	1	13	LM	Under fired
117	EA2	1	9	PM/MOD	
118	EA2	1	4	PM/MOD	

Appendix 2: The Design Specification

UNIVERSITY OF LEICESTER ARCHAEOLOGICAL SERVICES

Design Specification for archaeological work

*Proposed Cadeby Quarry Extension, on Land to the South of Bosworth Road, Kirkby Mallory, Leicestershire
(SK 443 008)*

Written scheme of investigation for Fieldwalking and Geophysical Surveys

For: Tarmac Ltd

1. Introduction

1.1 This document sets out a Written Scheme of Investigation (WSI) to evaluate potential archaeological deposits at, on Land to the South of Bosworth Road, Kirkby Mallory, Leicestershire for a Proposed Extension to Cadeby Quarry.

1.2 The proposed development area is located at New Park Farm, Kirkby Mallory, Leicestershire, 1200m north-west of Kirkby Mallory, and 2200m south-east of Cadeby, in Peckleton parish, in the Hinckley and Bosworth district of Leicestershire (NGR SK 443 008; Figs 1-2)

1.3 An Archaeological Desk-based Assessment for the area has been prepared (Speed 2009). The Historic Environment Record (HER) for Leicestershire and Rutland records that there are no archaeological sites located in the assessment area itself. However, the site is situated in an area rich in archaeological remains of prehistoric and Roman date.

2. Geology and topography

2.1 The Ordnance Survey Geological Survey of Great Britain, Sheet 155 indicates that the underlying geology is likely to consist of glacial-fluvial Pleistocene sand and gravel, with Mercia Mudstone in the immediate surrounding fields. The application area covers an area of c.21 ha over two fields, the larger field lies to the south of Bosworth Road at c.125m AOD. The remaining area is directly south of this field. It is the northern half of a field that lies to the north of New Park Farm on Stapleton Lane, this area slopes from north to south from c.127 to 118m AOD.

3. Aim of the survey

3.1 The overall aim of the survey is to gather sufficient information to establish the extent, condition, character and date (as far as circumstances permit) of any archaeological features and deposits within the area targeted for evaluation. A fieldwalking survey with follow-up detailed gradiometry will be undertaken.

4. Survey Methodology

4.1 General Methodology

4.1.1 Fieldwalking and geophysical surveys are required over the area in order that an assessment can be made of the presence and extent of any archaeological deposits. It is intended to undertake the fieldwalking first and on the basis of the results select target areas for detailed gradiometry survey.

4.1.2 The geophysical survey will be sub-contracted to Northamptonshire Archaeology, a registered organisation with the IfA. Suitable equipment will be used by a qualified archaeologist specialising in geophysical survey to cover an area as indicated in Figures 1 and 2. The results will then be interpreted and reported in a way that will give as much clarity as possible to the surveyed results enabling an informed decision on the nature of the archaeology. The specifications of the equipment and detailed methodology are outlined in Appendix 1.

4.1.3 The land for evaluation is mostly farmland. Access will be agreed with the landowner prior to access.

4.1.4 All geophysical survey work will adhere to guidance set out in English Heritage Research and Professional Services Guideline No.1: Geophysical survey in archaeological field evaluation (2008) and Geophysical Data in Archaeology: A Guide to Good Practice (Archaeology Data Service).

4.1.5 The surveys will be committed to the standards and codes of conduct set out by the Institute for Archaeologists.

4.2 *Setting out of survey grids*

4.2.1 The survey grids will be set out using a Global Positioning Satellite receiver. Partial grids shall be avoided wherever possible. Survey pegs will be set out in field boundaries and where possible be left in place. All survey grids will be plotted onto the OS digital base map with National Grid co-ordinates to enable the accurate location of trial trenches over anomalies.

4.3 *Specific Methodology: Geophysical survey*

4.3.1 The equipment used for the magnetic survey will be carried out using a dual sensor Grad601-2 Magnetic Gradiometer manufactured by Bartlington Instruments Ltd. The Grad601-2 consists of two high stability fluxgate gradiometers suspended on a single frame. Each sensor has a 1m separation between the sensing elements increasing the sensitivity to small changes in the Earth's magnetic field.

4.3.2 The equipment will be zeroed and balanced at a 'magnetically quiet' location with the use of a non-magnetic tripod. The balancing point will be accurately laid out using a compass. The gradiometer will be switched on for a period of at least 30 minutes prior to balancing and placed outside to allow stabilisation of temperature. Metal objects and compasses will be removed to at least 50m from the balancing position. Balancing with the Grad601-2 is an automated process using electronic adjustments and is only required prior to the start of each survey session (usually 2 per day).

4.4 *Specific Methodology: Fieldwalking*

4.4.1 A programme of fieldwalking will be undertaken over all area. The fieldwalking is to take place after the fields are ploughed, rolled and weathered for at least 3 weeks.

4.4.2 Pre-modern artefacts will be collected and bagged along 20m transects. The location of the finds will be plotted using hand held GPS loggers.

4.5 *Sampling Interval*

4.5.1 The fieldwalking survey will be carried out on a 20m grid with readings for the MS being taken at the node points.

4.5.2 Magnetometry Readings will be taken at 0.25m centres along traverses 1m apart. This equates to 3600 sampling points in a full 30x30m grid.

4.6 *Depth of scan and resolution*

4.6.1 Magnetometry - The Grad601-2 has a typical depth penetration of 0.5 – 1.0m. This would be increased in the presence of buried, strongly magnetic objects. The collection of data at 0.5m centres provides an appropriate methodology for balancing cost and time with resolution.

4.7 *Data Capture*

4.7.1 Fieldwalking readings will be logged manually on site, and then transferred to the office where they will be entered into a computer and colour surfer plots produced.

4.7.2 Magnetometry Readings will be logged consecutively into the data logger which in turn is daily downloaded into a portable computer on site. At the end of each job, data will be transferred to the office for processing and presentation. An initial assessment of the data quality will be carried out by the survey team. After each survey session a site record sheet will be completed or updated as appropriate.

4.8 *Processing of data*

4.8.1 Magnetometry Processing is performed using specialist software (e.g. Geoplot 3). Details of the software used and processing techniques should be provided by the Geophysical Survey Contractor.

4.8.2 Pre-modern artefacts will be collected from the fieldwalking surveys. These will be washed marked and identified.

4.8.3 All survey results will be plotted at an appropriate scale on an OS digital base map.

4.9 Timetabling

4.9.1 It is proposed that the surveys will be undertaken in January 2010

5. Liaison/monitoring

5.1 Unlimited access to monitor the project will be available to the Leicestershire County Council, Planning Archaeologists, the client and his representatives subject to the health and safety requirements of the site.

5.2 Internal monitoring procedures will be undertaken including visits to the site by the project manager. These will ensure that project targets are met and professional standards are maintained.

6. Report

6.1 A reports on the fieldwork will be provided following analysis of the surveys. It will be distributed to
The client
Leicestershire County Council, Planning Archaeologist
Leicestershire County Council, (HER)

6.2 The reports will contain sufficient detail to enable the results of the evaluation to be interpreted without recourse to the site archive.

6.3 The reports will include the following

Non-technical summary

Introduction (Site location and description, archaeological background, nature and location of the survey)

Method statement detailing methods and equipment used, results and conclusions.

Summary of results and significance

Appendices of specialist reports

6.4 The reports will contain an accurate site plan showing the surveyed areas, raw data and interpretation of the principal features revealed. The data will be presented in map form on the OS digital map base, on A3 sheets at an appropriate scale; usually no scale smaller than 1:1000 is used. Maps will be constructed using AutoCAD and contain north arrows, scale-bar, scale, title, figure number, key and date. Adjacent areas must also be included on the plan to allow the site to be accurately located as well as the grid co-ordinates used.

7 Health and Safety

7.1 ULAS is covered by and adheres to the University of Leicester Statement of Safety Policy and uses the ULAS Health and Safety Manual (revised 2007) with appropriate risks assessments for all archaeological work. A draft Health and Safety statement for this project is in the Appendix. The relevant Health and Safety Executive guidelines will be adhered to as appropriate.

8 Insurance

8.1 All ULAS work is covered by the University of Leicester's Public Liability and Professional Indemnity Insurance. The Public Liability Insurance is with St Pauls Travellers Policy No. UCPOP3651237 while the Professional Indemnity Insurance is with Lloyds Underwriters (50%) and Brit Insurances (50%) Policy No. FUNK3605.

9. Bibliography.

- ADS *Geophysical Data in Archaeology: A Guide to Good Practice* (Archaeology Data Service)
- EH, 2008 *Geophysical survey in archaeological field evaluation* (English Heritage 2008)
- Speed, G., 2009 *An Archaeological Desk-Based Assessment in Advance of an Extension to Cadeby Quarry, on Land to the South of Bosworth Road, Kirkby Mallory, Leicestershire (SK 44377 00922)* ULAS Report 2009-172

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