UNIVERSITY OF LEICESTER
Archaeological Services

An Archaeological Evaluation for a permitted extension to Mountsorrel Quarry, north of Kinchley Lane, Mountsorrel, Leicestershire SK 56439 14322

Stephen Baker

ULAS Report No 2016-005

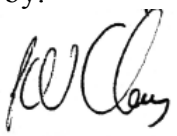
An Archaeological Evaluation for a permitted extension to Mountsorrel Quarry north of Kinchley Lane, Mountsorrel, Leicestershire

(SK 56439 14322)

Stephen Baker

For: Tarmac Trading Ltd

Approved by:

Signed 

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An Archaeological Evaluation on Land off Kinchley Lane, Mountsorrel Quarry, Mountsorrel, Rothley, Leicestershire

Summary

University of Leicester Archaeological Services (ULAS) carried out an archaeological evaluation by trial trenching on land off Kinchley Lane, Mountsorrel Quarry, Mountsorrel, Rothely, Leicestershire, on 6th – 12th January 2016. The work was undertaken as part of an archaeological impact assessment in advance of a permitted quarry extension for soil storage/landform creation.

Following a desk-based assessment and geophysical survey, the evaluation involved the excavation of 15 trenches to sample the permitted development area. Evidence of undated agricultural field drains and possible evidence for alluvium deposits were identified but no remains or deposits of archaeological significance were possible.

The archive will be held by Leicestershire County Council Museum Service under accession number XA4.2016.

1. Introduction

An archaeological evaluation was carried out by ULAS for Tarmac Trading Ltd (SK 6174 3612) following the granting of permission for a quarry extension programme for soil storage (Planning application no. 2014/CM011/LCC)

The fieldwork is intended to provide preliminary indications of character and extent of any heritage assets in order that the potential impact of the extension on such remains may be assessed by the Planning Authority.

The definition of archaeological field evaluation, taken from the Chartered Institute for Archaeologists *Standards and Guidance for Archaeological Field Evaluation* (2014) is a limited programme of non-intrusive and/ or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land, inter-tidal zone or underwater. If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, and enables an assessment of their worth in a local, regional, national or international context as appropriate.

2. Site Description, Topography and Geology (Figure 1) (Figure 2)

The 7.2 ha permitted area lies north of Kinchley Lane in Mountsorrel Parish, Charnwood Borough, to the north of the city of Leicester and south-west of Mountsorrel Quarry. From 78m OD to the north-east, the site drops down to the south-west which is now occupied by Swithland Reservoir (Lisboa 2015, 5). The varying sized fields comprising the site are all currently in use as pasture.

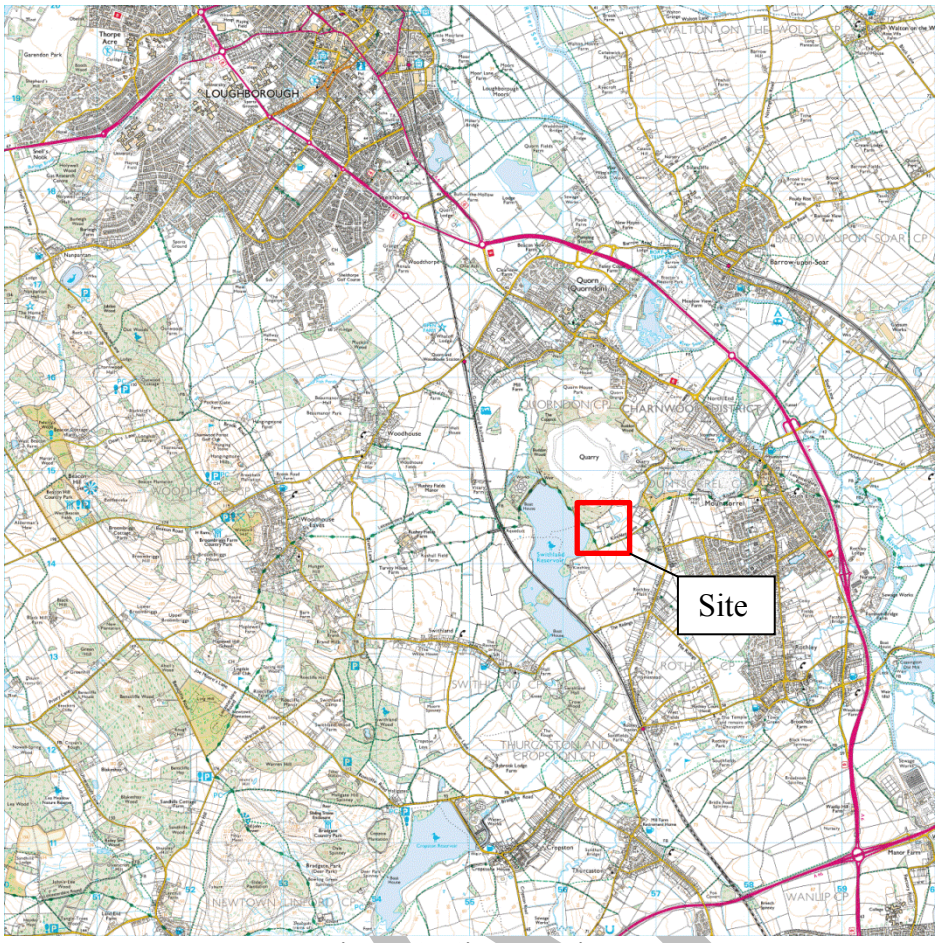

Figure 1: Site Location

Planning permission has been granted for the development of two parcels of land south-west of the existing quarry at Mountsorrel. The planning condition stipulates that a sequential programme of archaeological investigation is required for both areas of land which will follow the methods work proposed in the Written Scheme of Investigation (WSI) for Site 2 (Lisboa 2015). The extension work involves the creation, from clay deposits, of a new landform following removal of all superficial soils across the site. Leicestershire County Council, as archaeological advisors to the planning authority have requested a scheme of archaeological work, including exploratory trial trenches, to assess the location, extent, significance and character of any buried archaeological remains.

The site is located upon variable Gunthorpe member mudstones and boulder clay beneath superficial deposits of topsoil and subsoils.

Figure 2: Permitted Extension Area

3. Archaeological and Historical Background

An archaeological desk-based assessment has been prepared for the site (Lisboa 2012). The site is located close to a number of archaeological sites recorded on the Historic Environment Record (HER) ranging in date from the Mesolithic to the medieval period. A number of fieldwalking activities have resulted in finds from the vicinity. A flint scatter spreading over four fields was recorded via fieldwalking in 1988/9. Sixteen items could be dated to the Mesolithic/Early Neolithic period, including four tools and two cores (**MLE907**). Almost 300 flints of the later Neolithic/Bronze Age were also recovered as well as 19 sherds of handmade red pottery and a sherd of handmade brown pottery dating from the Bronze Age (**MLE908**) (Lisboa 2012, 11). Mesolithic and early Neolithic blades (**MLE 7416**) and large Neolithic scrapers were found suggesting (**MLE 843**) were identified as flint scatters to the north of the Kinchley Lane Site. In the same area a large are of Bronze Age and Iron Age pottery sherds were also identified (**MLE 842**) in a pattern matching that of the surface scatter site south of Kinchley Lane. The site was excavated in the early 1970's in advance of quarrying but no features were found (*TLAHS* 1972). Fieldwalking and subsequent excavations along Wood Lane, running towards the village of Quorn, revealed evidence for prehistoric activity (**MLE708**) and other isolated finds have been recovered from around the junction between Swithland Lane and Halstead Road, east of the site (**MLE 9744; MLE8848**).

Prior to quarrying in the 1970's, an Iron Age stone pottery pounder and Roman ceramic finds were recovered as surface finds from Buddon Wood to the immediate north (**MLE842; MLE843; MLE7416**). Subsequent excavation did not find structures suggestive of occupation (TLAHS 1972).

The site is also near to the medieval village cores of both Mountsorrel and Rothley, and presumably subject to open agriculture and associated manuring episodes from that period and the presence of related pottery in the topsoils/subsoils (Higgins 2013).

4. Aims and Objectives

The main objectives of the evaluation were to:

- to target and investigate anomalies identified through geomagnetometry survey
- identify the presence/absence of any archaeological deposits.
- establish the character, extent and date range for any archaeological deposits to be affected by the permitted quarry extension.
- produce an archive and report of any results.

Within the stated project objectives, the principal aim of the evaluation was to establish the nature, extent, date, depth, significance and state of preservation of archaeological deposits on the site in order to determine the potential impact upon them from the permitted extension.

5. Magnetometry Survey

A geophysical survey of the whole site was undertaken in 2015, the resulting linear and discrete anomalies cautiously interpreted as representing possible archaeological ditches, pits and cultivation features, along with field drainage systems. It was concluded that the overall plan and distribution of the anomalies suggested that at least some were of natural or modern origin.

6. Methodology (Figure 3)

A total of 15 trenches, each 40m x 1.8m, was excavated across the permitted extension area. These had been laid out by Tarmac Ltd using GPS. Nine of these were located to target geophysical anomalies identified in the magnetometry survey and the remaining six positioned to achieve a representative sample across the site. Trench 14, retaining approximately its original alignment, was relocated 17m to the west and further up the hill, after consultation with the Leicestershire County Council Planning Archaeologist, to where the likelihood of recovering flint deposits in the superficial deposits and any associated archaeology was deemed greater. The three contingency trenches were not required.

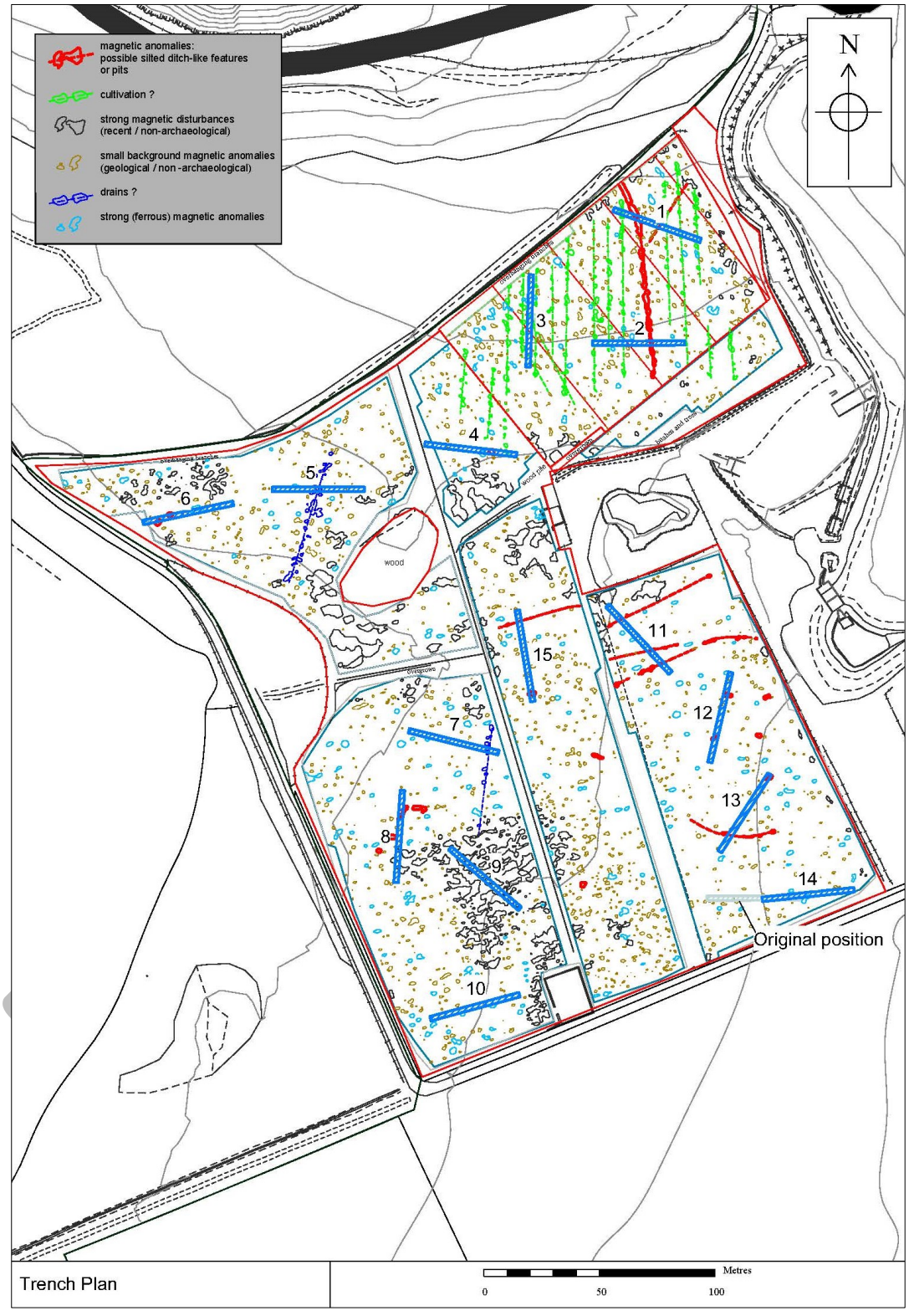

Figure 3: Trench locations

Topsoil and overburden were removed carefully in level spits, under continuous archaeological supervision using a mechanical excavator using a toothless bucket. Trenches were excavated down to the top of archaeological deposits or natural undisturbed ground, whichever was reached first. All excavation by machine and hand was undertaken with a view to avoid damage to archaeological deposits or features which appeared worthy of preservation in situ, or more detailed investigation than for the purposes of evaluation.

Trenches were examined by hand cleaning and any archaeological deposits were recorded using standard procedures as per the ULAS recording manual and outlined in the agreed Written Scheme of Investigation (Lisboa 2015). Spoil heaps were investigated using a metal detector.

Figure 4: Machining Trench 4

Constraints

There were no major constraints to the fieldwork although inclement weather conditions lead to the waterlogging of lower lying areas and the partial flooding of trenches located there.

7. Results

All trenches were excavated by removal of consistently dark-brown sandy-clay-loam topsoil and, where present, mid-brown sandy-clay subsoil, above a variable substratum. This was predominantly dark red brown clay with occasionally light brown sandy-clay patches or, in the north-east area and Trench 14 in the south-east of site, orange mottled light yellow/brown sandy-clay.

Trenches 1-2, 4, 6, 8, 11-13, 15

These trenches were targeted to investigate the anomalies identified through the geophysical survey and interpreted as being of potential archaeological origin. All of them were confirmed to be of natural origin or related to field drainage.

The strong magnetic anomaly in the north-east of the site, crossing trenches 1 and 2, was revealed to be a possible drain or culvert, constructed of brick with a stone and mortar foundation (Figure 5) and orientated parallel to linear anomalies interpreted as cultivation.

The culvert was not observed in Trench 2, in the same form, although a stone field drain in the predicted position and similar orientation was present. The linear anomalies in the other trenches (11-13, 15) were all attributable to clay and stone field drains, as were the discrete anomalies interpreted as possible pits in Trench 12.

Figure 5: Drain/Wall Trench 1

Discrete anomalies described by geophysics in Trench 6 may have been attributable to very large boulder of granite within the subsoil/substratum interface and other variations within the trench may represent the remains of furrows or cultivation. The remaining discrete anomalies identified in Trench 8, in the southwest of site and those in Trench 4/13 were confirmed to be geological in nature.

Trenches 5 and 8, in slight depressions in the landscape, revealed evidence of shallow (≤0.10m) brown grey alluvium deposits overlying the natural substratum (Figure 6)

None of the targeted trenches revealed any evidence for archaeological deposits.

Figure 6: Sondage through alluvium, Trench 5, looking east

Trenches 3, 5, 7, 9-10, 14

These trenches were located to provide a representative sample of the geophysical 'blank' areas of the site or where the interpretation had been towards natural geological anomalies. None of them contained any deposits of archaeological significance.

Trench 5 contained a superficial light grey sandy-clay alluvium deposit, with angular granite and natural flint fragments, 0.10m deep and overlying the natural red/brown clay substratum. This was cut by a land drain towards the east end of the trench.

Trench 9 contained a north-south land drain and some sporadic modern disturbance in the form of rubble spread, confirming the geophysical recent/non archaeological interpretation.

Trench 14, subject to re-location, contained two land drains parallel to the existing field boundaries but was absent of any deposits of archaeological interest, as were the topsoil/subsoil.

TRENCH	ORIENTATION	LENGTH AND WIDTH (metres)	TOPSOIL THICKNESS (metres)	SUBSOIL THICKNESS (metres)	DESCRIPTION	TRENCH DEPTH (MIN-MAX metres)
1	NW/SE	40 x 1.60	0.15 – 0.30	0.10 - 0.20	Geophysical linears, drain, no archaeological deposits	0.26 – 0.68
2	E/W	40 x 1.60	0.13 – 0.30	0.05 – 0.10	Land drain, no archaeological deposits	0.30 – 0.43
3	N/S	40 x 1.60	0.10 – 0.20	0.10 – 0.14	No archaeological deposits	0.20 – 0.38
4	E/W	40 x 1.60	0.12 – 0.23	0.05 – 0.15	Geophysical anomaly, no archaeological deposits	0.24 – 0.50
5	E/W	40 x 1.60	0.20 – 0.32	N/A	Geophysical linear, drain, no archaeological	0.30 – 0.50

					deposits	
6	E/W	40 x 1.60	0.16 – 0.30	0.10 – 0.12	Geophysical discrete anomalies, no archaeological deposits	0.28 – 0.53
7	SE/NW	40 x 1.60	0.20 – 0.30	0.05 – 0.15	Drain, no archaeological deposits	0.34 – 0.60
8	N/S	40 x 1.60	0.08 – 0.30	N/A	Geophysical anomalies, no archaeological deposits	0.20 – 0.40
9	NW/SE	40 x 1.60	0.15 – 0.28	0.10 – 0.15	Geological disturbance, no archaeological deposits	0.30 – 0.56
10	NE/SW	40 x 1.60	0.13 – 0.23	N/A	No archaeological deposits	0.26 – 0.44
11	NW/SE	40 x 1.60	0.20 – 0.27	0.08 – 0.12	Geophysical linears, modern post hole, no archaeological deposits	0.28 – 0.40
12	N/S	40 x 1.60	0.19 – 0.32	0.05 – 0.1	Geophysical discrete anomalies, no archaeological deposits	0.30 – 0.46
13	NE/SW	40 x 1.60	0.20 – 0.26	0.08 – 0.16	Geophysical linears and discrete anomalies, no archaeological deposits	0.29 – 0.40
14	E/W	40 x 1.60	0.19 – 0.25	0.08 – 0.1	No archaeological deposits, trench relocated	0.30 – 0.40
15	N/S	40 x 1.60	0.16 – 0.20	0.10 – 0.15	Geophysical anomaly, no archaeological deposits	0.32 – 0.49

7. Conclusion

Although evidence for field drainage systems was observed in the many of the evaluation trenches excavated, none revealed any deposits or features of archaeological interest. In two of the trenches possible alluvium deposits were identified, although these were very shallow and tentative evidence for past watercourses. There was also an absence of archaeological finds, particularly worked flints, in the topsoil/subsoil and the consistent observation of modern pottery and brick fragments may point to more recent disturbance and widespread agricultural practices.

8. Archive

The completed archive will be deposited with Leicestershire County Council under the accession no. XA4.2016 and contains:

- 15 trench recording sheets
- 1 photographic recording sheet
- CD containing digital photographs and report
- 2x Thumbnail print of digital photographs

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, under ID: universi1-144988. Available at: http://oasis.ac.uk/

ID	OASIS entry summary
Project Name	An Archaeological Evaluation on Land off Kinchley Lane, Mountsorrel Quarry, Mountsorrel, Leicestershire
Summary	University of Leicester Archaeological Services (ULAS) carried out an archaeological evaluation by trial trenching on land off Kinchley Lane, Mountsorrel Quarry, Mountsorrel, Leicestershire, on 6th – 12th June 2016. The work was undertaken as part of an archaeological impact assessment in advance of a permitted quarry extension for soil storage/landform creation. The evaluation involved the excavation of 15 trenches to sample the permitted development area. Evidence of undated agricultural field drains and possible evidence for alluvium deposits were identified but no remains or deposits of archaeological interest. The archive will be held by Leicestershire County Council Museum Service under accession number XA4-2016.
Project Type	Evaluation
Project Manager	Patrick Clay
Project Supervisor	Stephen Baker
Previous/Future work	Previous: Fieldwalking, magnetometry survey
Current Land Use	Pasture
Development Type	Quarry extension/soil storage
Reason for Investigation	NPPF, Section 12
Position in the Planning Process	Planning condition 2014/CM011/LCC
Site Co ordinates	SK 56439 14322
Height OD	78m OD
Start/end dates of field work	6th – 12th January 2016
Archive Recipient	Leicestershire County Council
Study Area	c.7.2 ha
Associated project reference codes	Museum accession ID: ULAS15.722 OASIS form ID: universi1-

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10. Acknowledgements

The fieldwork was undertaken on behalf of Tarmac Trading Ltd and was carried out by Stephen Baker and Nathan Flavell. Patrick Clay managed the project. The archaeological work was monitored by Dr Isabel Lisboa on behalf of Tarmac Trading Ltd and Richard Clark on behalf of the Leicestershire County Council Minerals planning authority.

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15/01/2016

Appendix – Trench photographs

Trench 1

Trench 2

Trench 3

Trench 4

Trench 5

Trench 6

Trench 7

Trench 8

Trench 9

Trench 10

Trench 11

Trench 12

Trench 13

Trench 14

Trench 15

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