University of Leicester
Archaeological Services

Topographic Earthwork Survey on land at Oakham Road, Tilton on the Hill, Leicestershire

NGR: SK 74487 05754

Gavin Speed

ULAS Report No 2014-072

A Topographic Earthwork Survey at Oakham Road, Tilton on the Hill, Leicestershire.

NGR: SK 74487 05754

Gavin Speed

For: Mrs Lucy Stewart
Planning Ref: 14/00184/FUL

Approved by:

Signed: 

Date: 25th April 2014

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An Archaeological Earthwork Survey on land north of Oakham Road, Tilton on the Hill, Leicestershire.

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Summary

University of Leicester Archaeological Services (ULAS) carried out an archaeological investigation on land to the north of Oakham Road, Tilton on the Hill, Leicestershire (SK 74487 05754). A topographic survey of an area of ridge and furrow earthworks was undertaken to fulfil a condition of planning permission. The survey confirmed that the earthworks recorded in the HER are in a good state of preservation. Two sets of ridge and furrows were surveyed and cover an area of approximately two hectares. The site archive will be held by Leicestershire Museums Service, under accession number XA.59.2014.

1. Introduction

The application area contains known earthworks of ridge and furrow, and a topographic survey of the remains which would be partly destroyed by the development for stables and manege, was required by the Senior Planning Archaeologist at Leicestershire County Council.

This report presents the results of the archaeological earthwork survey that took place on 23rd April 2014. The fieldwork follows the Written Scheme of Investigation, as detailed in Score 2014.

2. Site Description, Topography and Geology

The site is situated on the north side of Oakham Road, Tilton on the Hill, Leicestershire, (Figure 1) and comprises a pasture field with ridge and furrow earthwork remains. The land is currently under pasture. The grass was reasonably short allowing good visibility of the existing earthworks. The British Geological Survey shows the bedrock as Mudstone of the Whitby Mudstone Formation overlain with Glaciofluvial deposits (sand and gravel).

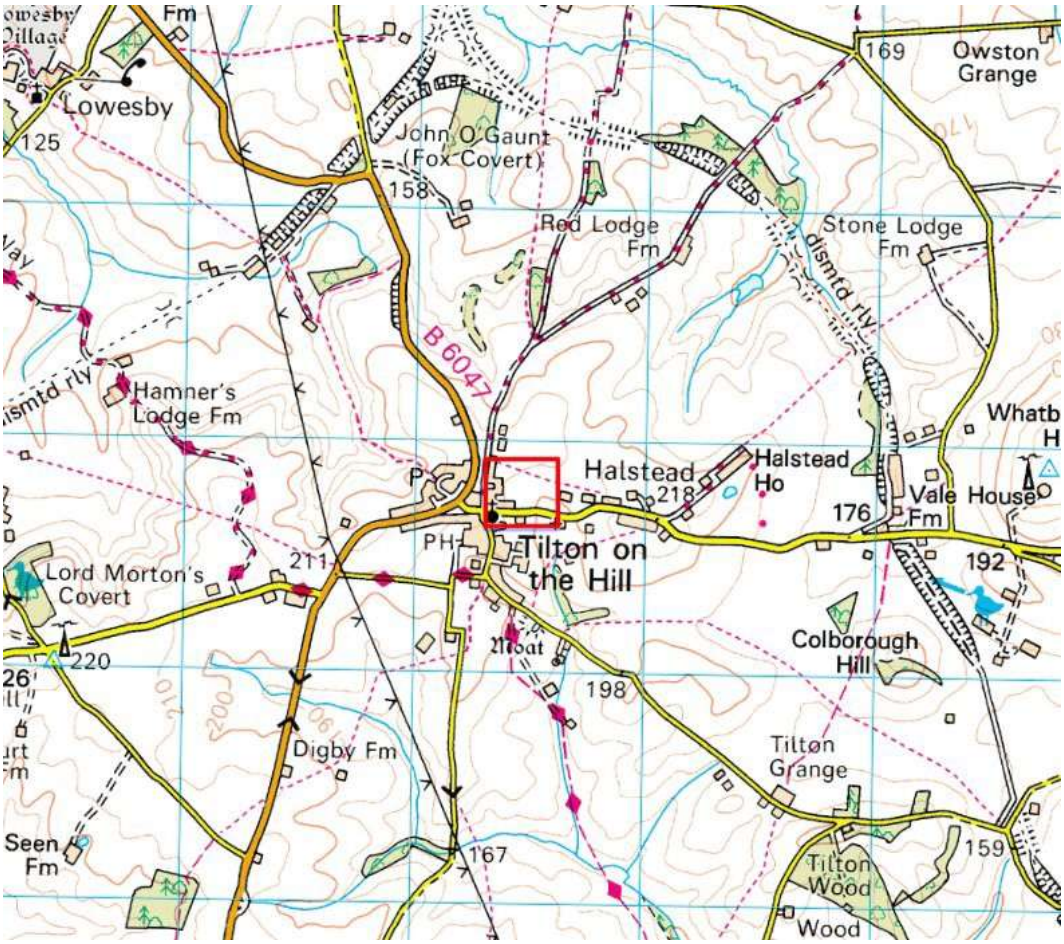

Figure 1: Site location

3. Historical and Archaeological Background

The Leicestershire & Rutland Historic Environment Record indicates that this site contains well-preserved Ridge and Furrow earthworks, which represent the upstanding remains of medieval and post-medieval agricultural cultivation. Ridge and Furrow earthworks are a characteristic feature of the Leicestershire landscape and are a diminishing resource. The Senior Planning Archaeologist, Leicestershire County Council has therefore requested a survey of the ridge and furrow earthworks prior to the levelling of the ground.

4. Aims and Objectives

The overall aim of the survey was to accurately record the visible ridge and furrow that will be destroyed by the development, and the earthworks in the entire field, to place the earthworks in their wider surroundings, and to produce a report showing the results.

5. Methodology

Photographs were taken of the earthworks prior to work being carried out. The earthwork survey was undertaken using a Topcon Hyper V Global Positioning System (GPS). This can provide resolution to an accuracy of 10mm. The changes in level of all the

earthworks and sections across the earthworks were recorded. The ridge and furrows were recorded as a topographical survey using a survey grade Differential Global Positioning System (DGPS) manufactured by Topcon to record appropriate points across the earthworks. The tops and bases of earthwork features were recorded to provide a plan. Spot heights across areas without earthworks or where there are large gaps between points were also recorded. Profiles were recorded across the full length of the area illustrating the vertical and horizontal differences in the ground surface. The location of any profiles will be marked on the plan. The survey is referenced to the Ordnance Survey National Grid (OSGB1936) and Ordnance Datum. The results will be used to produce a topographical plan of the area sufficient to see the extent, height and survival of the earthworks. Point and vector topographic data were edited in ARCGIS and AUTOCAD. A surface model was created for display (Figure 6). The survey was undertaken following guidance from the Royal Commission on the Historical Monuments of England (RCHME) 1999, Recording Archaeological Field Monuments: A Descriptive Specification.

6. Results

The earthwork survey has confirmed that the earthworks recorded in the HER are in a good state of preservation.

Two sets of ridge and furrows were surveyed within the study area and cover an area of two hectares (Figures 2-6). From the recorded profile (Figure 3), the depth between furrow base and ridge top was 0.7-1m. In the eastern half of the field the ridge and furrows were aligned north-south, and consisted of 17 ridges and furrows. They were regularly spaced at intervals between 5.3 and 5.8m (top of ridge to ridge). The system is mostly straight, with a slight curve at the south-west corner.

In the western half of the field the ridge and furrows were aligned east-west, and consisted of 16 ridges and furrows. In the north part of the western set of ridge and furrows they were regularly spaced at intervals between 6.5m to 7m (top of ridge to ridge). The angle of them changed slightly further south, and the intervals were much smaller, being between 4.5m to 6m (top of ridge to ridge).

In the central area, separating the two sets of ridge and furrow earthworks, was a wider ditch and a broadly flat and level area within which were two NW-SE ditches (see profile B). This area was the lowest point in the field and appears to have been unploughed and utilised as a water drainage point, these ditches drained water off the field to the south-east corner.

The earthworks on the far west-side have been truncated by housing beyond the site boundary to the west (Halstead Rise). There is some disturbance in the south-west corner, around former farm buildings. An area of the field (21m by 15m) had been stripped of topsoil prior to the earthwork survey, and so the survey was not possible in this area. However, few earthworks were visible in the surrounding area, and it is likely none were removed during the groundworks.

Figure 2: Plan showing ridge and furrow earthworks (solid line=top of slope, dashed =base of slope), base map provided by client

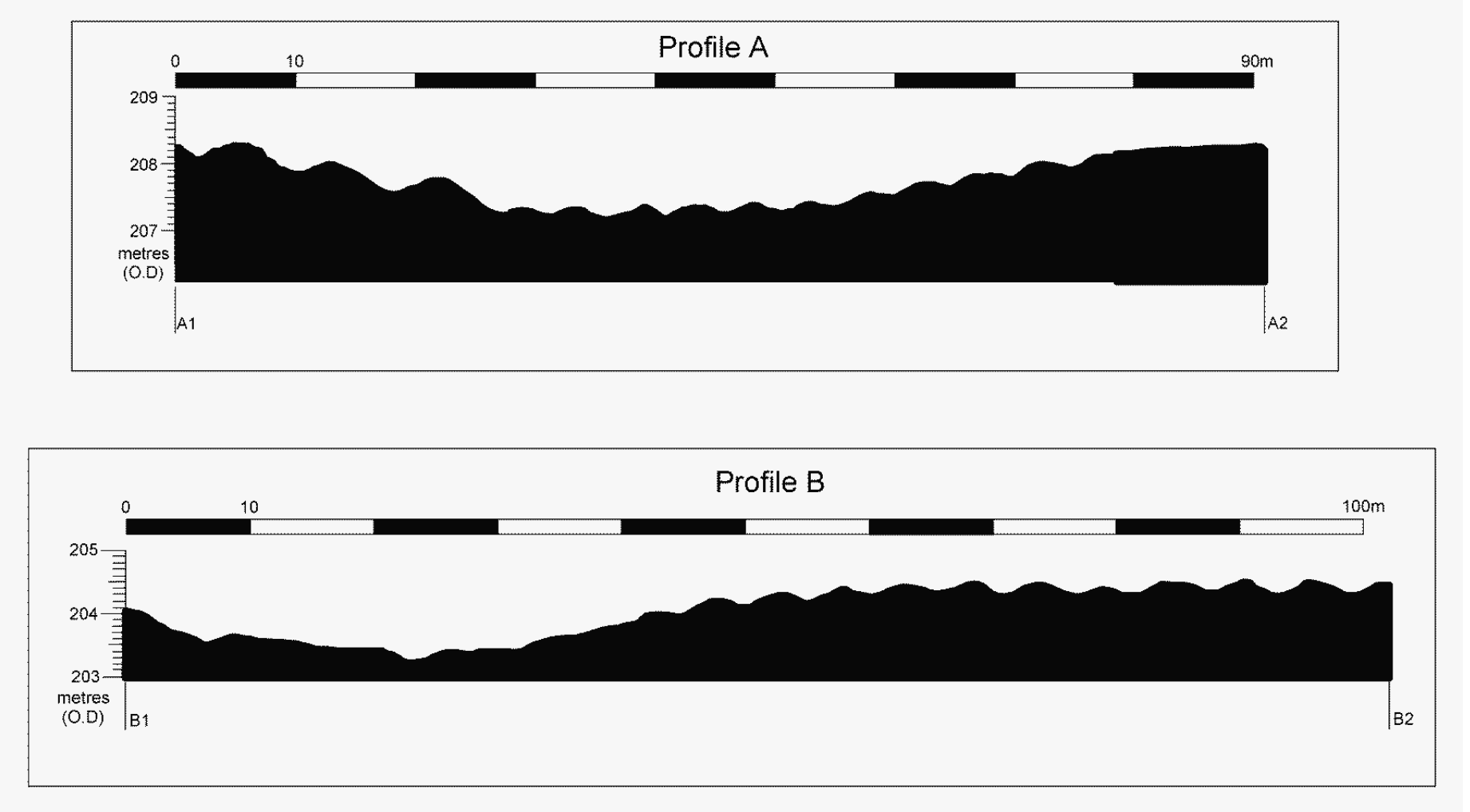

Figure 3: profiles across the ridge and furrow earthworks

Figure 4: view of ridge and furrow earthworks, south-west corner looking north-east

Figure 5: view of ridge and furrow earthworks, north-east corner looking south-west

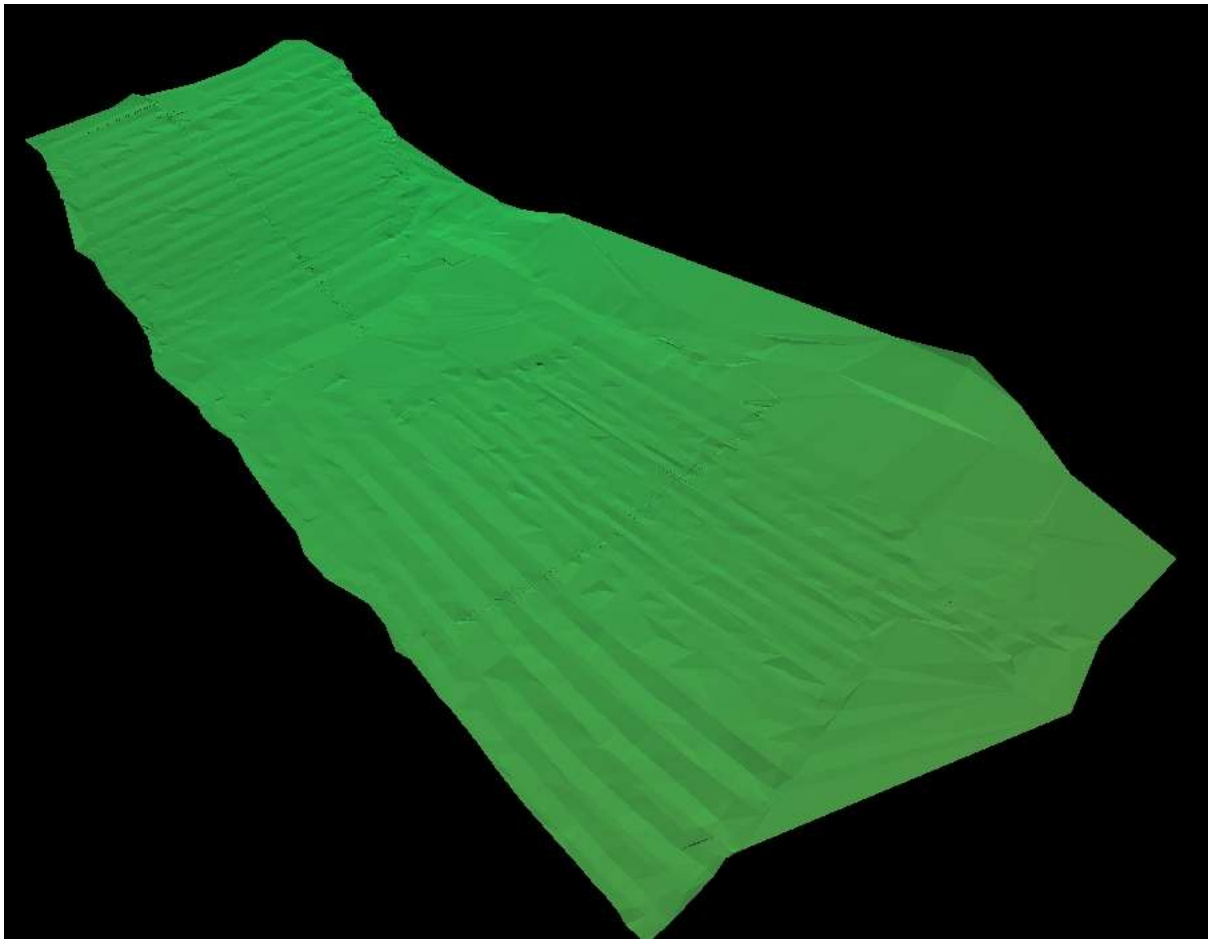

Figure 6: digital terrain model, looking south-west (angled to show earthworks)

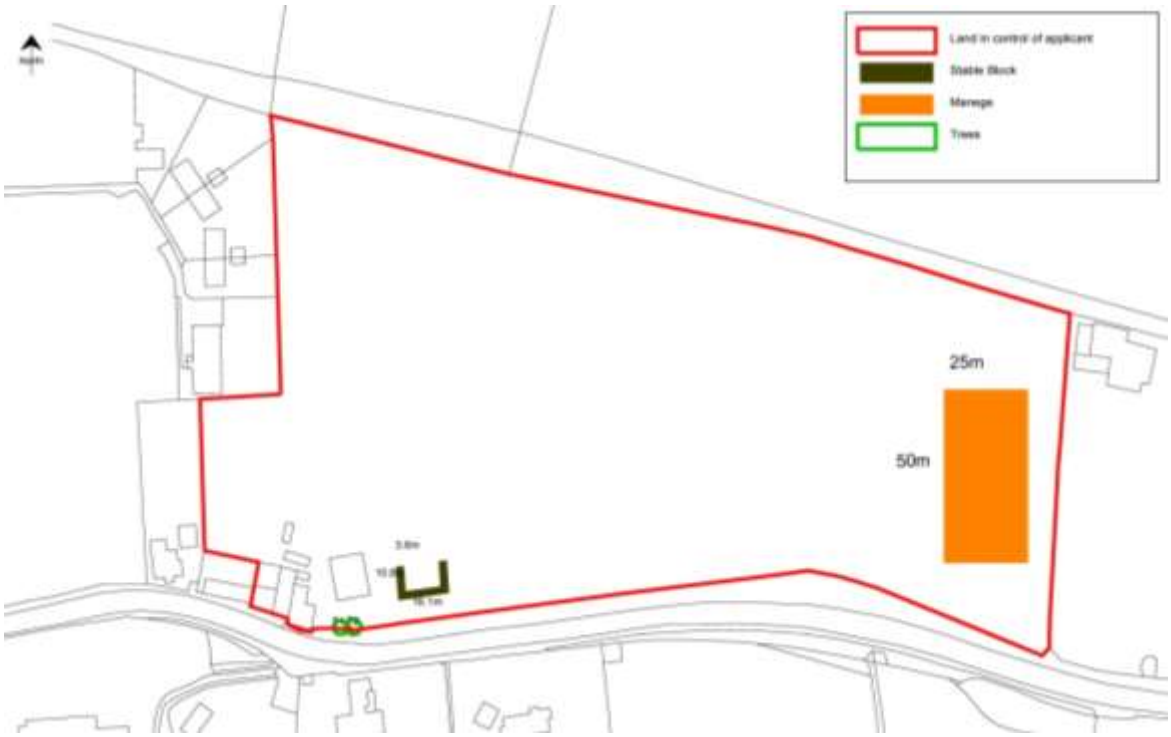

Figure 7: Plan of proposed development (provided by client)

7. Discussion

Ridge and Furrow earthworks represent the upstanding remains of medieval and post-medieval agricultural cultivation. They were formed within the cultivation strips of medieval Open Fields, and several studies have been made (Hall 1982, 1998, Astill 1988, Anderton and Went 2002). The earliest ridge and furrow cultivation dates to the 10th century (Anderton and Went 2002, 52). Medieval villages or townships within the Open Field system were surrounded by two or three substantial fields of cultivated land which could be several kilometres across. The ridges, interpreted as intentionally created free-draining seed beds, with the furrows acting as open drains (Hall 1998), were created by ploughing in a clockwise spiral with a plough constantly throwing soil to the right, over many years. Later medieval ploughs were reversible and threw soil in both directions. The vertical difference between furrow and ridge may have been up to 1m in height (Hall 1982, 6) when at their maximum. The fields of a system were usually cultivated on a three year rotation comprising cereals, legumes, and a fallow year. In the fallow year, the ridges were slightly lowered by ploughing in an anticlockwise direction, to prevent infertile subsoil being ploughed up from the furrows the following year (Hall 1998, 1).

Ridge and furrow is most common in the Midlands, and these are viewed as "nationally significant heritage assets" (Catchpole and Priest 2012, 7). In a recent wide study a significant amount of ridge and furrow earthworks were shown to have been lost or badly damaged in recent years (*ibid*, 7), and so recording their form in detail prior to redevelopment or removal of the earthworks is of vital importance.

The ridge and furrow earthworks recorded on land north of Oakham Road, Tilton on the Hill, Leicestershire are a partly eroded (but still relatively clear) example of medieval and post medieval strip cultivation. The width of the recorded system on this site ranged from 5.3 to 7m, which is around the average width of medieval ridge and furrow (Hall 1982, 5). The length of the system is unclear as the field originally extended further west – prior to the construction of the housing at Halstead Rise.

9. Conclusion

The remains of surviving earthwork ridge and furrow on land north of Oakham Road, Tilton on the Hill, Leicestershire have been recorded by GPS Survey.

10. Archive

The site archive will be deposited with Leicestershire Museums Service, under accession number XA.59.2014.

The archive contains:

- CD containing digital photographs and report
- Survey data
- Unbound copy of this report
- 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. Available at: http://oasis.ac.uk/

ID	OASIS entry summary
Project Name	Land to the north of Oakham Road, Tilton on the Hill, Leicestershire
Summary	The survey confirmed that the earthworks recorded in the HER are in a good state of preservation. Two sets of ridge and furrows were surveyed and cover an area of two hectares.
Project Type	Earthwork survey
Project Manager	Vicki Score
Project Supervisor	Gavin Speed
Previous/Future work	Previous: none / Future: no
Current Land Use	Field
Development Type	Stables and manege
Reason for Investigation	NPPF paragraph 141
Position in the Planning Process	Condition
Site Coordinates	SK 74487 05754
Start/end dates of field work	23/04/2014
Archive Recipient	Leicestershire Museums Service
Study Area	2ha
Associated project reference codes	Project ID: XA.59.2014

11. Publication

A summary of the work will be submitted for publication in the local archaeological journal *Transactions of the Leicestershire Archaeological and Historical Society* in due course. The report has been added to the Archaeology Data Service's (ADS) Online Access to the Index of Archaeological Investigations (OASIS) database held by the University of York.

12. Bibliography

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13. Acknowledgements

The earthwork survey was undertaken out by Gavin Speed. Vicki Score managed the project. Teresa Hawtin (Senior Planning Archaeologist of Leicestershire County Council) monitored the work on behalf of the planning authority.

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25/04/2014

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