



UNIVERSITY OF
LEICESTER

Archaeological Services

**An Archaeological Evaluation
On land off Grantham Road,
Bottesford,
Leicestershire**

NGR: SK 8169 3867

Andrew Hyam



ULAS Report No. 2018-142
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A R Hyam

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Summary

An archaeological field evaluation was undertaken on land off Grantham Road, Bottesford, Leicestershire between the 6th and the 13th of August 2018 by University of Leicester Archaeological Services (ULAS). Planning permission is being sought for a residential development on the land. There are a number of known archaeological sites within the vicinity of the development site and a geophysical survey produced strong results which it was suggested could relate to palaeochannels and waterlogged palaeoenvironmental deposits. Therefore the Leicestershire County Council Senior Planning Archaeologist, as advisor to the local planning authority, requested that a staged programme of archaeological investigation take place to identify the nature and date of any archaeological or palaeoenvironmental remains in order to identify the impact on the archaeological resource and to formulate a mitigation strategy if appropriate.

Eight 50m long trenches were excavated across the site. The geophysical anomalies were identified as being geological rather than archaeological and no evidence was identified for features with significant environmental potential.

No archaeological features or deposits were found although a small amount of Roman and medieval pottery was recovered from the topsoil. This is probably related to manuring activity originating from nearby farmsteads.

The report will be archived under accession number X.A81.2018

Introduction

In accordance with National Planning Policy Framework (NPPF) Section 16 *Conserving and Enhancing the Historic Environment* this document forms the report for an archaeological evaluation on land to the south of Grantham Road, Bottesford, Leicestershire, NGR: SK8169 3867. Under planning application 17/01577/OUT proposals have been submitted for the construction of a residential development with associated drainage infrastructure and a public open space. Such work would have an impact upon any buried archaeological remains should any be present. Therefore the Senior Planning Archaeologist at Leicestershire County Council requested that a programme of geophysical survey (Sumo 2018) and archaeological trial trenching be undertaken prior to any construction work taking place. This follows on from an archaeological desk-based assessment (DBA) produced by ULAS in 2018 (Hunt 2018).

Background

The village of Bottesford lies in the Vale of Belvoir in the extreme north-eastern tip of Leicestershire (Fig. 1). The county boundaries of Nottinghamshire and Lincolnshire lie to the north of the village. The City of Nottingham lies approximately 15 miles to the west of the village and Melton Mowbray is 12 miles to the south-west. The proposed development site lies on the southern side of Grantham Road as it heads eastwards away from the village core. The 3.45ha site is roughly rectangular in shape and is currently used as pasture land (Fig. 2). The River Devon runs along the southern boundary of the site and high hedgerows form the other three boundaries to the field. Traces of ridge and furrow run from north-east to south-west across the generally level site (Fig. 3). A LiDAR survey of the site (Hunt 2018, Fig. 5) clearly identifies the surviving ridge and furrow but no other earthworks.

The Ordnance Survey Geological Survey of Great Britain website indicates that the underlying geology of the site is likely to consist of Beckingham member mudstone and limestone which is overlain by alluvial sand and gravel deposits. The site lies at approximately 38mOD.

Despite the fact that the site lies some distance from the medieval and post-medieval settlement core the DBA noted that there are several known archaeological sites around the periphery of the village and which are close to the development site. These include two areas of Iron Age and Roman occupation discovered during the construction of the local by-pass to the south of the proposed development site. There are also findspots for a number of Anglo-Saxon artefacts close to the site.

A geophysical magnetometer survey undertaken in 2018 by SUMO Geophysics Ltd for ULAS did not identify any clear anomalies of possible archaeological origin but did pick up evidence of anomalies with a probable geological origin (Fig. 4). A field boundary was also detected along with the ridge and furrow (Sumo 2018).

The River Devon, which runs along the south side of the site, is quite slow and meandering. Evidence of its former courses can be seen in the field to the south and as geophysical anomalies along the bottom of the site. It was however felt that the anomalies towards the northern side of the site may relate to palaeochannels and other palaeoenvironmental features. Palaeochannels could be seen to the south close to the river (within the flood buffer zone and therefore outside the proposed development). Further anomalies suggested that the environmental potential of the rest of the site was moderate to high and that an appropriate assessment and sampling strategy should be implemented.

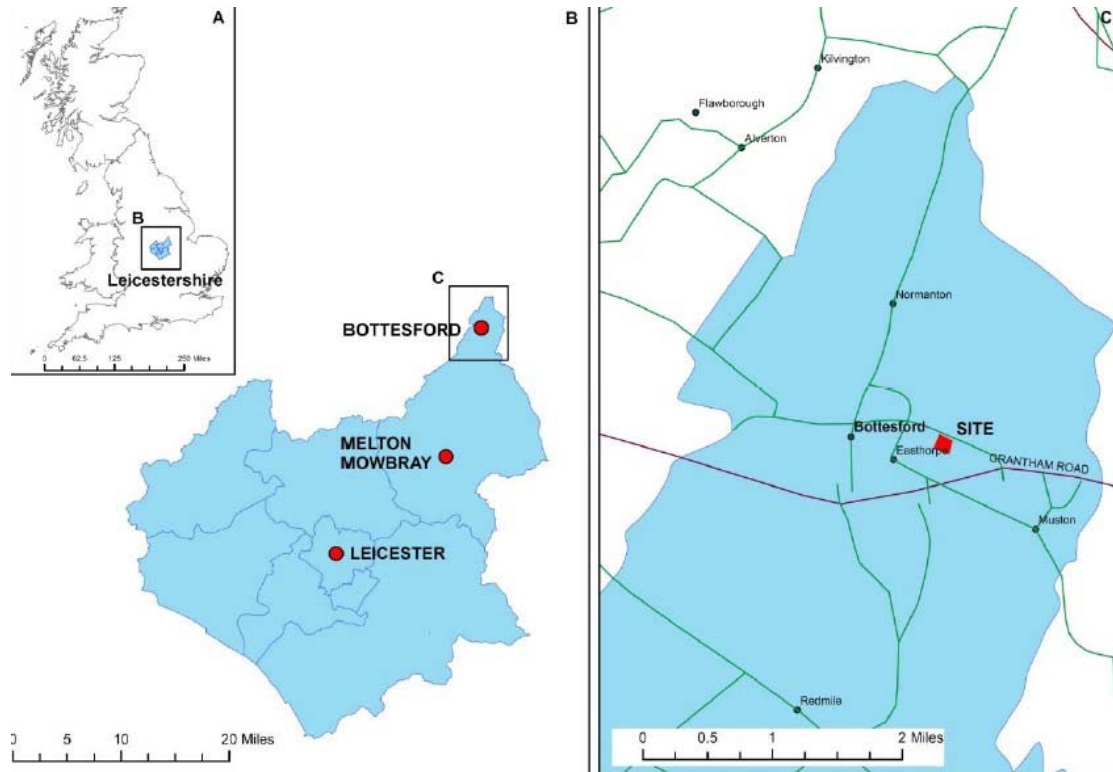


Figure 1 Bottesford location
From ULAS DBA



Figure 2 Site location
Plan supplied by developer



Figure 3 General view of site from south-east corner
Looking north-west. Grantham Road runs along the top of the picture.
Yellow lines indicate the furrows



Figure 4: Geophysical survey results (Sumo 2018)

Aims and Objectives

The overall objectives and research agenda are detailed in the ULAS Written Scheme of Investigation (WSI) for *Archaeological Evaluation by Trial trenching on land at Grantham Road, Bottesford, Leicestershire* (ULAS 2018).

The specific objectives for this programme of work were:

- To identify the presence/absence of any archaeological deposits.
- To establish the location, character, extent and date range for any archaeological deposits to be affected by the proposed ground works.
- To establish the ecofactual and environmental potential of archaeological deposits.
- To provide sufficient information on the archaeological potential of the site to assess the impact of the proposed development on the archaeological resource
- To inform a strategy to mitigate the impacts of the proposed development on surviving archaeological remains
- To produce a site archive for deposition with an appropriate Museum and to provide information to the Leicestershire HER.

Methodology

The trench excavation methodology used throughout the evaluation is discussed in detail in the ULAS WSI. For the evaluation a 360⁰ tracked mechanical excavator fitted with a toothless ditching bucket was used under constant archaeological supervision. Trenches were located with a DGPS. Eight 50m long by 1.8m wide trenches were excavated across the northern half of the site and were placed to target the geophysical anomalies. The southern side of the site is a buffer zone and will remain open as a public space and will not be built on (Fig.18).

Once exposed the geophysical anomalies were investigated using a combination of machine excavation and auger sampling. Environmental archaeologists were present on site to advise and an environmental sampling strategy was in place should the anomalies prove to be suitable for such treatment.

Results

The eight 50m long by 1.8m wide trenches were placed across the site to target the geophysical anomalies (Fig. 5). In all cases a mid-grey brown silty clay topsoil was identified across the site above a mid-yellowish brown silty clay subsoil which was carefully removed. According to the landowner the field had been used as pasture since his family took over the farm around the time of the First World War. As such the ground had not been ploughed since at least this date. The results of the auger survey are shown in Appendix 1.

Trench	Length (m)	Min depth (m)	Max depth (m)
1	50	0.60	1.20
2	52	0.55	1.09
3	51	0.66	1.10
4	50	0.80	1.16
5	50	0.48	0.65
6	50	0.61	0.76
7	50	0.70	0.93
8	51	0.72	0.83

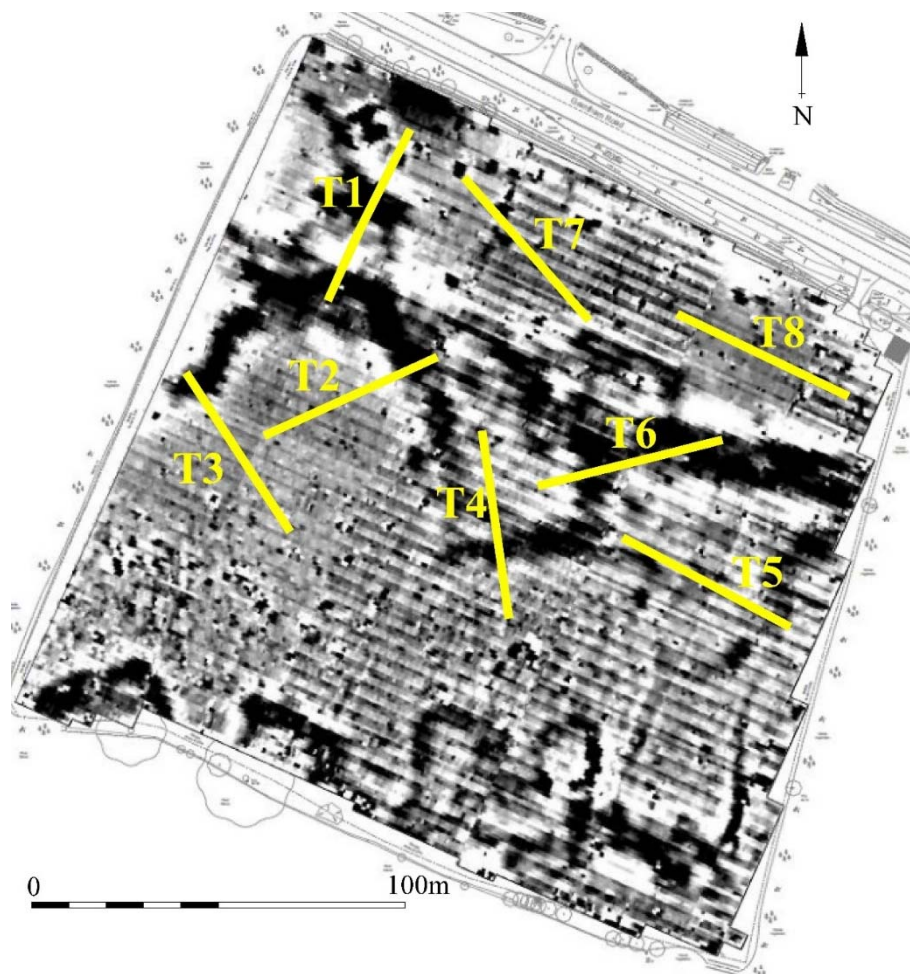


Figure 5: Trench layout overlaying geophysical results.

Trench 1

Trench 1 was placed in the north-west corner of the site to target two areas of geophysical responses. Removal of the topsoil and subsoil exposed the natural substratum of clean mid-yellow brown clay. Approximately 15m from the northern end of the trench the subsoil was removed to expose a substratum with a significantly higher sand content (Fig. 7). Part of this was excavated to reveal that it consisted of a sandy clay layer sat on top of the clean mid-yellow brown clay substratum. Even in the current dry weather the water table was observed at the interface of the sandier material and the clean substratum which may explain the strong geophysical responses. This sandier clay appeared to be a band of geology rather than the remains of a palaeochannel. Further areas of sandier clay substratum were observed closer to the southern end of the trench.

Despite the geophysical anomalies being of a geological nature it was decided to continue with the environmental sampling. An auger was used to assess the depth and nature of the sandier clay layer at four points along the trench (Figs 8-9). The results of the auger sampling are shown in Appendix 1 but in general the average depth of the sandier material was around 0.3m which corresponded with the machine excavated area. It was decided by the environmental archaeologists on site that there was no potential for any palaeoenvironmental remains and that none of the deposits would be sampled.

No archaeological features or deposits were present in this trench.



Figure 6: Trench 1 Looking north



Figure 7: Trench 1 over geophysical anomaly looking north. The 1m scale lies on top of the sandy clay which has been removed to the north



Figure 8: Trench 1 auger sampling depth of sandy clay

Trench 1

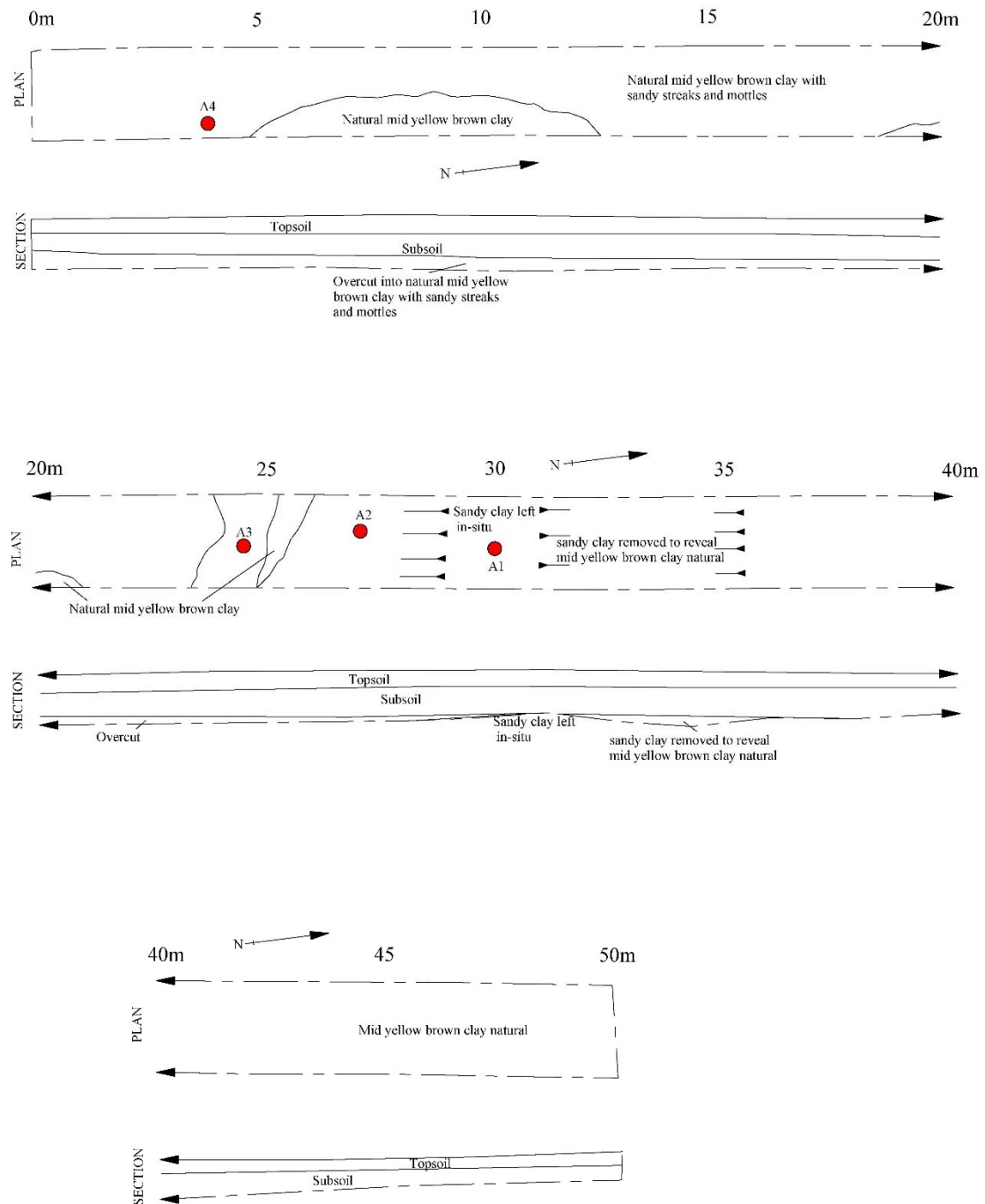


Figure 9: Trench 1 plans and sections
Red dots show auger sample locations

Trench 2

Trench 2 was placed on a north-east to south-west alignment to target a long geophysical anomaly extending south-eastwards away from Trench 1 (Fig. 10). As in Trench 1 the anomaly showed itself as a sandier layer of clay above the cleaner mid-yellow brown clay natural substratum. Partial machine excavation showed this sandy layer to be around 0.25 to 0.3m thick.

Close to the south-western end of the trench areas of blue-grey clay were exposed. This, once again, was a geological deposit representing natural changes in the geology of the clay substratum (Fig. 11). Three auger samples were taken within this blue-grey clay showing it to have varying depths between 0.2 and 0.7m in depth. A very sandy band of natural clay was observed at the extreme south-western end of the trench.

No archaeological features or deposits were present in this trench.



Figure 10: Trench 2 looking north-east. 1m scales

Trench 2

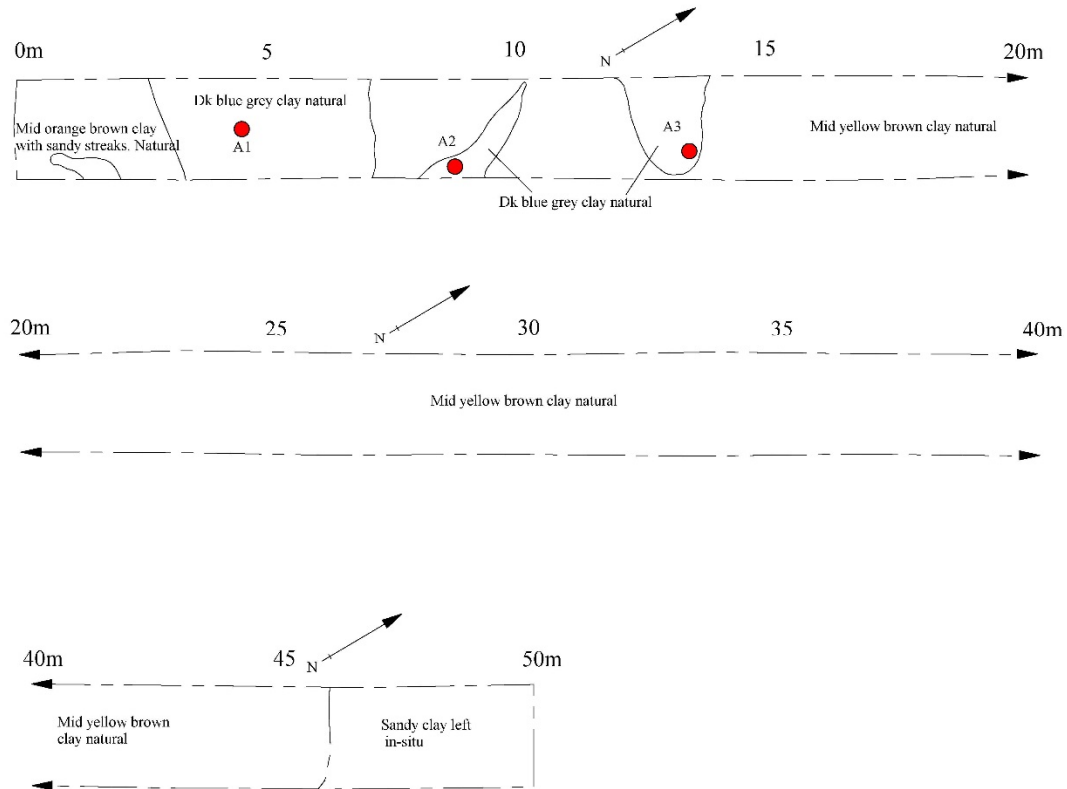


Figure 11: Trench 2 plans. Red dots show auger sample locations

Trench 3

Trench 3 was located at the end of another line of anomaly running southwards from Trench 1 (Fig. 12). This geological anomaly proved to be another area of sandy clay but this time it was overlying a natural substratum consisting of mid-yellow brown clay with blue/grey streaks within it. Further areas of mid-blueish grey clay natural substratum were seen to the east of a north to south land drain. Towards the south-eastern end of the trench an area of pale grey-brown clay with orange sandy streaks and a number of fossils was exposed beneath the subsoil. Five auger samples were taken, all of which proved the deposits to be geological in nature (Fig. 13). No environmental samples were retained.

No archaeological features or deposits were present in this trench.



Figure 12: Trench 3 looking south-east. 1m scales

Trench 3

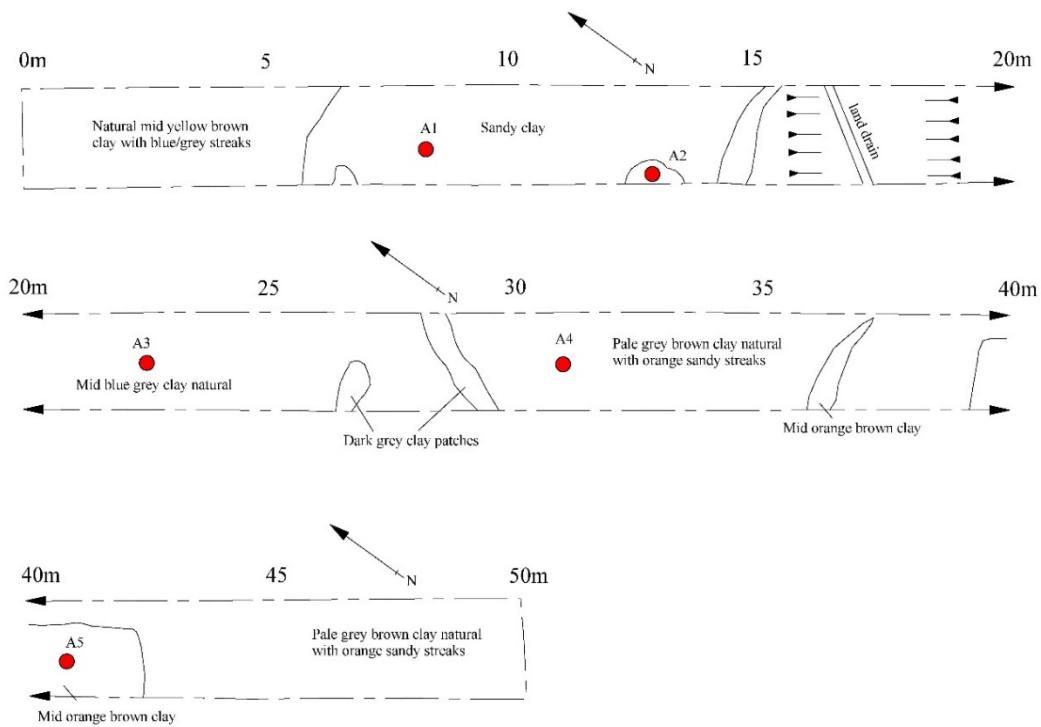


Figure 13: Trench 3 Plans. Red dots show auger sample locations

Trench 4

Trench 4 was the final trench to be assessed by the environmental archaeologists who concluded that once again the geophysical anomalies were due to geological changes in the ground. Removal of the topsoil and subsoil exposed a sandy clay band running across the trench which corresponds with the geophysical response (Fig. 14). A single auger sample was taken near to the south-eastern end of the trench but was halted when the auger reached 1m below the base of the trench with no apparent change in the nature of the deposit (Fig. 15).

No archaeological features or deposits were present in this trench.



Figure 14: Trench 4 looking north-west. 1m scales

Trench 4

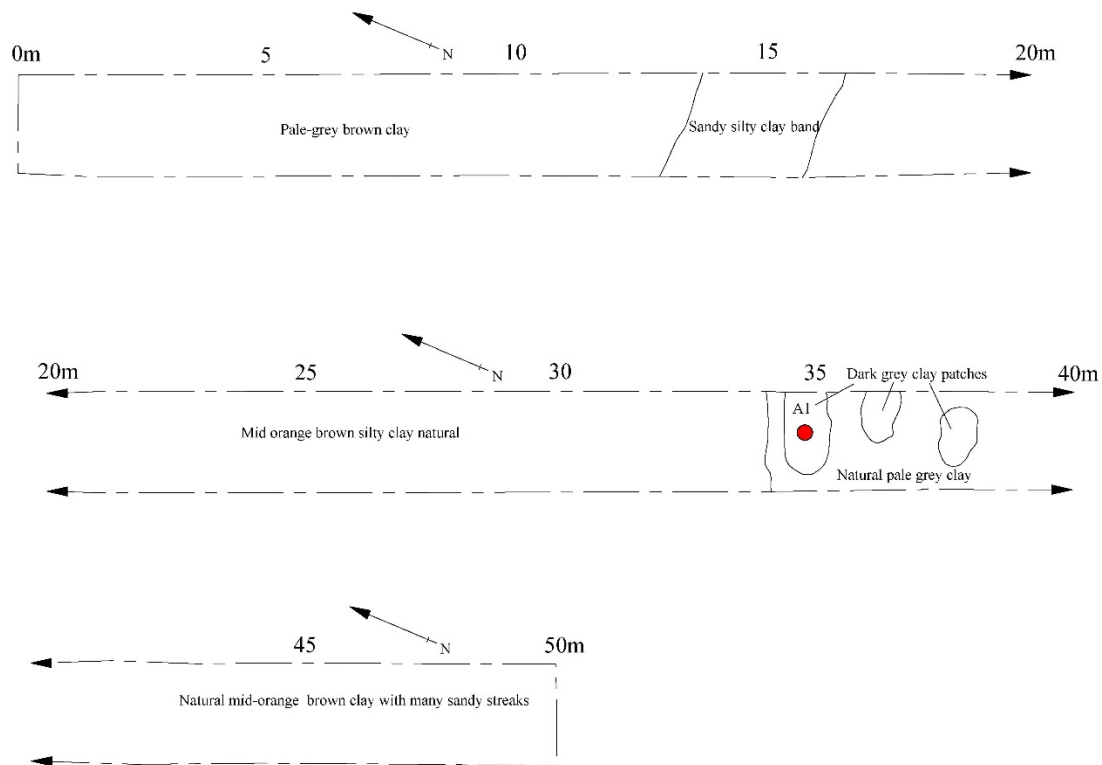


Figure 15: Trench 4 plans

Trench 5

Trench 5 contained a single land drain running from north to south following one of the plough furrows (Fig.16). A very faint anomaly had been detected towards the eastern end of the trench which appeared to correspond with a slightly sandy clay natural substratum.

No archaeological features or deposits were present in this trench.

Trench 6

Although a strong geophysical anomaly appeared to cut across Trench 6 only a trace of sandy clay was seen at the edges of the trench which mostly consisted of clean mid yellow brown clay (Fig. 16). Two unstratified abraded sherds of Roman greyware were recovered from the topsoil as was a small fragment of late Roman colour-coated ware and two post medieval sherds. The pottery was assessed by the ULAS pottery specialist but not retained.

No archaeological features or deposits were present in this trench.



Figure 16: Trenches 5 and 6

Trench 7

Two north to south land drains were seen in this otherwise empty trench (Fig. 17). Three unstratified sherds of post medieval pottery were recovered from the topsoil. The pottery was assessed by the ULAS pottery specialist but not retained.

No archaeological features or deposits were present in this trench.

Trench 8

A north to south land drain, probably the same one seen in Trench 5, was observed running across the empty trench (Fig. 17). Two sherds of unstratified pottery were recovered from the topsoil. One sherd dated to the late Roman period whilst the second was of post medieval origin. The pottery was assessed by the ULAS pottery specialist but not retained.



Figure 17: Trenches 7 and 8

Discussion

Despite the strong responses produced by the geophysical survey all of the trenches identified changes in geology as the cause of the anomalies, rather than archaeological deposits or palaeochannels. The survey anomalies appeared to correspond with sandier areas of clay which were sitting on top of the clay substratum. Machine excavating and auger sampling indicated that the water table lays below the sandy areas which seem to be slightly better drained and it may well be the case that the differences in water content are responsible for the anomalies.

The unstratified Roman and post medieval pottery sherds from the topsoil were quite heavily abraded suggesting that they had been moving around in the plough soil for some time. This, coupled with the fact that no archaeological features of any date had been found indicates that they are likely to have been introduced to the field as manure scatters probably from nearby farmsteads.



Figure 18: Illustrative plan of the proposed development Bottesford (provided by the client)

Archive

The archive consists of:

- This report,
- 8 ULAS pro-forma trench recording sheets,
- 1 photo record sheet,
- 1 contact sheet of 54 digital photographs,
- 1 CD of 54 digital images,
- 1 A3 drawing sheet

Publication

A summary of the work will be submitted for publication in the *Transactions of the Leicestershire Archaeological and Historical Society* in due course. A record of the project will also be submitted to the OASIS project. OASIS is an online index to archaeological grey literature.

Acknowledgements

The work was project managed by V Score. The site director was A Hyam and environmental sampling was carried out by A Santer and R Small.

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17-08-2018

Appendix 1 Auger sampling results- *Rachel Small and Adam Santer*

Eight trenches were dug at Grantham Road, Bottesford to investigate the potential presence of palaeochannels suggested by the geophysical survey. The trenches were inspected by environmental archaeologists and the soils proved to be natural with no have any archaeological potential (no visible charcoal, waterlogging etc.). Plans were drawn of each trench, denoting soil changes (see main report), to help understand formation, and it was clear that the changes within the natural correlated with the geophysical anomalies.

To ensure the soils were natural, the varying soil deposits were augered to the water table/bedrock (depths are given in Table 1 below). It is clear that the remains did not represent palaeochannels but were instead variations within the natural substrata.

No further work is recommended.

Table 1: Depths to water table/bedrock and soil descriptions.

< = denotes that the depth was shallow and the measurement is approximate, > = denotes that the depth was indeterminate and augering was stopped at this level.

Trench	Auger Hole	Depth of layer	Soil description
1	1	0.46m	Mid-yellow brown sandy clay
1	2	0.35m	Mid-yellow brown clay
1	3	0.39m	Mid-greyish brown silty clay
1	4	>0.30m	Mid brown (with bluish hues and ironstone inclusions) clay
2	1	0.67m	Dark blueish grey clay
2	2	0.62m	Dark blueish grey clay
2	3	0.10m	Dark blue grey (with black streaks) clay
3	1	<0.03m	Mid-yellow brown sandy clay
3	2	0.54m	Dark grey clay
3	3	0.40m	Dark grey clay
3	4	0.10m	Mid-greyish brown (with chalky/fossil inclusions) clay
3	5	0.35m	Mid-orange brown (with black mottles) clay
4	1	>0.94m	Dark grey clay

Appendix 2 OASIS Information

PROJECT DETAILS	Oasis No	universi1-326131		
	Project Name	Evaluation at Grantham Rd, Bottesford, Leicestershire		
	Start/end dates of field work	06-08-2018 - 13-08-2018		
	Previous/Future Work	No/ Not known		
	Project Type	Evaluation		
	Site Status	None		
	Current Land Use	Pasture land		
	Monument Type/Period	None/none		
	Significant Finds/Period	Pottery / Roman Pottery / PM		
	Development Type	Residential		
	Reason for Investigation	NPPF		
	Position in the Planning Process	Planning condition		
Planning Ref.	17/01577/OUT			
PROJECT LOCATION	Site Address/Postcode	Grantham Road, Bottesford, NG13 0EH		
	Study Area	3.45ha		
	Site Coordinates	SK 8169 3867		
	Height OD	38m OD		
PROJECT CREATORS	Organisation	ULAS		
	Project Brief Originator	Local Planning Authority (LCC)		
	Project Design Originator	ULAS		
	Project Manager	V Score		
	Project Director/Supervisor	A Hyam		
	Sponsor/Funding Body	Developer / Penland Estates ltd		
PROJECT ARCHIVE		Physical	Digital	Paper
	Recipient	NA	LCC MusService	LCCMusService
	ID (Acc. No.)		X.A81.2018	X.A81.2018
	Contents		Photos Survey data	Field Notes
PROJECT BIBLIOGRAPHY	Type	Grey Literature (unpublished)		
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	Author	A Hyam		
	Other bibliographic details	ULAS Report No 2018-142		
	Date	2018		
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	Description	Developer Report A4 pdf		



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