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**An Archaeological strip, map and
sample excavation during Lake
Development at Sinfin Moor,
Chellaston, Derby, Derbyshire.
(NGR SK 356 311)**

Jamie Patrick



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**An Archaeological strip, map and sample excavation
during Lake Development at Chellaston Business Park,
Sinfin Moor, Chellaston, Derby,
Derbyshire.
(NGR SK 356 311)**


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For

Derby City Council

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An Archaeological strip map and sample excavation during Lake Development at Chellaston Business Park, Sinfin Moor, Chellaston, Derby, Derbyshire. (NGR SK 156 311)

Jamie Patrick

Summary

An archaeological strip, map and sample excavation was undertaken to monitor the groundwork's associated with the development of a lake to the east of the Chellaston Business Park Construction. As the new lake development was taking place on the site of a late glacial lake there was some potential for the location of lake-edge archaeological remains associated with human activity during the late upper Palaeolithic or early Mesolithic periods. Prior to the strip, map and sample excavation, an Archaeological desk based Assessment (George 2005), geophysical survey (Smalley 2010) a trial trench evaluation (Hunt 2011) and test pitting survey (Jarvis 2013) were undertaken. The test pitting located a very few lithic artefacts and a strip, map and sample excavation was requested by the Derbyshire County Council Development Control Archaeologist as advisor to the planning authority. However despite constant monitoring of the study area no flint scatters or archaeological remains were found. The site archive will be deposited with Derbyshire County Council Historic Environment Record.

Introduction

University of Leicester Archaeological Services (ULAS) was commissioned by Derby City Council to carry out an archaeological strip, map and sample excavation during groundwork's associated with the development of a lake at Chellaston Business Park, Sinfin Moor, Chellaston, Derby, NGR: SK 356 311.

This archaeological work is in accordance with National Planning Policy Framework (NPPF) Section 12: Conserving and Enhancing the Historic Environment (DCLG 2012).

The site is located on Sinfin Moor approximately 2 kilometres north-west of Chellaston on the southern extent of the city of Derby. The former late glacial lake (study area) occupies an area of 79 ha and is on flat terrain. It is bounded along the south-western side by a brook and gas pipe line, and along the north-eastern side by a former railway line. The study area measured approximately 360 metres north-south by 100 metres east-west. The east – west 100 metre distance was judged to be sufficient to locate the presence of the shore edge. Within the development area no archaeological sites have been located during the subsequent survey and evaluations.

Location and Geology

The site lies approximately 2 kilometres north-west of Chellaston village and on the Southern outskirts of the city of Derby (NGR: SK 356 311) (Figure 1). The Ordnance Survey of Great Britain Sheet Loughborough 141 indicates that the underlying geology of the site is likely to consist of drift Lacustrine deposits. The land is flat at around 39m OD.

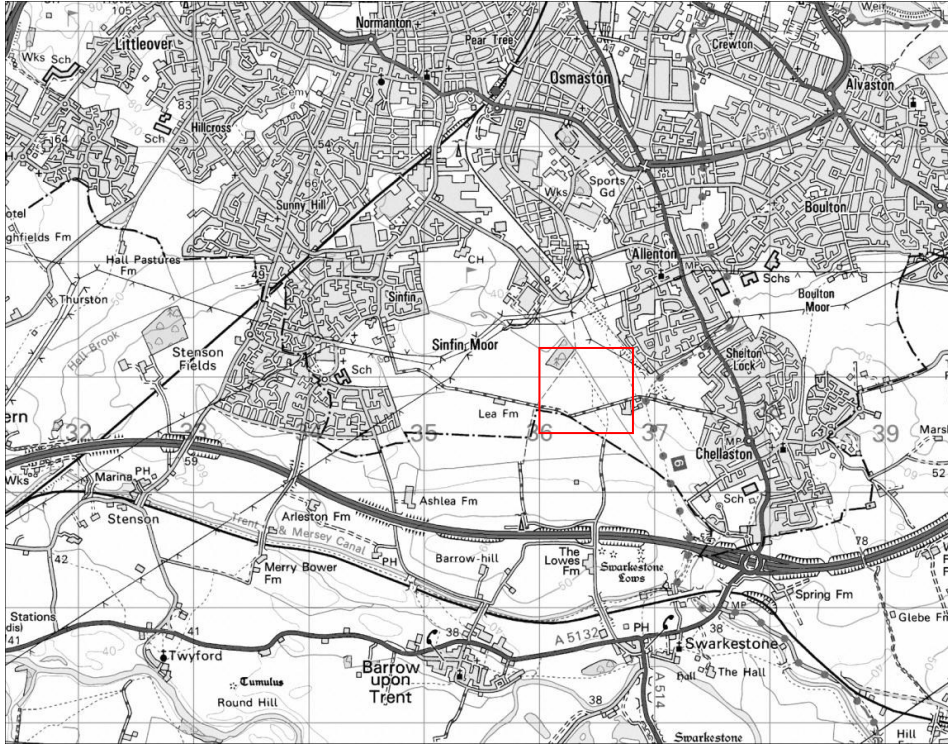


Figure 1: Site Location

Reproduced from *Landranger*® 1:50 000 scale, Sheet 128 (Derby & Burton upon Trent area) by permission of Ordnance Survey® on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright 2005. All rights reserved. Licence number AL 100029495.

Archaeological Background

No archaeological features have been recorded within the development area. However the geology of the area indicates deposits associated with a late glacial lake (Champion 1969). Therefore, there was a rare opportunity to investigate any archaeological activity related to the Upper Palaeolithic and early Mesolithic periods. The lake shore edges are potential foci for human activity which are national priorities (McNabb 2006; Myers 2006). Palaeolithic and Mesolithic archaeology in the East Midlands (McNabb 2006; Myers 2006; Knight *et al* 2012, 24-42). Palaeolithic archaeology is rare nationally and in-situ deposits, if present, would be of national importance. Late glacial lake deposits are identified as having potential for Palaeolithic archaeology in particular where there may be lake edge deposits (Colcutt

2006, 46). The marginal deposits of the Sinfin Moor depression show a hydrosere (vegetational succession) from lake deposits to swamp and moor (Champion 1969). The lake is thought to have been of Late Glacial origin, filling a solution hollow. It was also a lake in the early post-glacial period.

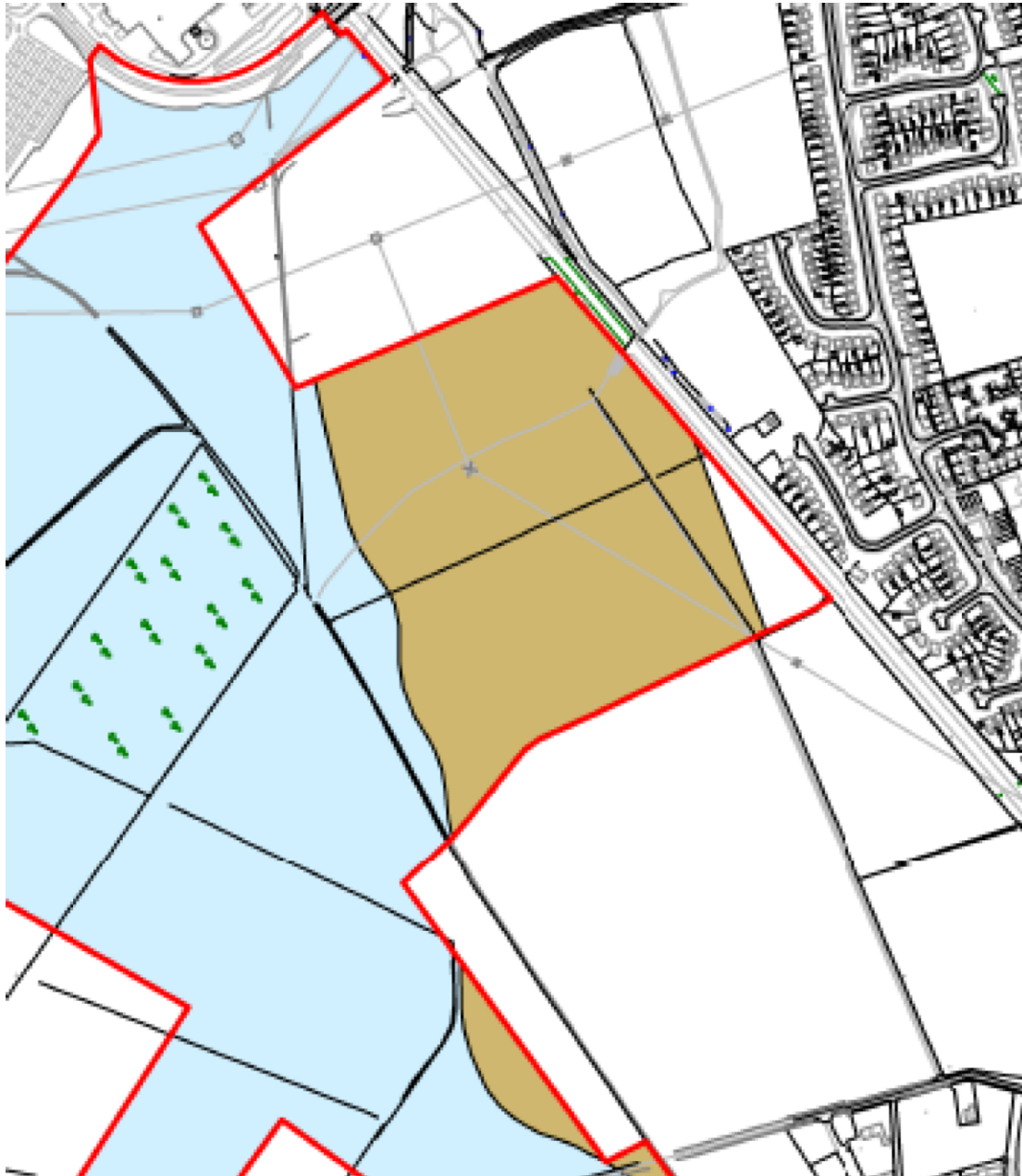


Figure 2: Projected area of lacustrine deposits (brown, after Jarvis 2013)

Lake-side exploitation during the Late Upper Palaeolithic and Early Mesolithic was identified as a possibility at Chellaston. Such environments were ecologically diverse and were attractive to game and therefore humans. One of the best researched lake-side environments is Lake Pickering where occupations and activities from the Late Upper Palaeolithic and Early Mesolithic are attested. One of the Flixton sites of Lake Pickering is the internationally significant site of Star Carr (Clarke 1954).

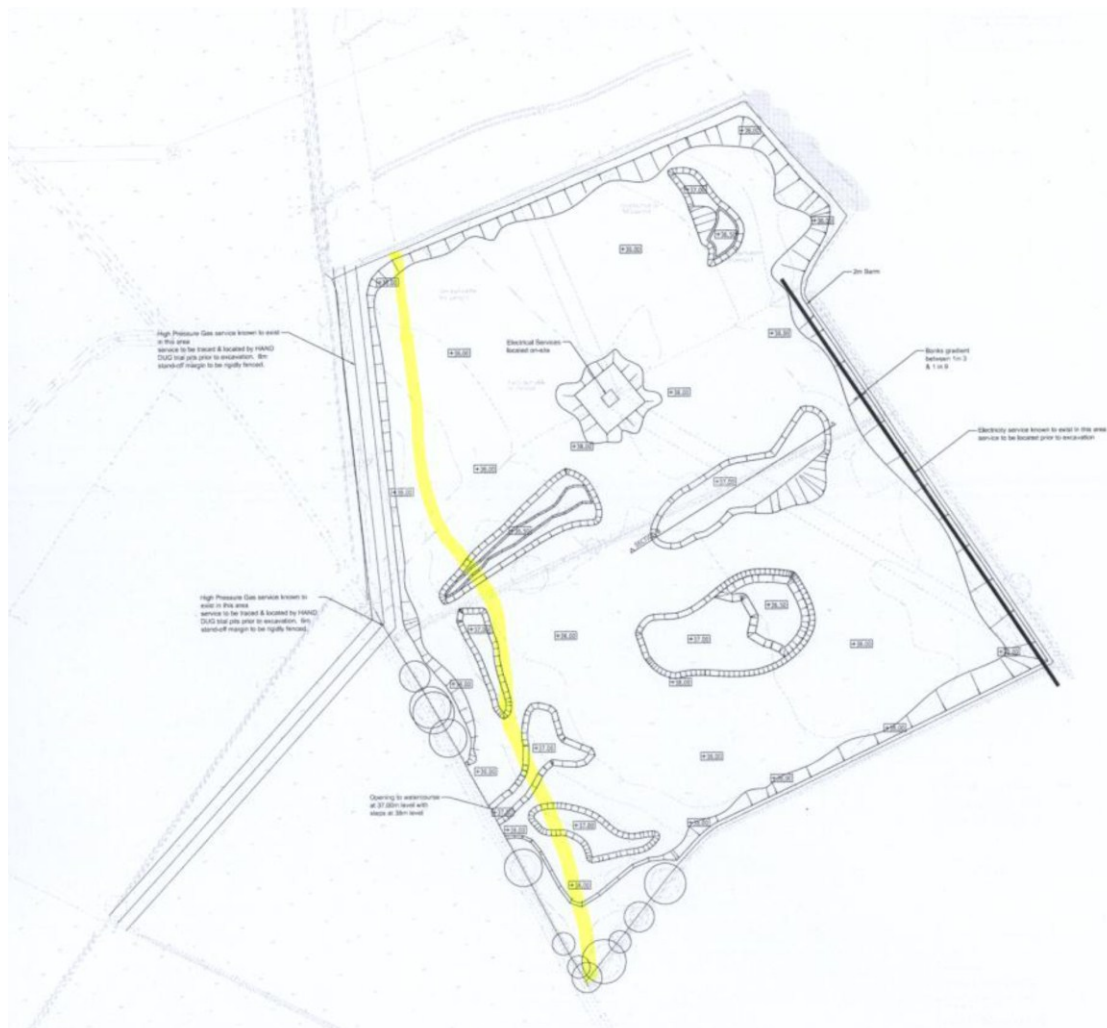


Figure 3: Plan of lake development. Yellow line marks approximate shore line. (taken from plan supplied by client).

The area of the T12 road at Chellaston was therefore identified as having the potential to contribute to the study of Late glacial and/or early post-glacial occupation in Britain. If present deposits of this date may contribute to our understanding of the seasonal use of lake and lakeside resources. The presence of

deposits would have the potential to provide greater definition of the different late palaeolithic cultures, help our understanding of the relationship between groups in what is now the East Midlands and the rest of Europe and the relationship between open and cave sites (ibid).

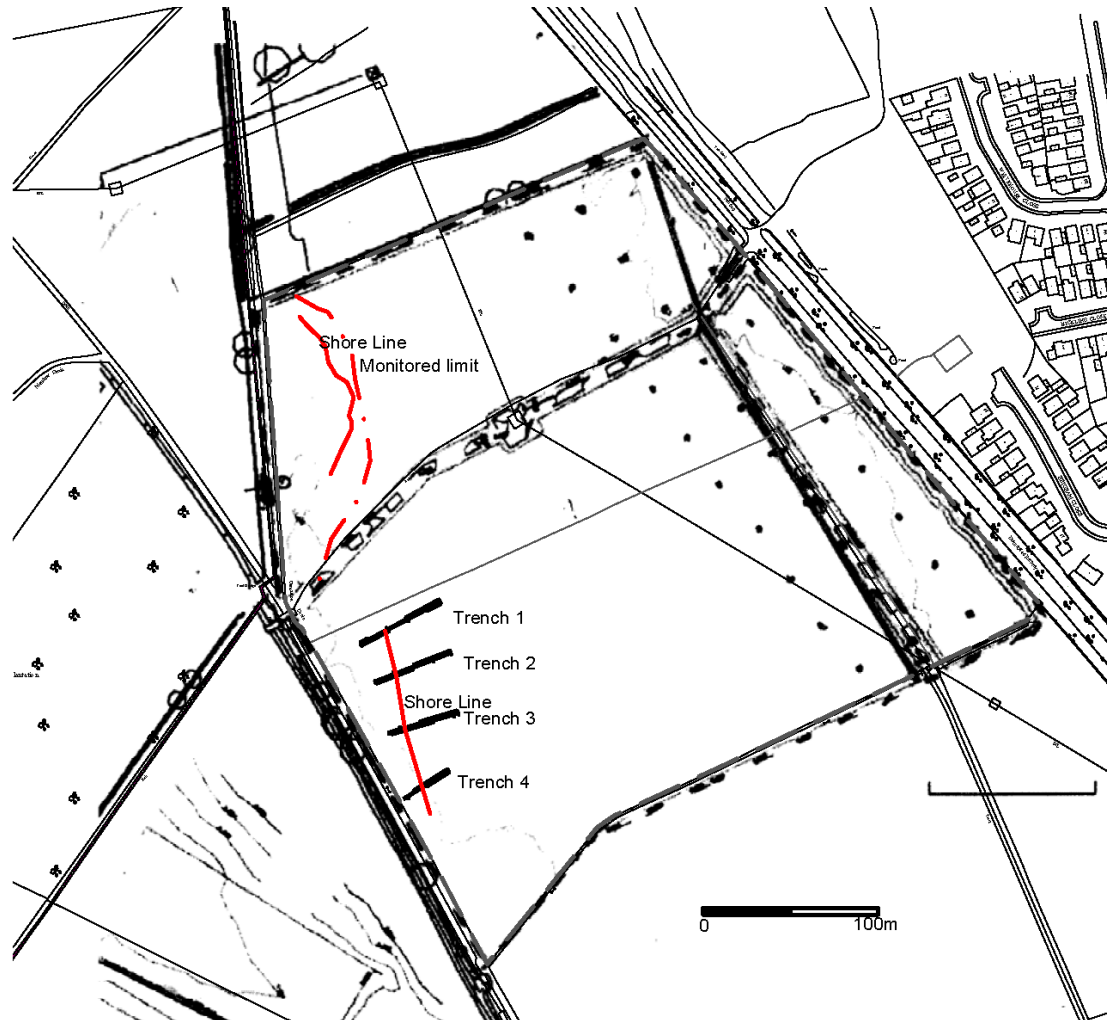


Figure 4: Location of Trenches, shore line, and excavation limit.

Archaeological Objectives

The main objective of the archaeological strip, map and sample excavation was to determine and understand the nature, function and character of any significant archaeology on the site in its cultural and environmental setting.

The aims of the strip, map and sample excavation were:

- To identify the presence/absence of any archaeological deposits.

- To establish the character, extent and date range for any archaeological deposits to be affected by the proposed ground-works.
- To record any archaeological deposits to be affected by the ground-works.
- To produce an archive and report of any results.

Methodology

All work followed the Chartered Institute for Archaeologists (CIfA) *Code of Conduct* (2014) and adhered to their *Standards and Guidance for Archaeological excavations* (2014).

A Design Specification for Archaeological Work was produced by ULAS and approved by the planning authority prior to the archaeological work being undertaken.

The project involved the archaeological supervision of topsoil removal. Following this the glacial lake deposits were carefully removed in 200mm spits using a tracked mechanical excavator fitted with a 2.0m toothless ditching bucket. However as work progressed, and due to the continuing lack of any artefactual evidence or archaeological remains, it was decided to continue the strip in no more than 2 spits with the up-cast inspected for finds. In view of the absence of significant archaeological deposits the strip map and sample excavation was also modified to include four east-west aligned trial trenches to assess the potential and decide whether further controlled stripping was necessary. These were excavated every 25 metres running from the projected shore line to the agreed strip, map and sample excavation limit. Despite locating the shore line and organic deposits, again no flints scatters or remains were found.

Results

The ground-works were monitored with visits between February 4th and 23rd April 2015 by James Patrick of ULAS. During the first visit the top-soil strip had yet to take place. Initial observation of the top soil surface along the Western length of the site parallel to the gas pipe line and brook revealed heavy rutting within the top soil by dumper trucks. No flints were found during stripping and a walk over of the top soil.

The sub-soils were removed from the north stripping southwards. The lake deposits were removed with a ditching bucket in approximate 0.20 m – 0.30 m spits. At the far northern end the formation level was 0.70m below the original ground level rising up to 0.50m to the south.

There was a general sequence of three deposits with the upper sub-soil consisting of a mid-orange brown silty-clay (average 0.30m thick). Underlying this was a thin layer of grey alluvium (0.05m thick). Below this, and directly onto the natural gravel was a

thick layer of finely bedded sands (average 0.40m) which contained shells and molluscs throughout. This was chiefly at the north end where formation levels were deeper at 0.70m. Here, some organic deposits were located along the shore edge lying on the gravel which was not seen further south where formation level was higher at 0.50m. However despite careful examination no flints scatters or waterlogged remains were found. The three layers were consistent along the study area and were the same as were identified within the test pitting survey (Jarvis 2013). Overall the formation level usually only reached the higher light coloured finely bedded sands which overlay the organic lake deposits.

The trenches were excavated every 25 metres running from the projected shore line to the agreed strip, map and sample excavation limit. Despite locating the shore line and organic deposits, no flints scatters or associated archaeological deposits were found.



Figure 5: In process of removing glacial deposits, looking south.



Figure 6: Trench 1 looking east



Figure 7: Trench 2 looking east



Figure 8: Trench 3 looking east.



Figure 9: Trench 4 looking east.

Conclusion

The archaeological strip, map and sample excavation revealed no evidence of archaeological remains or flint scatters associated with human activity. Although the late glacial lake covered a large area, the shore line along the western length of the lake provided the environment where there was potential for Late Palaeolithic and Early Mesolithic activity. Despite the previous intensive test pitting in the study area which located the shore line, no archaeological remains and few lithic artefacts were located (Jarvis 2013). The strip, map and sample excavation produced similar results and has confirmed the absence of visible evidence for such activities.

Acknowledgements

The fieldwork was undertaken by James Patrick of ULAS and the project was managed by Dr Patrick Clay. ULAS would like to thank Derby City Council for commissioning the work,

Archive

The archive for this project consists of 16 strip, map and sample excavation forms and one sheet of digital photographs which will be retained by ULAS. The report will be deposited with Derbyshire County Council Historic Environment Record.

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