KIRTON QUARRY

Archaeological Watching Brief

NETWORK ARCHAEOLOGY LTD

for

HANSON HEIDELBERG CEMENT GROUP

Report no. 583

September 2011

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New Best Red Brick Quarry northern extension

NGR: 469820 369040

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Network Archaeology delivers a complete consultancy and field service nationwide. The company's particular expertise is linear infrastructure, such as pipelines, roads, rail and cables. The company's emphasis is upon good communication and recognition of clients' individual needs and priorities. Network is known for delivering professional support, taking care of the archaeology and enabling projects to keep moving forward.

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NON-TECHNICAL SUMMARY

Monitoring of topsoil stripping on the site of the northern extension to the New Best Red Brick Quarry at Kirton Quarry, Nottinghamshire, was undertaken by Network Archaeology Ltd on 26th September 2011.

This watching brief forms the latest part of a series of archaeological works undertaken since 2004. These investigations have found limited preserved archaeological remains associated with the land at Kirton Quarry.

The latest work located no archaeological remains during topsoil stripping.

1. INTRODUCTION

This report presents the results of an archaeological watching brief undertaken by Network Archaeology Ltd for Hanson Heidelberg Cement Group. The extraction quarry is within the parish of Kirton, north Nottinghamshire, located 1km east of the centre of the village, and approximately 15km to the north-east of Mansfield (NGR: 469820 369040) (Fig. 1).

1.1 Work undertaken

An area was opened immediately adjacent to the pre-existing New Best Red Brick Quarry, enabling its further extension to the north-west (Figure 1; Plate 1). Topsoil stripping was carried out by a single tracked 360° excavator fitted with a 2m-wide toothless ditching bucket, on an area of approximately 0.1ha (Plate 2).

Work took place concurrent with the re-instatement of the Best Red Brick Quarry to the south-east, on the 26th September 2011.

An archaeological watching brief was carried out by an experienced archaeologist throughout the removal of topsoil.

1.2 Legislation, guidance and reporting

The work was carried out as part-fulfilment of Condition 10 of the planning permission granted by Nottinghamshire County Council for extensions to the existing brickearth quarry, and which requires the implementation of an agreed programme of archaeological investigation, treatment and recording. The procedures to be followed for this work were detailed in a Written Scheme of Investigation produced by Network Archaeology Ltd in 2010 (Wood 2010).

This report has been produced for Hanson Heidelberg Cement Group. Copies will also be submitted for approval to Ursilla Spence, the Senior Archaeological Officer for Nottinghamshire County Council, and subsequently deposited with the Nottinghamshire Historic Environment Record for public access.

1.3 Geology, topography, soils and land use

The local solid geology is Permo-Triassic and Carboniferous reddish mudstone, siltstone and sandstone overlain by extensive clay deposits. Soils are reddish loam, grouped in the *Hodnet Association* (*572c*) in the Soil Survey of England and Wales classification (SSEW 1983). The immediate landscape is one of undulating hills, while the northern extension lies on roughly level ground at a height of 51.5m OD, with a slight rise up to 53m OD at the south-western end.

The watching brief area consisted of overgrown grassland immediately prior to the start of work.

1.4 Archaeological and historical background

Palaeolithic and Mesolithic (500,000-4,000 BC)

The extent of Palaeolithic and Mesolithic activity in the region is difficult to quantify reliably because the vast majority of remains recovered are lithic find scatters from unstratified deposits (Cooper 2006).

Perhaps the most noteworthy local site is that of Creswell Crags, which is located roughly 17km to the north-west of Kirton and which contains engravings of Upper Palaeolithic cave art and lithic scatters from throughout prehistory.

Neolithic and Bronze Age (4,000-800 BC)

The Neolithic and Bronze Age periods are typically characterised through their use of monumental architecture within the landscape. In Nottinghamshire there are, at the last count, 21 sub-rectangular enclosures dating to the Neolithic and 104 circular enclosures to the Bronze Age (Cooper 2006).

Settlement remains are few and far between and still the most frequent evidence of activity in the area is through unstratified lithic scatters. A small number of bronze artefacts have also been found from secondary sources.

Iron Age (800 BC-mid first century AD)

The majority of known sites ascribed to the Iron Age in Nottinghamshire have been dated as such through the identification of cropmarks in the Trent valley and in the north of the county where such features are more conspicuous than in other areas.

Cropmark data suggests the development of a number of dispersed settlements and farms with enclosed field-systems (Cooper 2006). Enclosure and boundary ditches provisionally dated to this period have been identified in the neighbouring parishes of Ollerton, Haughton, Bothamsall, Rufford and Egmanton.

Roman (mid first century AD-410)

Roman settlement and activity in Nottinghamshire can best be observed through the study of cropmarks from aerial photography, as well as through the distribution of finds.

Land enclosure and field-system structures indicate a reinforcement and evolution of patterns already in existence at the time of the conquest. Fieldwalking of these sites often produces dense distributions of pottery, an occurrence not only limited to cropmark sites (Cooper 2006).

In the parish of Laxton, 4km south-east of Kirton, Roman pottery and other finds have been retrieved from at least 13 different locations, indicating a substantial settlement and a possible villa (Cooper 2006; Young 1999).

Anglo-Saxon (410-1066)

The start of this period saw a well-populated late Roman landscape: villas, farmsteads, dispersed settlement patterns and woodland clearance; switch to that detailed in the Domesday Book 600 years later: low population, nucleated and dense population centres, 'open field' structures and much woodland north of the Trent (Cooper 2006).

Cultural identity and allegiance would have been in flux throughout much of the period. There would have been a continuation of Roman heritage, of sorts, until the fifth century when Anglo-Saxon immigration began. Further change ensued following the Danish invasions and annexation of Danelaw towards the latter part of the period (*ibid*).

The earliest written record of Kirton occurs in the Domesday Book (1086) where reference is made to '*Circeton*': originating from the Old Scandinavian words '*ciric*' (church) and '*tun*' (village), and literally meaning 'village with a church' (Ekwall 1991).

On the whole, very little evidence for Anglo-Saxon activity has been produced within the environs of Kirton, although a single sherd of eighth- to ninth-century pottery was found in Laxton (Cooper 2006).

Medieval (1066-1540)

The county had been split in two following the Anglo-Saxon period. The Trent valley and south Nottinghamshire were well-populated with little woodland, whereas north and west of the Trent there were extensive woods and generally a much smaller, dispersed population (Cooper 2006).

Laxton is a good example of one of the few larger settlements north of the Trent. Documentary evidence exists for the expansion of field systems and the plan-forms of villages, indicating that communities grew by the thirteenth century, which is from when the earliest parts of the Church of the Holy Trinity in Kirton date.

Post-medieval (1540-1800)

Increased enclosure of fields, advances in building types, the development of settlements, and the emergence of early industrialisation in this period started to create the modern landscape with which we are familiar. The introduction of brick making, the development of textile working, and the appearance of early industrial landscapes through the expansion of the coal industry all first emerge in this period (Cooper 2006).

It seems as if Kirton and the surrounding area continued to develop as small, agriculturally-based population centres during this time; there is little documentary evidence to suggest otherwise.

Modern (1800-present)

By the beginning of the nineteenth century the process of enclosure was virtually complete, with greater investment in technology encouraging mechanisation, the development of large estate farms, and the loss of common land. Cartographic evidence, including the Enclosure Award and Map 1821, suggests the site of the quarry has remained agricultural throughout the modern period (Young 1999).

1.5 Summary of previous archaeological investigations

John Samuels Archaeological Consultants conducted an archaeological desk-based assessment, and field reconnaissance and fieldwalking surveys at Kirton Quarry (Young 1999). The study area lay to the south of the New Best Red Brick Quarry and was investigated in order to quantify and assess the known and potential archaeological resource. One sherd of Roman pottery was recovered from within the development area and consequently no further work was recommended.

Network Archaeology Ltd carried out a desk-based assessment to determine the potential of the northern extension to the New Best Red Brick Quarry (Burton 2004). A number of post-medieval and modern features was identified nearby; however, on the whole this report concluded that the study area had low archaeological potential and that the known sites nearby were of no more than local importance.

Since 2004, Network Archaeology Ltd has monitored several extensions to the Best Red Brick Quarry. Topsoil stripping during 2004 revealed the remains of a modern field boundary oriented north-west to south-east (Sleap 2004). This boundary had been removed in the very recent past, and parts of its hedge was still extant. An eastern extension to this area was monitored in 2005 and revealed the remains of another modern hedged field boundary, also on a north-east to south-west orientation (Sleap 2006).

A haul road for the northern extension to the quarry was stripped of topsoil in 2006 (Sleap 2006), and stripping of the eastern section of the northern extension was carried out the following year. An infilled pond and a possible palaeochannel were recorded (Casswell 2008).

In 2010, two shallow, modern ditches were found during topsoil stripping of 2ha of the New Best Red Brick Quarry immediately to the south-east of the northern extension, although a general lack of archaeological finds were apparent (Casswell 2010).

None of these watching briefs revealed any evidence of osier beds, which the desk-based assessment had indicated might be present, and there were no indications of any earthwork banks or lowered ground which might have been associated with water management for encouraging willow growth. Nor were there seen any remains relating to the construction of the railway.

2. PROJECT AIMS AND METHODOLOGY

2.1 Aims

The objectives of the archaeological works were to:

- allow the preservation by record and the interpretation of archaeological deposits, the presence and nature of which could not be established in advance of development;
- compare the archaeological remains with existing data from the immediate area;
- produce recommendations for future work as part of the region's ongoing research agenda;
- produce a project archive for deposition at Nottingham museum;
- provide information for accession to the county Historic Environment Record (HER)

2.2 Fieldwork procedures

Principles, standards and conduct

All works conformed to the Institute for Archaeologists (I*f*A) Code of conduct (1985, revised April 2010); Code of approved practice for the regulation of contractual arrangements in field archaeology (1990, revised October 2008); Standard and guidance for an archaeological watching brief (1994, revised October 2008); and Standard and guidance for archaeological excavation (1995, Revised October 2008). The work was managed in accordance with the methods and practice described in the *Management of Archaeological Projects, second edition* (English Heritage, 1991) and subsequently updated in Management of Research Projects in the Historic Environment (English Heritage, 2006).

The work was conducted in accordance with the Health and Safety at Work Act 1974, the Management of Health and Safety at Work Regulations 1999, and other relevant health and safety legislation/guidance.

Topsoil and subsoil stripping

The watching brief involved the visual inspection of freshly stripped areas for archaeological remains.

A hand-held GPS instrument was available for use on site, and in post-excavation the limits of the excavation area were taken from the detailed survey plans supplied by the client's surveying sub-contractor.

2.3 Field records

Project code

The project code for the 2011 Kirton Quarry watching brief is KIQ11.

Written records

Network Archaeology Ltd uses pro-forma record sheets, consistent with I*f*A standards, for on-site recording. All archaeological deposits seen during the watching brief were recorded. A total of two context numbers were issued during the work.

Photographs

Four colour slide, monochrome and digital photographs were taken.

2.4 Post-excavation procedures

The archive has been consolidated in accordance with the standards set out in Appendix 3 of the *Management of Archaeological Projects, second edition* (English Heritage, 1991, Stage 2).

Finds

No finds were recovered from the study area.

Palaeo-environmental remains

No deposits suitable for palaeo-environmental sampling were observed during the course of the watching brief.

2.5 Limitations

Visibility of archaeological remains is dependent on many factors including machine type, depth of stripping, weather and geology. In this instance, the character of the area monitored and the machining methods used revealed a clean surface to the clay deposits beneath the topsoil, and it is considered that there was a high probability that archaeological remains, if present, would have been visible.

2.6 Archive and archive deposition

The project archive has been prepared in accordance with the guidelines outlined in *Management of Archaeological Projects, second edition* (English Heritage, 1991, Appendix 3). It is currently housed at the Lincolnshire office of Network Archaeology Ltd. Nottinghamshire Historic Environment Record will receive the document archive. A digital copy of this report will be uploaded to the OASIS (Online Access to the Index of archaeological investigations) online library of unpublished fieldwork reports (Appendix A).

3. RESULTS

During the watching brief no archaeological remains (features, deposits, or artefacts) were revealed in the northern extension to the New Best Red Brick Quarry.

The study area contained a 0.25m thick layer of soft brown silty clay topsoil, 100, overlying light brown clayey silt, 101 (Plates 3 and 4).

4. DISCUSSION

The general lack of any finds of earlier than nineteenth or twentieth century date in previous work would suggest limited occupation of the area beyond recent agricultural land use. This confirms the conclusions of previous watching briefs from elsewhere within the quarry (Sleap 2004, Sleap 2006, Casswell 2008, Casswell 2010).

This area of Nottinghamshire contains valuable clay deposits which generated wealth for the region in the nineteenth and twentieth centuries with the creation of brickworks to supply the demands of expanding populations and building projects across the East Midlands. Prior to this, the landscape was utilised for agriculture. The lack of visible plough scarring and artefacts recovered from the thin topsoil and the thick underlying clays, would suggest that this agricultural usage was largely pastoral. The lack of topsoil finds implies a lack of manuring, as manured fields often incorporate a mix of domestic debris along with the animal waste; this again suggests that these fields had been utilised primarily for pasture throughout their history.

5. CONCLUSIONS

The results of this watching brief, when considered alongside the earlier results, suggest that there was very little human activity at the site, other than for pastoral use until the development of the brickworks and quarry.

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6. ACKNOWLEDGEMENTS

Network Archaeology Ltd would like to thank the following for their contribution to the project:

Hanson Heidelberg Cement Group

Brian Reid	Kirton Quarry Manager

Fox (Owmby) Ltd

Rick	Machine operator

Nottinghamshire County Council

Ursilla Spence	Senior Archaeological Officer

Network Archaeology Ltd

Christopher Taylor	Senior Project Manager
Mike Wood	Project Manager
Christopher Casswell	Project Supervisor
Jacqueline Churchill	Illustrations Manager

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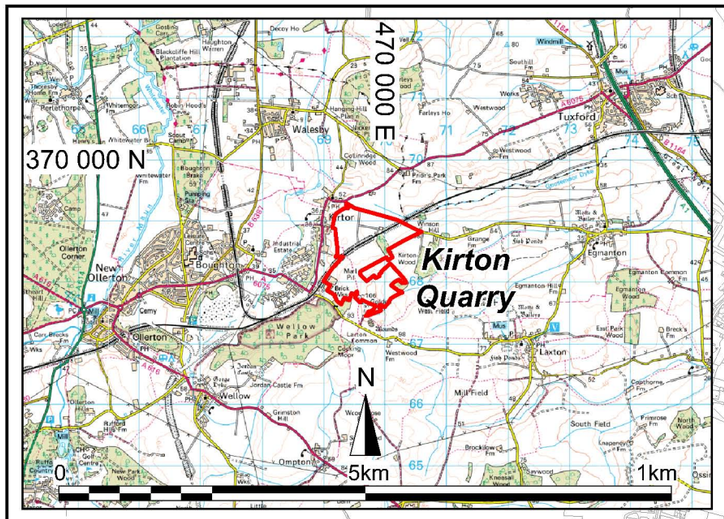
FIGURES



369 000 N

Kirton

- Proposed northern extension
- 2011 Watching brief area
- New Best Red Brick Quarry
- Previously quarried area
- 1999 Field reconnaissance and fieldwalking (JSAC 1999)
- 2004 Watching brief area
- 2005 Watching brief area
- 2006 Watching brief area
- 2007 Watching brief area
- 2008 Watching brief area
- 2010 Watching brief area

Ver	Date	Description	Drn	Chk	App
1.00	27/9/11	Location plan	JLC	MW	CT

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network archaeology

Kirton Quarry 2011

Figure 1
Location of current and previous areas of study

Scale: 1:5000

FILE NAME: K\Q11\Illustrations\GIS\Workspaces\WS\Ver 1.00\KIQ11_Fig 01_ver 1-00.WOR

PLATES

Plate 1: Northern extension prior to removal of topsoil.

Plate 2: Working shot during topsoil stripping.

Plate 3: Northern extension after the removal of topsoil, looking north.

Plate 4: Northern extension after the removal of topsoil, looking south.

APPENDIX

OASIS DATA COLLECTION FORM: England

OASIS ID: networka2-110992

Project details

Project name	Kirton Quarry 2011
Short description of the project	Monitoring of topsoil stripping on the site of the north-western extension to the New Best Red Brick Quarry at Kirton Quarry, Nottinghamshire, was undertaken by Network Archaeology Ltd on 26th September 2011. No archaeological remains were found.
Project dates	Start: 26-09-2011 End: 26-09-2011
Previous/future work	Yes / Not known
Any associated project reference codes	KIQ10 - Sitecode
Any associated project reference codes	KIQ08 - Sitecode
Any associated project reference codes	KIQ05 - Sitecode
Any associated project reference codes	KIQ04 - Sitecode
Type of project	Recording project
Site status	None
Current Land use	Industry and Commerce 5 - Mineral extraction
Monument type	NONE None
Monument type	NONE None
Significant Finds	NONE None
Significant Finds	NONE None
Investigation type	'Watching Brief'
Prompt	Planning condition

Project location

Country	England
Site location	NOTTINGHAMSHIRE NEWARK AND SHERWOOD KIRTON Kirton Quarry
Postcode	NG22 0PB

Study area	0.10 Hectares
Site coordinates	SK 698 690 53.2131859105 -0.954649388980 53 12 47 N 000 57 16 W Point
Height OD / Depth	Min: 51.50m Max: 53.00m

Project creators

Name of Organisation	Network Archaeology Ltd
Project brief originator	Local Planning Authority (with/without advice from County/District Archaeologist)
Project design originator	Network Archaeology Ltd
Project director/manager	Michael Wood
Project supervisor	Christopher Casswell
Type of sponsor/funding body	Developer

Project archives

Physical Archive Exists?	No
Digital Archive Exists?	No
Paper Archive recipient	Nottinghamshire Historic Environment Record
Paper Archive ID	KIQ11
Paper Contents	'other'
Paper Media available	'Context sheet','Report'

Project bibliography 1

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