

KIRTON QUARRY  
Archaeological Watching Brief

NETWORK ARCHAEOLOGY LTD  
for  
HANSON HEIDELBERG CEMENT GROUP

Report no. 598

April 2013



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Archaeological Watching Brief

New Best Red Quarry and Cream Quarry extension

NGR: 470000 368900

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## DOCUMENT CONTROL

<b>Client 1</b>	Hanson Heidelberg Cement Group					
<b>Project</b>	Kirton Quarry					
<b>Document title</b>	Archaeological Watching Brief: New Best Red Quarry and Cream Quarry extension					
<b>Report no.</b>	598					
<b>Document ref.</b>	KIQ86 report v1.0					
<b>Distribution</b>	Brian Reid (Hanson Heidelberg Cement Group); Ursilla Spence (Nottinghamshire County Council)					
<b>Document comprises:</b>	<b>Doc. control sheet</b>	<b>Table of contents, lists of figures, plates and appendices</b>	<b>Text</b>	<b>Figures</b>	<b>Plates</b>	<b>Appendix</b>
	1	2	9	1	4	1

<b>Version</b>	<b>Status</b>	<b>Author(s)</b>	<b>Reviewer</b>	<b>Approver</b>	<b>Date</b>
0.1	Internal draft	Chris Casswell	Chris Taylor		13 Feb 13
1.0	Final version	Chris Casswell		Chris Taylor	12 Apr 13



<p>Network Archaeology Northern Office 15 Beaumont Fee Lincoln LN1 1UH Tel: 01522 532621 Email: <a href="mailto:enquiries@netarch.co.uk">enquiries@netarch.co.uk</a></p>	<p>Network Archaeology Southern Office 22 High Street Buckingham MK18 1NU Tel: 01280 816174 Email: <a href="mailto:enquiries@netarch.co.uk">enquiries@netarch.co.uk</a></p>
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## **NON-TECHNICAL SUMMARY**

Monitoring of topsoil stripping on the New Best Red Quarry and Cream Quarry at Kirton Quarry, Nottinghamshire, was undertaken by Network Archaeology Ltd in August and September 2012.

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.

Several features were found during the course of the watching brief, including a horse burial and fragments of a relict field boundary. Sixteen sherds of post-medieval, and one sherd of late Iron Age or early Roman, pottery were also found.

# 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: 470000 368900) (Fig. 1).

## 1.1 Work undertaken

New areas were opened on the southwestern side of the New Best Red Quarry and the northeastern side of the Cream Quarry (Figure 1; Plates 1 and 2). Topsoil stripping was carried out by a single tracked 360° excavator fitted with a 2m-wide toothless ditching bucket.

Work took place in two stages. Topsoil stripping in the New Best Red Quarry was undertaken on the 21<sup>st</sup> and 22<sup>nd</sup> August, and in the Cream Quarry between 12<sup>th</sup> and 19<sup>th</sup> September 2012.

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. The extension to the Best Red Quarry lies on a slight northeast facing slope between 55m and 53m OD, while in the Cream Quarry there is a steeper northwest facing incline between 115m and 93m OD.

## 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 Egmanon.

### **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 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 Quarry (Burton 2004). A number of post-medieval and modern features were 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 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 were 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 Quarry immediately to the south-east of the northern extension, although a general lack of archaeological finds was apparent (Casswell 2010). The following year a watching brief was conducted on land extending the quarry further to the northwest, but no archaeological deposits were recorded (Casswell 2011).

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 (IfA) 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 2012 Kirton Quarry watching brief is KIQ86.

#### **Written records**

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

#### **Drawn records**

One 1:50 plan, and three 1:20 section, drawings were made of excavated archaeological deposits. This was supplemented by two sketch plans of the overall topsoil stripped areas.

#### **Photographs**

A digital photographic record was maintained on site.

## 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

The finds were quantified and sent to appropriate specialists for assessment; these specialists are listed in the table below.

**Table 2.1 Material types and specialists**

Material type	Assessment by
Post-Roman pottery and CBM	Jane Young
Roman pottery	Ian Rowlandson
Animal bone	Richard Moore

### 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 E).

### **3. RESULTS**

#### **New Best Red Quarry**

A small area of topsoil, measuring 100m long and 40m wide, was stripped in the south-western corner of the New Best Red Quarry (Figure 1). There was a very clear horizon between the loamy topsoil and mottled grey and sandy yellow clay subsoil.

The subsoil was uneven with a suggestion of remnant furrows, especially towards the north-western corner of the area. They seemed to align roughly east to west, parallel to the southern boundary of the field, and to be on 6m spacing. Towards the south-eastern end there was a small concentration of very shallow plough-marks aligned with the western boundary and on 1.5m spacing.

Other than the furrows and plough-marks, no archaeological remains were observed.

#### **Cream Quarry**

A larger area was stripped to the north-east of the existing Cream Quarry (Figure 1). The topsoil and subsoil were very similar to those found in the New Best Red Quarry.

Two ditches (2011 and 2012) were found within the stripped area (Figure 2a). Ditch 2011 contained a loose organic fill and crossed the whole area from north-west to south-east. Modern metal finds were recovered from it, including bits of agricultural machinery and shotgun cartridges; these were not retained. Ditch 2012 was considerably shorter, measuring 8.5m long and 1.2m wide, and curving slightly from north-north-west to south (Figure 2b). Apart from the modern metal finds, no artefacts were found.

In the southern corner of the field a sub-rectangular pit (2008) was found to contain the skeleton on a horse (2009) (Plate 5). This pit had been deliberately created for receiving the skeleton and contained no other artefacts. The good condition of the bones suggests it was probably not buried very long ago (perhaps in the last 200 years), and it wasn't found in association with any other features. It is likely to represent a field death where the animal was buried where it had died.

In addition to the cut features recorded, one sherd of Roman, one of late medieval, and several sherds of post-medieval pottery were recovered from the topsoil.

### **4. DISCUSSION**

The remains found during archaeological monitoring accord well with findings made during previous work at the quarry (Sleap 2004 & 2006; Casswell 2008, 2010 & 2011): there was limited occupation in the area beyond recent agricultural use.

The number of artefacts and features recovered was, however, significantly higher than in previous years, and some faint plough scarring was apparent in the New Best Red Quarry. It had been assumed that the fields had been kept mainly for pasture; however, a more diverse range of agricultural practices on the site is now evident.

### **5. CONCLUSION**

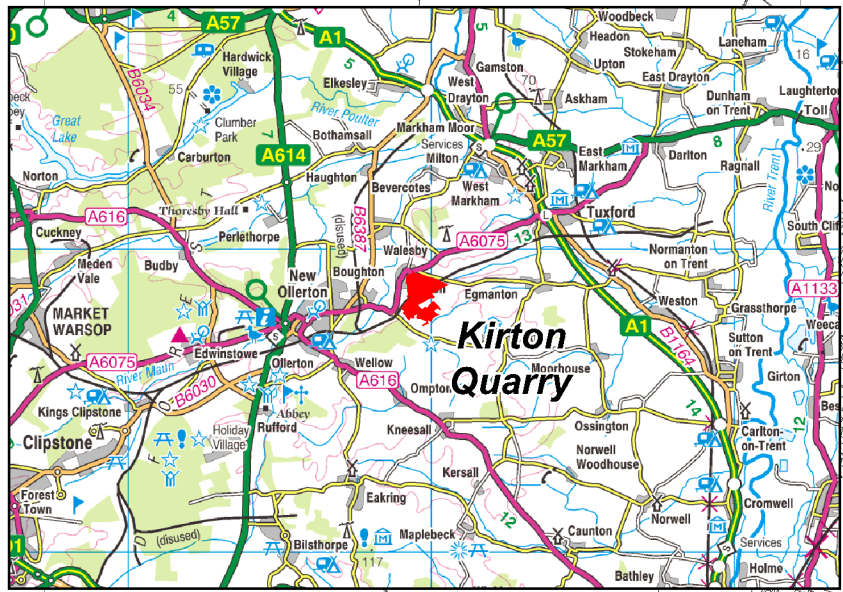
The results of this watching brief, when considered alongside earlier results, suggest there was little human activity at the site, other than for agricultural use until the development of the brickworks and quarry.



## 7. REFERENCES

- Burton, R. 2004, *Kirton Brickworks, Nottinghamshire, Archaeological Desk Based Assessment*. Unpublished Network Archaeology client report no. **312**.
- Casswell, C. 2008, *Kirton Quarry (Northern Extension), Archaeological Watching Brief*. Unpublished Network Archaeology client report no. **543**.
- Casswell, C. 2010, *Kirton Quarry, Archaeological Watching Brief*. Unpublished Network Archaeology client report no. **571**.
- Casswell, C. 2011, *Kirton Quarry, Archaeological Watching Brief*. Unpublished Network Archaeology client report no. **583**.
- Cooper, N. J. (ed) 2006, *The Archaeology of the East Midlands: an archaeological resource assessment and research agenda*. Leicester Archaeology Monograph **13**. Univ. of Leicester.
- Ekwall, E. 1991, *The Concise Oxford Dictionary of English Placenames. Fourth edition*. Clarendon Press, Oxford.
- English Heritage, 1991, *The Management of Archaeological Projects, 2nd edition*, London.
- English Heritage, 2006, *Management of Research Projects in The Historic Environment: The Morphe Project Managers Guide*. London.
- IfA, 1985, *Code of conduct*. Institute for Archaeologists (revised April 2010).
- IfA, 1990, *Code of approved practice for the regulation of contractual arrangements in field archaeology*. Institute for Archaeologists (revised October 2008).
- IfA, 1994, *Standard and guidance for an archaeological watching brief*. Institute for Archaeologists (revised October 2008).
- IfA, 1995, *Standard and guidance for archaeological excavation*. Institute for Archaeologists (revised October 2008).
- Sleap, J. 2004, *Kirton Quarry Archaeological Watching Brief*. Unpublished Network Archaeology client report no. **500**.
- Sleap, J. 2006, *Kirton Quarry Archaeological Watching Brief*. Unpublished Network Archaeology client report no. **520**.
- Soil Survey of England and Wales, 1983, *Soil Map of England and Wales*.
- Wood, M. 2010, *Written Scheme of Investigation to be carried out during an Archaeological Watching Brief*. Network Archaeology Ltd unpublished document.
- Young, J. 1999, *An Archaeological Desk-Based Assessment of Land to the East of Kirton Brickworks, Kirton, Nottinghamshire*. JSAC 530/99/01.

## **FIGURES**



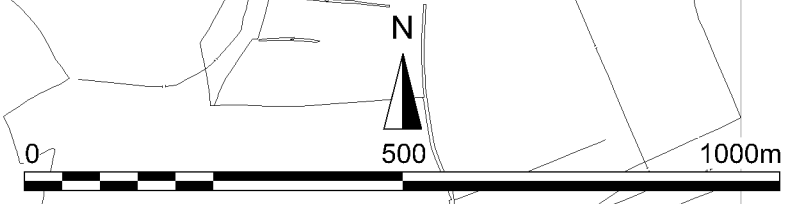
- Previously quarried
- New Best Red Quarry
- Cream Quarry

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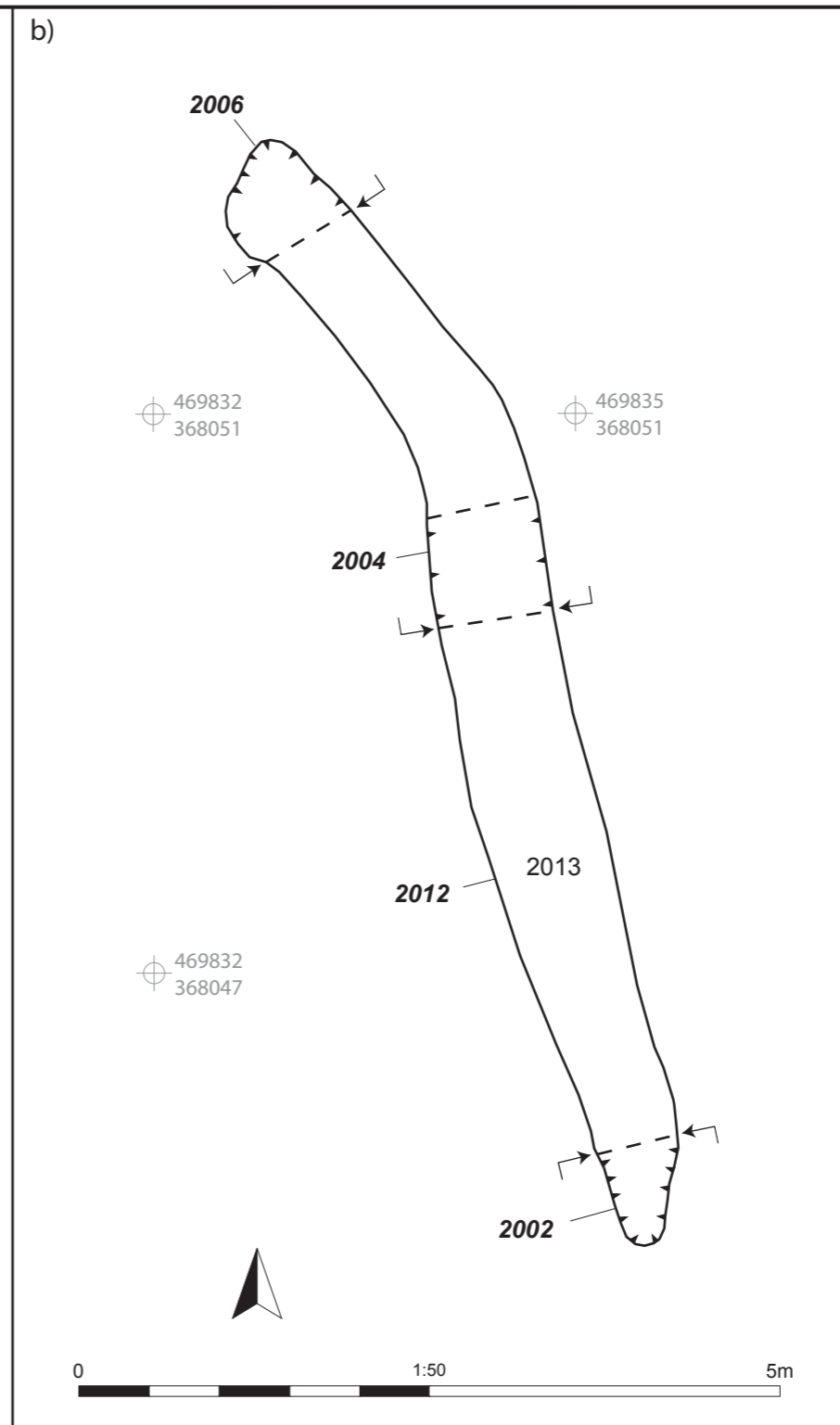
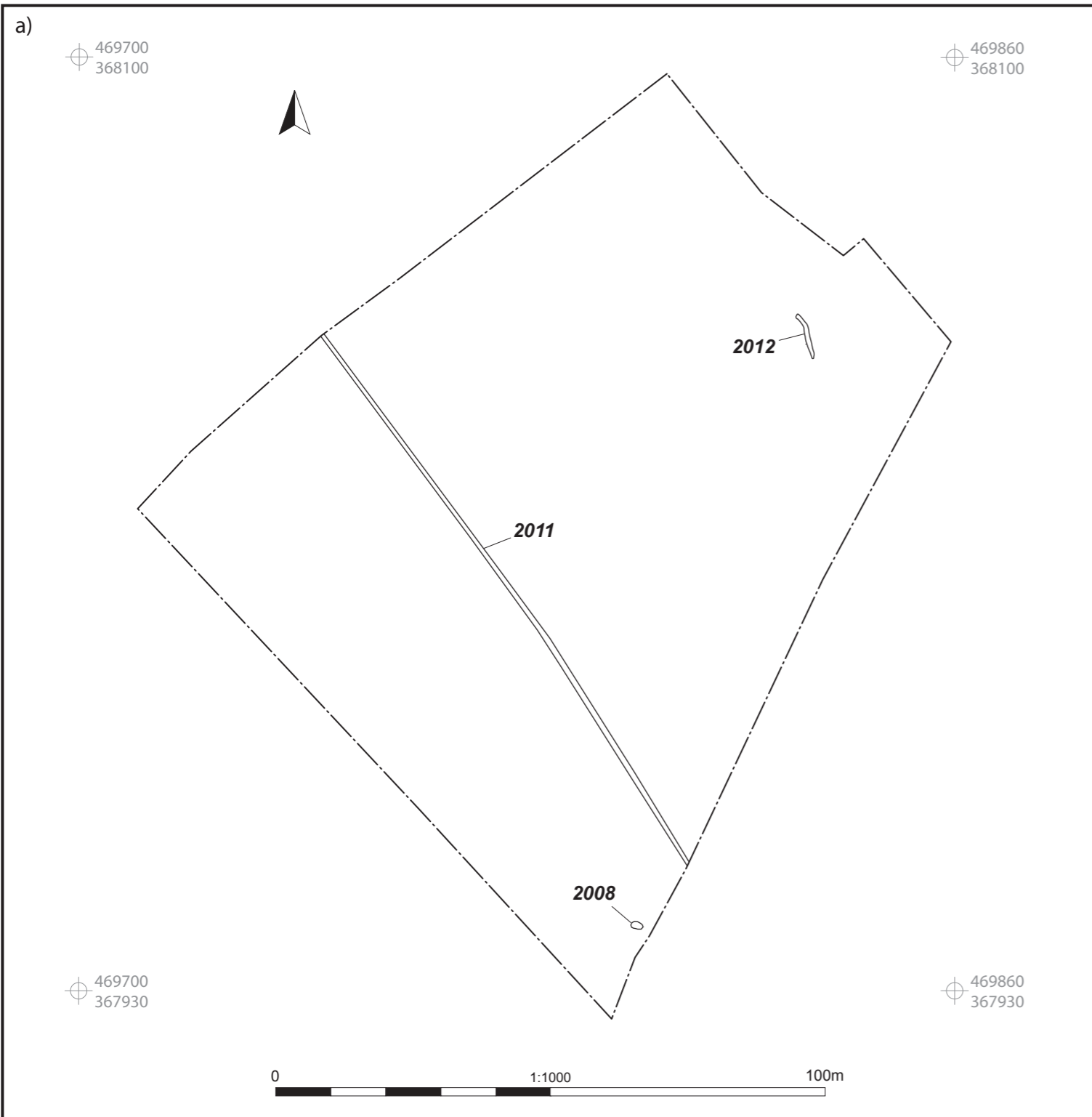


Kirton Quarry

**Figure 1**  
Location of current and previous areas of study

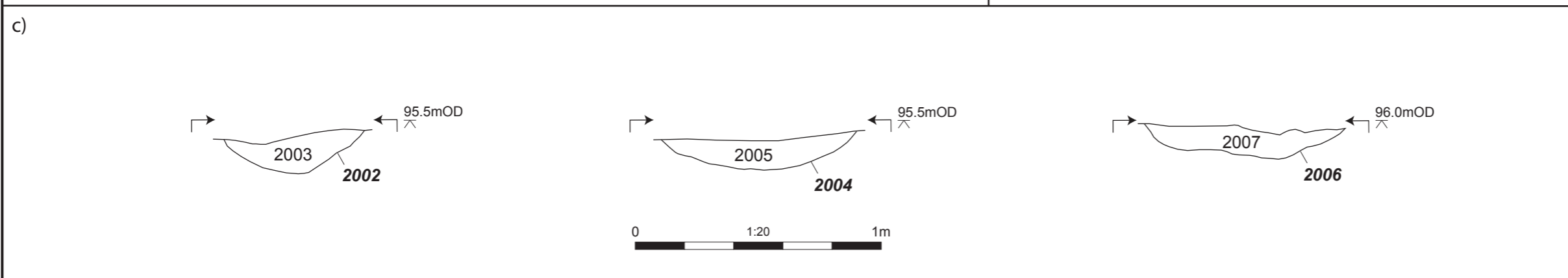
Scale: 1:10 000





--- Limit of excavation  
 — Cut line  
**1234** Cut number  
 1233 Layer/fill number

1.0	25/1/13	Plans & sections	CC	CC	CT
Ver	Date	Description	DM	Chk	App



**Kirton Quarry**

Figure 2: Plan and sections of Cream Quarry

a) Plan of Cream Quarry  
 b) Plan of ditch 2012  
 c) Section of ditch 2012  
 d) Section of cuts 2002, 2004 and 2006.

Scale 1:1000, 1:50 and 1:20

## **PLATES**



Plate 1: Working shot of New Best Red Quarry topsoil stripping, looking south-west



Plate 2: Working shot of Cream Quarry topsoil stripping, looking north-east



Plate 3: New Best Red Quarry after topsoil stripping, looking south



Plate 4: Cream Quarry after topsoil stripping, looking south-west



Plate 5: Horse skeleton 2009 in grave cut 2008

## **APPENDICES**

## Appendix A – Context Summary

Area	Context	Type	Dimensions	Description	Interpretation
New Best Red	1000	Layer	<0.3m thick	Mid greyish brown, friable to plastic, clayey silt	Topsoil
New Best Red	1001	Layer	Unexcavated	Mottled greyish brown and yellowish brown silty clay	Subsoil
Cream	2000	Layer	<0.33m thick	Mid greyish brown, friable to plastic, clayey silt	Topsoil
Cream	2001	Layer	Unexcavated	Reddish brown silty clay with patches of light grey and yellowish brown	Subsoil
Cream	2002	Cut	0.6m wide x 0.14m deep	Wide u-shape	Ditch
Cream	2003	Fill	0.6m wide x 0.14m thick	Light to mid yellowish brown firm clayey silt	Ditch fill
Cream	2004	Cut	0.8m wide x 0.12m deep	Wide u-shape/scoop	Ditch
Cream	2005	Fill	0.8m wide x 0.12m thick	Light to mid yellowish brown firm clayey silt	Ditch fill
Cream	2006	Cut	0.8m wide x 0.1m deep	Wide u-shape/scoop	Ditch
Cream	2007	Fill	0.8m wide x 0.1m thick	Light to mid yellowish brown firm clayey silt	Ditch fill
Cream	2008	Cut	1.7m long x 0.8m wide x 0.6m deep	Sub-rectangular, long axis E-W, steep sides and flat base	Horse burial
Cream	2009	Skeleton	N/A	Articulated bones	Horse skeleton
Cream	2010	Fill	1.7m long x 0.8m wide x 0.6m thick	Mid greyish brown silty clay	Horse burial fill
Cream	2011	Fill/Cut	110m long x 1m wide	NW-SE linear, brownish grey clayey silt fill	Modern field boundary
Cream	2012	Cut	8.5m long x 0.8m wide	Slightly curving NNW-S linear	Ditch

## Appendix B - Roman pottery

*Ian Rowlandson*

### Spot date

Context	Spot date	Comments
2000	2C+	A small group of unstratified pottery including two greyware sherds from a single vessel in a local 'Trentside' fabric and a handmade coarse quartz gritted sherd dating to the Iron Age or early Roman period.

### Sherd data

Context	Fabric	Form	Decoration	Vessels	Alt	Comments	Sherd	Weight (g)	Rim diam	Rim eve
2000	GREY	CLSD		1		BS; TRENSIDE FABRIC ?JAR	2	3	0	0
2000	QUCM	-	HM	1	VAB	BS? NEAR RIM; REDUCED; QUARTZ- COMMON MEDIUM; VERY ABRADED	1	11	0	0



## Appendix C - Post-Roman Pottery and CBM

Jane Young

### Pottery archive

Context	Cname	Sub-fabric	Form type	Sherds	Weight (g)	Part	Action	Description	Date
1001	BERTH	fine orange sandy	large bowl	1	40	rim	discarded		18th to 19th
1001	BERTH	fine red sandy	drinking vessel	1	5	BS	County Type Series	dark brown glaze;Staffs/Derbs	mid 17th to 18th
1001	MP	purple/brown/orange	jug/jar	1	42	BS	County Type Series	brown glaze;probably Ticknall	15th to 16th
1001	BERTH	fine orange sandy	large bowl	1	50	base	discarded	wear mark on basal edge;dark fe flecked brown glaze int	18th to 19th
1001	NNLBS		large bowl	1	97	rim	County Type Series	int dark brown glaze;poss repair or side handle scar	17th to 18th
1001	NNLBS		large bowl	1	12	BS	County Type Series	thick int white slip with spots of yellow glaze;ext orange slip	late 17th to 18th
1001	BL	medium orange sandy	jar	1	9	BS	discarded	int & ext glaze	late 17th to 18th
1001	BERTH	coarse orange sandy	bowl	1	16	rim	County Type Series	int glaze;Staffs/Derbs	late 17th to 18th
1001	BL	fine orange sandy	large bowl	1	24	rim	discarded	abraded;int glaze	18th to 19th
2000	CMW	reduced fabric	jug	1	14	BS	County Type Series	blistered brown glaze	mid 15th to 16th
2000	BL	MP type	jar	1	9	BS	County Type Series	int glaze	mid 17th to 18th
2000	CREA		cup	1	2	rim	discarded		mid/late 18th to mid 19th
2000	PORC		cup	1	6	rim	discarded	fluted	19th to 20th

Context	Cname	Sub-fabric	Form type	Sherds	Weight (g)	Part	Action	Description	Date
2000	TPW		plate	1	3	rim	discarded		19th to 20th
2000	TPW		jam jar	1	8	rim	discarded	..UNDEE ..MARM..	late 19th to mid 20th
2000	BL	fine-medium red sandy	jar/bowl	1	5	BS	discarded	int glaze	late 17th to 18th

### CBM archive

Context	Cname	Fabric	Frag	Weight (g)	Action	Description	Date
1001	BRK	coarse orange-red	1	874	discarded	very abraded;105x53mm;sand moulded;probably fairly local	late 17th to 19th

## **Appendix D – Animal Bone**

*Richard Moore*

The articulated remains of a horse skeleton (2009) recovered from a shallow pit (2008) beneath the plough soil at Kirton Quarry in Nottinghamshire were examined.

### **Bones present**

Much of the post-cranial axial skeleton is present: atlas, axis and five further cervical vertebrae; at least twenty thoracic and lumbar vertebrae, the fragmentary remains of the sacrum and two caudal vertebrae. The bodies of most of these bones survive, though there has been much damage to the neural spines and lateral processes.

Parts of the skull are represented by a large number of small to very small fragments. Five upper right maxillary cheek teeth and two incisors are present. There are no identifiable mandible fragments, nor any lower teeth.

A large number of rib fragments include several in which the articular end and a substantial proportion of the blade survive.

The articular ends and substantial parts of the blades of both scapulae are present, along with the proximal ends of both humeri and part of the distal end of the shaft of the left humerus. The right scapula blade is rather more complete than the left.

The right innominate is complete, and much of the left innominate is present. The right femur is also complete, as is the right patella. The proximal end of the left femur with part of the shaft, and the medial condyle of the distal end of the same bone are also present.

A fragment of the proximal articulation of the right tibia is the only identified representative of any of the lower limb bones.

### **Condition**

Though having suffered damage, the bones are generally in a good condition, with little obvious loss of the mineral component and considerable survival of their organic content.

### **Age at death**

All of the epiphyses are fully fused, indicating that the animal was at least 4 to 5 years old, the age by which the vertebral epiphyses of horses become fully fused (Schmid 1972, 74). The dentition suggests a mature animal, at least 6 years old.

### **Size**

The bones are relatively robust implying a fairly large animal. The complete femur could be used to estimate the height of the animal, but most of the published data on the relationship between bone length and height rely on other bones, such as metapodials, which commonly survive better than do femora.

### **Pathology**

The neural arches of two of the thoracic vertebrae are fused, and the neural spine of another vertebra is slightly bent. These deformations are likely to have been caused by undue stress. Their nature is perhaps more typical of stress from a collar rather than from a saddle and might be an indication that this was a working draught animal.

### **Discussion and recommendations**

This was an isolated burial, suggesting that it represents the convenient disposal of a field death. The animal was presumably buried on its back and leaning to the right. The burial was very shallow and subsequent ploughing had removed the parts of the limbs that project below the body, and damaging the higher-lying left side. There was no indication of the date of the burial, but the relatively good condition of the bone might suggest that it was of no great antiquity.

Lacking dating and in the absence of a useful archaeological context, the significance of this find is minimal. No further work is justified and retention of the bones is not recommended, although they may find a use for educational or training purposes.

**References**

Schmid, E. 1972. Atlas of animal bones, Elsevier, Amsterdam

## Appendix E

### OASIS Form

**OASIS ID: networka2-146267**

#### Project details

Project name	Kirton Quarry Watching Brief 2013
Short description of the project	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. No archaeologically significant remains were found.
Project dates	Start: 21-08-2012 End: 19-09-2012
Previous/future work	Yes / Not known
Any associated project reference codes	KIQ11 - Sitecode
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	POTTERY Roman
Significant Finds	POTTERY Post Medieval
Significant Finds	ANIMAL BONE Uncertain
Investigation type	"Watching Brief"

#### Project location

Country	England
Site location	NOTTINGHAMSHIRE NEWARK AND SHERWOOD KIRTON Kirton Quarry
Postcode	NG22 0PB
Study area	1.50 Hectares
Site coordinates	SK 69786 68025 53 0 53 12 15 N 000 57 18 W Point

Site coordinates SK 69802 68931 53 0 53 12 45 N 000 57 16 W Point  
Height OD / Depth Min: 53.00m Max: 115.00m

#### 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 Chris Taylor  
Project supervisor Christopher Casswell  
Type of sponsor/funding body Developer

#### Project archives

Physical Archive recipient None  
Physical Archive ID KIQ86  
Physical Contents "Ceramics"  
Physical Archive notes County type series pottery  
Digital Archive Exists? No  
Paper Archive recipient Nottinghamshire Historic Environment Record  
Paper Archive ID KIQ86  
Paper Contents "none"  
Paper Media available "Context sheet","Drawing","Report"

#### Project bibliography

1  
Publication type Grey literature (unpublished document/manuscript)  
Title Kirton Quarry archaeological watching brief  
Author(s)/Editor(s) Casswell, C.  
Other bibliographic details Report no. 598  
Date 2013  
Issuer or publisher Network Archaeology Ltd  
Place of issue or publication Lincoln  
  
Entered by Chris Casswell (chrisc@netarch.co.uk)  
Entered on 25 March 2013