



University of  
**Leicester**

**Archaeological Services**

**An Archaeological evaluation at Strancliffe Hall  
Cotes Road, Barrow upon Soar, Leicestershire.**

**NGR: SP 572 181**

**James Harvey**



ULAS Report No 2011-135  
©2011

**An Archaeological Evaluation at Strancliffe Hall,  
Cotes Road, Barrow upon Soar,  
Leicestershire**

**NGR: SK 57250 18150**

**James Harvey**

**For: The Environmental Dimension Partnership**

Approved by:

Signed:



Date: 06.09.2011

Name: Patrick Clay

**University of Leicester**

Archaeological Services

University Rd., Leicester, LE1 7RH

Tel: (0116) 2522848 Fax: (0116) 2522614

**ULAS Report Number 2001-135**

©2011

**X.A.108.2011**

## CONTENTS

Summary .....	1
1. Introduction.....	1
2. Site Description, Topography and Geology.....	2
3. Historical and Archaeological Background.....	3
4. Aims and Objectives .....	8
5. Methodology.....	8
6. Results.....	8
7. Discussion.....	20
9. Archive and Publication.....	22
10. Bibliography and Resources .....	23
11. Acknowledgements.....	24
Appendix 1 The Miscelaneuos Finds from Strancliffe Hall, Barrow upon Soar.....	25

## FIGURES

Figure 1: Site location plan. Scale 1:25000 .....	2
Figure 2: Close-up of site location showing the proposed development area (boundary marked in red). Scale 200m grid.....	3
Figure 3: Extract of John Prior's county map 1779 (Quorn Village Museum).....	5
Figure 4: Trench Location Plan incorporating the results of the geophysical survey ...	9
Figure 5: Plan of Trench 3 .....	13
Figure 6: Plan of Trench 4 .....	15
Figure 7: Pre-excavation shot of kiln [09] looking west.....	16
Figure 8: Detailed plans of kiln [09] and associated working area [17].....	19

## PLATES

Plate 1: Gullies [1] and [3] looking north-east.....	11
Plate 2: Pit/Scoop [5] looking south-west.....	12
Plate 3: Close-up of north-west facing kiln [09] cross-section showing the layer of heat-affected calcium carbonate on the base of the kiln .....	17
Plate 4: Section across kiln working area [17].....	17
Plate 5: Post-excavation shot of kiln [09] and working area [17] looking east.....	18

## **An Archaeological Evaluation at Strancliffe Hall, Cotes Road, Barrow upon Soar, Leicestershire (SK 57250 18150)**

James Harvey

### **Summary**

*University of Leicester Archaeological Services carried out an archaeological trial trench evaluation at Strancliffe Hall, Barrow upon Soar (SK 57250 18150) between the 2nd and 12th August 2011. The work was undertaken as a pre-application requirement in advance of a proposed residential development at the site.*

*Previous geophysical survey had highlighted the potential for archaeological features to be present within the site. The evaluation forms part of an archaeological impact assessment of the proposed development. A total of four trenches was excavated in order to target the possible features previously identified by the geophysical survey, as well as to evaluate apparently 'archaeologically unknown' areas of the site.*

*Trench 3 recorded evidence of pitting and a pair of parallel gullies that all produced modern pottery, suggesting that they may relate to the landscaping of Strancliffe Hall during the Victorian period. Trench 4 revealed evidence of three lime kilns as well as suggesting that the area had been previously utilized for clay extraction. No dating for this activity was recovered, but the kilns are likely to date to between the 16th and 17th centuries based on comparative studies.*

*The site archive will be held by Leicestershire County Council Heritage Services Section, accession number XA.108.2011.*

### **1. Introduction**

Planning permission is currently being sought for the construction of a new residential development on land at Strancliffe Hall, Barrow upon Soar, Leicestershire (NGR: SP SK 57250 18150; Fig. 1).

This report presents the results of a programme of archaeological trial trenching that was undertaken between 2nd and 12th August 2011. It follows a search of the Leicestershire Historic Environmental Record (HER) and geophysical survey of the area conducted by Archaeological Services WYAS (Harrison 2011) which concluded that the site had archaeological potential.

A strategy for the work was set out in the Written Scheme for Investigation (Clay 2010, hereinafter WSI). The trial trenching was undertaken to target specific anomalies identified by the geophysical survey as well as evaluate an area within the north-east of the site that had not suitable for geophysical survey but had increased

archaeological potential based on previous excavations undertaken adjacent to the site. The fieldwork was carried out in accordance with Planning Policy Statement 5: Planning for the Historic Environment (PPS5).

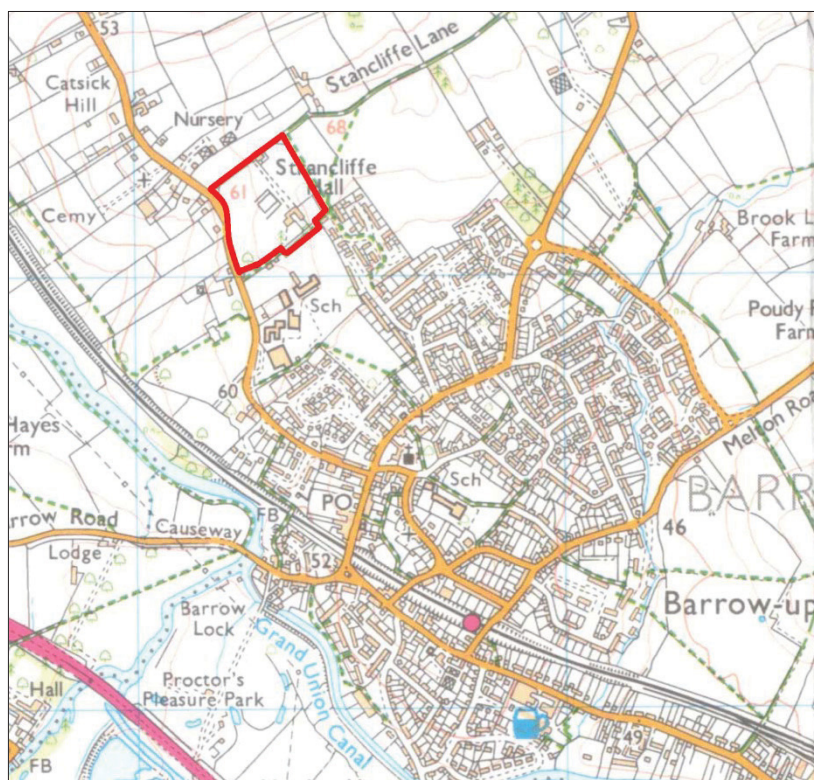


Figure 1: Site location plan. Scale 1:25000

Taken from Explorer Map 246: Loughborough. By permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. ©Crown Copyright. All rights reserved. Licence number AL 100029495.

## 2. Site Description, Topography and Geology

The proposed development area is located on the northern western edge of Barrow upon Soar, Leicestershire *c.*500m north-west of the village centre. The site consists of two fields within the extended grounds of Strancliffe Hall, located along its north-western and south-western sides and covering an area of *c.*5ha. It is bounded to the south-west by Cotes Road, to the north-west by Strancliffe Lane and to the north-east and south-east by residential development and by Humphrey Perkins High School respectively.

The general topography slopes gently down from 67m OD in the north-east corner to 63m OD towards the southern and western perimeter. A pronounced slope was recorded across the centre of the site in the western area where, the land drops steeply to the north. Towards the eastern boundary another slope was recorded that was on the same alignment, but here the land drops steeply to the south. It was also noted that the land rises steeply beyond the site boundary within the lower area.

The underlying bedrock geology consists of Barnstone interbedded mudstone and limestone. The majority of the site also contains overlying drift geology that consists of diamicton of the Thussington Member. This comprises a brown to reddish-brown deposit derived primarily from Upper Carboniferous and Triassic rocks; subordinate sand, gravel and stoneless clay and silt.

([http://maps.bgs.ac.uk/geologyviewer\\_google/googleviewer.html](http://maps.bgs.ac.uk/geologyviewer_google/googleviewer.html), August 2011).

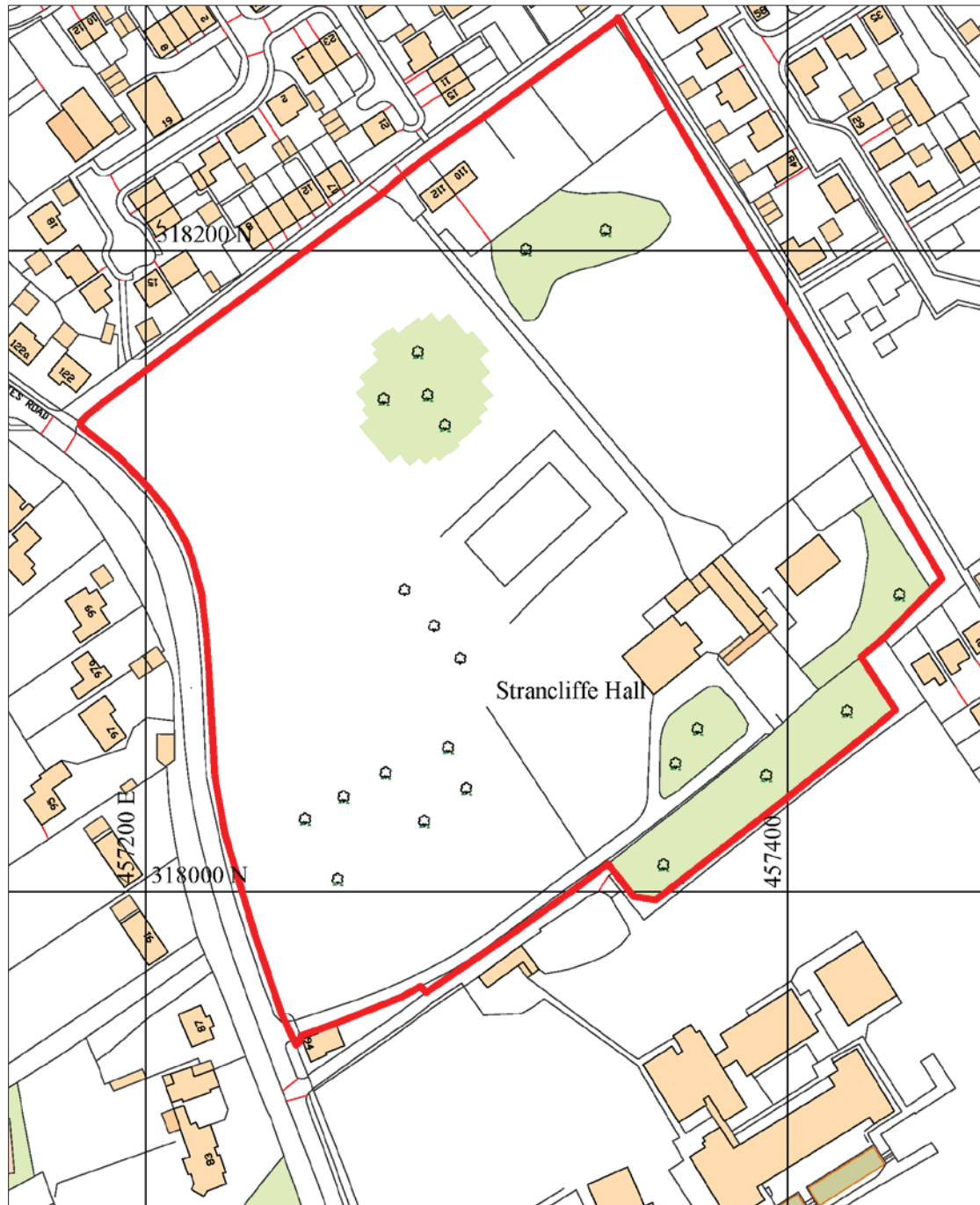


Figure 2: Close-up of site location showing the proposed development area (boundary marked in red). Scale 200m grid

### 3. Historical and Archaeological Background

#### *Historical Background*

Referred to as Barhou in the Domesday Survey of 1086, the village name of Barrow upon Soar is thought to be derived from the Old English bearu, meaning 'wood' or 'grove attached to a settlement'. Other early spellings have been given as Baro, Barhoo and Barwe and early writers have suggested that this is in reference to an ancient tumulus or burial mound (White 1877; Bennet 1938).

The entry for Barrow within the Domesday Survey of 1086 is as follows:

'In Guthlaxton wapentake, Earl Hugh holds Barrow from the King. 15c. of land. In lordship he has 4 ½ ploughs; 2 male with 1 female slaves. 40 villagers with 13 smallholders have 11 ploughs. 3 mills at 30s. woodland 1 league long and 4 furlongs wide which pays 5s. Earl Harold held this manor with the dependencies written below (including Castle Donington, Cossington, Hoton, Seagrave, Rearsby etc.)

Hugh Lupus, Earl of Chester, held the manor until his death in 1101, the manor staying with the Earls of Chester until the 13th century, passing to the Erdingtons and then to the Earls of Hastings. In 1483, following the beheading of William, Lord Hastings, accused of treason by Richard III, the manor was confiscated by the Crown and awarded to the Huntingdon family. In 1840 the manor was sold to Joseph Parker and in 1877 the Lord of the Manor was Edward Warner Esq. of Quorndon Hall, with other landowners in the parish given as Barrow Hospital & Co. trustees, H. Packe, W.J. Wooley, and J.S. Crossley, Esqs. (White 1877).

Barrow upon Soar is renowned for its limestone and it has been suggested that the area around Barrow has been associated with lime quarrying and burning since the Roman period. It has also been suggested that limestone was quarried and transported from here for the construction of the Roman town wall at Leicester (Cooper 2004). The first historical reference to limestone extraction at Barrow appears in the reign of Henry II, 1154-1189 (Ball 1976). An account from 1474 recorded 55 lime pits at Barrow and by 1481 this had increased to 85 (Farnham 1912). It is known that lime from Barrow was used extensively in the construction of Kirby Muxloe castle between 1481-1484. Further references are made to the limestone industry in the post-medieval period, but little reference is made to the specific locations of the quarries or the kilns.

John Prior (1729-1803) published a 1" to 1 mile map of Barrow as a part of his county survey in 1779. It provides some indication of lime working around the village. Three separate sites are marked to the north-west of the village, although the symbols may just be illustrative. These are located adjacent to Cotes Road and are in close proximity to the site. A further three lime working sites are also marked to the south-east of Barrow.

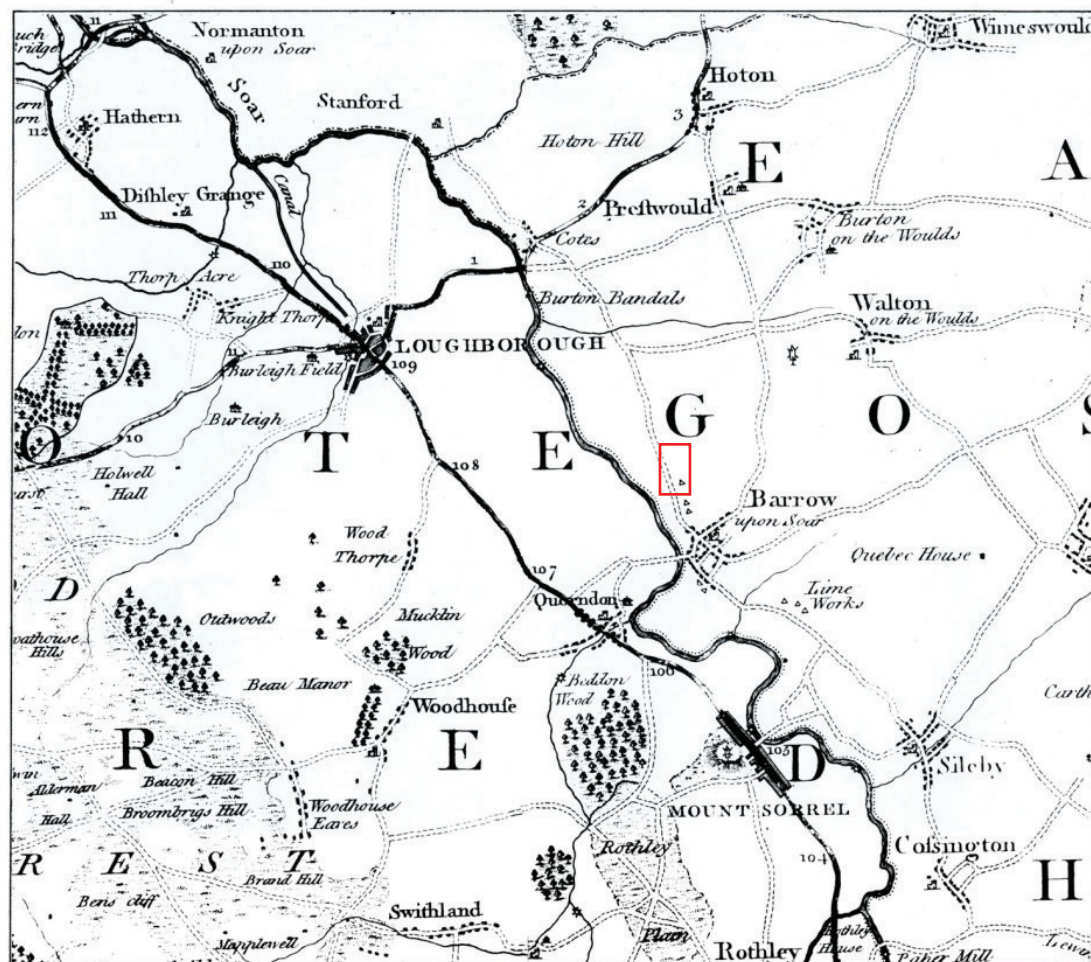


Figure 3: Extract of John Prior's county map 1779 (Quorn Village Museum)

The earliest map large scale map depicting the site is a survey of the manor of Barrow upon Soar, which dates from 1870. This map shows Strancliffe Hall, which is located in the east of the site. The hall is dated to 1868 (above the door entrance) and is a Grade II listed building (listing no. 1361118; **MLE 14641**). Also the map shows that the site was previously divided across two fields. The southern field includes the driveway to Strancliffe Hall and includes a circular copse of trees to the north-west. It is likely that the field represents the extended grounds of the hall.

The First Edition Ordnance Survey 1885 certainly suggests this area was open parkland. The circular copse previously recorded also appears to be fenced/ hedged. The northern field remains blank and unchanged. Notably the boundary between the two fields corresponds with the break of slope recorded on site. It was also noted on the map that a slope existed on the north-east boundary of Strancliffe Hall with the adjacent field.

Further north-east from the hall limekilns are recorded with clear roads leading north across Strancliffe Lane to the quarry area. The 1903 OS map records that the field boundaries within the site change, creating three separate fields that were aligned north-west to south-east, perpendicular with Strancliffe Lane. By the 1921 OS map the south-westernmost boundary had been removed. This land organisation has changed little since then apart from the construction of tennis courts on the north-



western side of the hall and the construction of properties fronting Strancliffe Lane in the north-eastern field.

### *Archaeological Background*

The site area is within an area of known archaeological potential recorded on the Leicestershire and Rutland Historic Environment Record. Most notably part of an Iron Age settlement and an extensive late medieval-modern lime working area were recorded during excavations on land to the north-east and north-west of Strancliffe Hall prior to residential development (McAree 2007). The area (which covered *c.*20 ha) was previously evaluated and eight areas within it were defined for further intervention prior to the development.

Within Area 5, located *c.*50m east of the site, evidence of Middle Iron Age settlement activity was recorded including elements of three roundhouse structures and a complex of ditch features, perhaps representing evidence of an enclosed farmstead. The extent of the activity was not ascertained, but the features appeared to continue westwards beyond the limit of the excavation. The features also continued eastwards, but any further activity in this direction appeared to have been truncated by limestone quarrying (McAree 2007, 14-15). Further Iron Age activity was recorded 150m north of the site on the northern edge of Area 2. A segment of ditch and a pit containing pottery had survived against the edge of a field boundary within an otherwise totally quarried area (McAree 2007, 14).

Elsewhere, extensive areas of limestone quarrying and lime kilns were recorded. These have been dated to between the 15th and 20th centuries. The earliest types of kiln recorded on the site are referred to as ‘sod’ or clamp kilns. This is the most basic design of kiln and consists of a shallow excavated pit into which alternate layers of limestone and fuel are stacked to form a mound. A small opening was left at the base for raking or extracting the lime. This would then be covered in turf or clay to form a clamp which would then be fired for between two and ten days depending on the size of the kiln. After firing the quick lime would be drawn from a hole left at the base.

Ten clamp kilns were recorded within Area 8, *c.*300m east of the site. The remains existed as sub-circular scorched and baked areas of clay and mudstone. Archaeomagnetic dating was undertaken on two of the kilns, producing date ranges of 1490-1510 and 1510-1540 for their last firings (McAree 2007, 15-16).

Evidence of a larger type of clamp kiln was also recorded, known as linear kilns. These consisted of rectangular features of bright red scorched and baked clay and mudstone, which were similar to the previous clamp kilns but much longer and narrower. Two of these types of kiln were recorded within Area 8, one of which was dated between 1570-1600. A further twelve were recorded in Area 7, located 200m east of the site. Four of these were dated to *c.* 1475, *c.*1490, 1515-1535 and *c.*1540 (McAree 2007, 16-17).

Elsewhere, much later evidence of lime working activities was recorded. These consisted of brick built pot kilns (also known as field kilns). These took the form of an inverted cone, 3-3.5m in diameter and up to 2.2m deep. The sides tapered to a base that was about 1-1.3m in diameter, containing one or more draw holes. These types of kilns would have been completely open at the top and not projected more than 0.5m above ground level. Initial charging and firing of the kiln was undertaken from the working area at the base and the subsequent loading of limestone was done from the top. The size of these kilns meant quick lime could be produced on an industrial scale.

Eighteen of these kilns were recorded during excavation related to within areas not covered by the mitigation that were spread across the development. Four archaeomagnetic dates were obtained for this design of kiln all dated to between the 18th and 19th centuries (McAree 2007, 18-20). Two further examples of these types of kilns were recorded during a separate evaluation *c.*110m north-west of the site (Hurford 2006:9)

The latest type of kiln observed during the excavation related to five larger and more sophisticated brick kilns that were observed on the 1870 and 1885 maps discussed previously, located *c.*100m east of the site. They measured in excess 4.5m in diameter and were up to 3.6m deep. The major technological development in these kilns from the earlier pot kiln consisted of the introduction of vertical wall flues, which allowed air to be drawn further up the kiln. This would assist pre-heating of the kiln and produce a more intense firing. Two of these kilns were archaeomagnetically dated to the late 18th to early 19th centuries (McAree 2007, 20-22).

In the wider context, a concentration of archaeological activity has been recorded *c.*800m to the north-west of the site adjacent to the River Soar. In 1971 a ring ditch and several linear features, possibly representing two or more enclosures, were recorded from an aerial photograph (**MLE462**). Through fieldwalking and metal detecting, various artefacts have been recovered from the area consisting of two Iron Age coins, various Roman artefacts including 37 coins, 13 brooches, two finger rings, an ornately decorated nail cleaner, a bronze figurine of a hound and a small amount of pottery. Also, two fragments of Anglo-Saxon long brooches and a medieval seal matrix have been recovered. The group of finds would appear to indicate a ritual site rather than a settlement, perhaps suggesting the continued significance of Bronze Age funerary monuments positioned above the River Soar (**MLE9860-9864**).

### *Geophysical Survey*

A detailed magnetic survey (gradiometry) was undertaken across the western part of the site by Archaeological Services WYAS (Harrison 2011).

The northern half of the data set is characterised by a cluster of twenty rectangular shaped, short linear, high magnitude anomalies. The anomalies are remarkably similar in form, each measuring approximately 8m in length, spaced at fairly regular intervals and generally located along the same north-east/south-west alignment. The limit of these anomalies is defined by the line of a former field boundary shown on the 1888 OS map. It was suggested that these anomalies represent a series of linear kilns similar to ones recorded on the adjacent excavation. Also, clusters of smaller, amorphous anomalies of lower magnitude were recorded, which were often concentrated at the south-western ends of many of the possible kilns. These may represent the working areas, spreads of burnt material or ancillary features, such as pits and post-holes, at the open ends of the kilns (Harrison 2011, 3)

To the south of the former field boundary, several broad and amorphous anomalies of much lower magnitude are identified across the remainder of the survey area. These could be caused by a different type of kiln, although the strength of the magnetic anomaly would tend to suggest that these responses are probably due to backfilled clay extraction pits (Harrison 2011, 4).

#### **4. Aims and Objectives**

The main aims of the evaluation were:

- To identify the presence/absence of any archaeological deposits. In particular, the evaluation would target a variety anomalies highlighted by the geophysical survey, as well as evaluate within the eastern area close to known prehistoric activity, which had not suitable for prior geophysical survey.
- To establish the character, extent and date range for any archaeological deposits to be affected by the proposed development.
- To produce an archive and report of any results.

Within the stated project objectives, the principal aim of the evaluation was to establish the nature, extent, date, depth, significance and state of preservation of archaeological deposits within the application area, in order to determine the potential impact upon them from the proposed development.

#### **5. Methodology**

The WSI stated that four 30m x 1.8m trenches were to be excavated in order to target the anomalies highlighted by the geophysical survey as well as to assess the 'archaeologically unknown' area towards the north-east (Fig. 4).

The topsoil and overlying layers were removed under full archaeological supervision until either the top of archaeology or natural undisturbed ground was reached, or to a maximum safe depth given the specific site conditions.

The bases of the trenches were cleaned in areas where potential archaeology was observed. Archaeological remains were recorded and sample excavation was undertaken in order to determine the character and date of any remains. Bulk soil samples were taken as appropriate in order to evaluate the environmental potential of the site. Archaeological contexts such as 'cut' are indicated by square brackets e.g. [09]; those that are 'fills' are indicated by round brackets e.g. (07).

The trenches were located using a Topcon Hiper Pro GPS+ RTK System attached to a Topcon FC-100 controller. The data was processed using Topcon Tools GPS+ Post Processing Software and the final plans completed with the aid of TurboCad v.15 design software.

All the work followed the Institute for Archaeologists (IfA) *Code of Conduct (2010)* *Standard and Guidance for Archaeological Field Evaluations (2008)*.

#### **6. Results**

A total of four trenches were excavated during the course of the evaluation, totalling an area of 300 sq. metres (Fig.5, Table 1). These trenches closely matched their proposed locations set out in the WSI. Trench 1 was rotated slightly to avoid thick undergrowth. Trench 3 was extended slightly at its northern end in order to clarify the extent of a feature and Trench 4 was extended at its northern end in order to fully

expose one of the geophysical anomalies. The composition of the overlying deposits showed some variation across the site.

The topsoil generally consisted of a dark greyish brown clayey loam deposit containing limestone and sub-rounded pebble inclusions. This underlying subsoil (where present) consisted of a mid-dark greyish brown silty clay deposit that also contained limestone and sub-rounded pebble inclusions. Trench 4 contained no clear subsoil. The natural substratum was also relatively similar across the sites, consisting of reddish brown clay containing varied inclusions of sand, pebble and coal flecks. Initially it was suspected that this deposit may represent re-deposited material; however subsequent test pits excavated to a depth of *c.*2m found no conclusive evidence to support this theory.

It is likely the coal flecks are actually naturally occurring, given that diamicton includes carboniferous rock inclusions. This is also supported by the geotechnical data recorded from the site that suggested thick deposits of generally undisturbed clay within the evaluated areas. Trial holes were excavated to *c.*3m and recorded no evidence of the interbedded Barnstone mudstone and limestone bedrock.



Figure 4: Trench Location Plan incorporating the results of the geophysical survey (Scale: 200m Grid)

*Trench 1*

Interval (m) from SSE end	0	5	10	15	20	25	29.5
Ground (m) (OD)	66.72-66.96						
Topsoil depth	0.31	0.40	0.30	0.25	0.26	0.30	0.30
Subsoil depth				0.42	0.38	0.59	0.50
Top of natural	0.31	0.40	0.30	0.42	0.38	0.59	0.50
Base of trench	0.47	0.55	0.42	0.55	0.46	0.70	0.59

Trench 1 was located within the north-east corner of the site. The trench was orientated north north-east to south south-west. The natural sub-stratum was reached between 0.30-0.59m. No archaeological finds or features were recorded in this trench.

*Trench 2*

Interval (m) from ESE end	0	5	10	15	20	25	29.5
Ground (OD)	65.84-66.94						
Topsoil depth	0.25	0.31	0.20	0.25	0.2	0.23	0.20
Subsoil depth	N/A		0.45	0.45	0.37	0.36	0.38
Top of natural	N/A	0.31	0.45	0.45	0.37	0.36	0.38
Base of trench	0.28	0.47	0.55	0.49	0.50	0.41	0.46

Trench 2 was located *c.*7m south of Trench 1. It was orientated east-south-east to west-north-west and was partially excavated down a prominent slope located at the eastern end of the trench. The natural sub-stratum was reached between 0.31-0.45m. No archaeological finds or features were recorded in this trench. The depth and nature of the overburden continued smoothly down the slope, with no clear backfilled material recorded towards its base. No archaeological finds or features were recorded in this trench.

*Trench 3*      *Figure 5; Plates 1 and 2*

Interval (m) from NE end	0	5	10	15	20	25	32
Ground (OD)	64.81-64.95						
Topsoil depth	0.22	0.24	0.20	0.19	0.20	0.22	0.20
Subsoil depth	Quarry	Quarry	0.30	0.33	0.30	Quarry	
Top of natural	N/A	N/A	0.30	0.33	0.30	N/A	0.20
Base of trench	0.60	0.60	0/46	0.49	0.31	0.50	0.60

Trench 3 was excavated *c.*100m west of Strancliffe Hall. It was orientated north-east to south-west in order to target three discrete positive anomalies that had been interpreted as possible backfilled clay extraction pits. The natural sub-stratum was reached between 0.31-0.45m. Two large pit features, recorded at either end of the trench did match two of the geophysical anomalies. Two parallel linear features were also recorded towards the south-west end of the trench.

Gully [01] was linear measuring 0.3m wide, 0.15m deep and spanning the width of the trench on a north-east to south-west alignment. Its sides were concave and its base was also slightly concave. It was filled by a mid greyish brown silty clay deposit (02) containing rare small to medium sub-rounded/sub-angular stones and occasional charcoal flecks and limestone fragments. A single handle fragment for a modern stoneware jug was recovered from this deposit Gully [03] was located 0.3m to the

south-east and ran parallel with gully [01]. It measured 0.4m wide and 0.24m deep and its sides were steep and sloping, with a reasonably flat base. It was filled with a very similar mid greyish brown silty clay deposit (04) with similar inclusions to (02).



Plate 1: Gullies [1] and [3] looking north-east

Immediately south-west, a large feature with linear sides was recorded that correlated with the geophysical anomaly suggesting a pit/scoop [05]. It measured 4.1m wide, 0.3m deep and spanned the width of the trench. Its northern side was steep and straight with an incline of  $c.45^{\circ}$  and it had a flat base. It was filled by two separately identifiable deposits. The primary fill consisted of a re-deposited natural reddish grey clay deposit (07) containing occasional medium sub-rounded/sub-angular stones. This deposit measured 0.8m wide and 0.2m deep and was located against the northern side of the feature. This was overlain by a mid greyish brown silty clay deposit (06) containing frequent small-medium sub-rounded/sub-angular stones, charcoal and limestone fragments and flecks. This deposit measured  $>3$ m wide and 0.3m deep. Within the fill a reasonable quantity of mixed pottery was recovered including sherds Roman, medieval, post-medieval and modern sherds (see Appendix 1).



Plate 2: Pit/Scoop [5] looking south-west

A further large modern pit was recorded at the north-eastern end of the trench. It too correlated a geophysical anomaly, but was much larger than previously suggested by the survey, although the edges were not well defined. It measured 5.5m long, >3m wide and >1m deep. The feature was sample excavated and found to contain re-deposited clay, sand, brick and other modern material including galvanised metal fragments.

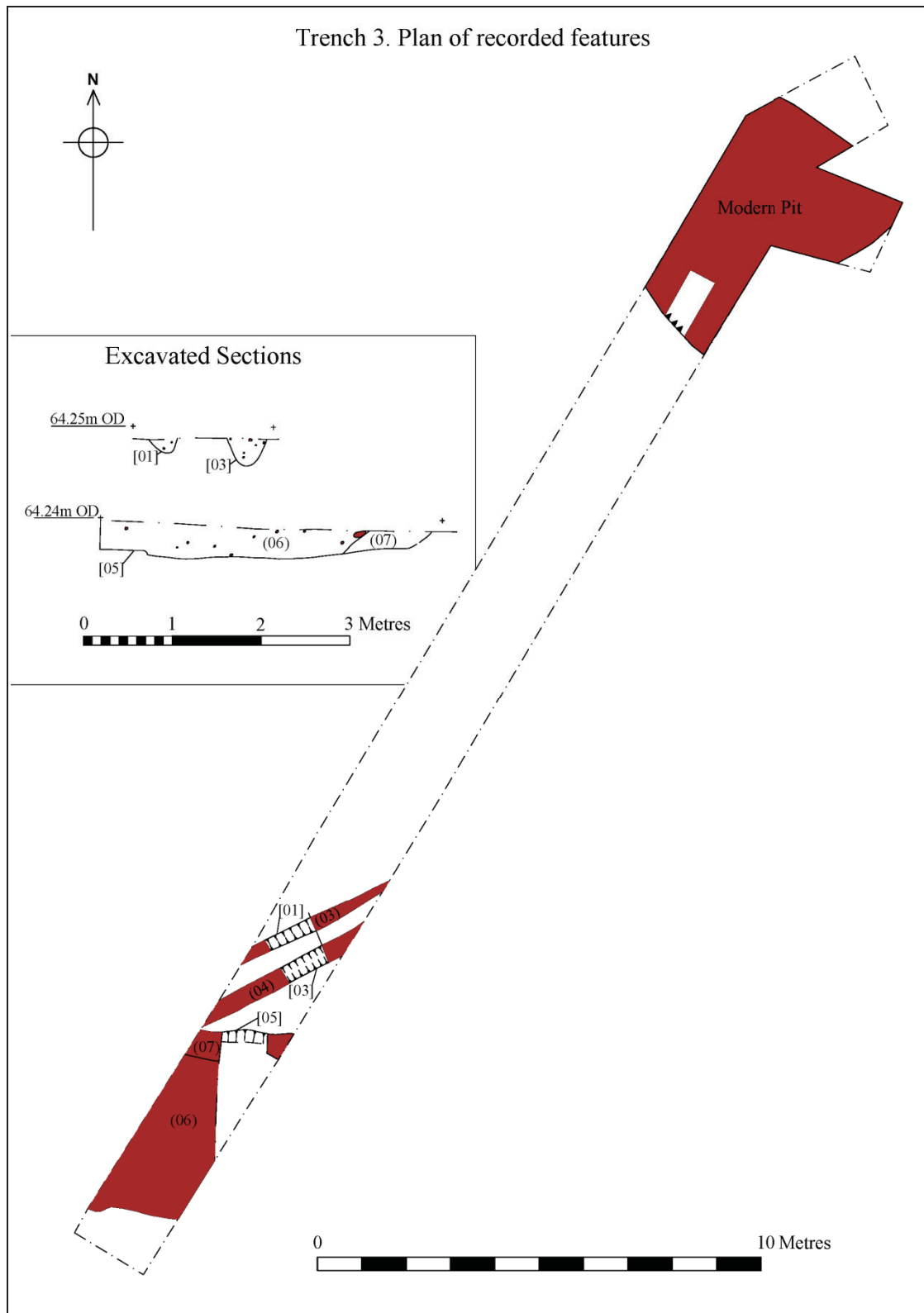


Figure 5: Plan of Trench 3



*Trench 4 Figures 6 and 7; Plates 3-5*

Interval (m) from SE end	0	5	10	15	20	25	34.5
Ground (OD)	64.32-64.64						
Topsoil depth	0.30	0.24	0.23	0.33	0.25	0.2	0.19
Overburden		0.40			0.4	0.32	
Top of natural/quarry waste	0.34	0.40	0.20	0.22	0.40	0.32	0.19
Base of trench	0.50	0.50	0.51	0.39	0.45	0.59	0.40

Trench 4 was located in the clearly lowered area in the north-western part of the site, *c.*110m north-west of Strancliffe Hall. It was orientated north-north-west to south-south-east mainly in order to target three strong positive magnetic anomalies highlighted by the geophysical survey and suggested to be possible kiln remains.

The overburden within this trench was very different compared to the other trenches. Directly below the topsoil, mixed quarry backfill deposits were recorded consisting of mixed grey siltstone, limestone fragments including large fragments of dressed limestone, as well as spreads of coal and ash. Beneath this layer the natural substratum was reached between 0.19-0.4m.

However, in some areas of the trench this overburden overlaid a deposit of greenish grey siltstone that appeared to be re-deposited, but was cut by archaeological features. A machine slot was excavated through this at the northern end of the trench and showed the deposit was only 0.2m deep and overlaid natural clay substrata.

Three similar kiln structures were partially exposed. These correlated with the geophysical survey. All three structures had partially heated/baked the surrounding substrata. Also, further areas of quarry pitting were observed in between the kiln remains. The northernmost kiln [08] appeared to be the most substantial and it was decided to extend the trench in order to expose the full extent of this feature.

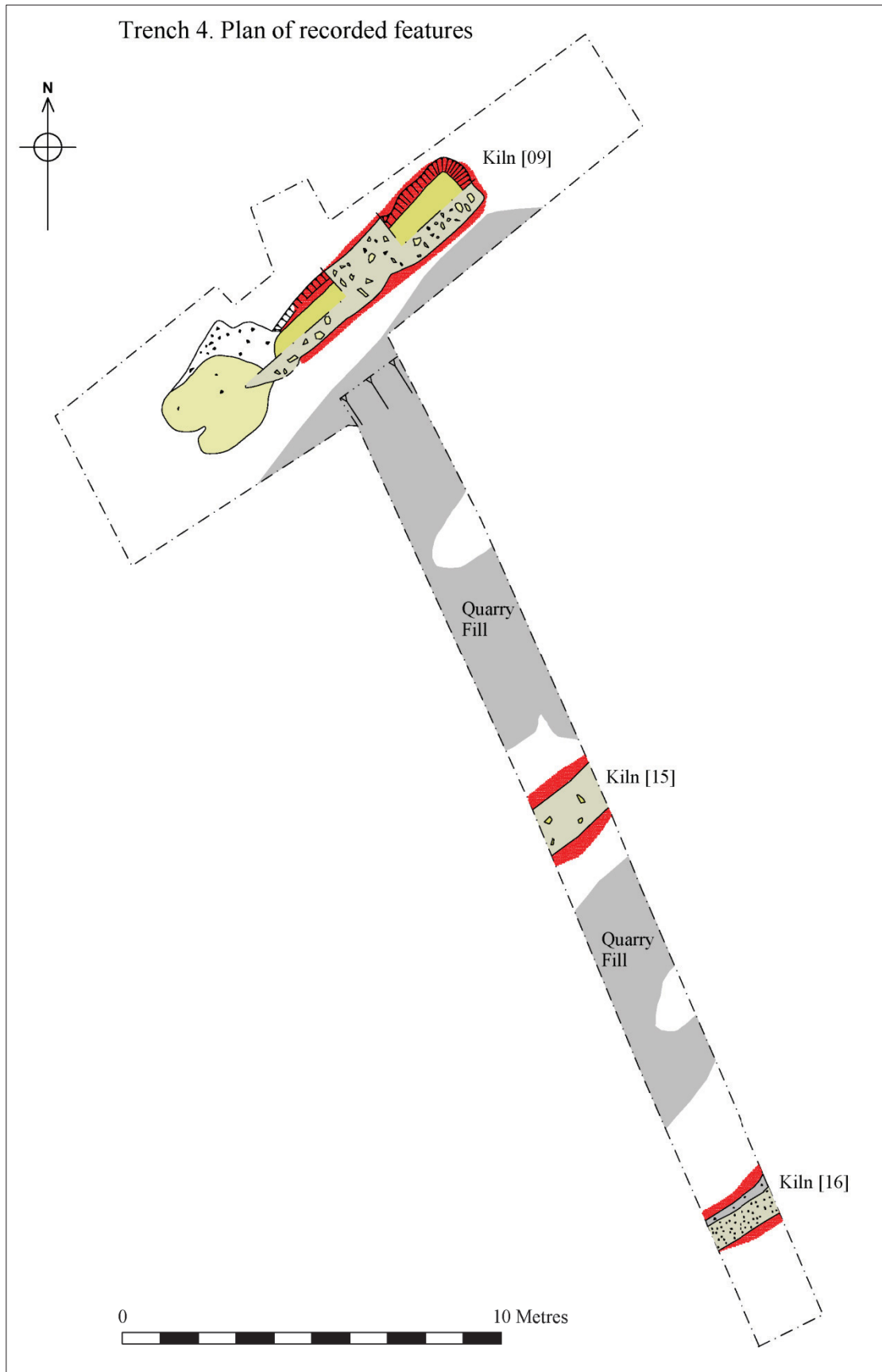


Figure 6: Plan of Trench 4



Figure 7: Pre-excitation shot of kiln [09] looking west

This kiln was linear in plan, aligned north-east to south-west and open at its south-west end. It measured 7m long and tapered from 1.65m at the north-east end to 1m at the south-west end. The excavated sides were generally steep, almost vertical, apart from the open end that was almost contiguous with the surrounding area. The feature was deepest at the closed north-east end, measuring 0.45m, becoming shallower towards the open end, which is reflected in the sloping ground level, rather than the base which remains relatively flat throughout the structure. The feature cut a layer of re-deposited greenish grey siltstone that had been baked red inside the kiln and the immediate surrounding edge apart from at the open end. Also, the surrounding area along the south-eastern side of the kiln had been scorched purplish red, suggesting the exposed level may represent the actual working surface when the kiln was in use.

There was no evidence that the kiln had originally been lined. However, there was a smooth deposit of mixed calcium carbonate and fuel ash (13) that formed a solid hard layer on the base of the kiln and extended along the whole length, continuing a further *c.*0.3m beyond the entrance. It was thickest at the closed end of the kiln, where it measured 0.1m thick, thinning towards the open end. Although this build-up is likely to have occurred naturally during the firing process, it appears to have been utilized as the kiln floor for subsequent firings, as clear evidence of burning could be seen on its upper surface.



Plate 3: Close-up of north-west facing kiln [09] cross-section showing the layer of heat-affected calcium carbonate on the base of the kiln

Immediately beyond the open end of the kiln the siltstone contained impressed fragments of coal spreading westwards. Within the adjacent trench section a more substantial layer of black fuel ash (12), measuring  $\geq 3\text{m}$  long,  $\geq 2.5\text{m}$  wide and a maximum of 300mm thick was observed. This is likely to represent the rake out of the waste material away from the kiln in that direction.

At *c.* 1m beyond the open end of the kiln a probable working area [17] was recorded. This feature was sub-square, and measured 2.7m long, 2.2m wide and up to 0.25m deep. Its excavated sides were variable. The north-eastern and north-western sides were steep, almost vertical, and elsewhere the sides were generally shallow and sloping. The base also was varied and undulating, but a clear dip was present on the north-west side that mirrored the edge and formed a shallow channel. It was filled by white grey powdered burnt limestone, with occasional coal and ash inclusions. The deposit extended beyond the top of the limits of the cut feature towards the entrance of the kiln.



Plate 4: Section across kiln working area [17]

After the kiln had gone out of use it was in-filled by two separately identifiable deposits. The primary in-fill was located directly on top of the solid calcium carbonate

base and consisted of a mixed deposit of mid pinkish brown baked clay and limestone/heated limestone fragments with frequent coal inclusions (10). This deposit measured a maximum of 0.24m deep and was confined to within the kiln itself.

It was overlain by a light grey silty clay and limestone deposit (08) containing occasional coal inclusions. This deposit measured a maximum of 0.13m deep and extended across the kiln and also filled a depression above the working area. It is likely this material represents part of the more widespread levelling backfill across the trench discussed previously. No finds were recorded within the kiln, but pottery recovered from above it (presumably within deposit (08)) dates from between the 18th and 19th centuries.



Plate 5: Post-excitation shot of kiln [09] and working area [17] looking east

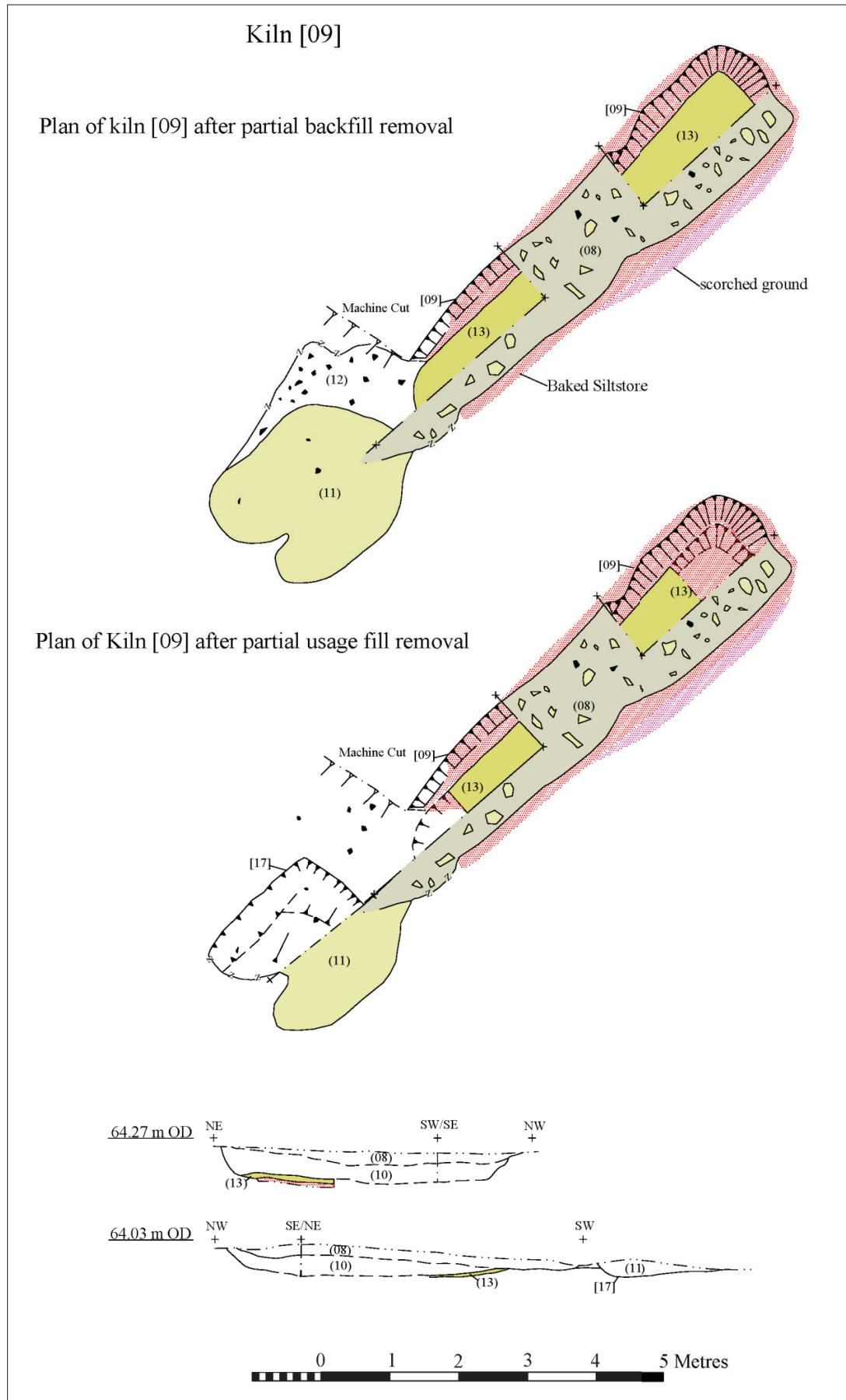


Figure 8: Detailed plans of kiln [09] and associated working area [17]

The other two partially exposed kiln structures [15]/[16] were not fully excavated. The geophysical survey suggested they were both in excess of 7m in length, were also orientated north-east to southwest and possibly also had working areas at their south-west ends. The exposed section of Kiln [16] (the southernmost kiln) measured 0.9m wide. The surrounding edges of the structure were baked and it was filled by a similar deposit to (08), but the limestone appeared to be more crushed. This overlaid an ashy deposit on the north-west side of the feature. It is likely that the exposed section was close to the south-west entrance of the kiln.

Kiln [15] measured 1.25m wide and the surrounding edges were also baked. Again, it was filled by a similar deposit to (08). It seems likely the exposed section of the kiln was located close to the wider north-east end of the structure.

As mentioned previously, two large areas of quarrying were also recorded in the base of the trench. They were cut from the exposed level and appeared to be filled with the same material that was located elsewhere directly below the topsoil. The northernmost quarry pit was excavated to a depth of c.0.5m during the machining of the trench, but neither of these was investigated further.

## **7. Discussion**

The trial trench evaluation has confirmed the results of the geophysical survey, as well as investigating the archaeologically unknown area within the north-eastern part of the site. Positive results were established within two of the four excavated trenches and these have revealed evidence of lime kilns and probable clay extraction.

Trenches 1 and 2 were excavated in the north-east corner of the site, where a potential for Iron Age activity was highlighted from previous excavations on the adjacent site. However, no archaeological deposits were recorded within Trenches 1 and 2, suggesting that the recorded activity does not spread into the site.

Trench 3 was excavated in the southern area of the site, where the geophysical survey suggested a large number of pit-like anomalies were present. Features corresponding with these anomalies, as well as two small parallel gullies, were recorded within the trench, but all contained modern pottery and may actually relate to landscaping around the grounds of Strancliffe Hall.

The excavated evidence suggests that structures recorded within Trench 4 represent the remains of clamp kilns, although no remains of any of the above ground structure survived. Clamp kilns are the most basic design of kiln and consist of a shallow pit into which alternate layers of fuel and limestone are stacked to form a high dome above the ground, with an opening left at one end to rake or extract the lime. The whole structure was then covered in turf or clay to form a 'clamp'. It was then burned for between 2-10 days depending on the size of the kiln (McAree 2007, 6).

Although only one of the kilns within Trench 4 was fully investigated, it seems likely from the geophysical survey and the exposed remains that all three kilns are structurally similar. The geophysical survey suggests the remains of approximately twenty kilns are located within this lowered area. Their parallel arrangement would suggest that the kilns are broadly contemporary, which is understandable given that many kilns would have been kept operational simultaneously by a group of workers, given the length of time it would have taken for each one to burn.

The kilns have all been constructed in an area of lower ground suggesting that the site may have previously been subject to extensive clay excavation prior to their

construction. Presumably, the site was being used as a source of clay for the construction of 'clamp' layers on kilns located nearby. Areas of further clay quarrying were recorded in between the kilns on the base of the trench and may represent localised clay excavation relating to the adjacent kilns.

Although the lime kiln partially excavated within Trench 4 does not directly correlate with any of the types that have been previously recorded in the recent excavation of the surrounding area (McAree 2007), it does have distinct similarities with the 15th and 16th century linear kilns recorded within Areas 7 and 8 of the adjoining site (as discussed previously) but on a larger scale.

The examples of linear kilns seen previously did not exceed 6m in length, 1.5m in width and 0.3m deep. The kiln recorded during the evaluation did however exhibit the same structural elements that were recorded within these smaller kilns. The form of the structure exhibited the same narrowing towards its open end and widening into an arc at the closed end.

Also, the sides were near vertical and it had a flat base, which had both been heated to such a degree as to bake the surrounding ground and also create a halo of scorched clay/mudstone around the feature. The base of the kiln also contained a similar hard build-up of calcium carbonate and fuel ash forming a solid flat surface, seen previously albeit much thicker. Although this build-up is likely to have occurred naturally during the firing process, it appears to have been utilized as the kiln floor for subsequent firings, as clear evidence of burning could be seen on its upper surface. This hard base would have proved useful for emptying the kiln, as the siltstone natural becomes very flaked and loose once it has been fired.

The heating of the kiln appeared more intense at the closed end and that was also seen within the smaller linear kilns. It was suggested that this type of kiln operated on a draw principle, with an open flue or chimney situated at the closed end, creating a draught to draw air through the kiln, producing a quicker and more intense burn (McAree 2007, 24).

The excavated kiln also had a working area at its open end that was filled with a powder lime deposit. It is uncertain whether this deposit represents some of the final product of the liming process which had not been removed, or whether it was deliberately laid down in order to provide a clean area to extract the lime onto. There was no recorded evidence of any structures relating to a shelter over the working area. It is suggested that even a rudimentary shelter would be necessary to protect the quicklime from inclement weather, given its volatile nature (McAree 2007, 25).

The geophysical survey suggests that the other two kilns recorded within the trench also had associated working areas at their open ends, which was a characteristic of all the linear kilns recorded on the adjacent excavation, but only one of these areas revealed structural remains.

No artefactual material was obtained from the excavated deposits, in order to accurately date the kilns. Typologically, it would appear that the fully exposed kiln is very similar to the 15th and 16th century linear kilns recorded previously. However given that it is larger than all the others seen previously, it is more than just a general variation in size because the geophysical survey suggests that all the other kilns within this field are similarly large. Its surface area is *c.*25% greater than the linear kilns seen previously meaning the kiln could be stacked high, producing a significantly larger yield of quicklime.



A significant gap exists in the timeline for the limestone industry within this area based on the previous excavations. No kilns relating to the later 16th to 17th centuries were recorded; the period between the linear kilns and the more sophisticated brick built kilns. It seems feasible to speculate that the kilns recorded with the site may fit within this part of the timeline, given that they are still basic but are more industrialised. This would also fit into the interpretation that the limestone industry spread from the village core, following the excavation of the limestone, as the site is located further away from the village than where the clamp kilns have previously been recorded.

## 9. Archive and Publication

The site archive will be held by Leicestershire County Council Heritage Services Section, accession number XA.78.2011.

The archive contains:

- 4 trench recording sheets
- 1 context summary record
- 17 context sheets
- 1 photographic recording sheet
- 1 Sample records sheet
- 1 Drawing Index sheet
- 1 Drawing Index sheet (detail)
- CD containing digital photographs and report
- Survey data
- Unbound copy of this report
- Thumbnail print of digital photographs
- 33mm black and white contact sheet and negatives
- A box of finds

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, under ID: universi1-109185. Available at: <http://oasis.ac.uk/>

ID	OASIS entry summary
Project Name	Strancliffe Hall, Barrow upon Soar
Summary	<p>University of Leicester Archaeological Services carried out an archaeological trial trench evaluation at Strancliffe Hall, Barrow upon Soar (SK 57250 18150) between the 2nd and 12th August 2011. The work was undertaken as a pre-application requirement in advance of a proposed residential development at the site.</p> <p>Previous geophysical survey had highlighted the potential for archaeological features to be present within the site. The evaluation forms part of an archaeological impact assessment of the proposed development. A total of four trenches was excavated in order to target the possible features previously identified by the geophysical survey, as well as to evaluate apparently 'archaeologically unknown' areas of the site.</p> <p>Trench 3 recorded evidence of pitting and a pair of parallel gullies that all produced modern pottery, suggesting that they may relate to the landscaping of Strancliffe Hall during the Victorian period. Trench 4 revealed evidence of three lime kilns, as well as prior clay extraction. No dating for this activity was recovered, but the kilns are likely to date to between the 16th</p>

	and 17th centuries based on comparative studies.
Project Type	Evaluation
Project Manager	Patrick Clay
Project Supervisor	James Harvey
Previous/Future work	Previous: geophysics / Future: likely further recording
Current Land Use	Grassland
Development Type	Residential development
Reason for Investigation	PPS5
Position in the Planning Process	Pre-Application
Site Co ordinates	SK 572 181
Start/end dates of field work	02/08/2011-09/08/2011
Archive Recipient	Leicestershire County Council Heritage Services
Study Area	2.5ha
Associated project reference codes	Museum accession ID: XA.108.2011 OASIS form ID: universi1- 109185

A summary of the work will be submitted for publication in the local archaeological journal *Transactions of the Leicestershire Archaeological and Historical Society* and in due course.

## 10. Bibliography and Resources

Ball, M.E., 1976 'The Extractive Industries', in Evans, I M *Charnwood Heritage*, Rutland Press.

Bennett, R. H. 1938 *A Short History of Barrow-upon-Soar*. Loughborough, Echo Press Ltd.

Brown, D., 2008 *Standard and guidance for the preparation of Archaeological Archives* (Institute for Archaeologists).

Clay, P.N., 2011 *Written scheme of investigation for archaeological work: Strancliffe Hall, Cotes Road, Barrow on Soar (573 181) ULAS Design Specification No. 11-680 (unpublished grey literature)*.

Cooper, N.J., 2006 *The Archaeology of the East Midlands. An Archaeological Resource Assessment and Research Agenda*. Leicester Archaeology Monograph 13.

Farnham, G.F., 1912 *Quorndon Records*

Harrison, D., and Harrison, S., 2011 *Land at Strancliffe Hall, Barrow upon Soar. Geophysical Survey report WYAS Report 2224 (unpublished grey literature)*.

Hurford, M., 2006 *An Archaeological Evaluation at 136, Cotes Road, Barrow on Soar, Leicestershire (SK 570 185) ULAS Report 2006-110 (unpublished grey literature)*.

IfA, 2008 *Codes of Conduct and Standards and Guidance for Archaeological Field Evaluation*.

McAree, D., 2007. *Archaeological Excavation at Cotes Road, Barrow Upon Soar, Leicestershire 2006* Northamptonshire Archaeology Report No. 07/148 (*unpublished grey literature*).

White, W., 1977 *White's History, Gazetteer and Directory of the Counties of Leicester and Rutland*. 3rd Edition 1877

John Prior's map of 1779 was obtained from the Quorn village museum website <http://www.quornmuseum.com/display.php?id=1361> (accessed 5th September 2008)

The survey of manors of Barrow upon Soar, which dates from 1870, as well as the early Ordnance survey maps of the site, were obtained from the Leicestershire and Rutland Record Office and provided by the client.

## **11. Acknowledgements**

The fieldwork was funded by The Environmental Dimension Partnership and was carried out by James Harvey and Gerwyn Richards.. The finds were analysed by Deborah Sawday, all of ULAS. The project was Dr Patrick Clay managed the project, also of ULAS.

## Appendix 1 The Miscellaneous Finds from Strancliffe Hall, Barrow upon Soar

*Deborah Sawday*

The pottery, 20 sherds, weighing 239 grams, was catalogued with reference to the guidelines set out by the Medieval Pottery Research group, (1998), (2001) and the ULAS fabric series (Sawday 1989; Davies and Sawday 1999). The miscellaneous finds were also recorded. The results are shown below (table 1) and (table 2).

### *The Pottery*

Part of the rim of a Roman jar, in an Oxidised fabric, dating from the 2nd century AD or later, (E. Johnson pers. comm.) and two sherds medieval pottery, dating from c.1250 to c.1400/1450, were residual in context (6) [5], which also contained post-medieval and modern pottery. Three more sherds of unstratified medieval pottery were recovered from trench 3.

### *Miscellaneous Finds*

Of note were the fragments of ceramic building material in (6) [5], including brick and vitrified material, possibly from the lining of a kiln.

Table 1: The pottery by fabric, sherd numbers and weight (grams), by context.

Context	Fabric/Ware	Nos	Grams	Comments
POT				
2 [1]	SW - Stoneware	1	6	Modern, moulded rod handle
6 [5]	OW2 – Oxidised ware 2	1	7	Jar rim, Roman, 2nd C AD +
6 [5]	MS2 – Medieval Sandy ware 2	1	4	Oxidised sandy ware, abraded, possibly a coarse Nottingham ware, c.1250-1400
6 [5]	MS3 – Medieval Sandy ware 3	1	7	Abraded, c.1250-1400/1450
6 [5]	SW5 – Brown Salt Glazed Stoneware	2	34	?mug base – possibly late 18th C. (Oswald 1982, fig.VI. 20)
6 [5]	SW5	1	11	Moulded strap handle, modern
6 [5]	EA2 – Earthenware 2	5	38	Fragments of a wide mouthed bowl or pancheon rim, post medieval/modern
8 [9]	EA10 – White Earthenware	1	1>	modern
U/S T3	NO3 - Nottingham ware	3	13	Oxidised, very light grey interior, traces of pale green glaze ext, abraded, c.1275-1325
U/S T4	EA8 – Cream ware	1	4	Hollow wares, decorated with bands of yellow, white & dark brown, 1730-1850.
U/S T4	EA8	1	93	? base, vessel type unknown, c.1730-1850.
U/S T4	EA10	1	19	Shallow dish/bowl transfer printed under glaze – mid 19th C.
U/S T4	EA10	1	2	Moulded fragment

Table 2: The miscellaneous finds by material, number and weight (grams), by context.

CERAMIC BUILDING MATERIALS				
6 [5]	EA - Earthenware	2	78	Post medieval/modern
6 [5]	EA	3	17	Vitrified brick/kiln lining
6 [5]	EA	1	18	Vitrified brick
GLASS				
U/S T4	Bottle Glass	1		Embossed – 19th Century.
BONE				
6 [5]	Animal Bone	2		
MISC.				
10	Coal	6	9	
11	Coal	10	24	
12	Coal	c.20	50	

### *Bibliography*

Connor, A., and Buckley, R., 1999 *Roman and Medieval Occupation in Causeway Lane, Leicester*, Leicester Archaeology Mon. **5**.

Davies, S., and Sawday, D., 1999 'The Post Roman Pottery and Tile' in A. Connor and R. Buckley, 1999, 165-213.

MPRG, 1998 *A Guide to the Classification of Medieval Ceramic Forms*. Medieval Pottery Research Group, London.

MPRG, 2001. *Minimum Standards for the Processing, Recording, Analysis and Publication of Saxon and Medieval Ceramics*

Oswald, A., 1982 *English Brown Stoneware, 1670-1900*

Sawday, D., 1989 'The post Roman pottery', 28-41 in J.N. Lucas, 'An excavation in the north east quarter of Leicester: Elbow Lane, 1977', *Trans. Leicestershire Archaeol. and Hist. Soc.* **63**, 18-47.

## ULAS Contact Details

Richard Buckley or Patrick Clay  
University of Leicester Archaeological  
Services (ULAS)  
University of Leicester,  
University Road,  
Leicester LE1 7RH

**T:** +44 (0)116 252 2848

**F:** +44 (0)116 252 2614

**E:** [ulas@le.ac.uk](mailto:ulas@le.ac.uk)

**W:** [www.le.ac.uk/ulas](http://www.le.ac.uk/ulas)



INVESTOR IN PEOPLE



**THE UNIVERSITY OF THE YEAR 2008/9**