

**LAND TO THE REAR OF 41-73 HYKEHAM ROAD  
LINCOLN  
LINCOLNSHIRE**

**ARCHAEOLOGICAL EVALUATION  
REPORT**

Site code	HYRL 08
NGR:	SK 96461 67940
Planning Ref:	2007/0178/0
Acc Code:	2008.114
PCA Ref:	08/456

Report prepared for

Lindum Homes

by

S. Williams

June 2008



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PCA 08/456/02/Rev A

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**Jones, Michael (City of Lincoln Council)**

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**From:** Jones, Michael (City of Lincoln Council)  
**Sent:** 11 August 2008 16:43  
**To:** 'Will Munford'  
**Subject:** RE: Hykeham Road

Dear Will,

I am happy to confirm that I accept the results of your preliminary site investigations, which indicate the presence of a late Roman pottery industry in the northern part of the site. In view of the shallow depth at which these remains survive, I do not see any alternative to excavation as a way of mitigating the impact of the development. We would therefore expect area excavation of the sites of those units of housing in the part of the site that are likely to contain such remains, which might include the potters' workshops as well as kilns. We did identify the three blocks that you specify in your message for which this approach would be appropriate.

I also confirm that it would be wise to check for any features on the alignment of the garden of 45 Hykeham Road and the strip of land formerly know as 'The Pingles'.

Apart from boreholes to check for the early river-line(s), the southerly ppt of the site would probably only need intermittent attendance during groundworks.

I hope that this clarifies the position.

Yours sincerely,

Mick Jones  
 City Archaeologist

-----Original Message-----

**From:** Will Munford [mailto:will@pre-construct.co.uk]  
**Sent:** 11 August 2008 13:31  
**To:** Jones, Michael (City of Lincoln Council)  
**Subject:** Hykeham Road

Mick,

With regard to Hykeham Road –

Lindum Homes are looking for some confirmation on how the project can proceed. I would very much appreciate a letter or email to either myself or Chris Brown at Lindum Homes clarifying that the evaluation report has been accepted and that it would be advisable for the development to proceed to a full application if we accept (as previously discussed) that a final archaeological condition for the site will exist as follows, (assuming that the site development plans previously viewed remain unchanged);

1) – Four area archaeological excavations in the northern half of the site in the footprints of the following plots;

- plots 25- 30 (area of approximately 30m x 15m).
- plots 2 – 4 (area of approximately 32m x 11m).
- plots 22 – 24 (area of approximately 30m x 15m).
- 20m due west of evaluation trench at same alignment. (area of approximately 1.5m x 20m) to record any extension of the linear features recorded during the evaluation within the trench located within the gardens.

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  - plots 22 – 24 (area of approximately 30m x 15m).
  - 20m due west of evaluation trench at same alignment. (area of approximately 1.5m x 20m) to record any extension of the linear features recorded during the evaluation within the trench located within the gardens.

2) - A borehole survey (running from the east of the site to the west) to establish whether the sites contains former river channels. This would be impossible post development.

3) - Watching briefs during the construction of plots in the southern half of the site and of the access roadway.

These mitigation proposals are based on the discussed factor that impact on the significant archaeology in the north of the site will be limited to the footprints of the plots listed. This is understood to be because all services and roads and other impacts will be within made ground (part of the development plan to alleviate flood risk).

Best regards

William Munford  
Senior Manager  
Pre-Construct Archaeology (Lincoln)  
47 Manor Road  
Saxilby  
Lincoln  
LN1 2HX

T: 01522-703 800

F: 01522-703 656

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Checked by AVG.

Version: 7.5.524 / Virus Database: 270.6.0/1603 - Release Date: 10/08/2008 18:13



## LINDUM HOMES

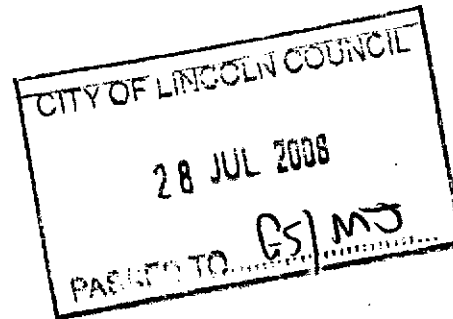
LINDUM BUSINESS PARK  
STATION ROAD  
NORTH HYKEHAM  
LINCOLN LN6 3QX  
TEL: 01522 500300  
FAX: 01522 852229

Our Ref: 4033/gc/8/cb

Your ref 2007/0178/O

24<sup>th</sup> July 2008

Heritage Team  
City of Lincoln Council  
City Hall  
Beaumont Fee  
Lincoln  
LN1 1DF



F.A.O Mr M Jones

**Archaeological Evaluation report relating to  
Proposed Residential Development, Rear of 41 Hykeham Road, Lincoln.**

Dear Mr Jones,

We enclose two copies of the evaluation report for your consideration, completed following site investigations undertaken by Pre Construct Archaeology in response the planning condition on our outline approval 2007/0178/O.

Some discussions have already taken place regarding potential further works & Will Munford of PCA will contact you shortly to discuss & hopefully finalise these. We anticipate these additional works will be undertaken once the road & house positions have been approved by the planners, following a further application which we are to submit shortly.

We trust this is clear & to your satisfaction.

Yours faithfully,

Chris Brown  
Building Surveyor

### Summary

*Pre-Construct Archaeology (Lincoln) carried out an archaeological evaluation for Lindum Homes on land to the rear of 41-73 Hykeham Road, North Hykeham, Lincolnshire (centred on NGR; SK 96461 67940).*

*A total of eight trenches were investigated, revealing evidence relating to Roman industrial use of the area in the form of a large 'occupation deposit', a series of ditches and a pottery kiln; this being an apparent outlier of the later Roman Swanpool industry. A small number of features remain undated.*

*The evaluation has identified a concentration of features towards the north of the site. The site exhibited a good state of artefact preservation, as demonstrated by the recovery of a complete pottery vessel from Trench 6.*



**Fig. 1:** General site location. Scale 1:25,000 and inset at 1:10,000. Site area shaded in red. (O.S. Copyright licence no. AL 51521 A0001)



## **1.0 Introduction**

Between 6<sup>th</sup> and 16<sup>th</sup> May 2008 Pre-Construct Archaeology (Lincoln) (PCA Lincoln) carried out an archaeological evaluation for Lindum Homes on land to the rear of 41-73 Hykeham Road, North Hykeham, Lincolnshire (centred on NGR; SK 96461 67940).

This work was undertaken to meet the recommendation of the Lincoln City Council Planning Archaeologist as part of a condition attached to an outline planning permission for redevelopment (ref: 2007/0178/0).

The evaluation was carried out in accordance with an Archaeological Specification prepared by PCA Lincoln in 2008. This approach is consistent with the recommendations of *Archaeology & Planning: Planning Policy Guidance Note 16* (Department of the Environment, 1990), *Standard and guidance for archaeological Field Evaluations* (IFA, 1999 as revised) and the LCC 1998 document *Lincolnshire Archaeological Handbook: A manual of Archaeological Practice*.

## **2.0 Site location and description**

The site is situated within the Lincoln suburb of Bracebridge, 4.5km southwest of the centre of Lincoln. It lies to the rear of 41-73 Hykeham Road and immediately to the west of the River Witham (centred on NGR; SK 9640 6794). Land to the south is occupied by allotment gardens; the north is bounded by commercial buildings, and housing/gardens are located to the west.

The site was divided into three areas; Area 1 is the proposed access route, comprising the gardens to the rear of 41-43 Hykeham Road. Area 2 is the main development area and Area 3 an area of floodplain. Both Areas 2 and 3 consist of scrubland. Combined, the three areas enclose approximately 2.1 ha which lies at approximately 6.00m AOD.

The underlying geology of the locale is mapped as alluvium overlying Lower Lias clay, shale and rare limestone (BGS, 1973).

## **3.0 Planning background**

Outline planning permission has been granted for the development of land to the rear of 41-73 Hykeham Road, North Hykeham, Lincolnshire. The proposed development would involve the construction of up to thirty dwellings, with access via 43 Hykeham Road (ref: 2007/0178/O).

This permission was granted subject to conditions; one being a program of archaeological evaluation prior to development - to determine the archaeological potential of the site and asses any potential threat that the development of the area may have on archaeological remains.

#### 4.0 Archaeological and historical context

The earliest archaeological evidence within Lincoln itself derives from finds of Neolithic and Bronze Age flint implements, although earlier (Mesolithic) knapped flints have been recovered 1km north east of the city in the area of the Roaring Meg spring.

Residual Neolithic and Bronze Age worked flints have been recovered from medieval and post-medieval contexts in the St Catherine's suburb of Lincoln, and recent work in this same area, involving sieving alluvial layers underlying medieval deposits, has recovered more than 400 worked flints dating from the Mesolithic period through to the Bronze Age (Rylatt 2008).

Although later pre-Roman settlement appears to have concentrated predominantly in the area of the Witham Valley, traces of Late Iron Age occupation was recovered during excavations at 181-3 High Street in the 1970's (Jones *et al.* 2003).

Archaeology relating to the Roman conquest and occupation of Lincoln is of national significance with important extant structural remains including entrance gateways such as the Newport Arch and the Lower West Gate, and segments of walling such as the Mint Wall in Bailgate.

Excavations in the area of the St Mary's Guildhall have identified a suburb to the main Roman town with traders' houses fronting Ermine Street and the Fosse Way from 3<sup>rd</sup> century onwards (Jones 2002).

Just to the north of the current site, it has been postulated that the Fosse Way crossed the River Witham, running west along an area known as *The Pingles* (Mick Jones pers. comm.).

At Rookery Lane, approximately 700m northwest of the site, a 4<sup>th</sup> century pottery production site has been investigated (Swan, 1984). The associated kilns are among a number of late Roman kiln sites allied with the so-called 'Swanpool' industry, located around, or to the north of, Lincoln. The produce of this industry is an important indicator relating to the continuation and changes of sites in the late Roman period.

The village of Bracebridge appears in the Domesday Book of 1086, grouped with the adjacent settlement of Canwick. It appears to have been a typical nucleated village, which made full use of the river, utilising mills and fisheries (Jones *et al.* 2003).

During the medieval period, Lincoln was a thriving and prosperous city; reflected after the Norman Conquest by the construction of the royal castle and cathedral in the upper city (Dobney *et al.* 1996). By the end of the 12<sup>th</sup> century Lincoln was the largest urban centre in the east midlands and a pre-eminent European city. Most of its commercial success was based on the growing woollen and cloth industries, which were exported throughout the country and western Europe (Jones *et al.* 2003).

During the 13<sup>th</sup>-14<sup>th</sup> century the medieval city walls were extended southwards to the edge of the river, and the Close Wall was built to enclose the Cathedral's properties (Dobney *et. al.* 1996).

The prosperity of Lincoln continued until the later medieval period when a number of factors combined to cause a rapid decline in the wealth of the city. These included the silting of the Fossedyke and Witham, disrupting certain trade routes; direct competition for the Flemish cloth trade, and a fall in population caused by plague and famine and the growing competition of other urban centres such as Boston (Dobney *et. al.* 1996, Jones *et. al.* 2003).

## 5.0 Methodology

A total of eight trenches were located using a Leica GS 50 global positioning system (Fig 3). Only Areas 1 and 2 were subject to trenching, as the proposed development would only impact Area 3 to a depth of 225mm below the present ground level.

Seven trenches were in Area 2, five of which were 30m in length and two 20m. A further trench was excavated in Area 1, which was 20m long (fig.3). Initial excavation was carried out using a mechanical excavator fitted with a 1.60m wide toothless grading bucket. Overburden was mechanically removed until the first archaeologically significant horizon or natural substrate was encountered, and all further excavation was undertaken by hand.

Archaeological features were sample excavated to establish depths and profiles and, where possible, date and function. Features were recorded in plan and in section at appropriate scales (1:50 and 1:20). Written accounts were prepared on pro forma context record sheets and bulk soil samples were recovered as necessary. A photographic record (colour slide) was maintained throughout the project, and selected views have been reproduced in this report.

Lindum Homes have a strict Health and Safety policy which required trenches to be stepped out on both sides if 600mm or more beneath current ground level. This policy was relevant to Trenches 4, 5 and 7.

## 6.0 Results

### 6.1 Trench 1 (Fig. 3)

*No archaeological features or deposits were exposed.*

The natural substrate (100) was encountered at 0.70m below present ground level. This was sealed by subsoil deposit (101), which in turn was sealed by topsoil (102).

## 6.2 Trench 2 (Fig. 3)

*No archaeological features or deposits were exposed.*

The natural substrate (200) was encountered at 0.70m below present ground level. This was sealed by subsoil deposit (201), which in turn was beneath topsoil (202).

## 6.3 Trench 3 (Fig. 4)

*A shallow gully and a small pit of unknown date were identified.*

The natural substrate (300) was 0.70m below present ground level. This was sealed by subsoil (301), which was cut by an isolated gully [303] and post-hole [305]. No dating evidence was recovered from these features but they are likely to be modern as they had cut through the subsoil.

## 6.4 Trench 4 (Fig. 5)

*This trench was stepped out due to the depth exceeding Lindum Homes Health and Safety limits. Two ditches and a kiln of late Roman date were identified within the trench, as was an occupation layer (also of late Roman date) which was also common to Trenches 5, 6, 7 and 8.*

The natural substrate (400) was encountered at 0.50m below present ground level. This was sealed by a silty deposit (401), which was rich in pottery fragments dated to the mid-late 4<sup>th</sup> century AD. This layer appeared to be an occupation / dump deposit that was also encountered in Trenches 5, 6, 7 and 8. It was cut by three ditches and a pottery kiln.

Ditch [410] was at the very north <sup>- western</sup> corner of the trench, and this prevented it being fully sample excavated. This and ditches [403] and [404] ran parallel to each other and were aligned on a north-south axis. The latter ditches contained pottery dating to the mid-late 4<sup>th</sup> century AD, and sherds from each ditch had derived from the same vessel, indicating that the features were contemporary.

Only part of the sunken kiln oven [414] was recovered and recorded. The structure consisted of a fired clay floor (416) and wall (413) with a fired clay kiln bar (415) running north-west to south-east within the oven. The centre of the kiln was filled with dark grey silt (412) which had occasional charcoal flecking and pottery sherds dated to the 4<sup>th</sup> century. The entire structure was within a construction cut [414].

These features were sealed by subsoil (409), which in turn was sealed by topsoil (408).

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### 6.5 Trench 5 (Fig. 6)

*This trench was stepped out due to the depth exceeding Lindum Homes Health and Safety limits. A number of ditches of Roman date were identified within the trench, as was an occupation layer (also identified in Trenches 4, 6, 7 and 8).*

The natural substrate (500) was 0.70m below present ground level. Cutting this was ditch [512] which ran on a north-south alignment. This feature was only identified at the base of a sondage. Sealing ditch [512] was occupation layer (501), and this was cut by four ditches. Ditches [503] and [509] ran on a north-west to south-east alignment and may have been contemporary, though mid 4<sup>th</sup> century pottery was only recovered from ditch [509]. Ditch [505] followed a north-south alignment, with ditch [507] being a recut, dated to the late 3<sup>rd</sup> century AD.

These features were sealed by subsoil (502), which in turn was below topsoil (511).

### 6.6 Trench 6 (Fig. 7)

*Two ditches of Roman date and a possible wall foundation were identified within the trench, as was an occupation layer (also observed in Trenches 4, 5, 7 and 8).*

The natural substrate (600) was 0.85m below present ground level. This was cut by two ditches following an east-west alignment: ditch [602] has been dated to the late 3<sup>rd</sup>- 4<sup>th</sup> century AD. One of the finds excavated from its fill was a complete jar.

A linear arrangement of stones (605) with pottery-rich sandy silt (604) between the stones was tentatively interpreted by the excavator as the remains of a wall foundation, although the *in-situ* preservation of a complete vessel in ditch [602] suggests that, if this had been a structural feature, then better preservation may have been expected. The pottery and tile recovered between the stones date to the mid/late 4<sup>th</sup> century AD, two possible metal tool fragments were also recovered (see Appendix 5).

Sealing these features was occupation layer (603), which contained pottery, brick and tile dating to the mid 4<sup>th</sup> century AD. This in turn was below topsoil (606).

### 6.7 Trench 7 (Fig. 8)

*This was located along the projected route of the Fosse Way. It also was stepped out due to the depth exceeding Lindum Homes Health and Safety limits. Two ditches, one dated to the Roman period, and a large undated feature were identified, as was an occupation layer (also evident in Trenches 4, 5, 6 and 8).*

The natural substrate (700) was at 0.90m below present ground level, and this was sealed by occupation layer (701). The latter was cut by two ditches and a large feature that extended beyond the southeast end of the trench. Ditch [706] was on a north-south alignment, and no dateable finds were recovered from its fill. Ditch [708] ran along a

*metal tool path?*

north-east to south-west alignment, and a complete pottery vessel dating to the late 3<sup>rd</sup> to 4<sup>th</sup> century AD was recovered from its fill. Feature [710] was partially excavated but its size prevented meaningful interpretation, where only one of its edges was identified.

#### 6.8 Trench 8 (Fig. 9)

*A ditch of Roman date, a further undated ditch and a Roman stony deposit were identified within the trench, as was an occupation layer (also identified in Trenches 4, 5, 6 and 7).*

The natural substrate (800) was 0.68m below present ground level. This was cut by ditch [801] which has been tentatively dated to the 2<sup>nd</sup> century AD. It was sealed by a stony deposit (806), the pottery from which was too fragmented to date more accurately than Roman (two small fragments of post-medieval brick may be intrusive).

The above was sealed by subsoil (805) from which late Roman, medieval and post-medieval finds were recovered. Cutting the subsoil was a post-medieval ditch [803] and a modern land-drain.

#### 7.0 Discussion and conclusion

Potentially, the earliest archaeological evidence on site comes from Trench 8, with a possible 2<sup>nd</sup> century date for ditch [801] (see Appendix 3 for fuller discussion of pottery dating). This may have been an early boundary and drainage ditch.

The other dated remains on site are attributed to the late Roman period, suggesting that this area to the south of Lincoln may not have been subject to extensive activity until this later phase.

The site is well suited to industrial rather than domestic use: its proximity to the river provided a ready source of water and an easy source of transport to bring in raw materials and to transport finished goods (i.e. pottery) to market.

The kiln identified in Trench 4 appears to be of the 'Swanpool-type' where a 'large, shallow, oval scoop was dug, into which raw clay was dumped, and from this the whole kiln, chamber, pedestals and flue, were constructed (Swan 1984).

The Swanpool pottery kilns reflected an important industry in the region during the later Roman period. The known distribution of 'Swanpool-type' kilns is closely defined; they have been identified at Rookery Lane, at Swanpool itself and at Knaith, as well as a small number of other sites (*ibid.*). The kiln identified at the current site follows this pattern, though it is some distance from the principal Swanpool complex.

The distribution of pottery over the site demonstrates that waster sherds occur mainly in Trench 4, near to the kiln, where Trench 5 has little evidence for wasters and has an unusually large quantity of Nene Valley Colour Coated ware. Despite 'Swanpool' potters

copying this ware and the fresh and unworn appearance of the sherds, Darling suggests that these are from the Nene Valley production rather than being local copies (see Appendix 3). This 'abnormal' assemblage is difficult to interpret within the limits of evaluation and the current evidence for pottery production within the area. Darling (Appendix 3) draws attention to the high average sherd weight which suggests that the material was part of a primary rubbish dump, but the inclusion of apparently unused vessels is unusual in normal occupation deposits. She also suggests that the 'juxtaposition of fresh Nene Valley products with Swanpool type kiln material [could be considered] of wider national importance'.

The animal remains do not add any further support in the interpretation of the site, the faunal assemblage being too small for meaningful interpretation on animal utilisation and husbandry practice, though it has been noted that no evidence for butchery, burning, gnawing or pathology occurs on the remains (Appendix 4).

The evaluation has demonstrated that extensive archaeological remain survive in a good state of preservation. A previously unknown 'Swanpool' pottery production site associated with an unusual assemblage of complete and freshly broken pots, including an unusually large Nene Valley Colour Coated assemblage, have been identified.

A number of the ditches identified do not appear to continue from one trench to the next and may be short drainage ditches, designed to stop the kiln area from becoming waterlogged rather than acting strictly as boundary delineations.

#### **8.0 Effectiveness of methodology**

The methodology was largely effective, in that adequate time and control was allowed by the developer for the archaeologists to conduct exploratory fieldwork and investigate archaeological remains. However, adverse flooding throughout some trenches did at times make recording and interpretation difficult.

#### **9.0 Acknowledgements**

Sincere thanks are expressed to the commissioning organisation, Lindum Homes.

#### **10.0 Bibliography**

Jones M. J., Stocker D., Vince A. 2003 *The City By the Pool* Oxbow Books

Rylatt, J. 2008 *Robey Street, Lincoln, Lincolnshire: Lithic Material Catalogue*.  
Unpublished typescript

Swan, G., 1984, *The Pottery Kilns of Roman Britain*. Royal Commission on Historical Monuments.

## **11.0 Archive**

The site archive including written, drawn and photographic elements will be deposited at the Lincoln City and County Museum within six months. Access to it can be gained by quoting accession number 2008.114.



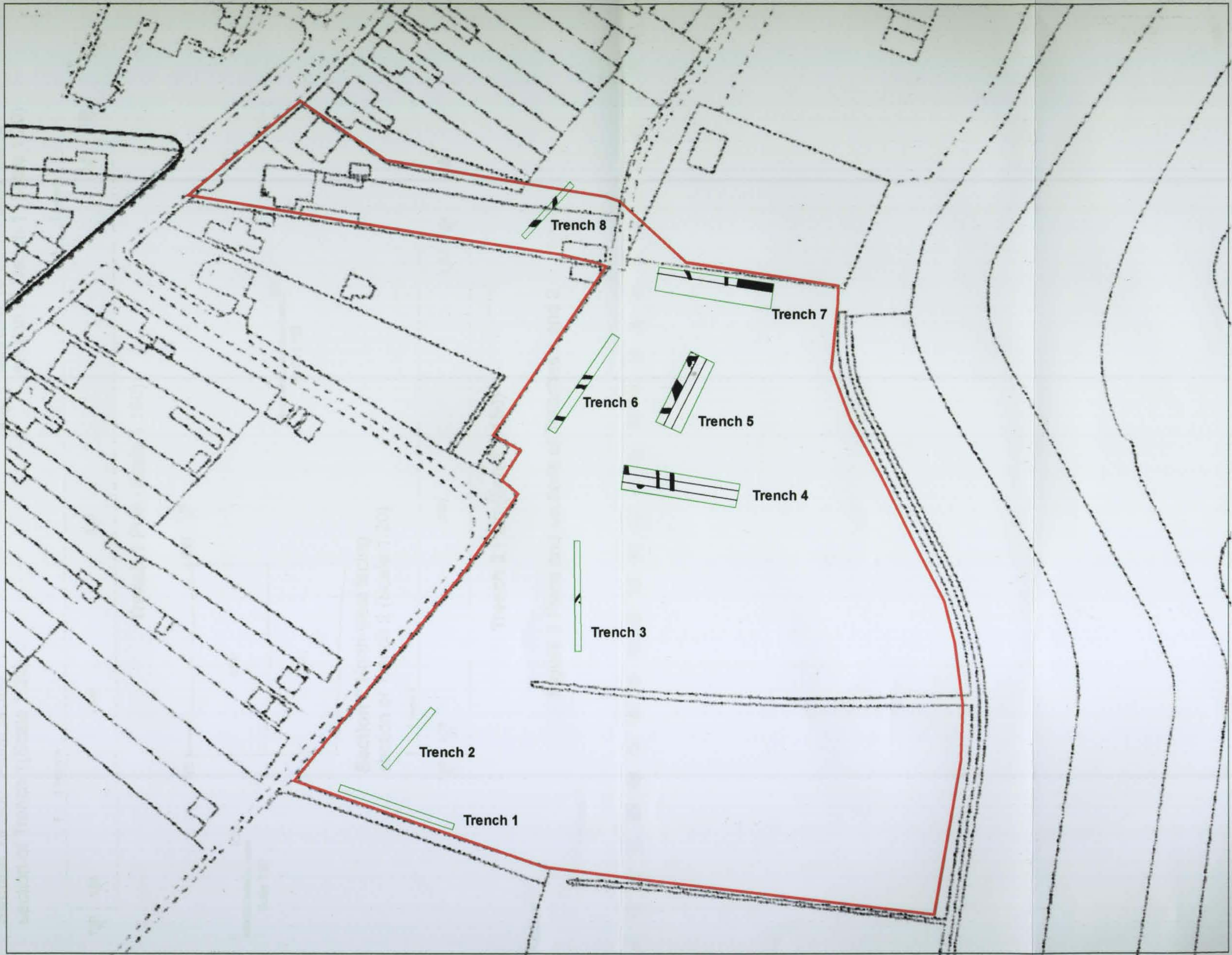
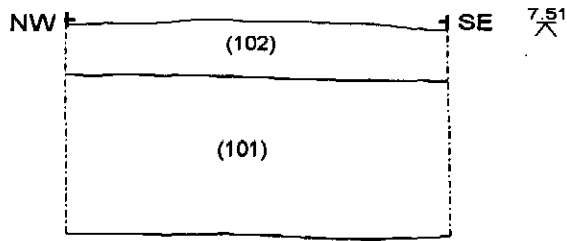
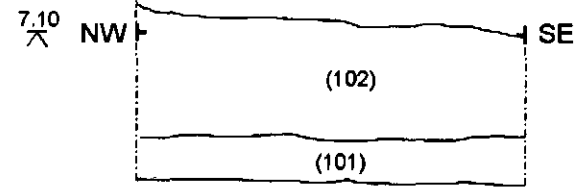
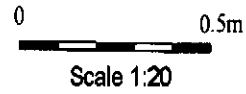


Figure 2 Trench location Plan (Scale 1:1000)

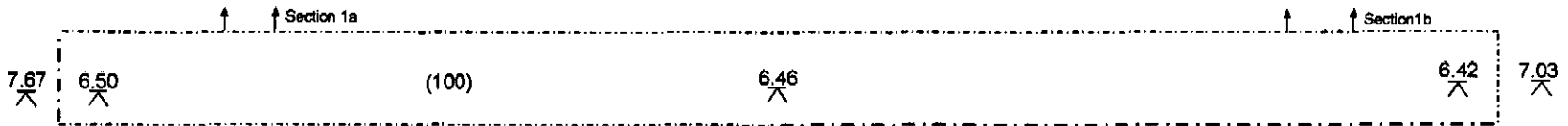
Archaeological Trench
  Archaeological feature



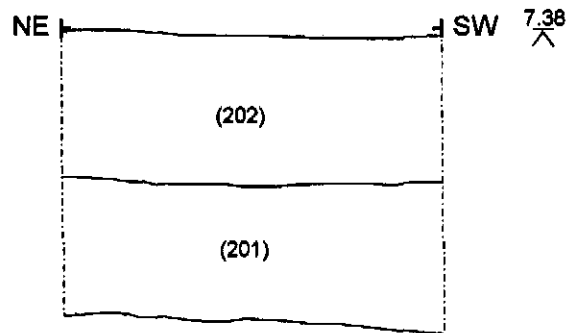
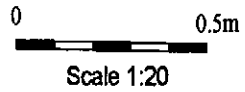
**Section 1a** South-east facing section of Trench 1 (Scale 1:20)



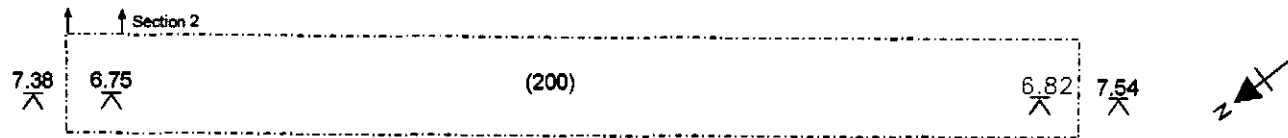
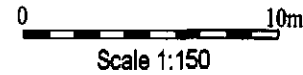
**Section 1b** South-east facing section of Trench 1 (Scale 1:20)



**Trench 1 Plan** (Scale 1:150)

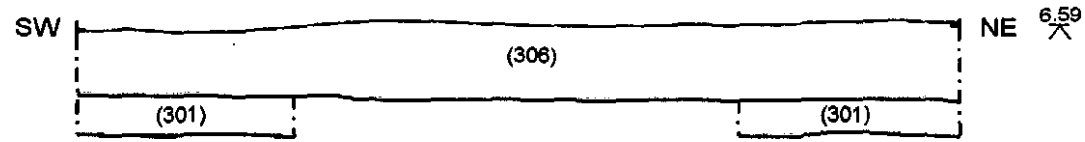


**Section 2** North-west facing section of Trench 2 (Scale 1:20)

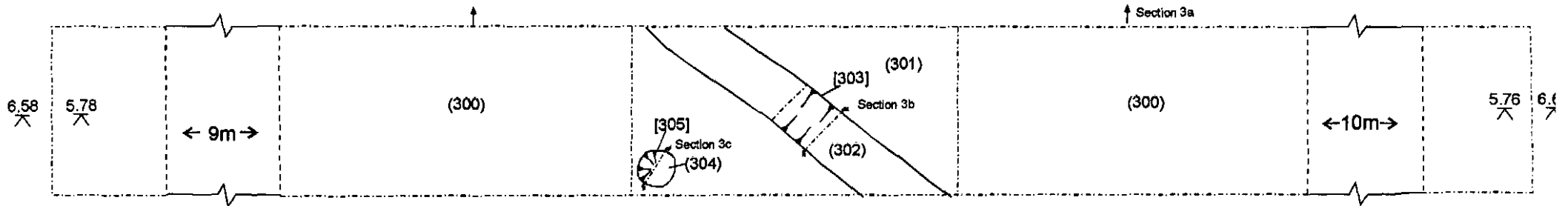
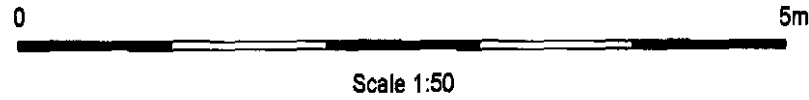


**Trench 2 Plan** (Scale 1:150)

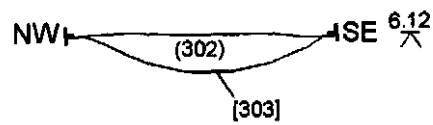
**Figure 3** Plans and sections of Trenches 1 and 2



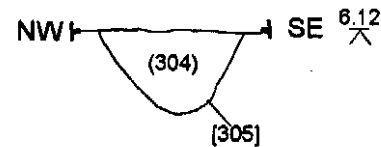
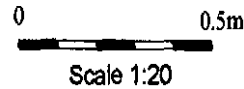
**Section 3a** South-east facing section of Trench 3 (Scale 1:50)



**Trench 3 Plan** (Scale 1:50)

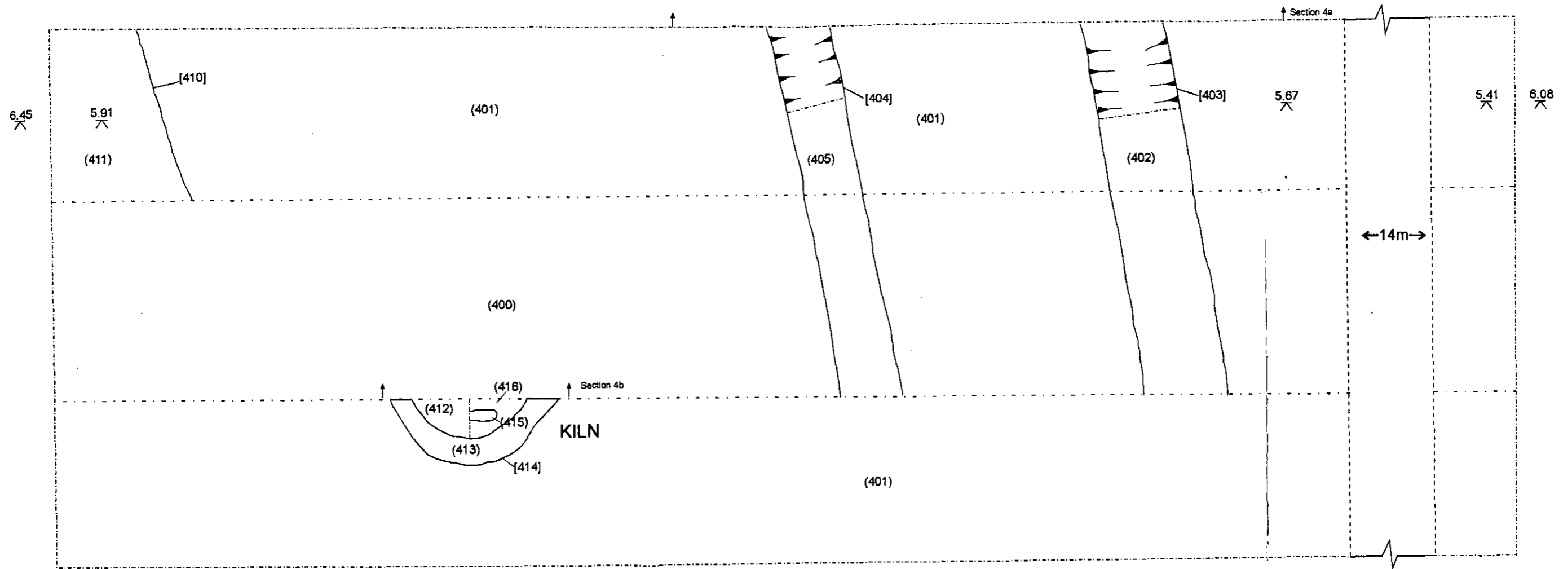


**Section 3b** South-west facing section of gully [303] (Scale 1:20)

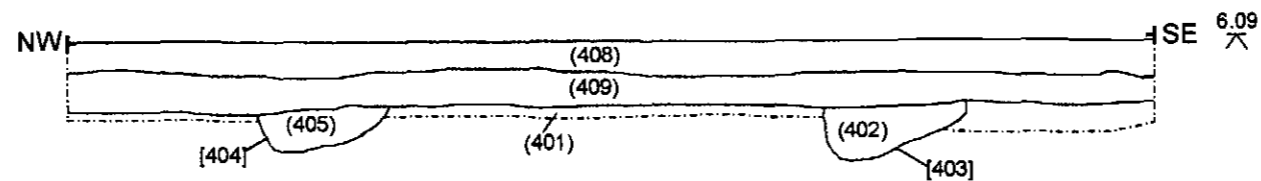
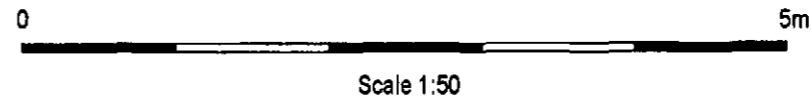


**Section 3c** South-west facing section of post-hole [305] (Scale 1:20)

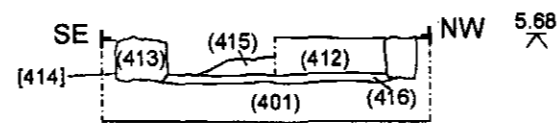
**Figure 4** Plan and sections of Trench 3



**Trench 4 Plan (Scale 1:50)**

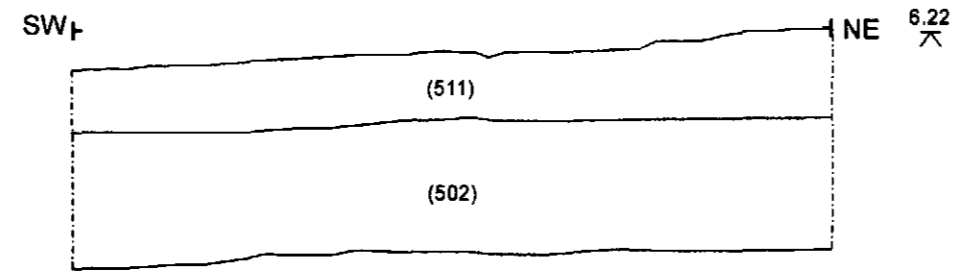


**Section 4a South-west facing section of Trench 4 (Scale 1:50)**



**Section 4b North-east facing section of kiln [414] (Scale 1:50)**

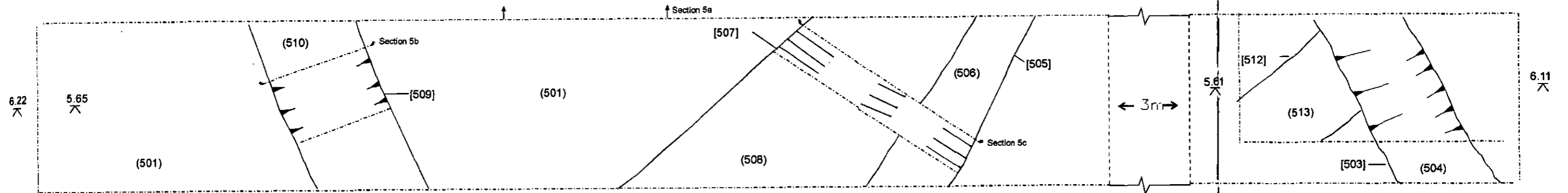
**Figure 5 Plan and sections of Trench 4**



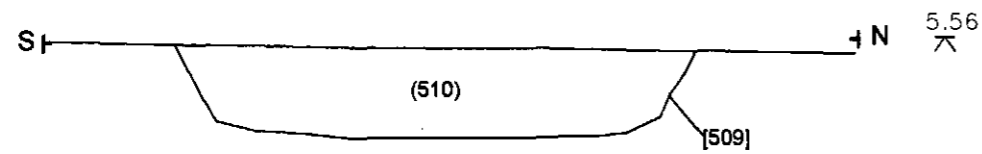
**Section 5a** South-east facing of Trench 5 (Scale 1:20)



Scale 1:50



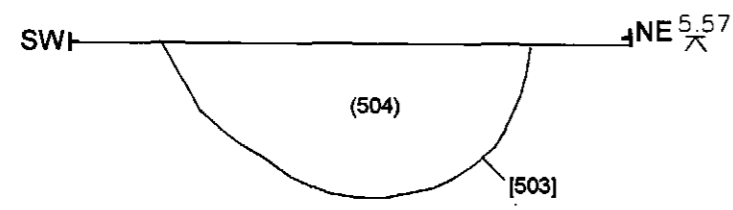
**Trench 5 Plan** (Scale 1:50)



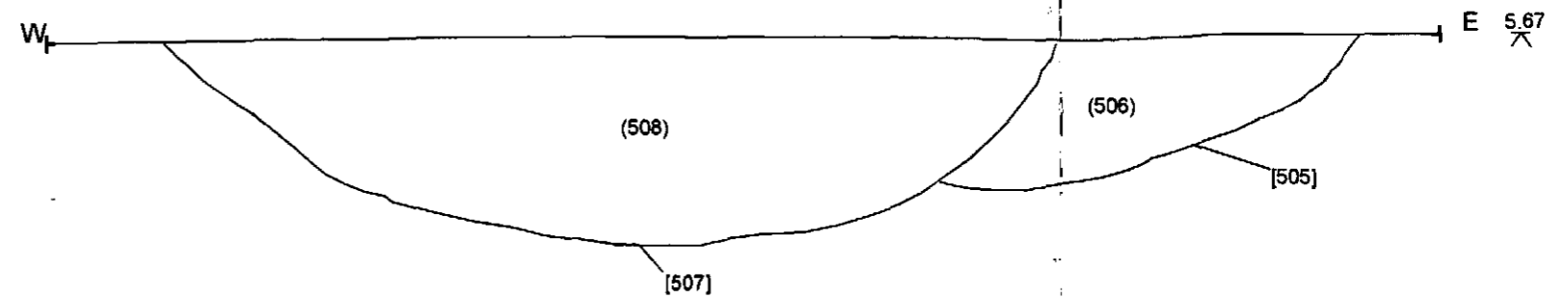
**Section 5b** South-east facing section of ditch [509] (Scale 1:20)



Scale 1:20

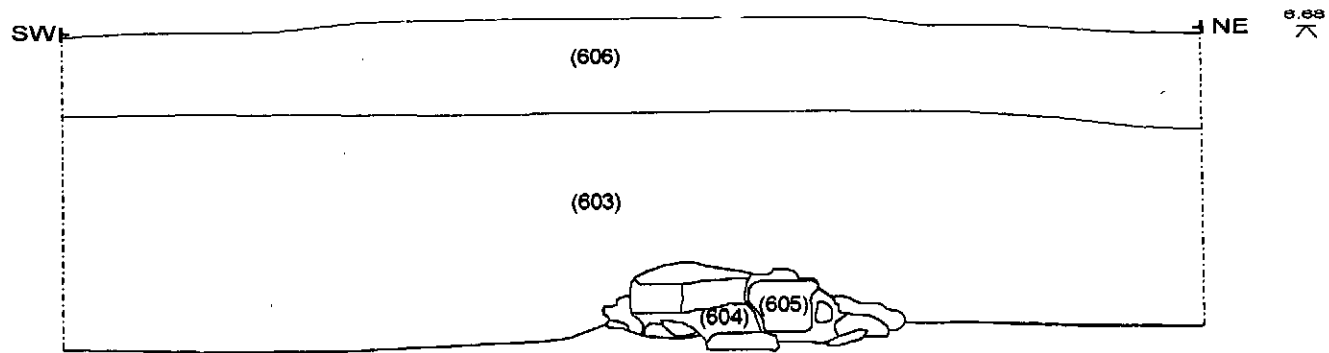


**Section 5d** South-east facing section of ditch [503] (Scale 1:20)

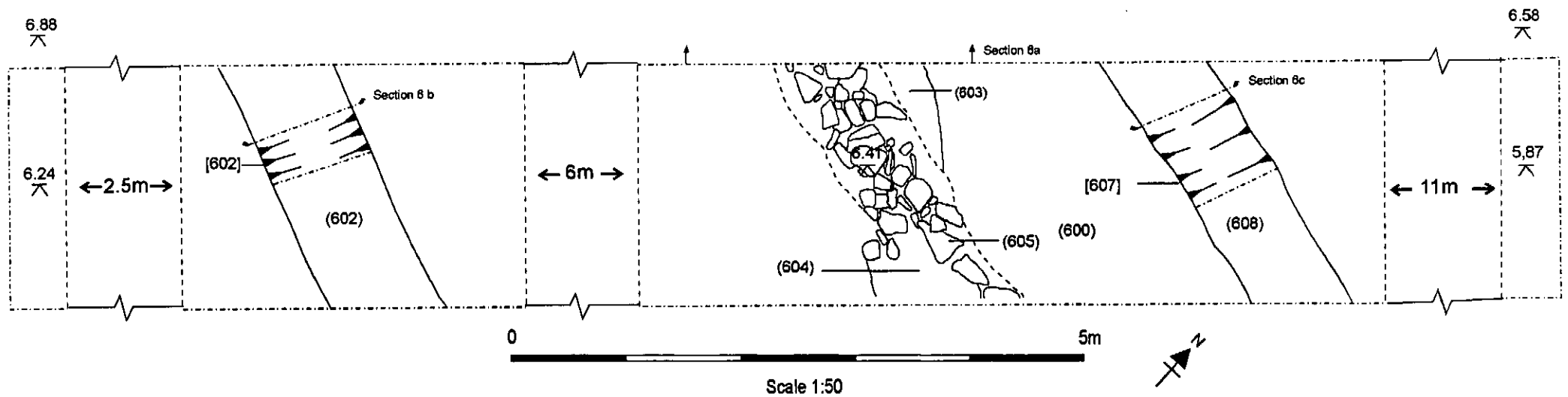


**Section 5c** South facing section of ditches [505] and [507] (Scale 1:20)

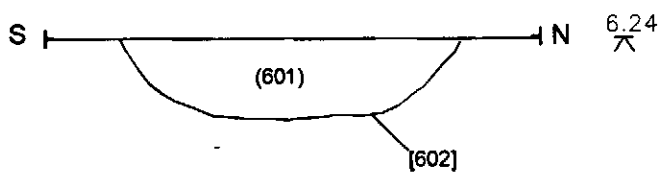
**Figure 6** Plan and sections of Trench 5



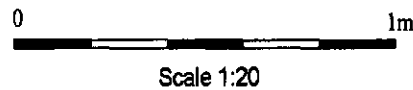
**Section 6a** South-east facing section of Trench 6 (Scale 1:20)



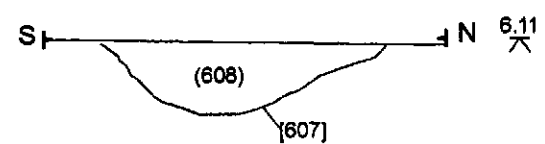
Scale 1:50



**Section 6b** East facing section of ditch [602] (Scale 1:20)

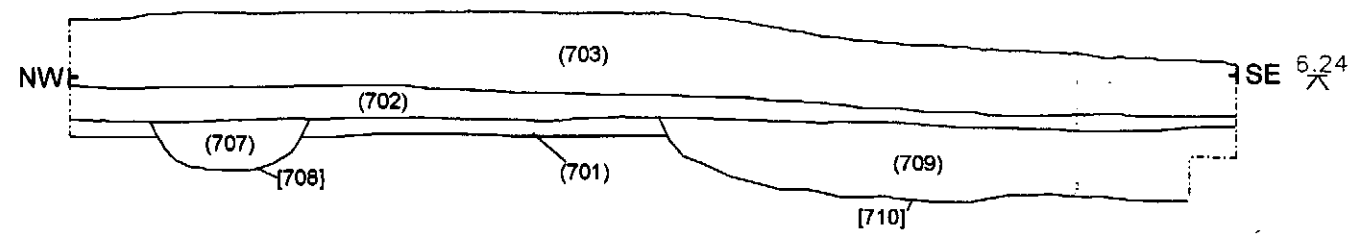


Scale 1:20

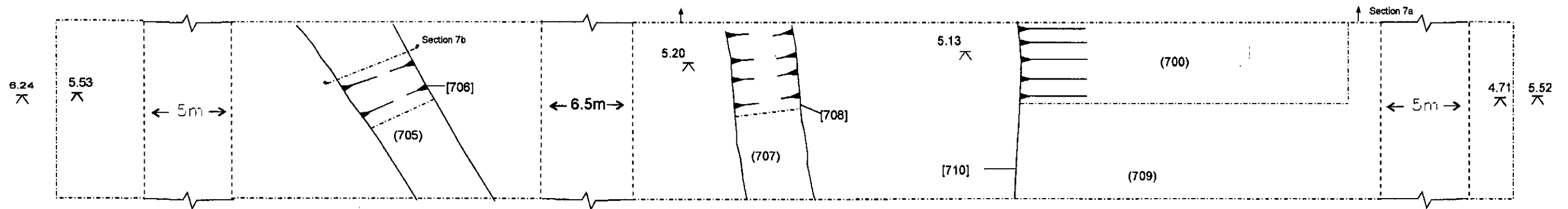
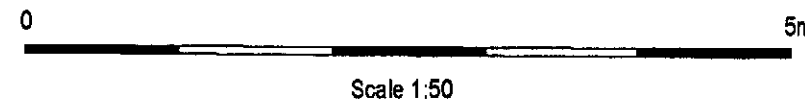


**Section 6c** East facing section of ditch [607] (Scale 1:20)

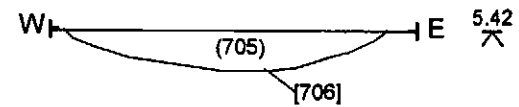
**Figure 7** Plan and section of Trench 6



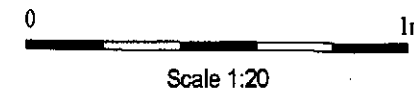
**Section 7a** South-west facing section of Trench 7 (Scale 1:50)



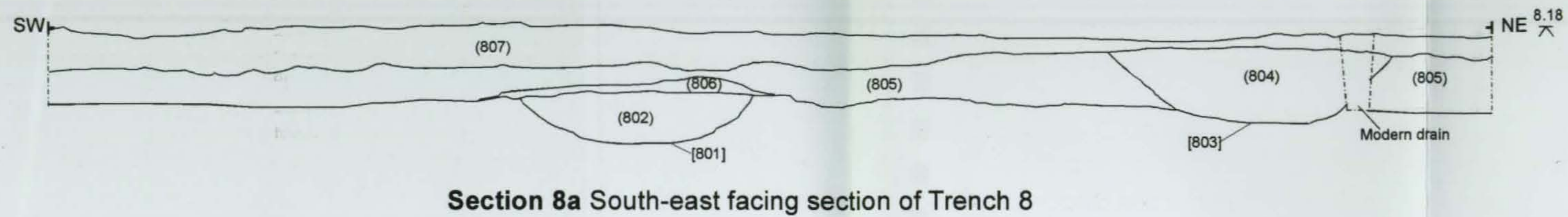
**Trench 7 Plan** (Scale 1:50)



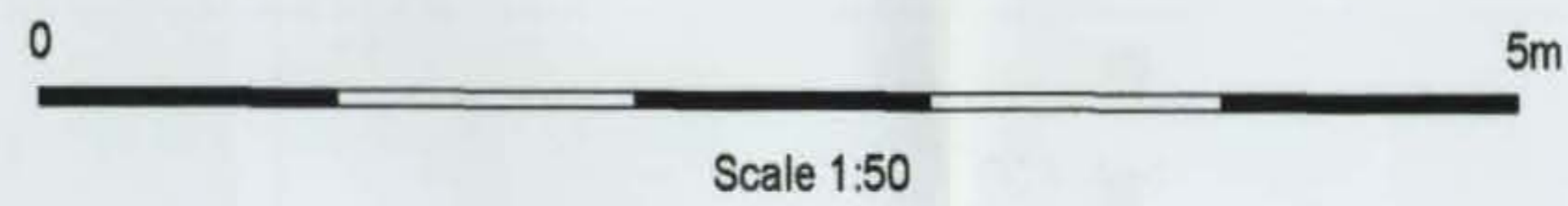
**Section 7b** South facing section of ditch [706] (Scale 1:20)



**Figure 8** Plan and sections of Trench 7



Section 8a South-east facing section of Trench 8



Trench 8 Plan (Scale 1:50)

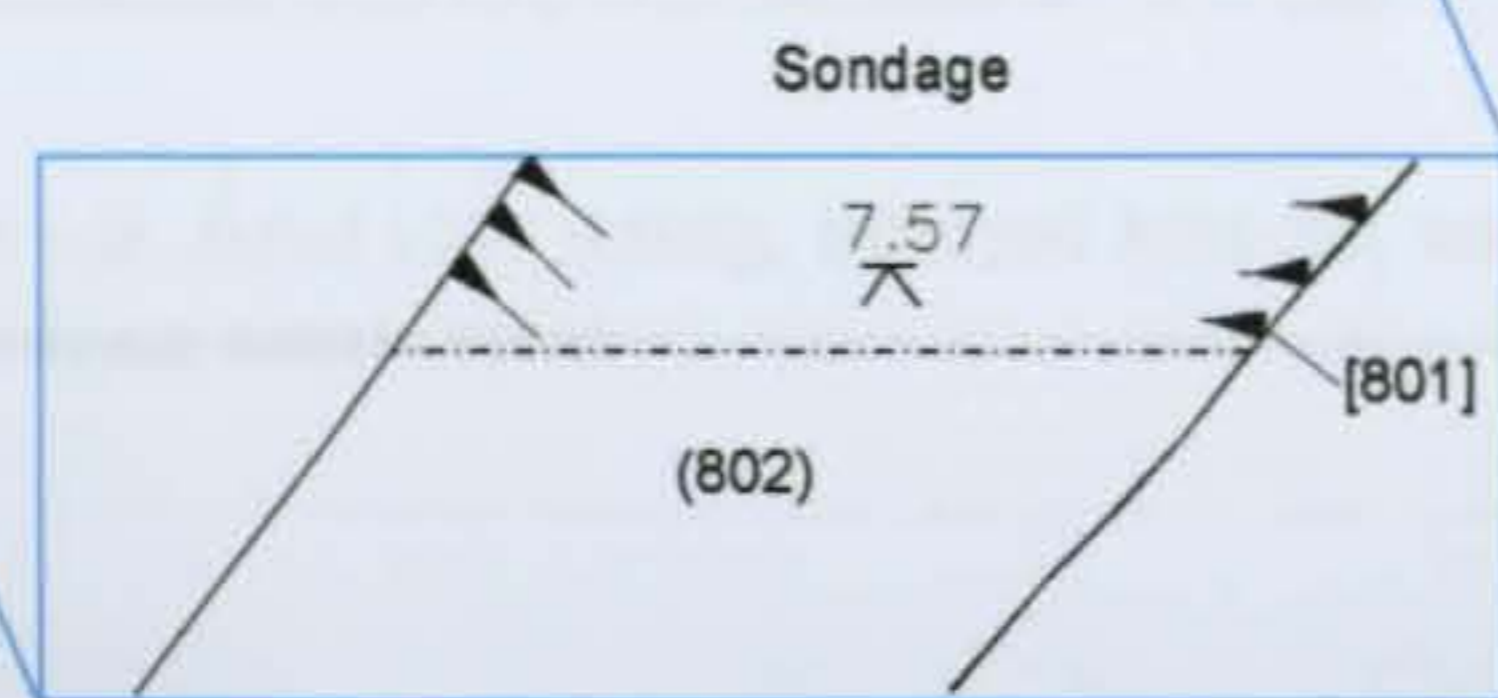


Figure 9 Plan and sections of Trench 8



APPENDIX 1 Colour Plates



Kiln oven [414] showing construction cut, fired clay lining, internal kiln bar and backfill. Looking north-west



Kiln oven [414], looking south-west



Kiln oven [414], looking south-west



Whole jar found within ditch [602], looking north



Near complete vessel undergoing excavation, from [708], looking east

**APPENDIX 2: Context descriptions**

<b>Trench 1</b>	
<b>Context</b>	<b>Description</b>
(100)	Natural; yellow sand. Unexcavated.
(101)	Subsoil; Mid orange brown sandy silt. 0.40m in depth.
(102)	Topsoil; Dark brown grey silty sand. 0.20m in depth.

<b>Trench 2</b>	
<b>Context</b>	<b>Description</b>
(200)	Natural; yellow sand. Unexcavated.
(201)	Subsoil; Mid orange brown sandy silt. 0.40m in depth.
(202)	Topsoil; Dark brown grey silty sand. 0.20m in depth.

<b>Trench 3</b>	
<b>Context</b>	<b>Description</b>
(300)	Natural; yellow sand. Unexcavated.
(301)	Subsoil; Mid orange brown sandy silt. 0.40m in depth.
(302)	Fill of [303]; Mid grey silty sand. 0.50m in width and 0.08m in depth.
[303]	Cut of gully; Shallow, U-shaped gully with moderate sloped sides and concave base. Single fill. 0.50m in width and 0.08m in depth.
(304)	Fill of [305]; Dark grey silty sand. 0.40m in width and 0.23m in depth.
[305]	Cut of post-hole; Moderate sloped sides and concave base. Single fill. 0.40m in width and 0.23m in depth.
(306)	Topsoil; Dark brown grey silty sand. 0.20m in depth.

<b>Trench 4</b>	
<b>Context</b>	<b>Description</b>
(400)	Natural; yellow sand. Unexcavated.
(401)	Occupation layer; Mid grey sandy silt with occasional small angular stones and patches of manganese and very frequent pottery sherds. 0.30m in depth.
(402)	Fill of [403]; Mid brown grey silty sand with small occasional poorly sorted angular and rounded stones. 1.00m in width and 0.35m in depth.
[403]	Cut of ditch; U-shaped ditch with moderate sloped sides and concave base. Single fill. 1.00m in width and 0.35m in depth.
[404]	Cut of ditch; U-shaped ditch with moderate sloped sides and concave base. Single fill. 0.80m in width and 0.30m in depth.
(405)	Fill of [404]; Mid grey brown silty sand with occasional small angular stones and frequent pot sherds. 0.80m in width and 0.30m in depth.
406	Void
407	Void
(408)	Topsoil; Dark brown grey silty sand. 0.20m in depth.
(409)	Subsoil; Mid orange brown sandy silt. 0.40m in depth.
410	Void
411	Void
(412)	Infill of kiln 414; Dark grey silt with rare small fragments and flecks of charcoal and occasional pottery sherds. 1.50m in width and 0.22m in depth.
(413)	Kiln structure; Mid red orange 'fired' clay lining, oval in plan 1.40m in diameter. Clay is 0.38m in width.
[414]	Construction cut for kiln; Oval in plan, 1.50m in diameter and 0.25m in depth.
(415)	Kiln bar; Dark grey 'fired' clay, linear in plan. $\geq 0.40\text{m}$ in length and clay 0.05m in width.
(416)	Layer; Mid reddish brown silt layer below (415), 0.05m in depth.

<b>Trench 5</b>	
<b>Context</b>	<b>Description</b>
(500)	Natural; yellow sand. Unexcavated.
(501)	Occupation layer; Mid grey sandy silt with occasional small angular stones and patches of manganese. 0.30m in depth.
(502)	Subsoil; Mid orange brown sandy silt. 0.40m in depth.
[503]	Cut of ditch; U-shaped ditch with moderate sloped sides and concave base. Single fill. 1.20m in width and 0.50m in depth.
(504)	Fill of [503]; Mid blackish grey silty sand with occasional small angular stones. 1.20m in width and 0.50m in depth.
[505]	Cut of ditch; U-shaped ditch with moderate sloped sides and concave base. Single fill. 0.60m in width and 0.30m in depth.
(506)	Fill of [505]; Mid grey sandy silt with occasional small angular stones. 0.60m in width and 0.30m in depth.
[507]	Cut of ditch; U-shaped ditch with moderate sloped sides and concave base. Single fill. 1.75m in width and 0.40m in depth.
(508)	Fill of [507]; Mid black sandy silt with occasional small angular stones. 1.75m in width and 0.40m in depth.
[509]	Cut of ditch; U-shaped ditch with moderate sloped sides and concave base. Single fill. 1.00m in width and 0.25m in depth.
(510)	Fill of [509]; Mid grey sandy silt with occasional small angular stone and frequent pottery sherds. 1.00m in width and 0.25m in depth.
(511)	Topsoil; Dark brown grey silty sand. 0.20m in depth.
[512]	Cut of ditch; 1.00m in width. Unexcavated due to flooding.
(513)	Fill of ditch; Light grey sand with infrequent bone fragments. Unexcavated due to flooding.

<b>Trench 6</b>	
<b>Context</b>	<b>Description</b>
(600)	Natural; yellow sand. Unexcavated.
(601)	Fill of [602]; Mid grey silty sand with complete vessel. 0.80m in width and 0.25m in depth.
[602]	Cut of ditch; U-shaped ditch with moderate sloped sides and concave base. Single fill. 0.80m in width and 0.25m in depth.
(603)	Occupation layer; Mid grey sandy silt with occasional small angular stones and patches of manganese and very frequent pottery sherds. 0.30m in depth. Sealing (605).
(604)	Deposit; Mid grey sandy silt with occasional small angular stones and patches of manganese and very frequent pottery sherds. 0.30m in depth.
(605)	?Wall; Unbonded limestone rubble possibly forming a linear. 2.50m in length exposed, 0.80m in width and 0.20m in depth.
(606)	Topsoil; Dark brown grey silty sand. 0.20m in depth.
[607]	Cut of ditch; U-shaped ditch with moderate sloped sides and concave base. Single fill. 0.90m in width and 0.20m in depth.
(608)	Fill of [607]; Mid grey brown silty sand. 0.90m in width and 0.20m in depth.

<b>Trench 7</b>	
<b>Context</b>	<b>Description</b>
(700)	Natural; yellow sand. Unexcavated.
(701)	Occupation layer; Mid grey sandy silt with occasional small angular stones and patches of manganese and very frequent pottery sherds. 0.30m in depth.
(702)	Layer; Dark brown silt, representing possible transformed topsoil. 0.30m in depth.
(703)	Layer; Dark blackish sandy silt, frequent modern rubbish. 0.50m in depth.
704	Void
(705)	Fill of [706]; Mid grey silty sand. 0.65m in width and 0.37m in depth.
[706]	Cut of ditch; U-shaped ditch with moderate sloped sides and concave base. Single fill. 0.65m in width and 0.37m in depth.
(707)	Fill of [708]; Dark black brown silty sand with infrequent pottery sherds. 0.80m in width and 0.18m in depth.
[708]	Cut of ditch; U-shaped ditch with moderate sloped sides and concave base. Single fill. 0.80m in width and 0.18m in depth.
(709)	Fill of [710]; Dark grey silty sand. 9.50m in width 0.40m in depth.
[710]	Cut; large undeterminable feature with moderate sloped sides. c. 9.50m in width and $\geq 0.40$ m in depth.

<b>Trench 8</b>	
<b>Context</b>	<b>Description</b>
(800)	Natural; yellow sand. Unexcavated.
[801]	Cut of ditch; U-shaped ditch with moderate sloped sides and concave base. Single fill. 2.70m in width and $\geq 0.40$ m in depth. Not fully excavated due to flooding.
(802)	Fill of [801]; Dark grey brown clay sand with rare small rounded stones, bone and pottery 2.70m in width and $\geq 0.40$ m in depth. Not fully excavated due to flooding.
[803]	Cut of ditch; U-shaped ditch with moderate sloped sides and concave base. Single fill. 2.50m in width and $\geq 0.75$ m in depth.
(804)	Fill of [803]; Dark grey sandy clay. 2.50m in width and $\geq 0.75$ m in depth.
(805)	Subsoil; Dark brown clay silt with occasional small rounded stones. 0.50m in depth.
(806)	Layer; Dark black brown clay sand containing moderate limestone fragments of irregular shape and size. 1.45m in length, $\geq 1.30$ m in width and 0.35m in depth.
(807)	Topsoil; Dark brown grey silty sand. 0.20m in depth.

**APPENDIX 3: Pottery and Ceramic Building Material Reports**



# ASSESSMENT REPORT 280 ON POTTERY FROM AN ARCHAEOLOGICAL EVALUATION ON LAND ADJACENT TO THE RIVER WITHAM, AT HYKEHAM ROAD, LINCOLN, HYRL08

## for PRE-CONSTRUCT ARCHAEOLOGY

by Margaret J. Darling, M.Phil., F.S.A., M.I.F.A.

June 2008

### QUANTITY AND CONDITION

The pottery consists of 677 sherds, weighing 34.765 kg from 14 contexts, drawn from five evaluation trenches. The condition of the pottery varies, with both fresh and abraded sherds. The average sherd weight is very high at 51.4g, but complicated by the survival of a complete large jar; excluding this, it is still high at 46.8g per sherd. No problems are anticipated for long term storage. The pottery has been archived using count and weight as measures according to the guidelines laid down for the minimum archive by *The Study Group for Roman Pottery*. The archive database is attached (Appendix 3; and can be supplied on disk), and will be curated for future study. Archives codes are expanded in Appendix 1. Vessels to be considered for illustration are listed in Appendix 2.

### INTRODUCTION

Quantities by deposit and dating are shown in Table 1.

Area/Tr.	Cut	Interpretation	Cxt	Sherds	Weight	Date	Comments	g/sherd
2/4	-	Silt	401	139	6598	ML4	Incl waste	47.5
2/4	403	Ditch	402	104	3125	ML4	Join with 405 Poss waste; join	30.0
2/4	404	Ditch	405	13	380	L3-4	with 402	29.2
2/4	414	Kiln structure	412	11	371	4C	2 poss waste	33.7
2/5	507	Ditch	508	9	377	L3+	Poss waste	41.9
2/5	509	Ditch	510	47	5025	M4	Quantity NVCC	106.9
2/6	602	Ditch	601	11	3608	L3-4	Single complete jar	328.0
2/6	-	Silty sand Silt assoc w 605	603	96	4276	M4	No definite waste	44.5
2/6	-	structure	604	207	8804	ML4		42.5
2/6	-	Wall	605	14	942	ML4		67.3
2/7	706	Ditch	707	1	134	L3-4	Single jar	134.0
1/8	801	Ditch	802	3	131	2C?		43.7
1/8	-	Subsoil	805	21	990	ML4		47.1
1/8	-	Surface?	806	1	4	ROM		4.0
				677	34765			51.4

Nearly all the pottery came from Area 2. The largest quantity came from Trench 6 (48-50%), followed by Trench 4 (39-30%), Trench 6 being less fragmented than Trench 4. Given the discovery of a pottery kiln in Trench 4, the main evidence for waste from pottery production comes from that trench. The adjacent Trench 5 has little evidence for any waste, and is remarkable for having many large fresh sherds, including a large quantity of late Nene Valley colour-coated vessels, nearly all bowls and dishes. The subsoil conditions appear likely to have badly affected the colour-coated sherds making assessment of abrasion

difficult, but it is notable that some sherds are very fresh and appear unworn. All the fabrics, however, appear to be within the range for production in the Nene Valley, despite the known copying of such vessels by the local Swanpool potters (Webster & Booth 1947). Apart from a Central Gaulish samian sherd (report by Margaret Ward), all the pottery fits into the later Roman period, except for some sherds from Trench 8. A sherd link of joining sherds occurred between ditches 403 and 404.

## OVERVIEW OF THE FABRICS

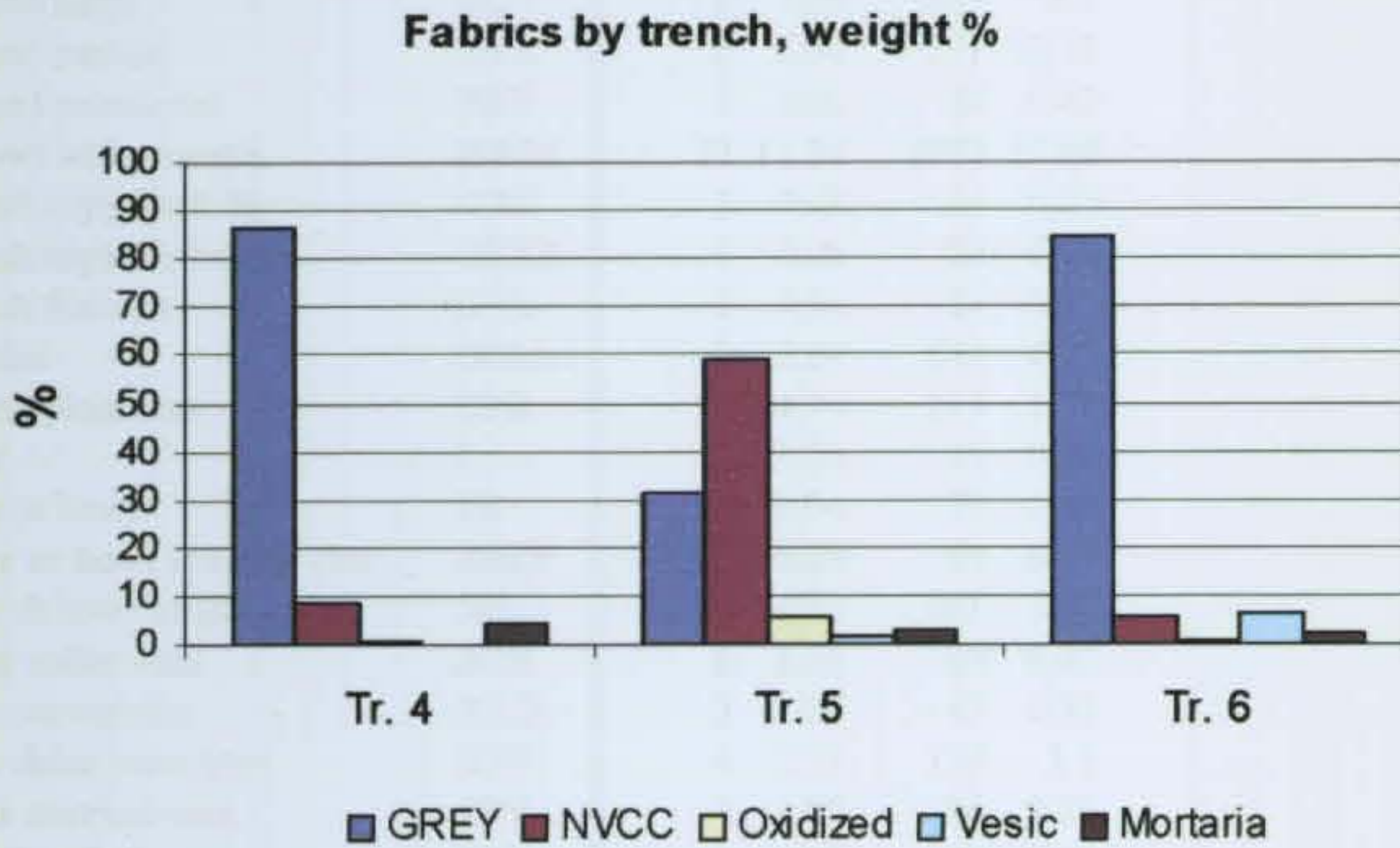
The fabrics from the evaluation are listed in Table 2.

Table 2 Fabrics

Fabric	Code	Sherds	%	Weight	%
Cream flagon type	CR	2	0.30	69	0.20
Grey quartz-gritted	GREY	523	77.25	26337	75.76
Grog-tempered	GROG	1	0.15	55	0.16
Grey sandy	GRSA	1	0.15	54	0.16
Mortaria Nene Valley	MONV	8	1.18	640	1.84
Mortaria unsourced	MORT	2	0.30	161	0.46
Mortaria Swanpool	MOSP	3	0.44	181	0.52
Nene Valley colour-coated ware	NVCC	84	12.41	5053	14.53
Oxidized	OX	10	1.48	262	0.75
Oxidized fine	OXF	2	0.30	9	0.03
Oxidized light	OXL	3	0.44	205	0.59
Oxidized white-slip	OXWS	1	0.15	39	0.11
Post-Roman	PRO	2	0.30	40	0.12
Vesicular	VESIC	35	5.17	1660	4.77
		677	100.00	34765	100.00

Apart from minor fabrics, the pottery divides between grey reduced wares, the standard product of the Swanpool and Rookery Lane kilns, and Nene Valley colour-coated ware. The grey wares occur in more than one fabric, albeit all in known Swanpool pottery types and made locally, if not actually in the kiln found in trench 4. Since virtually all the coarse wares belong to the later Roman period, the single very abraded samian sherd from Trench 6 is a stray residual sherd. Apart from two vessels of Swanpool type, most mortaria are from the Nene Valley kilns. One burnt mortarium is unidentified for source, having unusual trituration grit, and will need further investigation. Given the small quantities from Trenches 7-8, and the juxtaposition of Trenches 4-6, the fabrics by trench are shown below in fig 1.

Fig 1 Fabrics by trench, based on weight percentage.



This demonstrates the abnormal nature of the assemblage from Trench 5, with its high content of Nene Valley colour-coated wares (NVCC) and oxidized sherds (the analysis by sherd count is virtually identical). This poses questions about the nature and origin of the deposits in the ditches in Trench 5. The vesicular fabric found in Trenches 5 and 6 is a type frequently found on other Swanpool kiln sites used for standard Swanpool vessel types.

A single grog-tempered sherd came from ditch 801, underlying a possible road. The dating for this deposit rests on only three sherds, the grog-tempered sherd being a rim from an Iron Age tradition type of bowl, a type which continues in use into the 2<sup>nd</sup> century. The other sherds, both grey body sherds, consist of a sherd from the shoulder of either a jar or wide-mouth bowl and a fragment near the knob of a lid. A 2<sup>nd</sup> century date is feasible on this evidence, although a later date cannot be excluded. A single sherd came from the surface of this possible road, in an oxidized fabric, and is more likely to be early Roman than later. These sherds provide evidence for some earlier activity in the area, as does the samian.

### OVERVIEW OF VESSEL TYPES

The main product of any kilns in the area will be grey wares, and table 3 lists the grey vessels represented by rims and identifiable for the vessel type. Notable types are the bead-and-flange bowls, particularly the intumed variety, typical products of the Swanpool kilns, wide-mouthed and everted-rim bowls and jars, collar rim and narrow-neck jars. Copies of dales ware jars also occur as 'waster' fragments. These occur most in Trenches 4 and 6, while the strange assemblage from Trench 5 has at least two wide-mouthed bowls but none of the other types. The smaller deposit from Ditch 507 contains two grey sherds possibly from kiln waste, and it is the deposit from Ditch 509 that is highly unusual.

Table 3 Vessel types, Grey wares only

Vessel type	Code	Sherds	%	Weight	%
Bowl form 38	B38	3	2.04	94	0.75
Bowl	BCR	1	0.68	48	0.38
Bowl or dish	BD	1	0.68	12	0.1
Bowl or dish flat rim	BDFLV	1	0.68	83	0.66
<b>Bowl everted rim</b>	<b>BEV</b>	<b>3</b>	<b>2.04</b>	<b>147</b>	<b>1.17</b>
<b>Bowl bead &amp; flange</b>	<b>BFB</b>	<b>5</b>	<b>3.4</b>	<b>326</b>	<b>2.59</b>
<b>Bowl high bead &amp; flange</b>	<b>BFBH</b>	<b>6</b>	<b>4.08</b>	<b>535</b>	<b>4.25</b>
<b>Bowl low bead &amp; flange</b>	<b>BFBL</b>	<b>1</b>	<b>0.68</b>	<b>58</b>	<b>0.46</b>
Bowl flat-rim	BFL	1	0.68	89	0.71
<b>Bowl intumed bead &amp; flange</b>	<b>BIBF</b>	<b>16</b>	<b>10.88</b>	<b>1694</b>	<b>13.45</b>
Beaker	BK	15	10.2	200	1.59

Beaker everted-rim	BKEV	3	2.04	50	0.4
Bowl large	BL	2	1.36	517	4.1
Bowl necked	BNK	8	5.44	271	2.15
Bowl round-rim	BRR	1	0.68	54	0.43
<b>Bowl wide-mouth</b>	<b>BWM</b>	<b>17</b>	<b>11.56</b>	<b>1977</b>	<b>15.69</b>
Dish copy form 36	D36?	1	0.68	34	0.27
Dish expanded-rim	DEXR	1	0.68	23	0.18
Dish flat-rim	DFL	1	0.68	21	0.17
Dolia	DOLIA	3	2.04	533	4.23
Dish plain-rim	DPR	7	4.76	217	1.72
Jar	J	2	1.36	45	0.36
Jar or bowl	JB	3	2.04	71	0.56
<b>Jar or bowl everted-rim</b>	<b>JBEV</b>	<b>1</b>	<b>0.68</b>	<b>59</b>	<b>0.47</b>
Jar or bowl large	JBL	4	2.72	261	2.07
<b>Jar collar-rim</b>	<b>JCR</b>	<b>2</b>	<b>1.36</b>	<b>60</b>	<b>0.47</b>
Jar curved-rim	JCUR	3	2.04	47	0.37
Jar dales ware type	JDW	4	2.72	139	1.1
<b>Jar everted-rim</b>	<b>JEV</b>	<b>4</b>	<b>2.72</b>	<b>96</b>	<b>0.76</b>
Jar handled	JH?	1	0.68	29	0.23
Jar large	JL	15	10.2	4109	32.61
<b>Jar narrow-necked</b>	<b>JNN</b>	<b>7</b>	<b>4.76</b>	<b>366</b>	<b>2.9</b>
Jar round-rim	JRR	2	1.36	89	0.71
Jar storage	JS	2	1.36	245	1.94
		147	99.96	12599	100

## DISCUSSION AND RECOMMENDATIONS

The Swanpool pottery industry, including the earlier Rookery Lane kiln and other finds, is a major regional industry of the later Roman period, its products being traded widely in the 4<sup>th</sup> century in Lincolnshire, and there is evidence for trade in its more specialised wares further afield; this is the latest identifiable Roman pottery industry in the area. The distinctive kiln type is also known in South Yorkshire (Swan 1984, 123; fig XX). Any new kilns are of great importance to understanding the late Roman period in Lincoln.

The possibility of kilns in this area of Lincoln was noted in a survey of the evidence of known kilns and finds (Darling 1977, 32, particularly Appendix B), the find in question being located at 41 Hykeham Road. This was based on sherds found in the 1950's and, given the proximity of the kiln at Rookery Lane (Webster 1960), a related kiln seemed possible. The Rookery Lane kiln assemblage is earlier in date than those from the Swanpool kilns (Webster & Booth 1947), and it seemed possible that the industry had gradually expanded outwards over time, following fuel and clay sources. The finds from this new kiln do not, however, resemble the pottery from the Rookery Lane kiln, but appear to be late Swanpool products, and are therefore particularly important for understanding this major regional industry. The quantity of late Nene Valley colour-coated vessels from the site is strong evidence for a late Roman date.

Since no finds came from Trenches 1-3, the potential for important archaeological finds in the northern part of Area 2, and Area 1 is undoubted, and the location of kilns of the latest Roman period so far from the known Swanpool kilns is of considerable interest, as is the siting closer to roads than the other kilns. The ceramic evidence relating to the possible road is equivocal. Further investigation of the site is strongly recommended.

Waster sherds appear to be mostly over-fired, some with distortion, spalling and splits. These sherds occur in a variety of grey fabrics, ranging in both colour and proportion of inclusions, and some definite non-kiln grey vessels occur. The absence of any sign of use can also be relevant, but is not decisive evidence, particularly as some of the colour-coated sherds in Ditch 509 are unused. The finds are therefore a mixture of kiln debris and occupation material.

The deposit in Ditch 509 is extraordinary with its high content of colour-coated vessels, and impossible to understand in relation to the pottery production in the area on current evidence. The high average sherd

weight suggests a primary rubbish deposit, and there is some evidence to suggest some unused vessels were deposited, rare in normal occupation debris. The multiplicity of ditches and alignments clearly needs to be explored. The incidence of other rubbish such as animal bone is also important for the interpretation of this deposit. The relationship between the Swanpool potters and the Nene Valley potters in the later 4<sup>th</sup> century is little understood, but the manufacture of colour-coated vessels in Lincoln, in different fabrics, may have been filling a gap in the market, making this a period of immense interest in late Roman studies, not just for the pottery industry but also for understanding the latest occupation in the city of Lincoln. The juxtaposition of fresh Nene Valley products with Swanpool type kiln material is therefore of wider national importance.

Nine vessels have been noted as essential for illustration, but can be reserved pending the further work on the site that is considered to be essential. A further 42 vessels may be considered for illustration, dependant upon further work producing better examples (Appendix 2). The current assemblage has been archived at basic archive level, and not fully quantified on the basis that pottery from future planned excavation will yield a better sample. The data can be converted to a fully quantified archive with the addition of diameters and estimated rim equivalents (EVEs) if necessary. It is recommended that finds from kilns are fully quantified. The fired clay finds will need to be examined for identifiable kiln furniture.

### FABRIC DEFINITION

- Publication of *The National Roman Fabric Reference Collection*, abbreviated NRFRC (Tomber and Dore 1998), obviate the need to describe the major imported and widely traded Romano-British wares in detail.
- CR Cream, miscellaneous cream wares. Sherds attributed to a fabric group rather than a discrete fabric, usually from flagons or closed forms.
- GREY Grey, undifferentiated quartz-gritted grey fabrics, hard wares with sparse to common sub-rounded quartz inclusions. Sherds from Trench 4 in a dark fairly distinctive fabric may come from the kiln. Other sherds are in lighter fabrics commonly seen in Swanpool wares.
- GROG Grog-tempered. A single very abraded rim from a late Iron Age tradition jar or bowl, dark grey fabric and surfaces, with a light brown cortex; coarse fabric, common quartz, iron ore, and lighter grey grog inclusions. Probably wheel-made/finished. Trench 8.
- GRSA Grey, with common to abundant quartz sand inclusions.
- MONV Mortaria Lower Nene Valley NRFRC : LNV WH
- MORT Mortaria, unknown source. To be further defined.
- MOSP Mortaria from Swanpool kilns, Lincoln. NRFRC: SWN WS
- NVCC Nene Valley colour-coat NRFRC: LNVCC
- OX Oxidized, miscellaneous oxidized wares. This coding comprises all miscellaneous oxidized sherds, usually in varying red-brown shades and degrees of grittiness, for which no significant fabric groupings are evident. Several sherds consistent with a Swanpool origin.
- OXF Oxidized fine texture fabrics, not a discrete fabric.
- OXL Oxidized lighter red-brown. Fabrics in light cream-brown shades, usually relatively fine-textured, often used for flagons.
- OXWS Oxidized white slipped. Light brown fabric, with exterior white slip, usually used for flagons, unknown source.
- PRO Post-Roman sherds
- VESIC Vesicular. Vesicular sherds, probably due to loss of shell-gritting.

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## APPENDIX 1

### ARCHIVE CODES

Form	Expansion
B	Bowl
B31	Bowl copy samian form 31
B38	Bowl copy samian form 38
B38/BFB	Bowl copy 38 or bead & flange
BCR	Bowl collared rim
BD	Bowl or dish
BDFLV	Bowl or dish flat-rim variant
BEV	Bowl everted rim
BFB	Bowl bead & flange
FBFH	Bowl high bead & flange
BFBL	Bowl low bead & flange
BFL	Bowl flat-rim
BHEM	Bowl hemispherical
BIBF	Bowl intumed bead & flange
BK	Beaker
BKEV	Beaker everted-rim
BKFN?	Beaker funnel-neck
BKROU	Beaker rouletted
BL	Bowl large
BNK	Bowl necked
BREED?	Bowl reeded-rim
BRR	Bowl round-rim
BTR	Bowl triangular-rim
BWM	Bowl wide-mouth
CLSD	Closed form
CP?	Cooking pot BBT
D	Dish
D36?	Dish copy samian form 36
DEXR	Dish expanded-rim
DFL	Dish flat-rim
DOLIA	Dolia
DPR	Dish plain-rim
F	Flagon
J	Jar
JB	Jar or bowl
JBEV	Jar or bowl everted-rim
JBK	Jar or beaker
JBL	Jar or bowl large
JCR	Jar collared rim
JCUR	Jar curvev-rim
JDLS	Jar double lid-seated rim
JDW	Jar dales ware
JEV	Jar everted-rim
JH?	Jar handled
JL	Jar large
JNN	Jar narrow-neck
JRR	Jar round-rim
JS	Jar storage
JSQ	Jar square-rim
LID?	Lid
M	Mortarium
MBF	Mortarium bead & flange
MRF	Mortarium reeded-flange
Decoration-	Expansion
BARC	Burnished arcs
BDL	Burnished diagonal lines
BIA	Burnished intersecting arcs
BIWL	Burnished intersecting wavy-line
BL	Burnished line
BLOOP	Burnished loops
BS	Burnished scrolls
BVL	Burnished vertical-lines
BWL	Burnished wavy line

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FF	Frilled by finger
HM?	Hand-made
JUDD	Juddered
LA	Latticed
NOTC	Notched by tool
PA	Painted
ROUZ	Rouletted zone

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## APPENDIX 2

### Vessels possibly for illustration

Cxt	Fabric	Form	Manuf+	Vc	Altn	D#	Details	Lnk	Shs	Wt
402	MORT	MRF	-	-	-	01	RIM/PT WALL;GRY-CR FB/S;SLAG TG;DIAM21;UNUSUAL	-	1	119
510	MOSP?	MBF	-	-	1-	02	RIM/PT WALL;GRY FB;RB CORT;CR SLIP;FLINT;QUARTZITE;FE ORE TG;SPOUT;DIAM24	-	2	163
601	GREY	JL	BARC;BWL	-	1-	03	COMP JAR;DIAM17;BASE ?SPALLED OFF;MIDDLE MISSING	-	10	3605
603	MONV	MRF	-	-	1-	04	RIM/PT WALL;FRESH;DIAM24;FE TRIT;NO OBV WEAR	-	2	206
603	GREY	BIBF	-	-	-	05	RIM/PT WALL;DIAM31;UNUSUAL TYPE;LTGRY;MGRY EXT	-	1	51
603	GREY	BDFLV	-	-	-	06	RIM/WALL;DIAM24;UNUSUAL TYPE;MGRY	-	1	83
604	GREY	BIBF	-	-	1-	07	COMP PROF/RIM;SPLIT RIM;DIAM19;LESS COMMON TYPE;MGRY FB	-	4	621
604	GREY	BIBF	-	-	1-	08	COMP VESS;SPLIT WALL;DIAM18.5;MOSTLY LTRB;STRING BASE	-	4	560
604	GREY	BL	NOTC	-	1-	09	RIM/PT WALL;DIAM52?;V UNUSUAL;?CAULDRON	-	2	517
401	GREY	JNN	NOTC	-	-	D	RIM/NECK;NOTC BELOW RIM FLANGE;DIAM11	-	1	46
510	NVCC	B38	-	-	ABR	D	COMP PROF;FINE LTGRY CORE PINK FB;LTRB CC;DIAM28	-	1	342
510	NVCC	BFB	-	-	1-	D	COMP PROF;CR FAB;DK CC;FRESH/UNWORN	-	2	353
510	NVCC	BFB	-	-	1-	D	RIM/WALL;THIN SM VES;LTGRY CORE BN FB;DK CC;?UNWORN	-	2	100
510	NVCC	F	PA;ROUZ	-	-	D	BS WALL;SHLDR-GIRTH;CR/PINK FB;DK CC;ROUZ GIRTH;FRESH	-	1	105
510	GREY	BWM	-	-	1-	D	RIM/PT WALL;DIAM38	-	2	677
510	OXWS	JSQ	-	-	ABR	D	RIM/SHLDR;RB MODQTZ FB;SLIP I/E;NOT DEF SPOOL	-	1	39
603	GREY	BFL	-	-	-	D	RIM/PT WALL;DIAM28;UNUSUAL TYPE;MGRY	-	1	89
603	GREY	JNN?	-	-	-	D	RIM/NECK;CORDON;CF C12;DIAM10;MGRY	-	1	43
603	GREY	DOLIA	FF;HM?	-	1 ABR	D	RIM/PT WALL;TRIANG RIM;FF BELOW;MGRY COARSE FAB	-	2	322
604	GREY	BNK	-	-	-	D	RIM/PT WALL;L-MGRY;DIAM19	-	1	71
604	GREY	BNK	-	-	1-	D	RIM/PT WALL;L-MGRY;DIAM17	-	2	70
604	GREY	BK	-	-	1-	D	RIMS/NECK;DIAM11;MGRY	-	5	70
604	GREY	BK	-	-	-	D	RIM/PT WALL;DIAM9;MGRY FB;DKGY SFS;UNUSUAL	-	1	33
604	GREY	BWM	-	-	-	D	RIM/PT WALL;DIAM30;LTGRY FB;DKR EXT;LEAF SHAPE RIM	-	1	180
604	GREY	JNN?	-	-	1-	D	RIM/NECK;GRY CORE/SFS;RB CORT;DIAM11;TRIANG RIM;MGRY	-	2	39
604	GREY	BK	-	-	1-	D	RIM/PT WALL;RB FAB;DKGRY SFS;DIAM9	-	8	58
605	GREY	JNN	-	-	ABR	D	RIM/PT WALL;DIAM12;SLOPING X RIM;UNUSUAL;MGRY	-	1	130
707	GREY	JL	-	-	-	D	RIM/SHLDR;LTGRY FB;DKGY SFS;DIAM24;STRONGLY BENT OVER RIM	-	1	134
805	VESIC	DFL	-	-	1 VABR	D	COMP PROF;DKGRY FB/EXT;BN CORT;BNISH EXT;DIAM26?	-	6	319
401	NVCC?	BK	PA?	-	VABR	D?	BS STRANGE FB;BARB OR THICK SLIP PAINT	-	1	9
401	GREY	BCR	-	-	-	D?	RIM ONLY;DIAM20;KILN	-	1	48
402	GREY	BK	-	-	-	D?	RIM/PT WALL;DIAM12;SLOPING X RIM	-	1	39
412	GREY	BEV	-	-	1-	D?	RIM/WALL;TYPICAL C16 TYPE;DIAM16	-	3	147
508	GREY	JRR	-	-	-	D?	RIM/PT WALL;LOW CORDON BASE NCK;REDDISH EXT X?FIRING;DIAM14	-	1	65
510	NVCC	DPR	-	-	-	D?	COMP PROF;CR FB;DK CC;FRESH/UNWORN	-	1	154
510	NVCC	DPR	-	-	-	D?	COMP PROF;CR FB;DK CC;FRESH/UNWORN	-	1	363
603	NVCC	D	-	-	VABR	D?	RIM FR;CR FAB;TYPE AS GILLAM 297	-	1	33



603	OX	BTR	-	-	-	D?	RIM/WALL;LTRB;MOD QTZ;DIAM20	-	1	32
604	NVCC	BHEM	-	-	ABR	D?	RIM/PT WALL;DIAM16;CR FAB;BNT RIM	-	1	41
604	GREY	BIBF	-	-	1-	D?	RIM/PT WALL;DIAM24;GRY CORE/RB;MGRY	-	2	182
604	GREY	BIBF	-	-	1 BNT P/F	D?	RIM/PT WALL;DIAM27;MGRY;PT FL LOST;BNT POST FRAC	-	2	137
604	GREY	BFBL	-	-	-	D?	RIM PTWALL;DIAM15;MGRY	-	1	58
604	GREY	BFBH	-	-	-	D?	RIM PTWALL;DIAM18;MGRY	-	1	102
604	GREY	BFBH	-	-	-	D?	RIM PTWALL;DIAM20;RB FB;DKGRY EXT	-	1	85
604	GREY	BNK	-	-	1-	D?	RIM/PT WALL;NECKED;DIAM15;MGRY	-	2	45
604	GREY	D36?	-	-	ABR	D?	RIM/PT WALL;L-MGRY;DIAM20	-	1	34
604	GREY	BKEV	-	-	-	D?	RIM/PT WALL;DIAM10;LTGRY	-	1	14
604	VESIC	BIBF	-	-	1 ABR	D?	RIMS J;DKGRY FB/SFS;LTBN CORT	-	2	55
604	VESIC	JDW	-	-	ABR	D?	RIM/PT SHLDR;GYBN FAB;GRY SFS	-	1	55
605	GREY	BWM	-	-	-	D?	RIM FR;PT WALL;LTGRY FB;LEAF RIM	-	1	129
805	GREY	DPR	-	-	BNT	D?	RIM/ST.WALL;NARROW CHAMFER;LTGY;BNT LWR WALL;DIAM14	-	1	16

**APPENDIX 3  
ARCHIVE DATABASE**

Cxt	Fabric	Form	Manuf+	Ve	Altn	D#	Details	Lnk	Shs	Wt
401	MONV	MRF	-	-	ABR	-	RIM ONLY;CR FAB;NO TG;BNISH SURF X ?FIRING	-	1	39
							NVCC			
401	?	BFB	-	-	ABR	-	RIM ONLY;CR FAB;SOME MICA	-	1	67
							NVCC			
401	?	D36?	-	-	VABR	-	RIM ONLY;CR FAB;REMNAANT DKBN CC;SOME MICA	-	1	7
							NVCC			
401	?	CLSD?	-	-	VABR	-	BS CR FAB;DK CC	-	1	13
							NVCC			
401	?	CLSD?	-	-	VABR	-	BS CR FAB;VIRT.NO CC SURVIVING;SOME MICA	-	1	17
							NVCC			
401	?	CLSD?	-	-	VABR	-	BASE FTRG;CR FAB;SOME MICA;RB CC	-	1	191
							NVCC			
401	?	BK	PA?	-	VABR	D?	BS STRANGE FB;BARB OR THICK SLIP PAINT	-	1	9
							NVCC			
401	?	BD	-	-	VABR	-	BS FTRG/FLANGE;F COMM MICA	-	1	9
							NVCC			
401	?	B31	-	-	VABR	-	RIM/PT WALL;CRBN FAB	-	1	24
401	GREY	BFB	-	-	-	-	RIM/PT WALL;DKGRY;SL DISTORTED;SANDY	-	1	196
							RIM/PT WALL;DKGRY;WASTER;THINNER			
							WALL;SANDY			
401	GREY	BFB	-	-	-	-	RIM/PT WALL;SANDY	-	1	59
401	GREY	BFBH	-	-	-	-	RIM/PT WALL;SANDY	-	1	89
401	GREY	BFBH	-	-	-	-	RIM/PT WALL;DKGRY;NO WEAR;SANDY	-	1	137
401	GREY	BFBH	-	-	VABR	-	RIM/PT WALL;DKGRY;LOST FLANGE	-	1	39
401	GREY	BFB	-	-	-	-	RIM/PT WALL;NR NVCC TYPE;WASTERISH	-	1	42
401	GREY	BFB	-	-	-	-	RIM/PT WALL;LOST PT BEAD;LTGRY	-	1	14
401	GREY	BFBH	-	-	ABR	-	RIM/PT WALL;GRY CORE RB;LT CORT/SURF	-	1	83
401	GRSA	BRR	BIA	-	ABR	-	RIM/PT WALL;MGRY	-	1	54
401	GREY	DPR	-	-	-	-	RIM/PT WALL;DEEP;GRY CORE;LTBN CORT/SURF	-	1	58
401	GREY	DPR	-	-	-	-	COMP PROF;DKGRY;SANDY;NOT WEAR	-	1	32
401	GREY	DPR	-	-	-	-	RIM/WALL;DKGRY FB;BN CORT	-	1	9
401	GREY	D	-	-	-	-	BASE FR;LT-MGRY;SANDY	-	1	80
401	GREY	DEXR	-	-	-	-	RIM/PT WALL;LTGRY	-	1	23
401	GREY	DPR?	-	-	-	-	RIM FRAG	-	1	3
401	GREY	BWM	-	-	-	-	RIM>SHLDR;DIST.WASTER;U' CUT RIM	-	1	167
401	GREY	DOLIA	-	-	-	-	RIM INTURNED	-	1	211
401	GREY	JCUR	-	-	-	-	RIM FRAG;RB CORED FAB	-	1	14
401	GREY	JB	-	-	-	-	RIM FRAG	-	1	10
401	GREY	JNN	NOTC	-	-	D	RIM/NECK;NOTC BELOW RIM FLANGE;DIAM11	-	1	46
401	GREY	JNN	-	-	-	-	RIM/NECK;SQUARISH RIM;DIAM14	-	1	48
							RIM>SHLDR;?OFIRED GR/RB CORT;HEAVY			
							TYPE;DIAM14			
401	GREY	JDW	-	-	-	-	RIM>SHLDR;?NON'KILN LTR GREY;DIAM18	-	1	68
401	GREY	JDW	-	-	-	-	RIM>SHLDR;OFIRED SPLIT WASTER	-	1	34
401	GREY	JDW	-	-	-	-	RIM>SHLDR FRAG;KILN PROB	-	1	26
401	GREY	JNN	-	-	-	-	BS PT NCK;SL CORDON;SHLDR	-	1	23
401	GREY	BCR	-	-	-	D?	RIM ONLY;DIAM20;KILN	-	1	48
							RIM ONLY;SPLIT WASTER;DIAM38;LEAF SHAPE			
							RIM			
401	GREY	JBL	-	-	-	-	RIM ONLY;DIAM30;LTR GREY	-	1	98
401	GREY	JBL	-	-	-	-	RIM FRAG ONLY;AS ABOVE TYPE	-	1	71
401	GREY	JB	-	-	-	-	RIM FRAG ONLY;DIAM28;LTR GREY	-	1	37
401	GREY	JRR	-	-	ABR	-	RIM/NECK;DIAM13;DKGRY	-	1	48
401	GREY	DFL	-	-	ABR	-	RIM/PT WALL;LTR GREY;SHORT FLANGE	-	1	24
							RIM ONLY;COAR FB;CRYSTALLINE INCLS;			
							UNUSUAL;ENCRUSTED			
401	?	JS	-	-	VABR	-	BASE STRING;LGE VESS;LTR GRY FAB;F SANDY	-	1	194
401	GREY	JBL	-	-	ABR	-	BASES STRING;MOST LOOK KILN FB	-	1	396
401	GREY	-	-	-	5-	-	BASES PLAIN;LTR FAB	-	5	307
401	GREY	-	-	-	2-	-	BASES PLAIN;KILN FABS	-	2	75
401	GREY	-	-	-	2-	-	BASE RB FB;KILN TYPE;LGE VESS	-	2	127
401	GREY	-	-	-	VABR	-	BASE RB FB;KILN TYPE;LGE VESS	-	1	74
							GREY			
401	?	CP?	-	-	VABR	-	BASE FRAG;DKGRY;NON-KILN	-	1	27
401	GREY	BK	-	-	ABR	-	BASE UPR;GROOVED;DIAM45MM	-	1	27
401	GREY	BWM?	BS	-	-	-	BS SCROLL DEC.SPLIT WASTER	-	1	177
401	GREY	BWM?	BS	-	-	-	BS SCROLL DEC	-	1	62
401	GREY	BWM?	BL	-	-	-	BS ?LOOP DEC;WASTERISH	-	1	163
							BS INTERSECTING LINES;THINNER			
401	GREY	J	BL	-	-	-	WALL;RB/MGRY FB	-	1	44
401	GREY	-	LA	-	-	-	BS LTR GREY	-	1	7
401	GREY	-	-	-	-	-	BSS;DEF KILN TYPE FABS	-	47	1977

401	GREY	-	-	-	-	BSS;LTR FAB;MORE ABR	-	29	553
401	PRO	-	-	-	-	GLAZED HDLE;BS	-	2	40
	ZDAT								
401	E	-	-	-	-	ML4	-	-	-
402	MONV MRF	-	-	-	01	RIM/PT WALL;GRY-CR FB/S;SLAG TG;DIAM21;UNUSUAL	-	1	119
402	MORT M	-	-	BNT?	-	BS CR FB;PINK INT;V.UNUS.TG;?FELSPAR X IGNEOUS;HAEMATITE DEGRADED;SAME	405	1	66
402	MONV M	-	-	VABR	-	BASE FR;DK CR FB/S;?HAEMATITE TG;MICAC	-	1	120
402	NVCC BFB	-	-	1 ABR	-	RIM/PT WALL;PINKISH FB;WHITE CLAY PELL;SIMIL IN 510	-	2	181
				ABR;BN					
402	NVCC BFB	-	-	T	-	RIM/PT WALL;FB ?BNT GRYISH	-	1	57
402	NVCC BD	-	-	-	-	BASE STRING CR FAB	-	1	40
402	NVCC D?	-	-	ABR	-	RIM LOST ?FLANGE;SLOPING WALL;CR FB;DIAM22	-	1	27
						BASE/WALL;PNKBN FB;LTRD CC;MORE			
402	NVCC B	-	-	1 ABR	-	INCLS;WHITE CLAY	-	2	63
402	NVCC BK	-	-	-	-	BS CR FAB;DK CC	-	1	6
402	NVCC CLSD	ROUZ	-	1-	-	BSS CR FB;DK CC;ROUZ BELOW 2GROOVES	-	2	21
402	NVCC F?	-	-	-	-	BS CR FAB;FRESH;DK CC EXT ONLY	-	1	48
402	NVCC F	-	-	ABR	-	BS CR FAB W HDLE STUMP;DK CC EXT ONLY	-	1	26
	BREED					RIM DAMAGED FR;GROOVED			
402	OXL ?	-	-	VABR	-	TOP;INCOMP;PINKISH;NO OBV CC	-	1	11
402	OX CLSD	-	-	-	-	BS LTRB MOD QTZ;OK SPOOL;DK SURFS X?FIRING	-	1	14
402	OX CLSD	-	-	-	-	BS LTRB MOD QTZ;OK SPOOL	-	1	36
402	GREY BFB	-	-	VABR	-	RIM FRAG;OK SPOOL BUT NOT OBV X IMMED.KILN	-	1	15
402	GREY BIBF	-	-	-	-	RIM/PT WALL;LOST FLANGE;FRESH	-	1	49
402	GREY B38	-	-	VABR	-	RIM/PT WALL;LOST FLANGE;SOFTISH FB	-	1	53
402	GREY JCR	-	-	-	-	RIM/NCK;FRESH;X ?KILN;DIAM16	-	1	43
402	GREY BK	-	-	-	D?	RIM/PT WALL;DIAM12;SLOPING X RIM	-	1	39
402	GREY BKEV	-	-	-	-	RIM/PT WALL;L-MGRY;DIAM13	-	1	17
402	GREY BKEV	-	-	-	-	RIM/PT WALL;L-MGRY;DIAM10	-	1	19
402	GREY BNK	-	-	VABR	-	RIM/PT WALL;L-MGRY	-	1	28
402	GREY BWM	-	-	-	-	RIM/PT WALL>GROOVE;EVERTED CURVE TYPE	-	1	113
402	GREY BWM	-	-	-	-	RIM/NECK;DKGRY TYP.SPOOL	-	1	58
402	GREY BWM	BIWL	-	-	-	BS DGRY TYP.SPOOL	-	1	98
402	GREY BWM	BL	-	-	-	BS DKGRY;BASAL W BL ABOVE	-	1	60
						BASE PLAIN;BSS;MGRY;NOT DEF SPOOL;F THIN WALL		8	247
402	GREY J	-	-	1?	-	BASE PLAIN;NOT DEF SPOOL;RB FB;DKGRY SFS	-	1	92
402	GREY CLSD	-	-	-	-	BASE PLAIN;MGRY	-	1	48
402	GREY BK?	-	-	-	-	BSS DKGRY;MOST THIN WALL;NOT DEF SP	-	8	99
402	GREY -	-	-	ABR	-	BSS MGRY;MOST PROB SPOOL	-	9	275
402	GREY -	-	-	-	-	BSS MOST L-MGRY;SOME SL.OXID;NOT KILN WASTE	-	45	912
402	GREY -	-	-	ABR	-	BASE FTRG FRAG;DKGRY;RB FAB	-	1	15
402	GREY BK?	-	-	-	-	BS LTGRY;RIBBED WALL ?BASAL ZONE	-	1	10
	ZDAT								
402	E	-	-	-	-	ML4	-	-	-
405	MORT M	-	-	BNT?	-	BS CR FB;PINK INT;V.UNUS.TG;?FELSPAR X IGNEOUS;HAEMATITE DEGRADED;SAME	402	1	95
	NVCC								
405	? BD?	-	-	ABR	-	BS PINKISH FB;MICAC	-	1	5
405	GREY JCUR	-	-	-	-	RIM FRAG;M-LGRY;DK EXT;NOT SPOOL?	-	1	10
405	GREY BD	-	-	-	-	RIM FRAG;BDTR? NOT DEF;M-LGRY	-	1	12
405	GREY CLSD	-	-	-	-	BSSDKGRY;PROB X KILN WASTE	-	2	34
405	GREY -	-	-	ABR	-	BSS M-LGRY	-	7	224
	ZDAT								
405	E	-	-	-	-	L3-4	-	-	-
						RIM/WALL;DEEP DISH;CR FAB;EXT CC LOST;FE INCLS		1	58
412	NVCC DPR	-	-	-	-	RIM/WALL;TYPICAL C16 TYPE;DIAM16	-	3	147
412	GREY BEV	-	-	1-	D?	RIM >NOTC;CF TYPE C41	-	1	29
412	GREY JH?	NOTC	-	-	-	BS DKGRY;JUDD ZONE;?KILN WASTE	-	1	41
412	GREY CLSD	JUDD	-	-	-	BASE STRING;?KILN WASTE	-	1	22
412	GREY J	-	-	-	-	BSS;L-MGRY NOT KILN WASTE	-	4	74
	ZDAT								
412	E	-	-	-	-	4C	-	-	-
508	NVCC CLSD	-	-	ABR	-	BS CR FAB;LTRB CC	-	1	17
508	CR CLSD	-	-	-	-	BS X J OR FLAGON	-	1	39
508	OX CLSD	-	-	-	-	BS LTRB;MOD QTZ INCLS	-	1	5
						RIM/PT WALL;LOW CORDON BASE NCK;REDDISH EXT X?FIRING;DIAM14		1	65
508	GREY JRR	-	-	-	D?		-	1	65

508	GREY BWM?	BS?	-	-	-	BS BASAL ZONE;HARD FIRED ?KILN WASTE	-	1	94
508	GREY JEV	-	-	-	-	RIM ONLY;L-MGRY	-	1	19
508	GREY JS	-	-	-	-	RIM ONLY;LEAF-TYPE;GRY CORE;RB SKIN;?KILN	-	1	51
508	GREY J	-	-	-	-	BASE PLAIN	-	1	41
508	GREY -	-	-	-	-	BS L-MGRY	-	1	46
	ZDAT								
508	E	-	-	-	-	L3+	-	-	-
	MOSP					RIM/PT WALL;GRY FB;RB CORT;CR			
510	? MBF	-	1-	02		SLIP;FLINT;QUARTZITE;FE ORE TG;SPOUT;DIAM24	-	2	163
						COMP PROF;FINE LTGRY CORE PINK FB;LTRB			
510	NVCC B38	-	-	ABR	D	CC;DIAM28	-	1	342
						RIM/WALL;FINE LTGRY CORE FB;LTRB CC;FLANGE			
510	NVCC B38	-	-	VABR	-	LOST	-	1	139
510	NVCC B38?	-	1	VABR	-	BSS J;FINE LTGRY CORE FB;LTRB CC	-	2	68
	B38/BF								
510	NVCC B	-	-	VABR	-	FLANGE FRAG FLAKED;GRY CORE;LTBN;LTRB CC	-	1	16
510	NVCC B38	-	-	VABR	-	FLANGE/LWR WALL;CR FAB;DK CC	-	1	56
510	NVCC DPR	-	-	-	D?	COMP PROF;CR FB;DK CC;FRESH/UNWORN	-	1	154
510	NVCC DPR	-	-	-	D?	COMP PROF;CR FB;DK CC;FRESH/UNWORN	-	1	363
510	NVCC DPR	-	-	-	-	RIM FRAG;CR FB;DK CC	-	1	5
510	NVCC DPR	-	-	-	-	RIM FRAG;CR FB;DK RB CC	-	1	13
510	NVCC DPR	-	-	ABR	-	COMP PROF;GRY CORE;CR FB;LTBN CC	-	1	194
510	NVCC DPR	-	1	ABR	-	COMP PROF;SL GRY CORE;LTBN CC	-	4	80
510	NVCC BD	-	-	VABR	-	BASE/WALL FRAG	-	1	15
510	NVCC BFB	-	1-	D	-	COMP PROF;CR FAB;DK CC;FRESH/UNWORN	-	2	353
510	NVCC BFB	-	-	-	-	RIM/MOST WALL;CR FB;DK CC;?UNWORN	-	1	227
510	NVCC BFB	-	-	ABR?	-	RIM/MOST WALL;LTBNFB;DK RB CC	-	1	176
						COMP PROF;SL GRY CORE;LTBN FB;LTRB			
510	NVCC BFB	-	1-	-	-	CC;DIFFERENTIAL ABR?	-	3	534
						RIM/WALL;THIN SM VES;LTGRY CORE BN FB;DK			
510	NVCC BFB	-	1-	D	-	CC;?UNWORN	-	2	100
						RIM/WALL;LACKING FL;CR FB;DK CC;?UNWORN			
510	NVCC BFB	-	-	-	-	INT	-	1	73
510	NVCC B	-	-	-	-	BASE/WALL;CR FB;DK CC;?UNWORN	-	1	126
510	NVCC BFB	-	-	ABR	-	FLANGE FR ONLY;SL GRY CORE	-	1	15
510	NVCC F	-	1?	ABR	-	BSS HDLE SCAR;CR FB;DK CC	-	2	12
						BS WALL;SHLDR>GIRTH;CR/PINK FB;DK CC;ROUZ			
510	NVCC F	PA;ROUZ	-	-	D	GIRTH;FRESH	-	1	105
510	GREY BWM	-	1-	D	-	RIM/PT WALL;DIAM38	-	2	677
510	GREY BWM	-	-	-	-	BS GROOVED	-	1	86
						BS WALL BELOW GROOVE;BURNISH			
510	GREY BWM	BARC	-	-	-	ARCS;?SPALLED	-	1	320
						RIM SL CORD;SHLDR;DIAM15;SIMPLE RRIM;GRY			
510	OXL? JNN	-	1-	-	-	CORE RB;LTBN SFS	-	2	194
510	GREY JEV	-	-	-	-	RIM/SHLDR;CF C22 TYPE	-	1	33
						RIM/SHLDR;RB FB;MOD QTZ;GRY EXT;NOT DEF			
510	GREY JEV	-	-	-	-	SPOOL	-	1	21
510	GREY -	-	-	-	-	BASE 17MM STAND;STD GREY	-	1	95
510	GREY J?	-	-	-	-	BASE PLAIN;RB FB;MOD QTZ;NOT DEF SPOOL	-	1	112
						RIM/SHLDR;RB MODQTZ FB;SLIP LE;NOT DEF			
510	OXWS JSQ	-	-	ABR	D	SPOOL	-	1	39
510	OX? CLSD	-	-	VABR	-	BS RB MOD QTZ FB;TRACES GRY EXT	-	1	16
510	GREY J	-	-	VABR	-	RIM/NECK;RB MOD QTZ FB;DKGRY SFS;NOT SPOOL	-	1	42
						BASE STRING DIAM 55MM;DKGRY FB;RB			
510	VESIC J	-	-	ABR	-	CORT;LOST SHELL	-	1	61
	ZDAT								
510	E	-	-	-	-	M4	-	-	-
510	ZZZ	-	-	-	-	QUAN NVCC	-	-	-
						COMP JAR;DIAM17;BASE ?SPALLED OFF;MIDDLE			
601	GREY JL	BARC;BWL	1-	03		MISSING	-	10	3605
601	GREY J	-	-	-	-	RIM CHIP ONLY;DKGRY MOD QTZ FB/S	-	1	3
	ZDAT								
601	E	-	-	-	-	L3-4	-	-	-
601	ZZZ	-	-	-	-	SINGLE COMP JAR SPOOL TYPE	-	-	-
						RIM/PT WALL;FRESH;DIAM24;FE TRIT;NO OBV			
603	MONV MRF	-	1-	04		WEAR	-	2	206
603	MONV M	-	-	BNT P/F	-	RIM FLAKED PT;FE TRIT;UNUSUAL FLANGE END	-	1	53
603	MONV M	-	-	VABR	-	BS FE TRIT	-	1	15
603	MONV M	-	-	-	-	BASE LTBN FB;FE TRIT;LITTLE WEAR	-	1	88
603	MOSP M	-	-	VABR	-	BS RB QTZY FB;FINE SLAG TG;TRACES WHITE SLIP	-	1	18
603	NVCC BFB	-	-	ABR	-	RIM/PT WALL;CR FAB	-	1	54
603	NVCC BFB	-	-	VABR	-	RIM FRAG ONL Y;LTGRY CORE;PINKISH FB	-	1	25
603	NVCC B	-	-	ABR	-	BASE/WALL;PINKISH FB;MICAC	-	1	37
603	NVCC B38?	-	-	ABR	-	RIM FR ONLY;PINKISH FB;LTGRY CORE;MICAC	-	1	12

603	NVCC	D	-	-	VABR	-	BASE FRAG;CR FAB	-	1	66
603	NVCC	D	-	-	VABR	-	BASE FRAG;CR FAB	-	1	34
603	NVCC	D	-	-	ABR	-	BASE FRAG;CR FAB	-	1	41
603	NVCC	D	-	-	VABR	D?	RIM FR;CR FAB;TYPE AS GILLAM 297	-	1	33
603	NVCC	D?	-	-	ABR	-	BS CR FAB	-	1	13
603	NVCC	-	-	-	3 VABR	-	BSS CR FAB;NOT CLEAR OPEN/CLSD	-	3	41
603	NVCC	CLSD	-	-	-	-	BASE AS RPNV66;F.FRESH;CR FAB	-	1	26
603	NVCC	CLSD	-	-	2 ABR	-	BSS CR & PINK FAB	-	2	17
603	NVCC	CLSD	-	-	-	-	BS CR FAB;FE INCLS;SLIP DRIPS INT	-	1	7
603	NVCC	BKROU ROUZ	-	-	VABR	-	BS PINK-BN FB	-	1	4
603	NVCC	F?	-	-	-	-	BASE 85MM DIAM;AS RPNV66 TYPE;CR FAB	-	1	141
603	OX	BTR	-	-	-	D?	RIM/WALL;LTRB;MOD QTZ;DIAM20	-	1	32
603	OX	J	-	-	-	-	RIM/NECK ONLY;RB MOD QTZ;DIAM14	-	1	16
603	GREY	JL	-	-	-	-	RIM;SL CORDON;SHLDR;TYPE AS DW3;DIAM15	-	1	183
603	GREY	JL	-	-	-	-	RIM;SL CORDON;SHLDR;TYPE AS DW3	-	1	64
603	GREY	JL	-	-	-	-	RIM/NECK;DIAM20;WASTERISH;OVAL RIM	-	1	80
603	GREY	JCR?	-	-	-	-	RIM FLAKED AS C40 TYPE	-	1	17
603	GREY	BIBF	-	-	-	05	RIM/PT WALL;DIAM31;UNUSUAL TYPE;LTGRY;MGRY EXT	-	1	51
603	GREY	BFL	-	-	-	D	RIM/PT WALL;DIAM28;UNUSUAL TYPE;MGRY	-	1	89
603	GREY	BDFLV	-	-	-	06	RIM/WALL;DIAM24;UNUSUAL TYPE;MGRY	-	1	83
603	GREY	JNN?	-	-	-	D	RIM/NECK;CORDON;CF C12;DIAM10;MGRY	-	1	43
603	GREY	DPR	-	-	-	-	COMP PROF;MGRY	-	1	69
603	GREY	JBEV	-	-	-	-	RIM/PT WALL;DIAM18;MGRY	-	1	59
603	GREY	BNK	-	-	-	-	RIM/PT WALL;DIAM22;TIGHT CURVE;MGRY	-	1	38
603	GREY	BKFN?	-	-	ABR	-	BS NECK>SHLDR;RB FB;DKR GRY SURF	-	1	25
603	GREY	JEV	-	-	-	-	RIM/PT WALL;CF C22 TYPE	-	1	23
603	GREY	DOLIA FF;HM?	-	-	1 ABR	D	RIM/PT WALL;TRIANG RIM;FF BELOW;MGRY COARSE FAB	-	2	322
603	GREY	JDW	-	-	ABR	-	RIM FR;RB FB;DKGY SFS	-	1	11
603	GREY	JCUR	-	-	VABR	-	RIM FR;DKGRY FB/SFS;THIN RB CORT	-	1	23
603	GREY	JB	-	-	VABR	-	RIM FR;MGRY	-	1	13
603	GREY	J	-	-	VABR	-	BASE RB FAB;DKGRY SFS;STRING SMOOTHED	-	1	92
603	GREY	J	-	-	ABR	-	BASE RB FAB;DKGRY SFS;STRING SMOOTHED	-	1	14
603	GREY	-	-	-	ABR	-	BS RB FAB;DKGRY SFS	-	1	25
603	GREY	J	-	-	ABR	-	BS RB FAB;DKGRY SFS	-	2	42
603	GREY	J	-	-	ABR	-	BS RB FAB/INT;DKGRY EXT	-	1	37
603	GREY	-	-	-	VABR	-	BSS DKGRY F/SFS	-	3	53
603	GREY	JB	-	-	-	-	BASE PLAIN;JL OR BWM;MGRY	-	1	253
603	GREY	JB	-	-	-	-	BASE PLAIN;JL OR BWM;MGRY	-	1	198
603	GREY	J	-	-	-	-	BASE PLAIN	-	1	81
603	GREY	J	-	-	-	-	BASE STRING	-	1	61
603	GREY	BWM? BL	-	-	-	-	BS BASAL ZONE;BL DEC	-	1	78
603	GREY	J?	-	-	-	-	BASE/WALL;GRY CORE/SFS;RB CORT	-	1	54
603	GREY	BWM BWL	-	-	-	-	BS LT-MGRY	-	1	81
603	GREY	CLSD	-	-	-	-	BS V THIN WALL VESSEL;>1-2MM	-	1	25
603	GREY	JBK	-	-	-	-	BS SMALL VESSEL;MGRY	-	1	12
603	GREY	BK	-	-	-	-	BASE 10MM STAND;4CM DIAM	-	1	10
603	GREY	JL	-	-	1 VABR	-	BASE STRING;COARSE FAB;MGRY	-	2	304
603	GREY	-	-	-	ABR	-	BSS MISC MGRYS	-	29	646
603	VESIC	JDLS	-	-	VABR	-	RIM ONLY;RB FAB;DK SFS	-	1	24
603	VESIC	JDLS	-	-	VABR	-	RIM ONLY;RB FAB;DK SFS	-	1	14
603	ZDAT	-	-	-	-	-	-	-	-	-
603	E	-	-	-	-	-	M4	-	-	-
603	ZZZ	-	-	-	-	-	NO DEFINITE WASTE	-	-	-
604	NVCC	BHEM	-	-	ABR	D?	RIM/PT WALL;DIAM16;CR FAB;BNT RIM	-	1	41
604	NVCC	BFB	-	-	VABR	-	RIM FRAG ONLY;CR FAB	-	1	15
604	NVCC	BFB	-	-	VABR	-	RIM FRAG ONLY;CR FAB	-	1	13
604	NVCC	B38?	-	-	VABR	-	RIM >START FLANGE?;LTGRY CORE;PINKBN FAB;MICAC	-	1	32
604	NVCC	B	-	-	VABR	-	BS WALL;CR FAB	-	1	21
604	NVCC	F	-	-	-	-	BASE FTRG 9CM DIAM;CR FAB;CC DRIPS INT	-	1	283
604	NVCC	F	-	-	3?	-	BSS ALL CR FAB;CC EXT ONLY	-	3	18
604	NVCC	BK?	-	-	2-	-	BSS CR FAB	-	2	10
604	NVCC	-	-	-	VABR	-	BS LUMP CR FAB	-	1	17
604	CR?	-	-	-	VABR	-	BS POSS NVCC LOST CC?	-	1	30
604	OXF?	-	-	-	VABR	-	BS LTGRY CORE;LTBN FB;MICAC;POSS LOST CC?	-	1	5
604	OX	-	-	-	VABR	-	BS SANDY GRY CORE LTRB FAB;LOST SURF ?HDLE	-	-	-
604	OX	-	-	-	ABR	-	SCAR	-	1	20
604	OX	-	-	-	ABR	-	RIM/FLANGE;GRY CORE LTBN MOD QTZ	-	1	16
604	OX	-	-	-	VABR	-	BS LTRB MOD QTZ FAB	-	1	43
604	GREY	BIBF	-	-	1-	07	COMP PROF/RIM;SPLIT RIM;DIAM19;LESS COMMON TYPE;MGRY FB	-	4	621

604	GREY	BIBF	-	1-	08	COMP VESS;SPLIT WALL;DIAM18.5;MOSTLY	-	4	560		
604	GREY	BIBF	-	1-	D?	LTRB;STRING BASE	-	2	182		
604	GREY	BIBF	-	1	BNT P/F	D?	RIM/PT WALL;DIAM24;GRY CORE/RB;MGRY	-	2	137	
604	GREY	BIBF	-	1	VABR	-	RIM/PT WALL;DIAM27;MGRY;PT FL LOST;BNT POST	-	1	33	
604	GREY	BFBL	-	-	-	D?	FRAC	-	1	58	
604	GREY	BFBH	-	-	-	D?	RIM PTWALL;DIAM15;MGRY	-	1	102	
604	GREY	BFBH	-	-	-	D?	RIM PTWALL;DIAM18;MGRY	-	1	85	
604	GREY	B38	-	-	-	-	RIM/PT WALL;DIAM20;RB FB;DKGRY EXT	-	1	28	
604	GREY	B38	-	-	-	-	BS W FLANGE;PT BN CORE;LTGRY	-	1	13	
604	GREY	BNK	-	1-	D?	-	BS W PT FLANGE;RB CORE;LTGRY	-	2	45	
604	GREY	DPR	-	-	-	-	RIM/PT WALL;NECKED;DIAM15;MGRY	-	1	30	
604	GREY	D36?	-	-	ABR	D?	RIM/WALL;LTGY FB;DKR SFS;STRAIGHT WALL	-	1	34	
604	GREY	BNK	-	-	-	D	RIM/PT WALL;L-MGRY;DIAM20	-	1	71	
604	GREY	BNK	-	1-	D	-	RIM/PT WALL;L-MGRY;DIAM19	-	2	70	
604	GREY	BK	-	1-	D	-	RIM/PT WALL;L-MGRY;DIAM17	-	5	70	
604	GREY	BK	-	-	-	D	RIMS/NECK;DIAM11;MGRY	-	1	33	
604	GREY	BKEV	-	-	-	D?	RIM/PT WALL;DIAM9;MGRY FB;DKGY	-	1	14	
604	GREY	BWM	-	-	-	D	SFS;UNUSUAL	-	1	180	
604	GREY	BWM	-	-	-	-	RIM/PT WALL;DIAM30;LTGRY FB;DKR EXT;LEAF	-	1	100	
604	GREY	BWM	-	-	-	-	RIM ONLY;LTGRY FB;LEAF RIM;DIAM32	-	3	223	
604	GREY	BWM	-	-	-	-	RIM ONLY;LTGRY FB;LEAF RIM;DIAM34	-	1	67	
604	GREY	BWM	-	-	-	-	RIM ONLY;LTGRY FB W BN CORT;LEAF	-	1	45	
604	GREY	BWM	-	-	-	-	RIM;DIAM28	-	1	39	
604	GREY	BL	NOTC	1-	09	-	RIM FR ONLY;LTGRY;LEAF TYPE	-	1	78	
604	GREY	JBL	BVL	1-	-	-	RIM FLAKED;LTGRY;PROB LEAF TYPE	-	2	517	
604	GREY	JBL	BVL	1-	-	-	RIM ONLY;SQUARISH TYPE;DIAM34	-	2	369	
604	GREY	JB	-	1-	-	-	RIM/PT WALL;DIAM52?;V UNUSUAL;?CAULDRON	-	2	190	
604	GREY	JB	-	-	-	-	BASE PLAIN;95MM DIAM	-	2	142	
604	GREY	JB	-	-	-	-	BSS BASAL ZONE;DEC ABOVE	-	1	66	
604	GREY	JB	-	-	-	-	BASE UNUS SM.MOULDING;L-MGY;DK EXT	-	1	130	
604	GREY	J	-	2-	-	-	BASE UNUS SM.MOULDING;LGY CORE;BN	-	2	144	
604	GREY	J	-	-	VABR	-	CRT;DKGRY SFS	-	1	71	
604	GREY	BK?	-	-	-	-	BASE LGE VESS;SL SPLIT;MGRY	-	1	50	
604	GREY	BK	-	-	VABR	-	BASES PLAIN MGRY	-	1	11	
604	GREY	JB	-	-	VABR	-	BASE PLAIN;MGRY;DIAM50MM	-	1	72	
604	GREY	JL	BLOOP;BW	1-	-	-	BASE PLAIN;DKGRY;DIAM40MM	-	3	177	
604	GREY	BWM	BS	-	-	-	BASE STRING;DKGRY;CLUMSY	-	1	80	
604	GREY	J	BDL	-	-	-	BSS FRESH;MGRY;CF DW3	-	1	90	
604	GREY	J	BVL	1-	-	-	BS LWR WALL;LTGRY W DK EXT	-	2	69	
604	GREY	J	BWL	1-	-	-	BS ZONE W DIAG LINES	-	2	74	
604	GREY	J?	JUDD	3?	-	-	BSS	-	3	77	
604	GREY	JL	-	-	-	-	BSS J	-	1	43	
604	GREY	JNN?	-	1-	D	-	RIM/NECK;SIM DW3;W SM CORDON;DIAM18	-	2	39	
604	GREY	BK	-	1-	D	-	RIM/NECK;GRY CORE/SFS;RB	-	8	58	
604	GREY	-	-	-	VABR	-	CORT;DIAM11;TRIANG RIM;MGRY	-	1	34	
604	GREY	-	-	-	-	-	RIM/PT WALL;RB FAB;DKGRY SFS;DIAM9	-	85	1716	
604	VESIC	DFL	-	1	ABR	-	HDLE? FRAG;4 RIB;MGRY	-	5	400	
604	VESIC	DFL	-	-	ABR	-	BSS;OCCAS SPLIT	-	1	11	
604	VESIC	BIBF	-	1	ABR	D?	COMP PROF;DKGRY FB;DIAM16	-	2	55	
604	VESIC	JDW	-	1	ABR	-	RIM/PT WALL;BN FAB;DKGRY SFS	-	2	67	
604	VESIC	JDW	-	-	ABR	D?	RIMS J;DKGRY FB/SFS;LTBN CORT	-	1	55	
604	VESIC	JDW	-	-	ABR;BN	-	RIMS J;GY/BN FBL;GRY SFS	-	1	22	
604	VESIC	J	-	1	T	-	RIM/PT SHLDR;GYBN FAB;GRY SFS	-	2	39	
604	VESIC	J	-	-	ABR;BN	-	RIM FRAG;BNT	-	1	24	
604	VESIC	J	-	-	ABR;BN	-	BSS SHLDR;J;BNT	-	1	146	
604	VESIC	J	-	-	T	-	BS SHLDR;SOOTED	-	1	161	
604	VESIC	J	-	-	ABR	-	BASE PLAIN DAMAGED;PT WALL	-	1	18	
604	VESIC	CLSD	-	-	ABR	-	BASE PLAIN DIAM 85MM;GRY CORE RB FB;DKGRY	-	6	105	
604	E	-	-	-	-	-	SFS	-	-	-	
605	GREY	BWM	-	-	-	D?	RIM DAMAGED FRAG	-	1	129	
		ZDAT	-	-	-	-	BSS	-	-	-	
		E	-	-	-	-	ML4	-	-	-	
		605	GREY	BWM	-	-	D?	RIM FR;PT WALL;LTGRY FB;LEAF RIM	-	1	129

605	GREY J?	JUDD	-	-	-	BS ZONE JUDDERED DEC	-	1	38
605	GREY D	-	-	1-	-	BASE FRAGS;DISH DIAM	-	2	385
						RIM/PT WALL;DIAM12;SLOPING X			
605	GREY JNN	-	-	ABR	D	RIM;UNUSUAL;MGRY	-	1	130
605	GREY -	-	-	-	-	BSS;MGRY MOST	-	8	229
605	VESIC J	-	-	VABR	-	BS SHLDR;BN FAB;GRY SFS	-	1	31
	ZDAT								
605	E	-	-	-	-	ML4	-	-	-
						RIM/SHLDR;LTGRY FB;DKGY			
707	GREY JL	-	-	-	D	SFS;DIAM24;STRONGLY BENT OVER RIM	-	1	134
	ZDAT								
707	E	-	-	-	-	L3-4	-	-	-
707	ZZZ	-	-	-	-	SINGLE RIM	-	-	-
802	GREY LID?	-	-	-	-	BS DKGRY SANDY FB NR KNOB	-	1	34
802	GREY JB	-	-	-	-	BS SHLDR/GROOVE/BODY;JL OR BWM;MGRY	-	1	42
802	GROG JBL	-	-	VABR	-	RIM FRAG;?GROG;MGRY FB;BN CORT;DKGRY SFS	-	1	55
	ZDAT								
802	E	-	-	-	-	2C?	-	-	-
805	GREY BWM	-	-	1-	-	RIM/SHLDR;DIAM26;LEAF TYPE RIM;MGRY	-	2	101
805	GREY BIBF	-	-	-	-	BS FLAKED BY RIM;LGE VESSEL;MGRY	-	1	61
805	GREY BNK	-	-	-	-	RIM->SHLDR;DIAM20;SMALL BOWL;MGRY	-	1	19
						RIM/ST.WALL;NARROW CHAMFER;LTGY;BNT LWR			
805	GREY DPR	-	-	BNT	D?	WALL;DIAM14	-	1	16
805	GREY BWM?	BS	1?	-	-	BSS;MGRY	-	2	100
805	GREY -	-	-	-	-	BSS;MGRY	-	4	118
805	GREY CLSD	-	-	-	-	BS BN/GRY FAB;DKGRY SFS	-	2	84
805	OX JBK?	-	-	-	-	BASE DIAM60MM;GRY CORE RB FB/SFS	-	1	64
805	VESIC J?	-	-	VABR	-	BASE PLAIN;DKGRY FB/SFS;BN INT CORT	-	1	108
						COMP PROF;DKGRY FB/EXT;BN CORT;B'NISH			
805	VESIC DFL	-	-	1 VABR	D	EXT;DIAM26?	-	6	319
	ZDAT								
805	E	-	-	-	-	ML4	-	-	-
806	OXF CLSD	-	-	-	-	BS LTBN/RB FAB;BK? SL MICACEOUS	-	1	4
	ZDAT								
806	E	-	-	-	-	ROM	-	-	-

**HYKEHAM RD, NORTH HYKEHAM, LINCOLN  
THE SAMIAN WARE**

**by Margaret Ward, MA, MIFA**

June 2008

**Context (603), dark grey silt layer**

A single, badly battered sherd lacking its internal, basal surface. From the footring of a dish of fairly standard type, its micaceous, reddish fabric indicates that it was manufactured at Lezoux in Central Gaul at some point in the Hadrianic-Antonine period. Little of the footring has survived, but what there is suggests that the vessel may have been of the earlier form 18/31R, rather than the later form 31R that was produced in the period c AD 160-200. The general appearance of this sherd is consistent with this dish having been produced in the period c AD 140-160/170, though this is by no means certain. The footring was so abraded that it was not possible to comment on its wear from use. Weight 13 g, including silt which still adheres.

Thus this vessel is evidence of occupation in the vicinity in the second century, rather than having been related to construction of the Fosse Way in the first century or to the late-Roman pottery production that was recorded north-west of the current site.

For terminology, see P V Webster *Roman samian pottery in Britain*, CBA Practical Handbook in Archaeology 13, 1996, York



# Pottery Archive for Hykeham Road, North Hykeham, Lincolnshire (HYRL08)

Jane Young

context	cname	full name	sub fabric	form type	sherds	weight	part	description	date
805	BL	Black-glazed wares	fine oxid	large bowl	1	25	BS	internal glaze	18th to 19th
805	LSW2	13th to 14th century Lincoln	coarse fabric + fe	jug	1	15	BS	? Lincoln product as quite a lot of fe	13th to early/mid 14th

07 July 2008

# Ceramic Building Material Archive for Hykeham Road, North Hykeham, Lincolnshire (HYRL08)

Jane Young

A small mixed collection of ceramic building material including modern brick, Roman tile and kiln furniture was recovered from the site. All of the Roman tile, fired clay and kiln furniture appears to have utilised the same, probably local, clay source. The fabric contains a fine to medium sized round to subround quartz (0.2-0.6mm), common iron-rich grains, clay pellets (cream and red) and occasional small pebbles in an often marbled (cream and orange) fine clay. The presence of light firing streaks in the clay indicates that the clay was not well mixed and may suggest that a light firing clay is available in the locality.

context	ename	full name	fabric	frags	weight	description	date
401	KFURN	kiln furniture	reduced > oxid fine sandy	1	98	roughly flattened outer surface;35mm+ thick;reduction blends through to oxid;low fired;fabric includes med common subround quartz moderate-common fe sparse cream clay ? pellets & some light streaks	-
402	MISC	Unidentified types	marbled + fe	1	135	probably KFURN;flat ? upper surface;fabric includes med common subround quartz moderate-common fe common cream clay ? pellets & common light streaks;includes moderate small pebbles especially on upper surface	Roman
402	FIRED CLAY	fired clay	marbled cream & orange fine	1	9	very abraded	-
412	KFURN	kiln furniture	oxid	1	28	wedge with finger impressions;fabric includes med common subround quartz moderate-common fe sparse cream clay ? pellets & some	-

## **APPENDIX 4: Faunal Remains**

*By Jennifer Wood*

### **Introduction**

A total of 27 (840g) fragments of animal bone were recovered by hand during archaeological trial trenching undertaken by Pre-Construct Archaeology Lincoln.

The remains were recovered from possible Roman ditch [507], Roman spread (604), undated ditches [512], [602], [801] and subsoil (805).

### **Methodology**

The entire assemblage has been fully recorded into a database archive. Identification of the bone was undertaken with access to a reference collection and published guides. All animal remains were counted and weighed, and where possible identified to species, element, side and zone (Serjeantson 1996). Ribs and vertebrae were only recorded to species when they were substantially complete and could accurately be identified. Undiagnostic bones were recorded as micro (rodent size), small (rabbit size), medium (sheep size) or large (cattle size). The separation of sheep and goat bones was done using the criteria of Boessneck (1969) and Prummel and Frisch (1986) in addition to the use of the reference material. Where distinctions could not be made the bone was recorded as sheep/goat (S/G).

The quantification of species was carried out using the total fragment count, in which the total number of fragments of bone and teeth was calculated for each taxon. Where fresh breaks were noted, fragments were refitted and counted as one. The data produced the basic NISP (Number of Identified Specimen) counts.

The condition of the bone was graded using the criteria stipulated by Lyman (1996). Grade 0 being the best preserved bone and grade 5 indicating that the bone had suffered such structural and attritional damage as to make it unrecognisable. Also fusion data, butchery marks (Binford 1981), gnawing, burning and pathological changes were noted when present.

Tooth eruption and wear stages were measured using a combination of Halstead (1985), Grant (1982), Levine (1982) and Payne (1973), and fusion data was analysed according to Silver (1969). Measurements of adult, that is, fully fused bones were taken according to the methods of von den Driesch (1976), with asterisked (\*) measurements indicating bones that were reconstructed or had slight abrasion of the surface.

### **Results**

The remains were generally of a good to moderate condition, averaging between grades 2 and 3 on the Lyman criteria (1996).

No evidence of butchery, burning, gnawing or pathology was noted on any of the remains.

Table 1, Summary of Identified Bone (NISP)

Trench No.	5		6		8		
Context	508	513	601	604	802	805	
Taxon	Ditch [507]	Ditch [512]	Ditch [602]	Layer of Roman material associated with wall 605	Ditch [801]	Subsoil	Total
Equid (Horse Family)	1	1			1		3
Cattle	2			2	1	1	6
Sheep/Goat				2	1		3
Pig						1	1
Large Mammal	2			6	2		10
Medium Mammal			2	2			4
Total	5	1	2	12	5	2	27

As can be seen from Table 1, cattle were the most abundant species identified, followed by equid and sheep/goat, in equal numbers, with a single fragment identified as pig also present.

The assemblage was relatively small, which provides limited information on the animal utilisation and husbandry practices undertaken on site, save these presence and use of the identified species.

## References

- Baker, J, and Brothwell, D, 1980 *Animal Diseases in Archaeology*, Academic Press
- Binford, L., 1981, *Ancient Men and Modern Myths*, New York: Academic Press.
- Boessneck, J, 1969 Osteological Differences in Sheep (*Ovis aries* Linné) and Goat (*Capra hircus* Linné), in D Brothwell and E Higgs (eds) *Science in Archaeology*, Thames and Hudson, 331-358
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Silver, I, A, 1969, The Ageing of Domestic Animals, in D. Brothwell and E.S. Higgs, *Science in Archaeology*, Thames and Hudson.

Key:

*Codes and references used in cataloguing animal bone*

**Taxon:** Species, family group or size category.

Non-species specific codes: -

- : Equid- Horse Family
- : Gadidae- Cod Family
- : Passer- *Passerine*, Small songbirds i.e. Sparrow or Finches
- : Turdid- *Turdidae*, Blackbird/Thrush family
- : Corvid- *Corvidae*, Crow family i.e. Crow, Rook or Jackdaw
- : Galliform- Fowl or Pheasant
- : Large Mammal – Cattle, Horse, Red Deer size
- : Medium Mammal- Sheep/Goat, Pig, Dog, Roe Deer size
- : Small Mammal- Cat, Rabbit size
- : Micro Mammal- Mouse sized
- : Unidentified- Not identified to species

**Element:** Skeletal element represented.  
: Unidentified- Not identified to element

**Side:** L-Left, R- Right, B- Both

**Zones:** Records presence/absence of individual areas of the bone.  
Based on Zone illustrations in Serjeantson, D, 1996 The Animal Bones, in *Refuse and Disposal at Area 16, East Runnymede: Runnymede Bridge Research Excavations*, Vol. 2, (eds) E S Needham and T Spence, British Museum Press, London.

**Prox & Dist:** Fusion of proximal and distal epiphyses  
: X- Not present, F- Fused, U- Unfused, B- Unfused diaphysis and epiphysis present, V- Fusion Line visible.

**Age Range:** Age range based on age at fusion. Based on Silver, I, A, 1969, The Ageing of Domestic Animals, in D. Brothwell and E.S. Higgs, *Science in Archaeology*, Thames and Hudson.

**Path:** Presence of pathology, details in notes column.

**Butch:** Presence of butchery, details in notes column.

- Burnt:** Presence of burning, details in notes column.
- Gnaw:** Presence of gnawing, details in notes column.
- Worked:** Fragment shows evidence of working, details in the notes column.
- Fresh Break:** Fresh break noted, fragments re-fitted as one bone.
- Associated:** Articulating or adjoining bones.
- Measured:** Measurements taken as according to Von den Driesch, A, 1976 *A Guide to the Measurement of Animal Bones from Archaeological Sites*, Peabody Museum.
- Tooth Wear:** Tooth wear score for aging data, taken as according to:
- Grant, A, 1982 'The Use of Tooth Wear as a Guide to the Age of Domestic Ungulates', in B Wilson *et al.* *Ageing and Sexing Animal Bones from Archaeological Sites*, BAR British Series 109, 91-108, Oxford
  - Halstead, P, 1985 A Study of Mandibular Teeth from Romano-British Contexts at Maxey, in F Pryor, *Archaeology and Environment in the Lower Welland Valley*, East Anglian Archaeology Report 27:219-224
  - Levine, M A, 1982 The Use of Crown Height Measurements and Eruption-Wear Sequences to Age Horse Teeth. In Wilson, B *et al.* *Ageing and Sexing Animal Bones from Archaeological Sites*. BAR British Series 109. 223 – 250
- Surface:** Taphonomies noted on the bone surface:  
W- Weathered  
A- Abraded  
R- Rootlet etched  
D- Chemical etching from digestion
- Condition:** Grades 0-5, where 0 = pristine and 5= indicating that the bone had suffered such structural and attritional damage as to make it unrecognisable. Based on Lyman, R L, 1996 *Vertebrate Taphonomy*, Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge
- No.:** Number of individual bones/fragments
- (g):** Weight in grams
- Notes:** Notes on observed taphonomies, differences and associations.

## **APPENDIX 5: Metal finds**

### **Assessment of Iron Artefacts from Land to the rear of 41-73 Hykeham Rd, North Hykeham, Lincolnshire (HYRL08)**

***Alan Vince and Kate Steane***

Two iron artefacts were recovered from an archaeological excavation at land to the rear of 41-73 Hykeham Road, North Hykeham, Lincolnshire, undertaken by Pre-Construct Archaeology (Lincoln) Ltd.

#### **Description**

##### **Iron**

- 1. Context 604. A tool with a square tang showing no signs of tapering, 6mm square, and a chisel-like blade, possibly incomplete. The blade is 12mm wide and 4mm thick.
- 2. Context 604. A tool with a possible circular-sectioned tang snapped off close to the blade and small curved blade. Total surviving length: 43mm

#### **Assessment**

The two artefacts come from the same context, associated with mid to late 4<sup>th</sup>-century pottery, and are both tools. There is a strong possibility, therefore, that the two tools were associated with the same craft.

#### **Further work**

The two tools are stratified in a late Roman deposit and could throw light on late Roman craft activity. They should therefore be submitted to a specialist in Roman small finds and illustrated (under that specialist's supervision).

#### **Retention**

Both finds should be retained and advise obtained from a conservation laboratory on packing and storage conditions.

*Appendix 1*

<b>Context</b>	<b>cname</b>	<b>Object</b>	<b>Nosh</b>	<b>NoV</b>	<b>Weight</b>	<b>Part</b>	<b>Action</b>	<b>Description</b>	<b>L</b>	<b>B</b>	<b>TH</b>
604	IRON	TOOL	1	1	15	PART	SPECIALIST; DR	POSS ROUND TANG 6 DIA; POSS CURVED BLADE?	43+		
604	IRON	TOOL	1	1	14	PART	SPECIALIST; DR	SQUARE TANG 6 BY 6; POSSIBLE CHISEL LIKE END/BROKEN END	66+	6- 12	4- 6



# OASIS DATA COLLECTION FORM: England

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**OASIS ID: preconst3-45617**

## Project details

Project name	Land to the rear of 41 Hykeham Road, North Hykeham, Lincoln
Short description of the project	A total of eight evaluation trenches were excavated revealing evidence relating to Roman industrial use of the site, including a 'Swanpool' type kiln.
Project dates	Start: 06-05-2008 End: 16-05-2008
Previous/future work	No / Not known
Any associated project reference codes	2008.114 - Museum accession ID
Any associated project reference codes	HYRL08 - Sitecode
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 1 - Minimal cultivation
Monument type	KILN Roman
Monument type	OCCUPATION Roman
Significant Finds	POTTERY Roman
Significant Finds	KILN Roman
Methods & techniques	'Sample Trenches'
Development type	Housing estate
Prompt	Planning condition
Position in the planning process	After full determination (eg. As a condition)

## Project location

Country	England
Site location	LINCOLNSHIRE LINCOLN LINCOLN Land to the rear or 41-73 Hykeham Road, North Hykeham
Postcode	LN6
Study area	2.10 Hectares
Site coordinates	SK 96461 67940 53.1994854149 -0.555804367595 53 11 58 N 000 33 20 W Point

Height OD                   Min: 6.00m Max: 6.00m

### Project creators

Name of Organisation   Pre-Construct Archaeology (Lincoln)

Project brief originator   Pre-Construct Archaeology (Lincoln)

Project design  
originator                   N/A

Project  
director/manager           Will Munford

Project supervisor       s williams

Type of  
sponsor/funding body     Developer

### Project archives

Physical Archive  
recipient                   The Collection, Lincoln

Physical Archive ID       2008.114

Physical Contents         'Animal Bones','Ceramics'

Digital Archive  
Exists?                   No

Digital Contents         'none'

Paper Archive  
recipient                   The Collection, Lincoln

Paper Archive ID         2008.114

Paper Contents           'Animal Bones','Ceramics','Stratigraphic'

Paper Media  
available                  'Context sheet','Drawing','Map','Photograph','Plan','Report','Section'

### Project bibliography

1

Publication type           Grey literature (unpublished document/manuscript)

Title                       Land to the rear of 41-73 Hykeham Road, Lincoln

Author(s)/Editor(s)       Williams, S

Other bibliographic  
details                     Report 456

Date                       2008

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Entered by                 Charlotte (info@pre-construct.co.uk)

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