ARCHAEOLOGICAL EVALUATION REPORT: LAND OFF PREBEND LANE, WELTON, WEST LINDSEY, LINCOLNSHIRE

NGR: TF 00967 80466
WLDC Planning Ref.:131681
PCAS job No.: 1293
Site code: PLWE 14
Archive acc. code: 2014.176

Report prepared for

Beal Homes

By

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Figures

Appendices

Plates

Plate 1: Trench 1 pre-excavation (looking E).

Plate 2: Trench 2 pre-excavation (looking E).

Plate 3: Trench 3 pre-excavation (looking S).

Plate 4: Trench 4 pre-excavation (looking W).

Plate 5: Trench 5 pre-excavation (looking E).

Plate 6: Trench 6 pre-excavation (looking E).

Plate 7: Trench 7 pre-excavation (looking NNE).

Plate 8: Trench 8 pre-excavation (looking N).

Plate 9: North facing section of pit [503] (looking S).

Plate 10: Oblique shot of ditches [505] and [507] (looking NW).

Plate 11: North facing section of gully [509] (looking S).

Plate 12: West facing section of terminus of ditch [511] (looking E).

Plate 13: South facing section of ditch [511] (looking N).

Plate 14: Photo of unexcavated cremation located towards the east end of Trench 5 (looking E).

Plate 15: South facing section of ditch [603] (looking N).

Plate 16: South facing section of ditch [607] (looking N).

Plate 17: West facing section of pit [609] (looking E).

Summary

A programme of archaeological evaluation trenching took place on land to the east of Prebend Lane, on the north side of Welton village in the West Lindsey district of Lincolnshire. Where exposed, archaeological deposits and remains were assessed and recorded.

The proposed development site is at the edge of the modern village, outside the historic core and Conservation Area, but where there is evidence for prehistoric and Roman activity, with possible Roman settlement directly to the north of the site. A geophysical survey carried out as part of this project identified anomalies indicating potential ditches and pits in the south-east corner of the western field (Field 1), with slighter indications of similar features elsewhere on the site.

Eight trenches (30m x 2m) were excavated across the site. Of these, six proved archaeologically negative (1, 2, 3, 4, 7 and 8); only Trenches 5 and 6 (in the south-east corner of the western field) contained archaeological features, dated by pottery to the Iron Age or early Roman period.

This document describes the results of the evaluation and will be used to inform a forthcoming planning application.

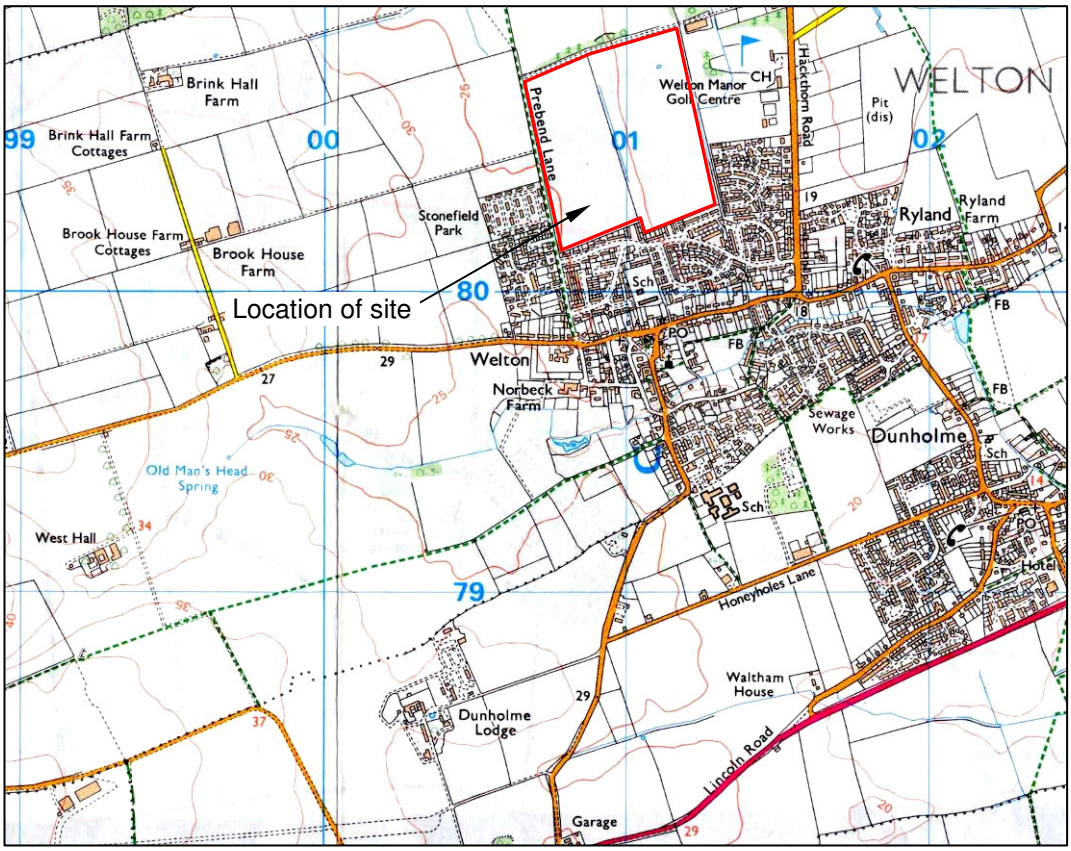

Figure 1: Location plan of the site (outlined in red) at scale 1:25,000. OS mapping © Crown copyright. All rights reserved. PCAS licence no. 100049278.

1.0 Introduction

Pre-Construct Archaeological Services Ltd (PCAS) were commissioned by Beal Homes to undertake a scheme of archaeological evaluation trenching on land off Prebend Lane, to the north of the village of Welton in the West Lindsey district of Lincolnshire.

The proposed development site is situated on the edge of the modern village, outside the historic core and Conservation Area, but in an area where there is evidence for prehistoric and Roman activity, with possible Roman settlement directly to the north. A programme of archaeological evaluation, in the form of trial trenching preceded by geophysical survey, was recommended in order to inform a planning application for residential development. The results of this evaluation will be used to inform mitigation measures that will seek to reduce the impact of development on any significant heritage assets on the site.

2.0 Site location and description

The village of Welton is *c.* 9km north of the centre of Lincoln, on the A46 Lincoln to Market Rasen road. The historic core of the village is of a typical medieval plan, comprising a sub-rectangular arrangement of lanes on which farms and houses were built, with adjacent small fields and paddocks and flanked by two areas of village green. The Welton Beck bisects the village from west to east (WLDC, 1989).

The proposed development site lies directly outside the north edge of the village, on the east side of Prebend Lane. It currently consists of two fields totalling approximately 28 hectares - Field 1, directly adjoining Prebend Lane, and the larger Field 2 to the west. The site is bounded to the south and south-east by residential development extending northwards from the village core, to the west by similar development on the opposite side of Prebend Lane; to the north and north-west by agricultural land, and to the north-east by a golf course. The site does not fall within Welton's Conservation Area, nor do any of Welton's 38 Listed and Locally Important Buildings lie in its vicinity (WLDC, 1989).

Central National Grid Reference: TF 00967 80466.

3.0 Topography and geology

Welton village lies at the foot of the east-facing slope of the Lincoln Edge, on land generally sloping gently from west to east. The site itself is generally level, at a height of approximately 15m above Ordnance Datum.

Drift geology across Field 1 and the western side of Field 2 is recorded as glacial till, overlying a solid geology of Blisworth Limestone Formation. No drift geology is recorded on the remainder of the site, where the solid geology is Blisworth Clay Formation mudstone (*ibid.*).

4.0 Planning background

An application for outline planning permission for a residential development of up to 350 dwellings, with areas of landscaping and public open space, two new access points and associated infrastructure works, is under consideration (Application No. 131681): the results of this evaluation will be presented in support of the application, and will be used to inform an archaeological mitigation strategy if required.

5.0 Archaeological and historical background

The Lincolnshire Historic Environment Record lists a possible prehistoric enclosure, observed as a cropmark on aerial photographs, centred within Field 1 (**HER ref. 52216**). Two further possible enclosure cropmarks, one to the west of Prebend Lane about 80m from the north-west corner of the site and the other centred on the north-west corner, were investigated in advance of the

Welton to Lincoln Trunk Main in 1994, but nothing was found and the original observations may thus have been mistaken (**HER refs. 52224-5**).

Fieldwalking on the route of the Welton to Lincoln Trunk Main retrieved four Neolithic to Bronze Age struck flints about 100m to the north of the north-west site corner (**HER ref. 54969**). Other archaeological works on the Trunk Main project retrieved a scatter of five Neolithic to Bronze Age struck flints from near the north-western corner of the site, with four sherds of Iron Age pottery; a further sherd of Iron Age pottery and a Neolithic flint were retrieved on the opposite side of Prebend Lane, about 100m to the west of the site, and two further Neolithic to Bronze Age flints about 300m to the south-west (**HER refs. 54959, 54963-6**). The find of a Neolithic stone axehead was recorded about 100m to the east of the site *c.*1960 (**HER ref. 52210**).

Cropmark enclosures and pits, interpreted as the site of a Roman villa, are situated in the field to the north of the site. This field was walked in 1993 in advance of the Welton to Lincoln Trunk Main construction, retrieving a scatter of about 50 sherds of late 2nd- to early 3rd-century pottery from an area of darker soil near the centre of the field, with lesser concentrations elsewhere. Monitoring during pipeline construction identified two steep-sided cut features containing animal bone, and retrieved Romano-British pottery and quern fragments; other archaeological works during the project retrieved eleven sherds of Romano-British pottery and two fragments of tile from near the north-western corner of the site, and three further sherds of pottery approximately 120m to the east of its north-eastern corner (**HER refs. 52214, 54967, 54972**).

A sherd of Anglo-Saxon pottery was retrieved during fieldwalking on the course of the Welton to Lincoln Trunk Main, approximately 90m to the north of the north-western corner of the site, and another was retrieved close to the north-western corner of the site (**HER refs. 54968, 54970**).

A geophysical survey commissioned to inform the current trenching scheme concluded that the majority of the proposed development site appears to have limited archaeological potential. However, ditch-like anomalies and pits were identified in the south-east corner of Field 1, with slight indications of similar features elsewhere, principally in the central part of Field 1. Two linear anomalies in Field 2 were also considered to be ditch-like. For the most part, however, weak variation was considered to be of natural origin (with some anomaly examples possibly indicative of glacial processes). Modern responses included land drains, at least one buried service, cultivation trends and ferrous-rich deposits within two recently back-filled ponds in Field 2. A dense group of strong readings in the north-east region of Field 1 partially corresponded to a recently removed structure (Bunn, 2014; figs. 2 and 3).

6.0 Aims and methodology

The written scheme of investigation (WSI) for the evaluation proposed the excavation of eight trenches. Locations were selected based on geophysical survey results. The broad objective was to fully clarify potential archaeology on the area of proposed development.

All evaluation trenches were accurately fixed to the National Grid using a Leica GS50, Topcom GRS1 global positioning system (GPS). Trench locations had been agreed in advance with the Planning Archaeologist although locations were varied slightly to avoid services, overhead obstructions etc. These alterations did not affect the anomalies that were being targeted.

The broad aims of the evaluation were:

- To determine the presence/absence, nature, date, depth, quality of survival, importance, extent, form and function of any archaeological features identified
- To recover stratified dating evidence;
- To establish the sequence of archaeological remains on the site;

- To interpret the archaeology in the context of known archaeological remains in the vicinity.

A methodology for the scheme had been set out in the WSI approved by the West Lindsey District Council Historic Environment Officer. In summary, the WSI stated that excavation of all the trial trenches would be initially by a mechanical excavator under constant archaeological supervision. Machine excavation would progress in spits no greater than 200mm and cease either at the first significant archaeological horizon, or the natural substrate. All archaeological features would be examined sufficiently to determine their date, character, state of preservation and extent, as well as to recover artefactual / ecofactual remains for further study. These features would then be recorded by measured plan and section drawings at appropriate scales (normally 1:20 and 1:10 respectively). A written record for each stratigraphic horizon and archaeological feature would be made on standard PCAS recording forms. A photographic record and a narrative account in the form of a site diary would supplement these recording forms.

Any securely stratified archaeological deposits considered suitable for environmental analysis would be sampled in 40ltr quantities, where possible.

The results of the evaluation presented here will be used to provide site-specific archaeological information that will allow the Local Planning Authority to make an informed judgement on any appropriate archaeological mitigation for the proposed development.

In accordance with the methodology outlined above, all archaeological deposits and features, including those exposed by machine, were manually cleaned and recorded and were sample excavated by hand.

7.0 Results

A full descriptive context summary list appears as Appendix 2, whilst selected photographs can be seen in Appendix 1. See figure 3 for trench plans and sections.

7.1 Trenches containing no archaeological remains

Trenches 1 – 4 and 7 – 8 were archaeologically sterile; exposing topsoil overlying the natural substrate.

7.2 Trenches containing archaeological features

Trench 5

Trench 5 (30m x 2m) was orientated approximately ENE-WSW and was positioned in the south-east corner of field 1. It was located in an area where a possible enclosure/settlement zone had been highlighted by geophysical survey. Five features [503], [505], [507], [509] and [511] were identified, confirming the findings of the geophysical survey. In addition, a possible cremation burial or hearth was exposed towards the east end of the trench. However this was left unexcavated.

Feature [503], at the west end of the trench, was a relatively large pit; 2.72m in diameter and 0.28m deep; an irregular circle in plan, with shallow edges and a broad concave base. It was filled by a single sand silt deposit, (504), that produced sherds of Iron Age tradition pottery.

Features [505] and [507] were parallel ditches on an approximate N-S alignment. Ditch [505] had cuts [507] on its eastern edge. The former was 2.12m wide, 0.44m deep and featured across the whole width of the trench. It had steep sides and a narrow concave base. Its single sand silt deposit, (506), contained animal bone, as well as sherds of Iron Age tradition pottery. The other

ditch, [507] was 1.3m wide, 0.32m deep and terminated approximately 1m short of the southern trench baulk. It was filled with a single deposit, (508), that produce a fragment of animal bone.

Feature [509], located towards the centre of trench 5, was a thin gully, orientated approximately NE-SW; 0.7m wide and 0.2m deep. It contained a homogenous sand silt deposit that produced no finds.

A curving linear feature, [511], located to the east of [509] in the eastern half of the trench, entered the trench on an approximate N-S alignment, curving to the east where it terminated. At its deepest and widest point this had steep sides and a fairly flat and broad base. It was 4.5m long, 2.4m at its widest point and 0.4m deep. It contained a single sand silt deposit that produced a fragment of animal bone.

In the south eastern corner of the trench, a feature was exposed that at the time of excavation was characterised as a potential cremation burial. This was left unexcavated as it contained what looked like burnt human bone. It may also be possible that rather than being a burial, this was in fact a hearth, with the burning contained to the centre of the feature, with burnt animal bone present, rather than human.

All of the features in Trench 5 were sealed by topsoil (500), 0.38m deep, and were cut into the natural substrate (501). The trench was excavated to a depth of 0.4m below original ground level.

In total two fragments of animal bone and fifteen sherds of pottery were recovered from this trench. The bones were from a large unidentified mammal and from a sheep/goat, whilst all of the pottery was dated to the 1st century AD.

Trench 6

Trench 6 (30m x 2m) was orientated approximately ENE-WSW and was positioned in the south-east corner of Field 1, approximately 5m to the north-east of Trench 5. Three features [603], [607] and [609] were exposed. As with Trench 5, these corroborated the results of the geophysical survey.

A large ditch, [603], on a NW-SE orientation, was exposed at the very east end of the trench. Only its western edge was revealed, which was steep; its depth was not determined due to the depth of this feature (excavated to 1.3m). It was 3.75m wide and was present throughout the whole width of the trench. It contained with three deposits, (604), (605) and (606). Two of these, (604) and (605) were recorded as possible slumping on the western edge of the ditch, whilst context (606) was the bulk fill, and this produced Iron Age tradition pottery sherds and animal bone. A bulk sample was taken from the ditch fill (see **appendix 5**) yielded traces of domestic waste such as charcoal fragments, traces of calcined bone, a few unburnt bones and a small sherd of pottery. Charred rhizomes, which were also present, are often found on Iron Age sites in Britain, although their occurrence is not restricted to this period.

A ditch on a NE-SW alignment, [607], was located at the very west edge of the trench. This has steep sides and a V shaped profile. It was 1.63m wide, 0.6m deep and was filled by a single sand silt deposit, (608), that contained animal bone and Iron Age tradition pottery.

A small pit [609] was less than 1m to the east of [607]. This was oval in plan, with shallow sides and a concave base. Its southern edge was beyond the baulk. It was 1.6m long, 0.6m wide and 0.16m deep.

Features [607] and [609] were sealed by topsoil (600), 0.37m deep, and were cut into the natural substrate (602). [603], however, was sealed by a subsoil (601) which was present in the eastern half of the trench. The trench was excavated to a depth of 0.5m below original ground level.

In total fifteen fragments of animal bone and five sherds of pottery were recovered from this trench. The majority of the animal bones were attributed to cattle and horse, as well as one rodent tooth. As with Trench 5, all of the pottery dated to the 1st century AD.

8.0 Discussion and conclusion

The evaluation demonstrated that Trenches 1, 2, 3, 4, 7 and 8 were archaeologically sterile: only natural substrate and topsoil deposits were exposed in these areas.

The evidence observed in Trenches 5 and 6 corroborates with anomalies that had been identified by the preceding geophysical survey. The features exposed seem to indicate occupational activity focused on the south eastern corner of field 1, and presumably beyond this proposed development zone. These features appear to be associated with phases of enclosure construction, with smaller linear features, a waste or storage pit and a potential cremation burial/hearth also present. The presence of pottery (see **appendix 4**) and animal bone (see **appendix 3**) in this area suggests a domestic, rather than agricultural origin for these features.

In total, 20 sherds of pottery was recovered from features. This has been dated from the Iron Age to early Roman period, with all sherds dating to the 1st century AD. This would indicate that the features in Trenches 5 and 6 are all broadly contemporary. The assemblage of animal bone is not large enough and is far too degraded to make detailed conclusions with regard to contemporary animal husbandry, other than the obvious – that cattle were grazed locally and horses were probably used for traction and possibly consumption as well.

9.0 Effectiveness of methodology

The methodology employed during this project achieved its primary objective, ensuring that the proposed development area was fully explored in order to characterise any potential archaeology.

10.0 Acknowledgements

Pre-Construct Archaeological Services Ltd., are grateful to Beal Homes for this commission.

11.0 References

Bunn, D., 2014, *Archaeological Geophysical Survey: Land off Prebend Lane, Welton, Lincolnshire*. Unpublished client report for Pre-Construct Geophysics.

Lincolnshire Historic Environment Record (HER) consulted online 03-09-2014 at http://www.heritagegateway.org.uk/gateway

Ordnance Survey, 2006, *Lincoln, Sleaford, Metheringham & Navenby: Explorer Series Sheet 272, scale 1:25 000*. The Ordnance Survey, Southampton.

West Lindsey District Council (WLDC), 1989, *Welton Conservation Area*.

Figure 2: Plan of the site at scale 1:2,500, showing the evaluation trench layout superimposed on the interpreted geophysics results.

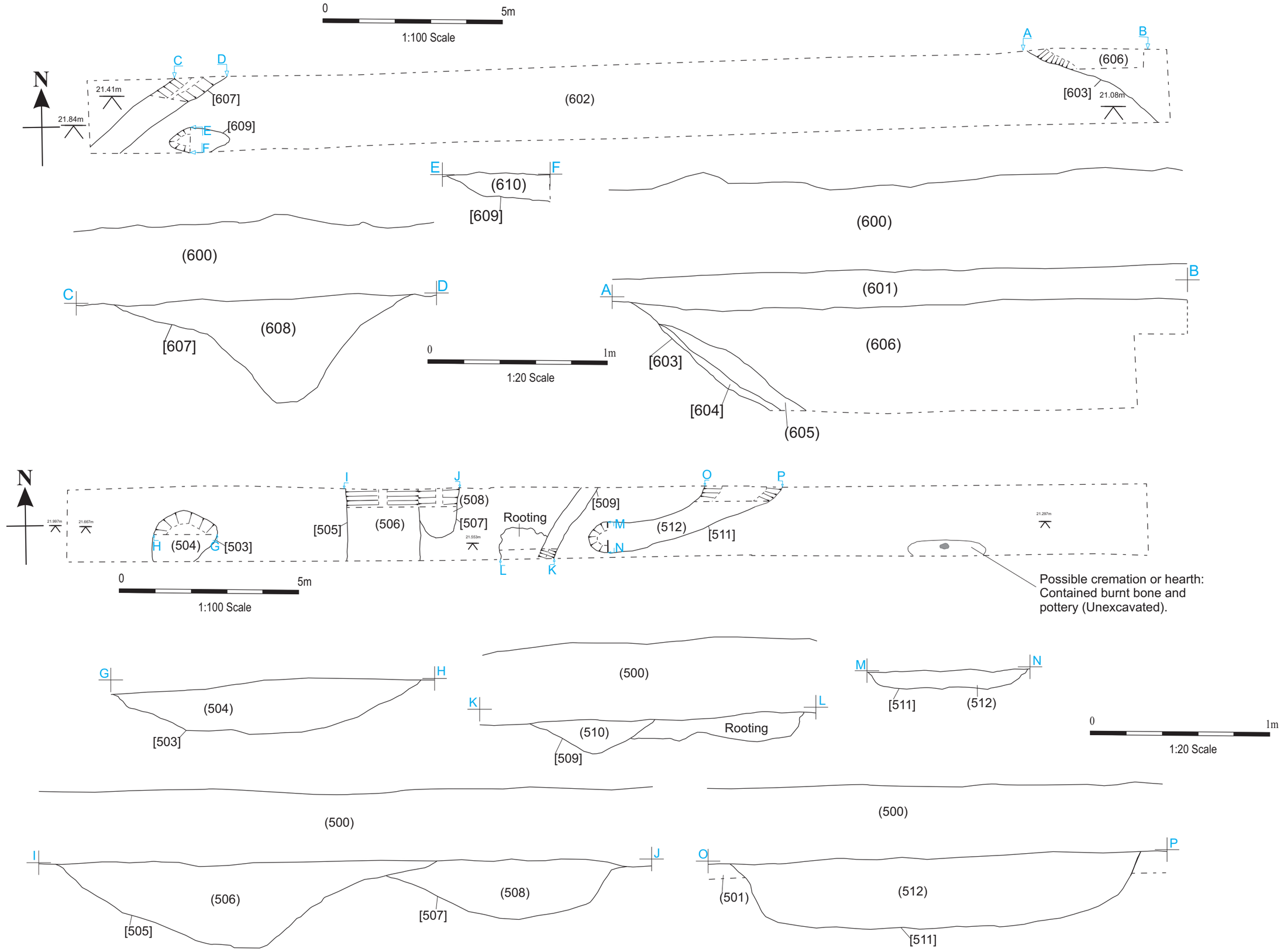

Figure 3: Trench 5 and 6 plans (1:100) and sections (1:20).

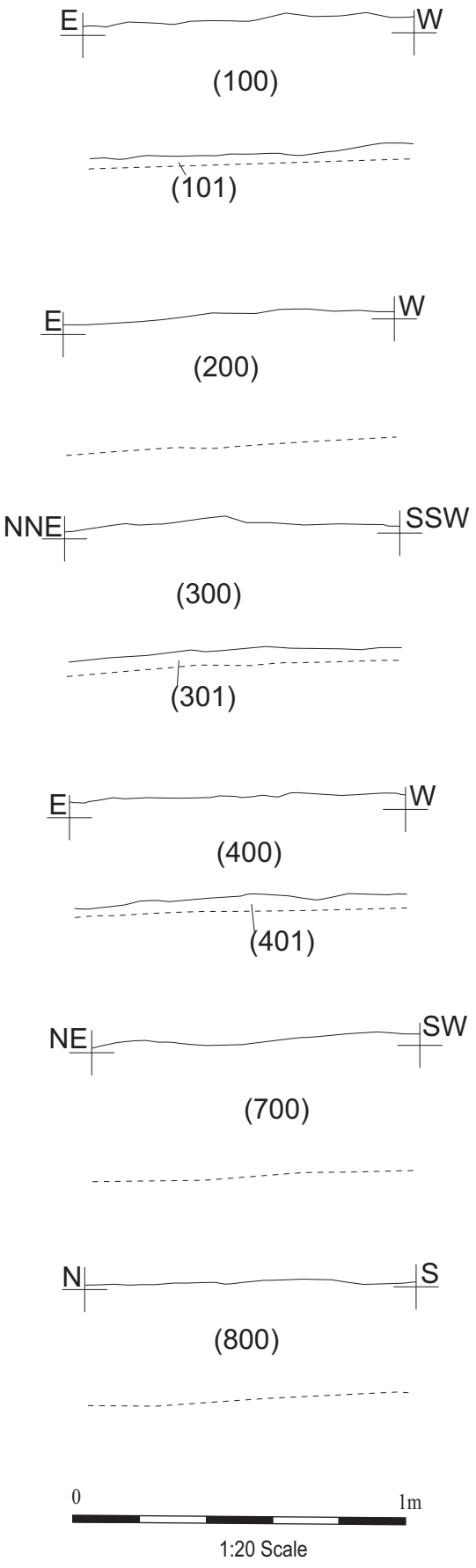

Figure 4: Representative sections (1:20) of archaeologically negative trenches.

Appendix 1 – Colour plates

Plate 1: Trench 1 pre-excavation (looking E).

Plate 2: Trench 2 pre-excavation (looking E).

Plate 3: Trench 3 pre-excavation (looking S).

Plate 4: Trench 4 pre-excavation (looking W).

Plate 5: Trench 5 pre-excavation (looking E).

Plate 6: Trench 6 pre-excavation (looking E).

Plate 7: Trench 7 pre-excavation (looking NNE).

Plate 8: Trench 8 pre-excavation (looking N).

Plate 9: North facing section of pit [503] (looking S).

Plate 10: Oblique shot of ditches [505] and [507] (looking NW).

Plate 11: North facing section of gully [509] (looking S).

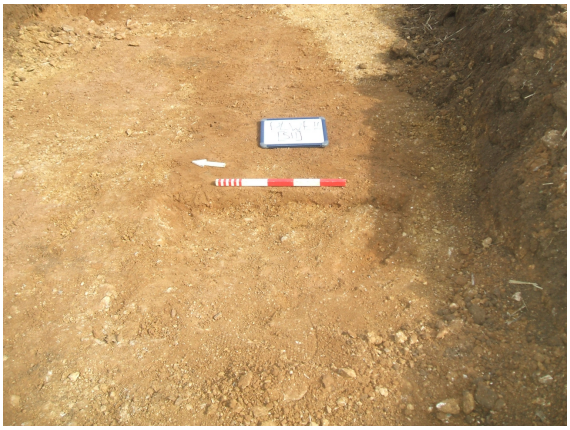

Plate 12: West facing section of terminus of ditch [511] (looking E).

Plate 13 (above): South facing section of ditch [511] (looking N).

Plate 14 (right): Photo of possible cremation/hearth located towards the east end of Trench 5 (looking E).

Plate 15: South facing section of ditch [603] (looking N).

Plate 16: South facing section of ditch [607] (looking N).

Plate 17: West facing section of pit [609] (looking E).

Appendix 2 – Context Summary

Context No.	Type	Description	Finds
Trench 1			
100	Layer	Topsoil. Dark grey brown silt. Very soft and loose. Some occasional limestone fragments. 0.4m thick.	
101	Layer	Natural. Limestone brash.	
Trench 2			
200	Layer	Topsoil. Same as (100). 0.38m thick.	
201	Layer	Natural. Limestone brash.	
Trench 3			
300	Layer	Topsoil. Same as (100). 0.4m thick.	
301	Layer	Natural. Limestone brash.	
Trench 4			
400	Layer	Topsoil. Same as (100). 0.36m thick.	
401	Layer	Natural. Limestone brash.	
Trench 5			
500	Layer	Topsoil. Same as (100). 0.38m thick.	
501	Layer	Natural. Limestone brash.	
502	Void		
503	Cut	Pit. Irregular circle in plan, shallow edges and broad concave base. 2.72m in diameter and 0.28m deep.	
504	Fill	Of [503]. Mid brown orange sand silt. Fine grained and friable. Some occasional small angular stones.	Pot
505	Cut	Ditch. Linear in plan, with fairly steep sides, and a narrow concave base. N-S orientated. Cuts [507]. 2.12m wide and 0.44m deep.	
506	Fill	Of [505]. Mid to dark red brown sand silt. Very fine grained with some small limestone fragments.	Pot and Animal bone
507	Cut	Ditch. Linear terminus in plan, east edge is steep, whilst west edge is more gradual; however it has been partially destroyed by [505]. Wide concave base. N-S orientated. 1.3m wide and 0.32m deep.	
508	Fill	Of [507]. Very similar to (506), but slightly lighter.	
509	Cut	Gully. Linear in plan, with steep but short edges and a narrow concave base. V shaped in profile. NE-SW orientated. 0.7m wide and 0.2m deep.	
510	Fill	Of [509]. Dark brown sand silt, loose and fine. Clear of inclusions.	
511	Cut	Ditch. Linear terminus in plan, steep edges and a wide flat base. North to south orientated that curves to the west. 4.5m in length, 2.4m wide and 0.4m deep.	
512	Fill	Of [511]. Mid brown sand silt, soft and friable with frequent limestone inclusions.	Animal bone
Trench 6			
600	Layer	Topsoil. Same as (100). 0.35m thick.	
601	Layer	Subsoil. Similar to (100), however it has a red hue	

		to it. Only present in east half of trench. 0.2m thick.	
602	Layer	Natural. Limestone brash.	
603	Cut	Ditch. Linear in plan, with a near vertical western edge. Eastern edge is not present in trench. Base unexcavated due to depth. 3.75m wide and 1.3m deep.	
604	Fill	Primary fill of [603]. Light brown sand silt. Loose, with lots of small stones within. 0.66m wide and 0.7m deep.	
605	Fill	Secondary fill of [603]. Mid brown red sand silt. Quite firm, with occasional stone inclusions. 0.82m wide and 0.7m deep.	
606	Fill	Upper fill of [603]. Mid brown grey sand silt. Loose and friable, with frequent limestone fragments throughout. 3.75m wide and 1.3m deep.	Pot and Animal bone Sample no.1
607	Cut	Ditch. Linear in plan, with steep edges, stepped towards the top of the feature. Narrow concave base, forming a V shaped profile. NE-SW orientated. 1.62m wide and 0.6m deep.	
608	Fill	Of [607]. Mid brown with a red hue. Friable sandy silt with some small stones within it.	Pot and Animal bone
609	Cut	Pit. Oval shaped in plan, with shallow edges and a concave base. 1.6m long, 0.6m wide and 0.16m deep.	
610	Fill	Of [609]. Mid brown sand silt. Friable, soft, and some small stones within the deposit.	
Trench 7			
700	Layer	Topsoil. Same as (100). 0.4m thick.	
701	Layer	Natural. Limestone brash.	
Trench 8			
800	Layer	Topsoil. Same as (100). 0.4m thick.	
801	Layer	Natural. Limestone brash.	

Land off Prebend's Lane,
Welton, Linconshire
(PLWE 14)
The Animal Bone
By Jennifer Wood

Introduction

A total of 2 (106g) refitted fragments of animal bone were recovered by hand during archaeological works undertaken by Pre-Construct Archaeology Services Ltd at Land off Prebend's Lane, Welton. The remains were recovered from Trench 5 ditches [505] and [511] and Trench 6 ditches [603] and [607], suggesting a possible focus of activity in these areas.

Results

The remains were generally of a moderate to poor overall condition, averaging between grades 3 and 4 on the Lyman criteria (1996).

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

Table 1, Summary of Identified Bone

Context	Cut	Sample	Taxon	Element	Side	Number	Weight	Comments
506	505		Large Mammal Size	Ulna	R	1	5	Shaft fragment
512	511		Sheep/Goat	Radius	R	1	11	Midshaft
606	603		Large Mammal Size	Tibia	L	1	34	Proximal shaft, in 5 pieces
		<1>	Rodent	Tooth	X	1	<1	Incisor
			Unidentified	Unidentified	X	2	<1	
608	607		Large Mammal Size	Skull	X	5	46	
			Equid	Tooth	L	2	62	Upper PM/M
			Equid	Skull- maxilla	L	1	32	Male canine, in occlusion
			Equid	Tooth	R	1	7	Upper incisor
			Cattle	Tooth	R	1	26	Upper M1
			Cattle	Ulna	R	1	25	Shaft, carnivore gnawing on the olecranon

As can be seen, cattle, *Equid*, sheep/goat and rodent were identified within the assemblage. Equid remains are relatively prominent within the assemblage, although they all potentially originate from a single individual.

The assemblage is too small to provide meaningful information on animal husbandry and utilisation on site, save the presence/use of the animals on site.

In the event of further works the site is liable to produce further remains of moderate to poor condition, with a moderate potential of providing further information of site economy and animal husbandry practices.

References

Lyman, R L, 1996 *Vertebrate Taphonomy*, Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge

The Iron Age and Roman Pottery archive- Land off Prebend's Lane, Welton. PLWE14 (TF00967 80466)

I.M. Rowlandson

October 29th 2014

A small group of Iron Age to early Roman pottery was retrieved Roman pottery (20 sherds, 265g, RE0.06). The assemblage was presented to this author for archiving. All of this pottery probably dates to the 1st century AD. An archive has been produced to comply with the requirements of the Study Group for Roman Pottery (Darling 2004) using the codes and system developed by the City of Lincoln Archaeological Unit augmented by codes in use for recording Iron Age pottery in the East Midlands (Darling and Precious 2014, Knight 1998). A tabulated summary by context and a sherd archive are presented below.

The dates provided represent the pottery recorded here: the main text of the report and other specialist contributions should be consulted to ascertain the overall date attributed to each context. It is recommended that this pottery should be deposited with the relevant local museum along with the rest of the archive.

Dating summary					
Context	Spot date	Comments	Sherd	Weight (g)	RE %
504	ML1-?E2	A native tradition jar base with a post-firing piercing.	3	83	0
506	ML1	Fragments from a handmade shell-gritted jar and a Dressel 20/Southern Spanish amphora.	12	135	0
606	IA-EROM	A single handmade shell-gritted sherd.	2	13	0
608	MLIA	Fragments from a shell-gritted jar with a flattened lip and rounded rim edge (same vessel as 606?).	3	34	6

Iron Age and Roman pottery- archive data															
Context	Fabric	Form	Rim	Body	Base	Decoration	Vessels	Alt	D. No	Comments	Join	Sherd	Weight	Rim diam	Rim eve
504	IAGR	J	-	-	-		1	PIERCED POST-FIRING		BASE; IRF; HOLE DIA 13MM		3	83	0	0
506	DR20	A	-	-	-		1	ABR		BS		2	28	0	0
506	IASH	J	-	-	-	HM	1			BASE; FLP; IRF		10	107	0	0
606	IASH	JB	-	-	-	HM	1			BS; R; SHCC		1	12	0	0
606	IASH	-	-	-	-		1			BS; R; SCRAP; SAMPLE 1		1	1	0	0
608	IASH	J	FRE	-	-	HM	1			RIM; R; SHCC; ?JOINS 606		3	34	13	6

REFERENCES

Darling, M.J., 2004, Guidelines for the archiving of Roman Pottery. *Journal of Roman Pottery Studies* 11, 67-74.

Darling, M.J. and Precious, B.J., 2014, *Corpus of Roman Pottery from Lincoln*, Lincoln Archaeological Studies No. 6, Oxbow Books, Oxford

Knight, D. 1998, Guidelines for the Recording of Later Prehistoric Pottery from the East Midlands, unpublished Trent and Peak Archaeology report

ARCHAEOLOGICAL SERVICES
DURHAM UNIVERSITY

on behalf of
Pre-Construct Archaeological Services Ltd

Land off Prebend Lane
Welton
Lincolnshire

palaeoenvironmental assessment

report 3585
October 2014

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Contents

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1. Summary

The project

1.1 This report presents the results of palaeoenvironmental assessment of a bulk sample taken during archaeological works at Prebend Lane, Welton in Lincolnshire.

1.2 The works were commissioned by Pre-Construct Archaeological Services Ltd (PCAS), and conducted by Archaeological Services Durham University.

Results

1.3 Material recovered from ditch deposit (606) provides evidence of domestic waste. The poor condition of the charred plant macrofossil remains and absence of diagnostic material provides little information about the origin of the feature. Charred rhizomes recorded in (606) are often found on Iron Age sites in Britain, although their occurrence is not exclusive to this period.

Recommendations

1.4 No further palaeoenvironmental analysis is required for this sample, however the preservation of charcoal and charred plant remains (albeit limited) indicates that other features on the site may have the potential to provide further information about diet, crop husbandry practices and landscape change. If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced.

2. Project background

Location and background

2.1 Archaeological works were conducted by PCAS at land off Prebend Lane, Welton in Lincolnshire. This report presents the results of palaeoenvironmental assessment of a bulk sample taken from a ditch fill (606) of possible Iron Age or Roman origin.

Objective

2.2 The objective of the scheme of works was to assess the palaeoenvironmental potential of the sample, establish the presence of suitable radiocarbon dating material, and provide the client with appropriate recommendations.

Dates

2.3 The sample was received by Archaeological Services on 16th October 2014. Report preparation and assessment was conducted between 16th and 22nd October 2014.

Personnel

2.4 Sample processing, assessment and report preparation were conducted by Lorne Elliott.

Archive

2.5 The site code is **PLWE14**, for **P**rebend **L**ane **W**elton **E**valuation 20**14**. The flot and finds are currently held in the Environmental Laboratory at Archaeological Services Durham University awaiting collection or return. The charred plant remains will be retained at Archaeological Services Durham University.

3. Methods

3.1 The bulk sample was manually floated and sieved through a 500μm mesh. The residue was examined for shells, fruitstones, nutshells, charcoal, small bones, pottery, flint, glass and industrial residues, and was scanned using a magnet for ferrous fragments. The flot was examined at up to x60 magnification for charred and waterlogged botanical remains using a Leica MZ7.5 stereomicroscope. Identification of these was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Habitat classification follows Preston *et al.* (2002). Plant nomenclature follows Stace (1997).

3.2 Selected charcoal fragments were identified, in order to provide material suitable for radiocarbon dating. The transverse, radial and tangential sections were examined at up to x600 magnification using a Leica DMLM microscope. Identifications were assisted by the descriptions of Schweingruber (1990) and Hather (2000), and modern reference material held in the Environmental Laboratory at Archaeological Services Durham University.

3.3 The snail assemblage was scanned and the remains identified to species using the descriptions of Macan (1977), Cameron (2008) and Kerney & Cameron (1979). Nomenclature follows Anderson (2005) and habitat classification follows Cameron (2008), Kerney & Cameron (1979) and Macan (1977).

3.4 The works were undertaken in accordance with the palaeoenvironmental research aims and objectives outlined in the regional archaeological research framework and resource agendas (Monckton 2006; Hall & Huntley 2007; Huntley 2010).

4. Results

4.1 The sample comprised small fragments of charcoal, traces of calcined bone, a few unburnt bones (possibly small mammal) and a small sherd of pottery. Identified charcoal predominantly comprised oak with ash and field maple also present. Fragments of oak charcoal comprising low vitrification and radial cracks were noted. Sparse charred plant macrofossil remains were extensively degraded and pitted, preventing identification in most instances. A poorly preserved wheat and barley grain were noted, although their poor condition and absence of diagnostic chaff prevented identification to species level. Other charred botanical remains included small rhizomes, monocot stems and weed seeds of buttercup and sedge.

4.2 The sample comprised a moderate number of snails in reasonable condition. The assemblage included *Cochlicopa* cf. *lubrica* (Müller), *Pupilla muscorum* (Linnaeus), *Arianta arbustorum* (Linnaeus), *Vallonia costata* (Müller), *Oxychilus alliarius* (Miller), *Trochulus* cf. *striolatus* (Pfeiffer), *Galba truncatula* (Müller) and *Vertigo* sp.

4.3 Low numbers of uncharred weed seeds including black-bindweed, knotgrass, fat-hen and common chickweed were present, however the well-drained nature of the site and the presence of roots suggest that these are modern introductions. Material for radiocarbon dating is available, although this may be unsuitable due to long-lived species or insufficient weight of carbon. The results are presented in Appendix 1.

5. Discussion

5.1 The presence of burnt bone and charred cultivated remains (barley and wheat) provides evidence for the disposal of food waste, although the poor condition of these remains and the absence of diagnostic material provide little information about the origin of the feature. Charred rhizomes recorded in (606) are often found on Iron Age sites in Britain, although their occurrence is not exclusive to this period. The fragmentary nature of the charcoal and poor preservation of the grains is typical of hearth waste material, possibly reflecting intense heat (Boardman & Jones 1990), rapid combustion or exposure to repeated burning.

5.2 The presence of low numbers of charred rhizomes, monocot stems and weed seeds suggests some of this material may represent the remains of gathered hay either for fodder or bedding, or it may reflect the remains of burnt turves, used as fuel or building material such as roofing (Hall 2003). The unusually small size of the charred weed seeds may be due to the drying out of material before charring.

5.3 The fragmented nature of the charcoal prevented further conclusions other than species identification, although anatomical properties associated with oak stemwood were recorded.

5.4 Overall the land snail remains were mostly catholic and provided little interpretative value, although species typical of dry open calcareous grassland were noted. *Galba*

truncatula (Müller) is an amphibious species often found at the edge of ditches and small streams or damp places in fields.

6. Recommendations

6.1 No further palaeoenvironmental analysis is required for this sample, however the preservation of charcoal and charred plant remains (albeit limited) indicates that other features on the site may have the potential to provide further information about diet, crop husbandry practices and landscape change. If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced.

7. Sources

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Appendix 1: Data from palaeoenvironmental assessment

Sample		**1**
Context		**606**
Feature number		**603**
Feature		**ditch**
Material available for radiocarbon dating		(✓)
Volume processed (l)		20
Volume of flot (ml)		50
Residue contents		
Bone (calcined)	indet. frags	(+)
Bone (unburnt)	?small mammal	+
Pot (number of fragments)		1
Flot matrix		
Charcoal	fragmented	++
Coal	fragmented	+
Monocot stems (charred)		+
Rhizomes (charred)		++
Roots (modern)		++
Snails	terrestrial / freshwater	+++
Uncharred seeds		++
Charred remains (total count)		
(c) *Hordeum* sp (Barley species)	grain	1
(c) *Triticum* sp (Wheat species)	grain	1
(c) Cerealia indeterminate	grain	3
(w) *Carex* sp (Sedges)	trigonous nutlet	1
(x) *Ranunculus* subgenus *Ranunculus* (Buttercup)	achene	1
Identified charcoal (✓presence)		
Acer campestre (Field Maple)		✓
Corylus avellana (Hazel)		✓
Quercus sp (Oaks)		✓

[c-cultivated; w-wet/damp ground; x-wide niche.
(+): trace; +: rare; ++: occasional; +++: common; ++++: abundant
(✓) may be unsuitable for dating due to size or species]

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OASIS ID: preconst3-192728

Project details

Project name	LAND OFF PREBEND LANE, WELTON, WEST LINDSEY, LINCOLNSHIRE
Short description of the project	A programme of archaeological evaluation trenching took place on land to the east of Prebend Lane, on the north side of the village of Welton in the West Lindsey district of Lincolnshire. If exposed, any archaeological deposits or remains were to be assessed and recorded. The proposed development site is situated at the edge of the modern village, outside the historic village core and Conservation Area, but there is evidence for prehistoric and Roman activity in the area, with possible Roman settlement, potentially a villa, directly to the north of the site. A geophysical survey carried out on the site as part of this project observed anomalies suggesting ditches and pits in the south-east corner of the western field (Field 1), with slighter suggestions of similar features elsewhere on the site. 8 trenches (30m x 2m) were excavated across the site. Of these 8, 6 proved to be archaeologically negative (1, 2, 3, 4, 7 and 8), whilst trenches 5 and 6 (in the south-east corner of the western field) produced fairly substantial archaeological features, which produced pottery that has been dated to the Iron Age.
Project dates	Start: 16-09-2014 End: 10-10-2014
Previous/future work	No / Not known
Any associated project reference codes	PLWE 14 - Sitecode
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 2 - Operations to a depth less than 0.25m
Monument type	PIT Iron Age
Monument type	DITCH Iron Age
Monument type	GULLY Iron Age
Significant Finds	POT Iron Age
Significant Finds	BONE Iron Age
Methods & techniques	"Sample Trenches"
Development type	Rural residential

Prompt	National Planning Policy Framework - NPPF
Position in the planning process	Between deposition of an application and determination

Project location

Country	England
Site location	LINCOLNSHIRE WEST LINDSEY WELTON Land off Prebend Lane, Welton, West Lindsey, Lincolnshire
Study area	0 Square metres
Site coordinates	TF 00967 80466 53.3112149922 -0.484392052411 53 18 40 N 000 29 03 W Point

Project creators

Name of Organisation	Pre-Construct Archaeological Services Ltd
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Pre-Construct Archaeological Services Ltd
Project director/manager	Will Munford
Project supervisor	L. Brocklehurst
Type of sponsor/funding body	Developer

Project archives

Physical Archive recipient	The Collection, Lincoln
Physical Contents	"Animal Bones","Ceramics"
Digital Archive recipient	The Collection, Lincoln
Digital Contents	"Animal Bones","Ceramics"
Digital Media available	"Database","GIS","Images raster / digital photography","Text"
Paper Archive recipient	The Collection, Lincoln
Paper Contents	"Animal Bones","Ceramics"
Paper Media available	"Context sheet","Diary","Drawing","Map","Notebook - Excavation',' Research',' General Notes","Photograph","Plan","Report","Section"

Entered by	Leigh Brocklehurst (leigh@pre-construct.co.uk)
Entered on	15 October 2014

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