Land off Louth Road, Wragby, East Lindsey, Lincolnshire LN8

ARCHAEOLOGICAL EVALUATION REPORT

Approx. central NGR: TF 13868 78424

Planning Authority: East Lindsey District Council

Planning app.: Pre-Application LCNCC 2015.69

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Prepared for Capita

On behalf of Mr. M. Phillipson

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Non-Technical Summary

This document presents the results from a programme of archaeological trial trenching on land off Louth Road, Wragby.

The site lies to the south of the projected route of the Roman road extending from the east gate of the fortress at Lincoln to the salt-producing industrial zone on the coast around Burgh-le-Marsh.

Occupation and evidence for Roman pottery production has been recovered from the area of modern Wragby, and the Roman settlement appears to have been re-established in the late Saxon period. Place name evidence indicates a Scandinavian origin, possibly as a Viking farmstead. The village quickly developed, and is recorded as a large community by the mid 11th century, complete with a church.

Geophysical survey of the site revealed a small number of linear anomalies, primarily in the southern half. Six trenches were opened to investigate these features and confirm archaeologically "void" areas.

Artefactual evidence has confirmed the exposed ditches to be of later Iron Age date, with possibly some overlap into the Romano-British period.

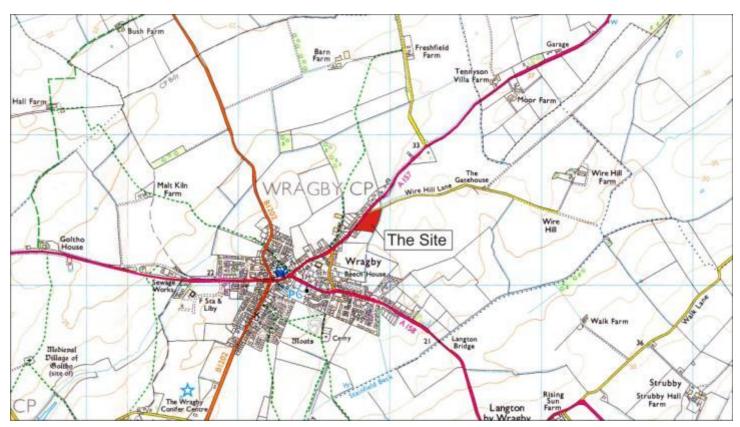


Figure 1: Site location map at scale 1:25,000. Site location shown in red. OS Explorer map sheet 273. (OS mapping © Crown copyright. All rights reserved. PCAS licence no. 100049278).

1 Introduction

Pre-Construct Archaeological Services Ltd (PCAS) was requested by Capita on behalf of Mr. M. Philipson to carry out an archaeological evaluation on land at Louth Road, Wragby.

The site is being considered for a forthcoming planning application. The East Lindsey District Council Historic Environment Officer recommended a scheme pre-application archaeological investigation to support the application in due course, and this document is the report on a scheme of trial trenching. It follows current best practice and appropriate national guidance including:

- The Lincolnshire Archaeology Handbook (2012)
- NPPF, National Planning Policy Framework (2012)
- IFA Code of Conduct (1994 as revised)
- IFA Standards and Guidance for Archaeological Watching Briefs (2008)
- IFA Standard and Guidance for Archaeological Excavation (revised 2008)
- Management of Research Projects in the Historic Environment (MoRPHE)

2 Site Location and Description (Fig. 1)

Wragby is a civil parish and small town lying at the crossroads formed by the A158 between Lincoln and Horncastle, the A157 Louth Road to the north and the B1202 River Witham crossing at Bardney. It lies at a point approximately 15km northeast of Lincoln, 11km southeast of Market Rasen and 15km northwest of Horncastle.

The site lies on the north-eastern periphery of the town on the east side of the A157 Louth Road. It comprises a single field of slightly more than 3 acres, currently under arable cultivation. The site boundaries are formed by established hedgerows, interspersed with infrequent trees. To the north lies Wire Hill Lane which ultimately gives access to Wire Hill Farm; arable farmland lies to the east. The southern boundary of the site is defined by the garden of a detached bungalow fronting onto Louth Road, which itself forms the western boundary.

The only access to the site is from Wire Hill Lane via a gate in the northeast corner.

The central NGR of the site is TF 13868 78424.

3 Geology and Topography

The bedrock geology of the area is recorded as Ampthill Clay Formation Mudstone. This sedimentary bedrock was formed in the Jurassic period in a shallow sea, and is identified as a pale to mid grey smooth mudstone, with more silty patches and occasional limestone nodules. The site lies close to the interface between this bedrock, and a band of Kimmeridge Clay Formation mudstone to the east.

The bedrock geology is overlain by mid Pleistocene till – Diamicton. The till was laid down in ice age conditions in the Quaternary period. There are Glaciofluvial deposits in the vicinity and bands of riverine alluvium mark former river channels (http://mapapps.bgs.ac.uk/geologyofbritain/home.html).

Land off Louth Road, Wragby Archaeological Evaluation Report

The site lies between 25 and 30m OD, a ground survey height of 29m OD (to the nearest metre) is recorded on Louth Road towards the southwest corner of the site. A cut benchmark on the south side of *Four Wynds*, a private house on the northwest side of Louth Road about 90m north of the junction of Louth Road with Wire Hill Lane is recorded at 30.125m OD (0.30m above EGL). Benchmarks from the area indicate ground level decreases slightly from north to south across the site.

4 Planning Background

This site is currently being considered for a forthcoming planning application. The Historic Environment Officer for East Lindsey was consulted concerning the proposals, and recommended pre-application archaeological works to investigate archaeological potential. The first phase of works was a geophysical survey, undertaken in September 2014. The results of the survey were then used to target archaeological trial trenches to investigate geophysical anomalies.

5 Archaeological and Historical Background

There are no known archaeological sites or artefacts from within the boundaries of the proposed development site.

Evidence for early activity around the site is limited to a scatter of worked flint tools. Flakes and scrapers dating from the Neolithic and Bronze Age were recovered during monitoring of a gas pipeline to the north and east of the site (the closest some 250m north of the site boundary). Two unstratified flints of similar date was recovered from a subsoil layer on the south side of the town, and field walking around the east side of Wragby has produced a small corpus of flints (HER ref: 40341; 46921; 48700). The latter may be associated with a cropmark indicating a double ditched enclosure, identified on aerial photographs over 1km southeast of the site (HER ref: 46372). An undated mound about 800m north east of the site is known as Gallows Hill (in Gallows Wood); the name would suggest a post-medieval date; however this may be a prehistoric or Roman feature (PastScape Gallows Hill).

Wragby lies on the A158, much of which follows the line of the Roman road leaving the first century legionary fortress at Lincoln via its east gate, extending towards the coast at Burghle-Marsh. The Roman road is lost east of Bullington some 5km west of Wragby, but can be traced again in the eastern end of Wire Hill Lane and the existing field boundaries south of Panton 3km east (Margary, 1973). The line of the road can therefore be extrapolated to run less than 400m north of the site; soil marks in this area may be evidence of the road. With the road running to the north of the existing town, it may be expected that any Roman settlement would be adjacent to the road, but Roman pottery and building material has been found across Wragby and fragments of kiln furniture have also been found, suggesting the presence of at least one kiln associated with local pottery production (HER ref: 48726; 48728; 48701).

The place name *Wragby* derives from the Old Norse personal name *Wraggi* and the Old Danish *by*, giving *Wraggi's farmstead* or *village* (Cameron, 1998). This indicates a late Saxon period origin for the settlement. There is very little evidence of continuity of settlement around Wragby following the end of the Roman rule of Britain, there are no known features or artefacts of this date around the development site. It is possible the Roman settlement was abandoned, only to be resettled by the Norse settlers in the 9th – 10th century.

Wragby is recorded in the Domesday Book as *Waragebi*, large settlement of 16 villagers and 15 smallholders with a church and priest. The land had been held by *Toki son of Auti*, but the land was granted to Norman overlords following the Conquest (http://domesdaymap.co.uk/place/TA0108/wrawby/).

Land off Louth Road, Wragby Archaeological Evaluation Report

There are few records of medieval Wragby, the village developed on the Saxon settlement as an agriculture-based economy. The village was likely focused around the church and moated manorial complex which survives as a series of Scheduled earthworks and buried deposits on the south side of modern Wragby (SAM 31624). The manorial complex is thought to date from the early medieval period, and was abandoned in the 15th century. The church was a slightly later construction dating from the 12th century, but was largely dismantled in the early 19th century when a new church was built, and was finally demolished in the 1980's.

Ridge and furrow earthworks are mapped around Wragby, the closest being 150m south of the site (HER ref: 48626).

The site was subject to geophysical survey, undertaken in September 2014 (Bunn, 2014). The survey recorded a number of weak linear and other anomalies, indicative of potential archaeological remains. These features largely fell in the southern half of the site; the strongest anomaly was two linear features forming a "T" shape towards the western side of the site. A possible pit lay in the south-west corner, flanked by a short linear feature. Two further potential linear features lay towards the south-east corner. A study of historic mapping indicates this site has remained unoccupied since the mid 19th century, and the magnetic anomalies cannot be related to any former field boundaries.

6 Methodology (Fig. 2)

The evaluation consisted of six 20m x 2m trenches; positioned to investigate magnetic anomalies identified by geophysical survey. In addition, one trench was positioned in the northern corner of the site to confirm background readings of natural magnetic variation.

The trenches were located and set out using a survey grade Global Positioning System, and opened up under archaeological supervision using a 180° excavator fitted with a toothless bucket, down to the first archaeologically significant horizon or the natural substrate, whichever was encountered first. The exposed surfaces were then cleaned by hand, and any features encountered were examined sufficiently to determine their date, character and survival condition.

Evaluation trenches were drawn in plan at a scale of 1:50, excavated features were drawn in section at scales of 1:20 or 1:10 as appropriate, and sample sections of the trench baulks were also drawn. The section drawings were located on base plans; Ordnance Datum levels were taken using Global Positioning System. Cuts, deposits and layers were recorded on standard PCAS record sheets, and an excavation site diary was also kept. A digital photographic record was kept, which was supplemented by colour slide photography. Finds were stored in labelled finds bags prior to their removal to the offices of PCAS for initial processing. Two environmental samples were taken from ditches 303] and [605] and sent off to specialists for analysis.

The fieldwork was carried out by Julian Sleap and David Brown between the 8th and 15th April 2015.

7 Results (Figs. 3-8)

The composition of the uppermost soil layers was common throughout the site, although thicknesses varied slightly. The topsoil was a dark brown silty sand, typically 0.3m to 0.4m thick, while the subsoil was friable pale brown silty sand, between 0.1 and 0.25m thick. In each trench, the natural substrate was orange coloured sand/silt with flint inclusions.

7.1 Trench 1 (Fig. 3)

Oriented north-east to south-west, Trench 1 was positioned towards the north-east corner of the site to confirm background readings of natural magnetic variation. Nothing of archaeological interest was encountered.

7.2 Trench 2 (Figs. 4-4b, Plate 1)

Trench 2 was located in the south-east part of the site, and orientated roughly north to south. A 3.2m wide east-west aligned feature, probably a palaeochannel [207], was observed. This feature was filled with clean layers of orange and grey sandy silt and yielded no finds.

Only one definitively archaeological feature was encountered: recorded on the geophysical survey report as a relatively short linear anomaly, a 1.6m wide ditch [204] was orientated east to west. This feature yielded 19 sherds of Late Iron Age pottery, as well as sheep and goat bone.

7.3 Trench 3 (Figs. 5-5a, Plate 2)

Trench 3 was positioned along the north-western side of the site and orientated east-west. Excluding land drains, only one feature was exposed: a ditch [303] aligned north to south which was 1.8m wide by 1.1m deep. This feature was clearly visible on the geophysical survey, although it was unclear which course it followed south of the excavated area. The exposed profile was unusual as there was a distinct step on its western side - close examination did not reveal any evidence of a recut. The eastern side was uniform, and fairly steep. 52 sherds of primarily plain Late Iron Age pottery were recovered, as well as cattle bone, all from the lower fills of the ditch (305) and (306). Charcoal was present in context (305).

7.4 Trench 4 (Figs. 7-7d, Plates 3-7)

Trench 4 was situated c. 3.0m to the south of Trench 3; positioned in a north-west to south-east alignment to target a linear feature and what appeared on the geophysical survey to be a possible pit or ditch. Following initial soil stripping, two intercutting features were exposed; both probably ditches dating to the later Iron Age / early Roman period.

The earlier feature, [403]/[408]/[417], was partially masked by a layer of redeposited sand (416). This moderately substantial ditch appeared to be curvilinear in plan and orientated approximately north-south, with steep sides and a blunt northern terminus falling within the excavated trench. A date was provided by the recovery of 14 sherds of Late Iron Age pottery and bone (predominantly large mammals), one piece of which shows evidence of butchery. An iron object of Roman date, possibly an awl or punch used for leatherworking, was also recovered from this ditch.

The later feature, [412], was partially cut through the backfill of the ditch described above. This was also most likely a ditch terminus; possibly a recreation of [403]/[408]/[417]. It was 0.6m deep, and its fill yielded cattle bone and fragments of flint, two of which showed slight signs of possible working.

7.5 Trench 5 (Fig. 6)

Trench 5 was positioned towards the south side of the site; oriented north north-east to south south-west to target a ditch like anomaly identified by geophysical survey. The anomaly had in fact been created by a land drain, and nothing of archaeological interest was encountered.

7.6 Trench 6 (Figs. 8-8b, Plate 8)

Trench 6 was in the south-west corner of the site; oriented north north-east to south south-west in order to target a potential ditch and a possible elongated pit or short ditch. Corresponding features were encountered; both were ditches and aligned broadly east -west.

The smaller, northernmost ditch [603] was dated as post-medieval, based on a single clay pipe fragment. Situated 5m to the south, feature [605] was either an elongated pit or a ditch, with part of its length masked due to the close proximity of a road and modern housing to the south. This feature was 2.4m wide and 0.8m deep, and its fill contained 39 sherds of decorated and plain pottery, a wide range of animal bone (cattle, sheep, goats, pig, horse), and one flint flake, which was probably unworked. The pottery was fresh, which enabled a date of Late Iron Age, perhaps as late as the 1st century AD. Some of the animal bone found in deposit (606) was burnt, which may represent incidental burning events or hearth sweepings. One piece of bone showed evidence of carnivore gnawing. Part of a fired clay loom weight was recovered from ditch [605], probably triangular, and of a type commonly used south of the Humber in the Late Iron Age or early Roman period.

8 Discussion and Conclusions

The overall results suggest that this site is either on the edge of, or in close proximity to, a farmstead or similar minor settlement.

Ditches [303] and [412] featured on the geophysical survey as curved anomalies, separated by what may be an opening. They may well have been the same feature; if so then there may have been a circular or oval-shaped enclosure located on the north-west of the site, extending into the area now occupied by the A157. Therefore, the settlement may well have been situated just off the western edge of the site.

The animal bone findings indicate a wide variety of animals were present on the site during the Late Iron Age and probably into the early Roman period; primarily cattle but also sheep, goats, and occasionally pigs and horses. The skeletal elements of the animal bone assemblage suggest the remains were probably from butchery waste.

Two environmental samples were taken, from ditches [303] and [605]. These provide evidence for the cultivation of spelt wheat and hulled six-row barley at the site, which were the main cereal crops for Middle Iron Age to Roman period sites in the region. The presence of spelt wheat chaff may indicate crop processing at or near to the site. In addition, identified charcoal in both sampled deposits indicates that there was an exploitation of woodland resources.

There are indications of some kind of localised domestic crafting or light industrial activity. In common with many sites from the late Iron Age in Lincolnshire, the pottery recovered was locally produced. One piece of fired clay loom weight found in the south-west of the site in ditch [605] suggests that weaving took place in the vicinity.

The evidence presented strongly suggests that the site was on the edge of a Late Iron Age/Romano-British settlement - a rural farmstead practising mixed agriculture.

9 Effectiveness of Methodology

Archaeological evaluation was effective in demonstrating the presence of dateable archaeological remains towards the western parts of the site. The eastern element would appear to be archaeologically sparse. The body of data produced from this evaluation will be sufficient to inform the planning and development process.

10 Project Archive

The project archive, consisting of the site recording and the finds, will be deposited with printed copies of this report and the forthcoming full report at The Collection, Lincoln, within six months of the completion of the fieldwork. Following deposition, the archive will be available for consultation under the LCNCC accession number 2015.69. A copy of the full report will also be uploaded to the Archaeology Data Service OASIS (Online AccesS to the Index of archaeological investigationS) database, where it will be publicly accessible online.

11 Acknowledgements

Pre-Construct Archaeological Services would like to thank Capita for this commission.

12 References

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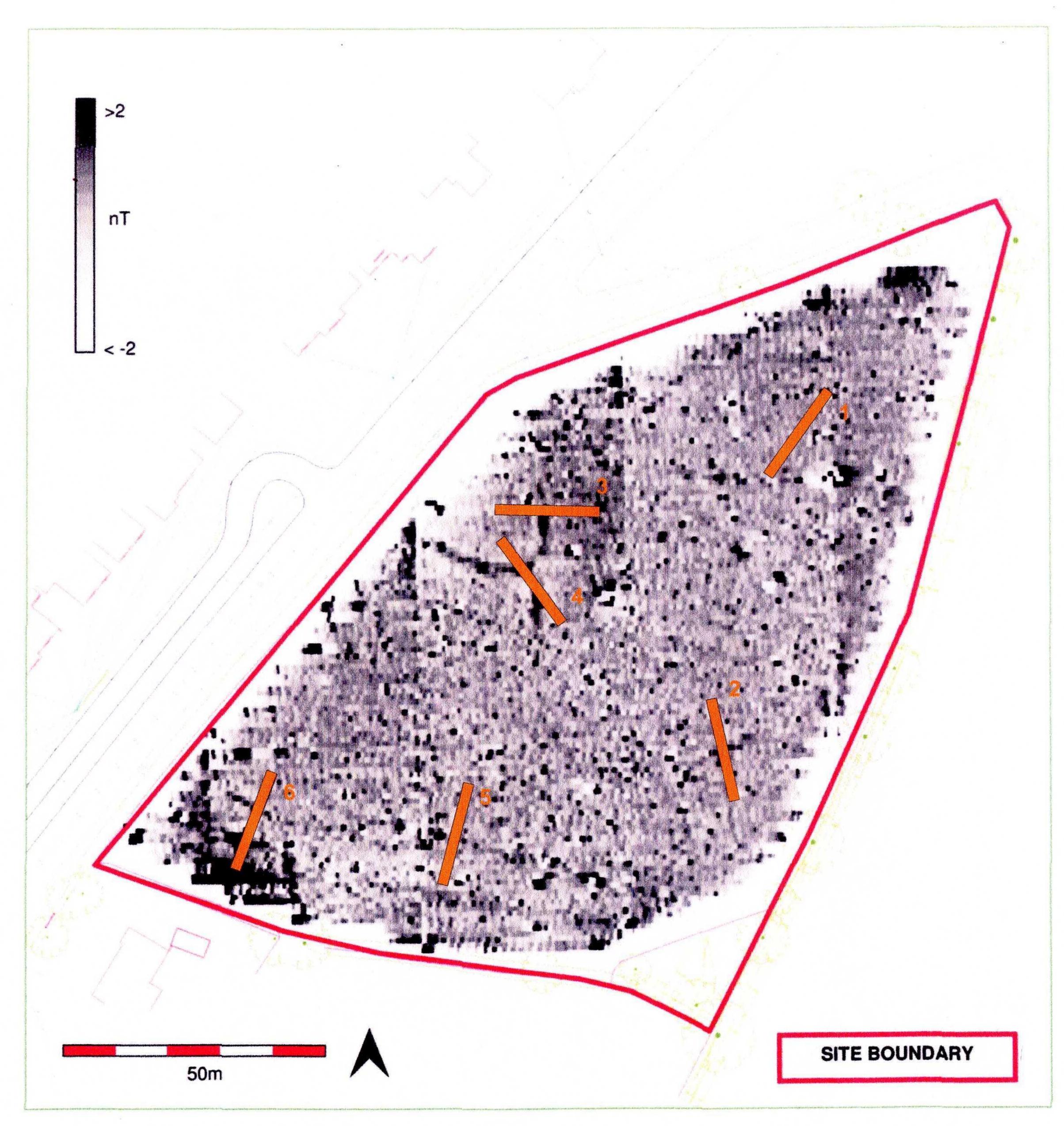


Fig. 2: Trench Locations shown on greyscale and interpretative geophysics results. Scale 1:1,000 @A3



Appendix 1: Colour Plates



Plate 1: West facing section of ditch [204].



Plate 2: North facing section of ditch [303]. This is likely to continue southwards into Trench 4.

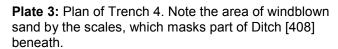






Plate 4: South facing section of ditch [403].



Plate 5: Terminal end of Ditch [408]. This is the same ditch as [403] shown above.



Plate 6: North-east facing section of Ditch [412]. This probably heads northwards into Trench 3, and may be the same feature as [303].



Plate 7: Oblique view of Ditch [417]. This area was masked by a deposit of windblown sand, which initially gave the impression there were several features.



Plate 8: North-west facing section of Ditch [605].

Appendix 2: Context Summary

Trench 1 (N: 28.927m, S: 28.656m OD)

Context	Type	Description	Finds/Dating
100	Layer	Topsoil. Dark brown silty sand. Thickness 0.40m	
101	Layer	Subsoil. Friable pale brown silty sand with	
		moderate small stones. Thickness 0.20m.	
102	Layer	Natural. Brown/orange silty sand, glacial deposits with patches of small flints and diamicton clay. Thickness >0.28m.	Natural

Trench 2 (N: 27.877m, S: 27.474m OD)

Context	Type	Description	Finds/Dating
200	Layer	Topsoil. Dark brown sandy silt. Thickness 0.30m.	
201	Layer	Subsoil. Dark brown sandy silt. Thickness 0.30m.	
202	Layer	Natural. Mid orange sandy silt with frequent flint.	Natural
203	Layer	Natural diamicton clay. LOE.	Natural
204	Cut	Cut of linear, shallow E-W aligned, moderately sloping sides descending to narrow rounded base. Width 1.60m, depth 0.50m.	IA
205	Fill	Upper fill of linear [204]. Dark friable grey sandy silt with occasional small stones. Width 1.30m, depth 0.28m.	IA pottery, animal bone
206	Fill	Lower fill of linear [204]. Pale orange brown sandy silt with frequent flint. Width 1.50m, depth 0.26m.	Animal bone
207	Layer	Palaeochannel, moderately sloping sides, flat base. Width 3.20m, depth 0.60m.	Natural
208	Fill	Upper fill of palaeochannel [207]. Mid orange grey clay silt. Width 3.20m, depth 0.20m.	Natural
209	Fill	Middle fill of palaeochannel [207]. Mid orange gravelly sandy silt. Width >1m, depth 0.20m.	Natural
210	Fill	Lower fill of palaeochannel [207]. Pale/mid grey friable silty sand. Width >0.80m, depth 0.30m.	Natural

Trench 3 (E: 28.831m, S: 29.045m OD)

300	Layer	Topsoil. Dark brown silty sand. Thickness 0.50m.	
301	Layer	Subsoil. Pale brown silty sand. Thickness 0.10m.	
302	Layer	Natural. Mid brown orange silty sand with frequent small flint and patches of diamicton clay. LOE.	Natural
303	Cut	Cut of linear aligned N-S. Steep eastern side, slightly stepped on west with flat base. Length >2m, width 0.80m, depth 1.10m.	IA
304	Fill	Top fill of linear [303]. Dark reddish brown friable sandy silt with occasional patches of yellowish clay. Infills "step". Length >2m, width 1.80m, depth 0.50m.	IA
305	Fill	Fill of linear [303]. Mid brownish grey friable sandy silt with frequent red mineral staining and some charcoal. Width 1.0m, depth 0.28m. Sample 1.	IA pottery, bone

306	Fill	Fill of linear [303]. Dark grey friable sandy silt with	IA pottery, bone
		no inclusions. Width 0.80m, depth 0.24m.	
307	Fill	Bottom fill of linear [303]. Pale yellow/grey friable sandy silt with occasional small flint. Width 0.60m,	IA pottery, bone
		depth 0.36m. Slumpage.	

Trench 4 (NW: 28.965m, SE: 28.532m OD)

Context	Type	Description	Finds/Dating			
400	Fill	Topsoil. Dark brown silty sand. Thickness 0.44m.				
401	Fill	Subsoil. Pale brown silty sand. Thickness 0.25m.				
402	Fill	Natural. Mid orange sand with frequent flint inclusions. LOE.	Natural			
403	Cut	Cut of linear aligned NE-SW. Steeps sides and flat base. Length >6m, width 1.30m, depth 0.67m. Same as [408] and [417].				
404	Fill	Top fill of linear [403]. Dark brownish grey friable silty clay with occasional small stone and charcoal flecking. Well sorted. Length >6m, width 1.30m, depth 0.40m.	IA pottery			
405	Fill	Fill of linear [403]. Pale yellow grey friable sandy silt with occasional small stone. Well sorted. Width >0.60m, depth 0.20m.	IA pottery, bone			
406	Fill	Fill of linear [403]. Pale grey and orange friable sandy silt with occasional small stone. Well sorted. Width 0.70m, depth 0.12m.	IA			
407	Fill	Bottom fill of linear [403]. Pale orange friable sandy silt with occasional small stone. Width 0.75m, depth 0.16m. Slumpage.	IA pottery, bone			
408	Cut	Terminal end of elongated pit aligned NW-SE. Steep sides with flat base. Length 4m, width 1.0m, depth 0.84m. Same as [403] and [417], cut by [412] to the SW.	IA			
409	Fill	Top fill of linear [408]. Mid greyish brown friable sandy silt with occasional small stones and red mineral flecking. Well sorted. Length 3.80m, width >0.90m, depth 0.30m.	IA pottery, bone, Fe nails			
410	Fill	Middle fill of linear [408]. Mid brownish grey friable silty sand with occasional small stones. Well sorted. Width >1.30m, depth 0.52m.	IA			
411	Fill	Bottom fill of linear [408]. Pale orange friable sandy silt with occasional small stones. Width 0.70m, depth 0.80m. Slumpage.	IA			
412	Cut	Cut of pit, moderately sloping sides with flat base. Width >1.60m, depth 0.58m. Cuts [408].				
413	Fill	Upper fill of pit [412]. Mid brown friable sandy silt. Width 1.0m, depth 0.12m.				
414	Fill	Middle fill of pit [412]. Mid greyish brown friable sandy silt. Width 1.0m, depth 0.12m.				
415	Fill	Bottom fill of pit [412]. Dark grey friable sandy silt. Width 1.60m, depth 0.38m.	Pottery, bone, flint			
416	Layer	Redeposited orange sandy silt masking area between ditches [403] and [408]. Thickness 0.10m.				

417	Cut	Cut of linear oriented NW-SE, moderately steep sides and flat base. Same as [403] and [408]. Width >0.56m, depth 0.44m.	IA
418	Fill	Single fill of linear [417]. Dark grey friable sandy silt with occasional flint. Width >0.56m, depth 0.44m.	

Trench 5 (N: 28.123m, S: 27.931m OD)

Context	Type	Description	Finds/Dating
500	Layer	Topsoil. Mid brown sandy silt. Thickness 0.44m.	
501	Layer	Subsoil. Pale grey brown sandy silt. Thickness	
		0.16m.	
502	Layer	Mid orange silty sand with frequent flint	Natural
		inclusions. Thickness >0.12m	

Trench 6 (N: 28.733m, S: 28.742m OD)

Context	Туре	Description	Finds/Dating
600	Layer	Topsoil. Dark brown sandy silt. Thickness 0.25m.	
601	Layer	Subsoil. Pale brown sandy silt. Thickness 0.20m.	
602	Layer	Pale orange sandy silt with frequent flint inclusions. Depth LOE.	Natural
603	Cut	Cut of linear aligned SE-NW. Moderately steep sides with rounded base. Length >2m, width 1.40m, depth 0.40m.	Post-medieval?
604	Fill	Single fill of linear [603]. Mid brown friable sandy silt with frequent flint inclusions. Length >2m, width 1.40m, depth 0.40m.	Post-medieval? Clay pipe, pottery, bone
605	Cut	Cut of linear/elongated pit aligned roughly E-W. Moderately steep sides with narrow flat base. Length >2m, width 2.40m, depth 0.80m.	IA/RB
606	Fill	Upper fill of linear/pit [605]. Dark greyish brown friable sandy silt with moderate flint inclusions and some charcoal. Length >2m, width 1.30m, depth 0.42m. Sample 2.	LIA/RB pottery, bone, flint
607	Fill	Middle fill of linear/pit [605]. Pale greyish brown friable sandy silt with frequent small/medium flint inclusions. Length >2m, width 2.40m, depth 0.68m.	IA pottery, bone
608	Fill	Bottom fill of linear/pit [605]. Pale orange grey friable sandy silt with occasional flint inclusions. Slumpage. Length >2m, width 2.40m, depth 0.68m.	

The Iron Age pottery assessment – Land off Louth Road, Wragby, Lincolnshire (WLRE15, NGR TF 13868 78424)

I.M. Rowlandson *with H.G. Fiske* May 12th 2015

One hundred and twenty sherds, (1.486 kg, RE 1.47) were presented to this author for an assessment. 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 (Darling and Precious 2014). H.G. Fiske assisted the archive with preliminary sorting, data entry and researching parallels for this group of pottery. 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.

The majority of sherds were fresh with an average sherd weight of 12.38g. A maximum of 28 vessels were represented including some sizable fragments. Sherds were attributed to two main fabric groups: a coarser fabric predominantly gritted with common fossil shell (IASH) and a finer fabric used for making the thin walled, often burnished, Late La Tène III 'fine ware' type vessels mostly consisting of necked jars or bowls (IASHF).Quantities of quartz sand were also present in some vessels. The range of fabrics appeared similar to those handled by the author from Willingham Road, Market Rasen, just over 10km to the north, (in prep, site code MRWR08). Despite access to a range of fine jars and bowls there were no continental imports present and the fabrics suggest a local source for all of the pottery. This is not uncommon for sites of this period in Lincolnshire as pre-conquest imports are rare and mostly found near major centres such as Dragonby or Sleaford.

The majority of vessel forms present could be paralleled with the late Iron Age groups from Holmes Grain Warehouse in Lincoln (Darling 1988; Darling and Precious 2014). The presence of vessel marked with square toothed decoration on the base and a possible example of a large cover or perhaps bowl are unusual finds for this part of Lincolnshire. The fresh condition of the pottery from this site suggests settlement in close proximity to this site in the first half of the 1st century AD.

A range of Roman, and perhaps earlier, finds have recently been found by fieldwalking in the parish of Wragby (Wilson 2012, K. Trott *pers. com*) and a significant late Iron Age site was excavated in the neighbouring parish of Langton by Wragby during excavations for a Gas Pipeline (Network 2003). The pottery from the WLRE15 site is an interesting addition to the growing number of late Iron Age assemblages from this part of the county. In the event of more substantial excavations on the site further pottery is likely to be retrieved. Any final report on archaeological investigations ought to integrate this assemblage with any further pottery and place the assemblage in its local context.

	Iron Age pottery dating summary by context							
Context	Spot date	Comments	Sherd	Weight (g)	Total RE %			
205		This group contained fragments from a fine shell-gritted jar or bowl with cordon decoration and a large bowl that can be paralleled with an example from Ingoldmells (Elsdon 1996a, C.7), Market Rasen Willingham Rd and Dragonby (Elsdon 1996b, Fig. 19.21.22 Ceramic Stage 4).	19	176	9			

		Iron Age pottery dating summary by context			
Context	Spot date	Comments	Sherd	Weight (g)	Total RE %
305	LIA	Up to four vessels were present in this group; one fine ware body sherd cross-joined with context 305 and a basal fragment with a moulded foot-ring had been decorated with a double toothed rouletting to form a cross on the underneath of the base. Examples of vessels with burnished crosses on bases are quite common at Dragonby but only three vessels have evidence of toothed on the basal zone (Elsdon 1996b, No. 758, 759 and 769). Also present was a fragment from a bead-rimmed jar (Darling & Precious 2014, No. 702-703) and a large bowl similar to an example from the Welton-Glentham pipeline (Elsdon 1996a, C.17.AW2).	28	172	23
306	LIA	A small group including a fragment from a jar with a wedge shaped rim.	4	33	4
307	LIA	A small fresh group dating to c. AD25 until Roman conquest. Vessels include a necked jar or bowl with a grooved shoulder (Elsdon 1996b, Fig. 19.33.258 Ceramic Stage 6-7) and a further fine shell-gritted vessel joining context 305. Also present were two wedge-rimmed jars (the larger of the two as Elsdon 1996a, D.17a bottom left and Darling & Precious 2014, No. 702-703). The unusual occurrence of a large lid or cover of a type more commonly found in Northamptonshire suggests a date at the very end of the pre-Roman Iron Age (as at Rushden, Friendship-Taylor 1999, Fig. 87.3; Type 3). The vessel had carbonised deposits on the internal surface of the lower wall of the vessel.	20	601	52
404	LIA	A small group including fragments from a necked jar or bowl (Elsdon 1996 B No. 238 and 404) and probably a tazza type form similar to a type from Holmes Grain Warehouse, Lincoln (Dragonby Type 10 Elsdon 1996b; Darling & Precious 2014, No. 733).		62	36
405	LIA	A small group including fragments from a large jar or bowl and two necked jar/bowls including one paralleled to an example from Dragonby (Elsdon 1996b, No. 238 and 404) also present in context 404.	3	42	0
407	LIA	A single shell-gritted sherd.	1	15	0
606	LIA	Fragments from two necked jars or bowls, one with cordon decoration (Elsdon 1996b No. 443?) and another with a grooved shoulder (Elsdon 1996b No.258?).	10	110	38
607	LIA	A small group including abraded fragments probably all from a single large bowl or storage jar with a wedge-shaped rim.	29	325	4

	Fabric summary								
Fabric code	Fabric group	Fabric details	Sherd	Sherd %	Weight (g)	Weight %	Total RE %		
IASH		Native tradition shell- tempered	90	75.00%	1133	76.24%	77		
IASHF		Fine shell tempered; IA type	29	24.17%	352	23.69%	70		
MISC	Miscellaneous		1	0.83%	1	0.07%	0		

		Form sun	nmary				
Form	Form Type	Form Description	Sherd	Sherd %	Weight (g)	Weight %	Total RE %
-	_	Unidentified form	3	2.50%	13	0.87%	0
BCAR	Bowl	Carinated	5	4.17%	33	2.22%	15
BL	Bowl - large	Large	1	0.83%	11	0.74%	2
BNAT	5-	Native tradition bowl eg. D&P No.700	52	43.33%	471	31.70%	27
CPN	Jar	Native tradition	10	8.33%	148	9.96%	25
J	Jar	Unclassified form	10	8.33%	81	5.45%	0
J?	Jar	Unclassified form	1	0.83%	23	1.55%	0
JB	Jar/Bowl	Unclassified form	6	5.00%	95	6.39%	0
JBKNK	Jar/Beaker	Necked	4	3.33%	18	1.21%	8
JBL	Jar/Bowl	Large	2	1.67%	8	0.54%	0
JBNK	Jar/Bowl	Necked	1	0.83%	13	0.87%	0
JBR	Jar	Bead rimmed	12	10.00%	65	4.37%	9
JEV	Jar	Everted rim	1	0.83%	67	4.51%	15
JNK	Jar	Necked	3	2.50%	40	2.69%	30
L?	Lid	Unclassified form	9	7.50%	400	26.92%	16

						WIL	RE15- Sherd data					
Context	Fabric	Form	Dec.	Vessels Alt Drawing Comments		Join	Sherd	Weight	Rim diam	Rim eve		
205	IASH	BNAT	НМ	1			RIM; IRF; SLIGHT WEDGE SHAPED RIM- ELSDON 1996B BROADLY DRAGONBY TYPE 20		9	95	29	9
205	IASHF	J	HM; CORD	1			BS; R; CORDON		10	81	0	0
305	IASH	BNAT	НМ	1			RIM; IRF; AS ELSDON 1996A C.17 AW2 WELTON-GLENTHAM PIPELINE		14	51	22	14
305	IASH	JBR	НМ	1			RIM; IRF; BEAD RIM; POORLY FINISHED		12	65	16	9
305	IASHF	JВ	HM	1			BS; R; JOINS	307	1	12	0	0
305	IASHF	JB	HM; ROUL	1		D4	BASE; FTR; MOULDED FOOTRING; FORM PROB AS ELSDON 1996B NO. 423 BUT ROULETTED DEC; FORM PROB AS S-SHAPED BOWL CF NO679; SANDY FABRIC		1	44	0	0
306	IASH	CPN	HM	1			RIM; IRF; AS D2		2	25	20	4
306	IASH	JBL	НМ	1	ABR		BS; SIMILAR TO BNAT CONTEXT 305 SAME VESSEL		2	8	0	0
307	IASH	CPN	НМ	1		D2	RIM SHLDR; IRF; AS ELSDON 1996A D.17A BOTTOM LEFT AND DARLING AND PRECIOUS 2014 NO.702/703 BUT WITH MORE MARKED PROJECTION		7	116	16	19
307	IASH	CPN	HM	1			RIM; IRF; AS D2		1	7	0	2

					,	WIL	RE15- Sherd data					
Context	Fabric	Form	Dec.	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve
	IASH	L?	НМ	1	CARBON DEP INT	D3	RIM BASE; IRF; CARBON DEPOSIT ON INSIDE OF 'BASE'; A LID OR COVER? THESE FORMS ARE RARE IN LINCOLNSHIRE BUT EXAMPLES ARE KNOWN FROM NORTHAMPTONSHIRE FRIENDSHIPTAYLOR 1999, TYPE 3; FIG. 87.3; THEY HAVE BEEN DATED TO THE MIDDLE OF THE 1ST CENTURY AD		9	400	22	16
	IASHF		HM	1			BS; R; JOINS	305	1	10	0	0
	IASHF	JEV	CORD; CORUG	1		D1	RIM; SHLDR; RIDGED SHOULDER; ELSDON 1996B, FIG. 19.33.258 CERAMIC STAGE 6-7		1	67	15	15
307	MISC	-		1			BS; REDUCED; DENSE SANDY ?CERAMIC- PERHAPS A CRUCIBLE		1	1	0	0
	IASH		HM	1	ABR		BS; IRF		1	7	0	0
404	IASHF	BCAR	HM; CORD	1			RIM; R; PROBABLY A TAZZA TYPE VESSEL SEE EXAMPLES FROM HOLMES GRAIN WAREHOUSE LINCOLN DARLING AND PRECIOUS 2014 NO.733		5	33	18	15
404	IASHF	JNK	HM	1			RIM; IRF; SANDY FABRIC		1	10	14	13
404	IASHF	JBKNK	HM; CORD; CORUG	1			RIM; IRF; SMOOTH FABRIC; FORM AS ELSDON 1996B NO. 238; CERAMIC STAGE 7> OR PERHAPS DEVELOPED FROM GIRTH BEAKER TYPES	405	3	12	15	8
405	IASHF	JBKNK	НМ	1			BS; IRF; CARINATION; JOINS	404	1	6	0	0
	IASHF		HM	1			BS; R		1	13	0	0
	IASHF	J?	НМ	1			BS; IRF; THICK WALL; SANDY FABRIC		1	23	0	0
<u> </u>	IASH	JB	НМ	1			BS; IRF		1	15	0	0
		JB	HM	1	ABR		BS; IRF		1	5	0	0
	IASH	JB	HM	1		ļ	BS; IRF		1		0	0
	IASH	-	HM	1	ABR	<u> </u>	BS; R		1	5	0	
	IASHF		НМ	1			RIM; R?; CORDONED AND SPLIT RIM; DIAM?		1		0	
	IASHF	JNK	HM; CORD	1			RI; R; CORDON BELOW NECK		2		16	17
607	IASH	BNAT	НМ	1	ABR		RIM; IRF; AS ELSDON 1996B TYPE 20 WITH WEDGE RIM; LARGE- DIAM 30- 40CM?		29	325	0	4

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Appendix 4: Animal Bone Report

Land off Louth Rd, Wragby, Lincolnshire (WLRE 14) The Faunal Remains By Jennifer Wood

Introduction

A total of 107 (908g) refitted fragments of animal bone were recovered by hand during trial trench excavation undertaken by Pre-Construct Archaeology Lincoln.

The remains were recovered from a series of ditches and pits from Trenches 2, 3, 4 and 6. The deposits were predominantly dated from the Late Iron Age and Post-Medieval periods.

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 variable in condition, ranging between grades 2 and 4, with the majority of the remains averaging at grade 3 on the Lyman criteria (1996).

A single fragment of cattle axis recovered from late Iron Age pit [412] displayed evidence of butchery, possibly associated with jointing/disarticulation of the carcass.

Two fragment of bone recovered from late Iron Age ditches [403] and [605] displayed evidence of carnivore gnawing.

A total of 10 fragments of burnt bone were recovered from Late Iron Age ditches [204], [403], [605] and pit [408]. The remains were mostly calcined, suggesting that they had been subjected to high heat over a prolonged period of time. The burnt bone may represent incidental burning events or hearth sweepings.

No evidence of working or pathology were noted on any of the remains.

Table 1, Summary of Identified Bone (NISP)

Trench	2	3		4				6	
Taxon	Late Iron Age Ditch [204]	Late Iron Age Ditch [303]	Late Iron Age Ditch [403]	Late Iron Age Elongated Pit [408]	Late Iron Age Pit [412]	Undated Ditch [417]	Late Iron Age Ditch/Pit [605]	Post- Medieval Ditch [603]	Total
Equid (Horse			1		1	,		1	
Family)			I		I		1		3
Cattle		2	1		5		8		16
Sheep/Goat	3	1	1			1	5		11
Sheep			1						1
Pig							2		2
Large Mammal			15	1	1	1	13	4	35
Medium									
Mammal	3	1		1	1	3	9		18
Unidentified	10				2		9		21
N=	16	4	19	2	10	5	47	4	107

As can be seen from table 1, the majority of the remains were identified as cattle. Sheep/goat, with a single fragment positively identified as sheep, were the next most abundant species identified. Small numbers of pig, and *equid* remains were also present.

The assemblage is too small to provide meaningful information on animal husbandry and utilisation on site, save the presence of the animals on site. The skeletal elements represented suggest the remains were probably from butchery waste.

In the possible event of further archaeological works, the site would be liable to produce further remains of a similar condition and nature, with good/moderate potential to provide further information on dietary economies and underlying husbandry practices for the site.

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Flint

By Tom Lane

Introduction

Three flints were collected from an evaluation in Louth Road, Wragby.

Condition

All items are relatively unabraded.

Results

Cxt No	Description	No	Wt(g)	Date
415	Natural fragment with cortex remaining over upper surface and heavily patinated elsewhere. Two small flake/chip scars suggest possible attempt to begin working but may also be natural occurrences. 32 x 15 x 8mm	1		
415	Broken pebble with single flake scar. Probable natural. 40 x 22 x 10mm	1		
606	Flake with single narrow possibly struck flake scar. Other flakes scars probably natural. 49 x 38 x 13mm	1		

Provenance

The pieces were found in separate pitfills in Trenches 4 and 6.

Range

The two items from 415 were natural flints with possible small scar removals, although these could be natural. The piece from 606 has a single narrow blade scar that may have been worked and other scars that are probably naturally occurring.

Potential

None of the items have certain man-made working on them and no dates are possible for the scar removals. None are tools.

Summary

Three flints were found that are most probably unworked.

Appendix [#]

THE FINDS

All the finds were recorded in accordance with the Lincolnshire Archaeological Handbook (2012).

CLAY PIPE

By Gary Taylor

Introduction

Analysis of the clay pipes followed the guidance published by Davey (1981) and the material is detailed in the accompanying table.

Condition

The clay pipe is in moderate condition but very abraded.

Results

Table 1, Clay Pipes

Context	Bore	diamet	er /64"			NoF	W(g)	Comments	Date
no.	8	7	6	5	4				
604			1			1	1	stem only, very worn	17 th
									century

Provenance

The clay pipe was recovered from ditch/gully fill (604). It is probably a fairly local product, perhaps made in nearby Market Rasen or Lincoln.

Range

A single stem of probable 17th century date was recovered. It is very worn which suggests that it might be residual or redeposited in a context of later date.

Potential

Other than providing an earliest date for the context it derived from the clay pipe is of limited potential.

OTHER FINDS

By Gary Taylor and Denise Buckley

Introduction

Two other finds, one of them broken in two linking pieces, together weighing a total of 67g, were recovered.

Condition

The other finds are in good condition, though the metal item is very corroded.

Results

Table 2, Other Materials

Cxt	Material	Description	NoF	W (g)	Date
	iron	uncertain, possible punch or awl, 108mm long; section	2(link)	37	Roman?
409		at centre is 10mm x 8mm but tapers to each end to			
		about 5mm x 5mm			
606	fied clay	loomweight	1	30	Iron Age-early
					Roman

Provenance

The other finds were recovered from ditch fill (409) and ditch/pit fill (606).

Range

Part of a fired clay loomweight was recovered. Three surviving faces meeting at a corner suggest it was triangular in shape. Loomweights of this form occur widely across southeastern Britain, south of the Humber, on Iron Age sites (Elsdon and Barford 1996, 330). However, at Newton on Trent, about 15km west of Lincoln, loomweights of this same triangular form were found in an early-mid 2nd century Roman pottery kiln (Field and Palmer-Brown 1991, 49) and were clearly being made and in use in the early Roman period.

An iron object, broken at the centre, was also recovered. This object is at its widest at the centre and tapers to both ends. As such, it has the appearance of an awl or punch. Similar awls/punches, tapering to either terminal from a broader midpoint, have been found in Colchester in a 2nd-3rd century context (Crummy 1995, 168-9) and at Baldock (Hertfordshire) in a 3rd century level. It was thought that one of the awls from Baldock may have been a leather-working tool (Manning and Scott 1986, 148-150).

Potential

The other finds are of moderate potential. In particular, the loomweight suggests weaving at the site of very close by during the Iron Age-early Roman period. The iron object is of uncertain identification but may be an awl or punch, perhaps for use in leather-working in the Roman period.

SPOT DATING

The dating in Table 3 is based on the evidence provided by the finds detailed above.

Table 3, Spot dates

Cxt	Date	Comments
409	Roman?	based on 1 metal of uncertain identity
604	17 th century	based on 1 clay pipe – abraded, suggesting date of context is later
606	Iron Age-early Roman	based on 1 fired clay

ABBREVIATIONS

CXT Context

NoF Number of Fragments W (g) Weight (grams)

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on behalf of Pre-Construct Archaeological Services Ltd

Land off Louth Road Wragby Lincolnshire

palaeoenvironmental assessment

report 3804 May 2015



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1. Summary

The project

- 1.1 This report presents the results of palaeoenvironmental assessment of two bulk samples taken during an archaeological evaluation at land off Louth Road, Wragby Lincolnshire.
- 1.2 The works were commissioned by Pre-Construct Archaeological Services Ltd (PCAS), and conducted by Archaeological Services Durham University.

Results

- 1.3 The assessment provides evidence for the cultivation of spelt wheat and hulled 6-row barley at the site. These were the main cereal crops for Middle Iron Age to Roman period sites in the region. The presence of spelt wheat chaff may indicate crop processing at or near to the site.
- 1.4 The deposits comprised small charred plant debris such as grass-type rhizomes, which frequently occur on sites from the later prehistoric, although they are not exclusive to this period.
- 1.5 Identified charcoal indicates comparable exploitation of woodland resources for both deposits. The charcoal assemblages are consistent with studies of later prehistoric sites in the region.

Recommendations

- 1.6 No further analysis is required for these samples, but the preservation of charred plant remains indicates that other features that may be present on the site have the potential to provide further information about the exploitation of fuel resources, diet and crop husbandry practices, which could be supplemented by AMS dating. If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced.
- 1.7 The flots should be retained as part of the physical archive of the site. The residues were discarded following examination.

2. Project background

Location and background

2.1 Archaeological works were conducted by PCAS on land off Louth Road at Wragby, East Lindsey, Lincolnshire. This report presents the results of palaeoenvironmental assessment of two bulk samples of probable Iron Age/Romano-British origin, taken from linear feature [303] and a linear feature or elongated pit [605].

Objective

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

Dates

2.3 Samples were received by Archaeological Services on 5th May 2015. Assessment and report preparation was conducted between 6th and 20th May 2015.

Personnel

2.4 Assessment and report preparation was conducted by Lorne Elliott. Sample processing was by Janice Adams.

Archive

2.5 The site code is **WLRE15**, for **W**ragby **L**outh **R**oad **e**valuation 20**15**. The flots and finds are currently held in the Palaeoenvironmental Laboratory at Archaeological Services Durham University awaiting collection. The charred plant remains will be retained at Archaeological Services Durham University.

3. Methods

- 3.1 The bulk samples were manually floated and sieved through a $500\mu m$ mesh. The residues were examined for shells, fruitstones, nutshells, charcoal, small bones, flint, pottery, glass and industrial residues, and were scanned using a magnet for ferrous fragments. The flots were 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 Palaeoenvironmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (1997). Habitat classifications follow Preston *et al.* (2002).
- 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 Palaeoenvironmental Laboratory at Archaeological Services Durham University.
- 3.3 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; Murphy 2001; Huntley 2010).

4. Results

- 4.1 The bulk samples produced relatively large flots comprising large quantities of charcoal and low numbers of charred plant macrofossils. Generally, the charcoal was soft and friable with mineral inclusions, and in poor condition. Identified charcoal comprised field maple stemwood and small calibre branchwood of oak, blackthorn, hazel, willow/poplar and hawthorn/apple. The small fragment size and species diversity of the charcoal is typical of fuel debris from a domestic hearth. Charred plant macrofossils included the remains of wheat and barley, indeterminate grass-type rhizomes and weed seeds such as sedges, brome and heath-grass. Wheat grains were noted, comprising the oval shape and parallel-sided morphology typical of spelt wheat (*Triticum spelta*), as summarised by Jacomet (2006). Diagnostic glume bases (chaff) recorded in both samples confirmed the presence of this species. Diagnostic barley chaff was absent, although hulled and twisted grains recorded from [305] may indicate the presence of hulled 6-row barley (*Hordeum vulgare*).
- 4.2 Finds typical of domestic waste included small amounts of indeterminate unburnt and calcined bone, pottery, fired clay, a fragment of worked flint and a possible nail. Material suitable for radiocarbon dating is available for both samples. The results are presented in Appendix 1.

5. Discussion

- 5.1 The assessment provides evidence for the cultivation of spelt wheat and hulled 6-row barley at the site. These were the main cereal crops for Middle Iron Age to Roman period sites in the region (Monckton 2006; Greig 1991). The presence of spelt wheat chaff may indicate crop processing at or near to the site. The small assemblages of charred wild taxa recorded are typical of arable, heathland and damp ground habitats.
- 5.2 These deposits comprised small charred plant debris such as grass-type rhizomes and weed remains. This material may represent the remains of gathered hay for fodder or bedding, or probably represents burnt turves, used as fuel or construction purposes such as roofing or earth ovens (Hall 2003). These remains frequently occur on sites from the later prehistoric, although they are not exclusive to this period.
- 5.3 Identified charcoal indicates comparable exploitation of woodland resources for both deposits. The charcoal assemblages are consistent with studies of later prehistoric sites in the region (Monckton 2006).

6. Recommendations

- 6.1 No further analysis is required for these samples, but the preservation of charred plant remains indicates that other features that may be present on the site have the potential to provide further information about the exploitation of fuel resources, diet and crop husbandry practices, which could be supplemented by AMS dating. If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced.
- 6.2 The flots should be retained as part of the physical archive of the site. The residues were discarded following examination.

7. Sources

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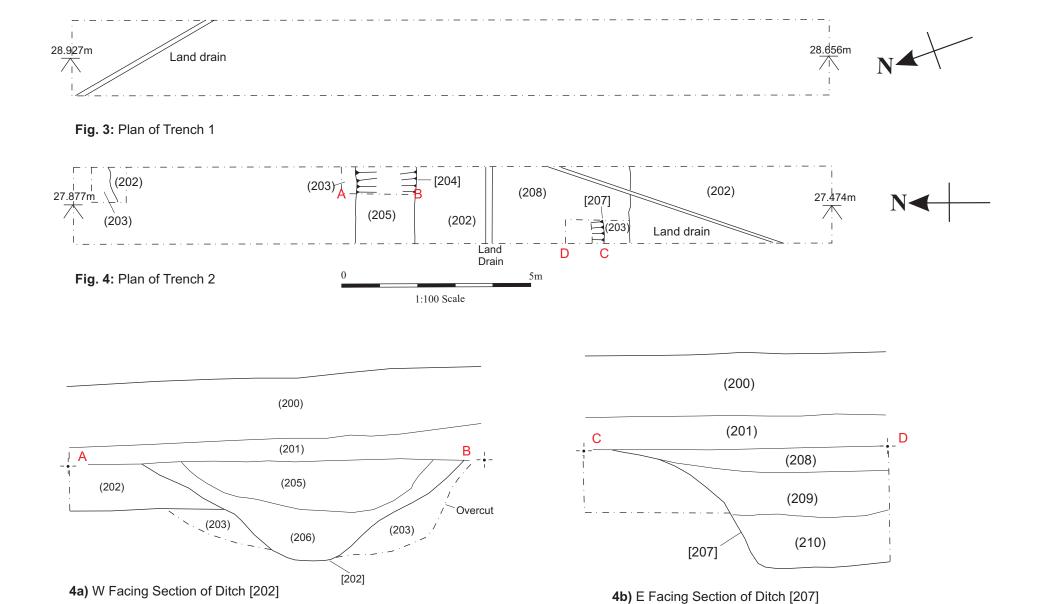
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Appendix 1: Data from palaeoenvironmental assessment

Sample		1	2
Context		305	606
Feature number		303	605
Feature		Linear	Linear/Pit
Material available for radiocarbon dating		✓	✓
Volume processed (I)		33	32
Volume of flot (ml)		700	450
Residue contents			
Bone (calcined)	indet. frags	++	++
Bone (unburnt)	indet. frags	+	++
Fired clay		+	+
Flint (number of fragments)	worked	1	-
Nail (number of fragments)		1	-
Pot (number of fragments)		9	1
Flot matrix			
Bone (calcined)	indet. frags	+	+
Bone (unburnt)	indet. frags	-	++
Charcoal		+++	+++
Rhizomes (charred)		++	++
Roots (modern)		++	++
Uncharred seeds		(+)	(+)
Charred remains (total count)			
(a) Bromus sp (Bromes)	caryopsis	1	-
(c) Cerealia indeterminate	grain	1	1
(c) Hordeum sp (Barley species)	hulled grain	1	-
(c) Hordeum vulgare (6-row Barley)	twisted grain	1	-
(c) Triticum cf. spelta (cf. Spelt Wheat)	grain	-	2
(c) Triticum spelta (Spelt Wheat)	glume base	2	1
(c) Triticum sp (Wheat species)	grain	2	2
(h) Danthonia decumbens (Heath-grass)	caryopsis	3	-
(w) Carex sp (Sedges)	trigonous nutlet	1	2
Identified charcoal (✓ presence)			
Acer campestre (Field Maple)		✓	√
Corylus avellana (Hazel)		-	✓
Maloideae (Hawthorn, apple)		✓	-
Prunus spinosa (Blackthorn)		✓	✓
Quercus sp (Oaks)		✓	✓
Salicaceae (Willow, poplar)		✓	-

[a-arable; c-cultivated; h-heathland; w-wet/damp ground.

^{(+):} trace; +: rare; ++: occasional; +++: common; ++++: abundant]



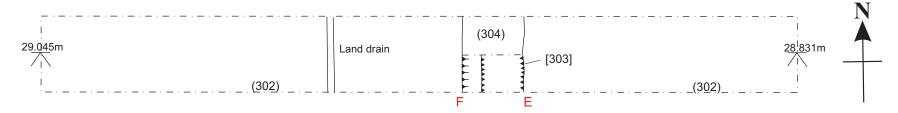
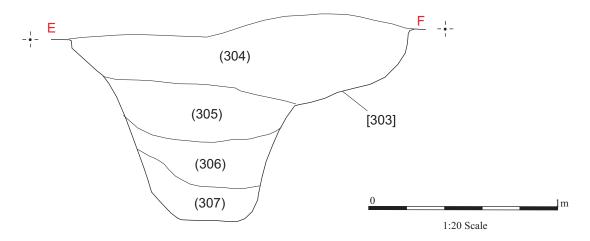
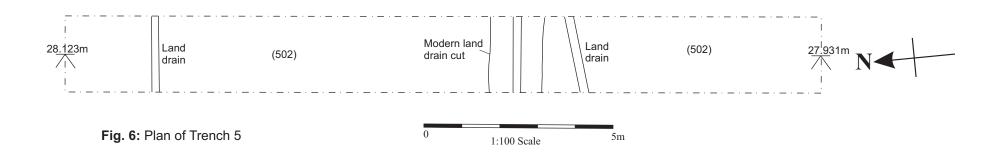
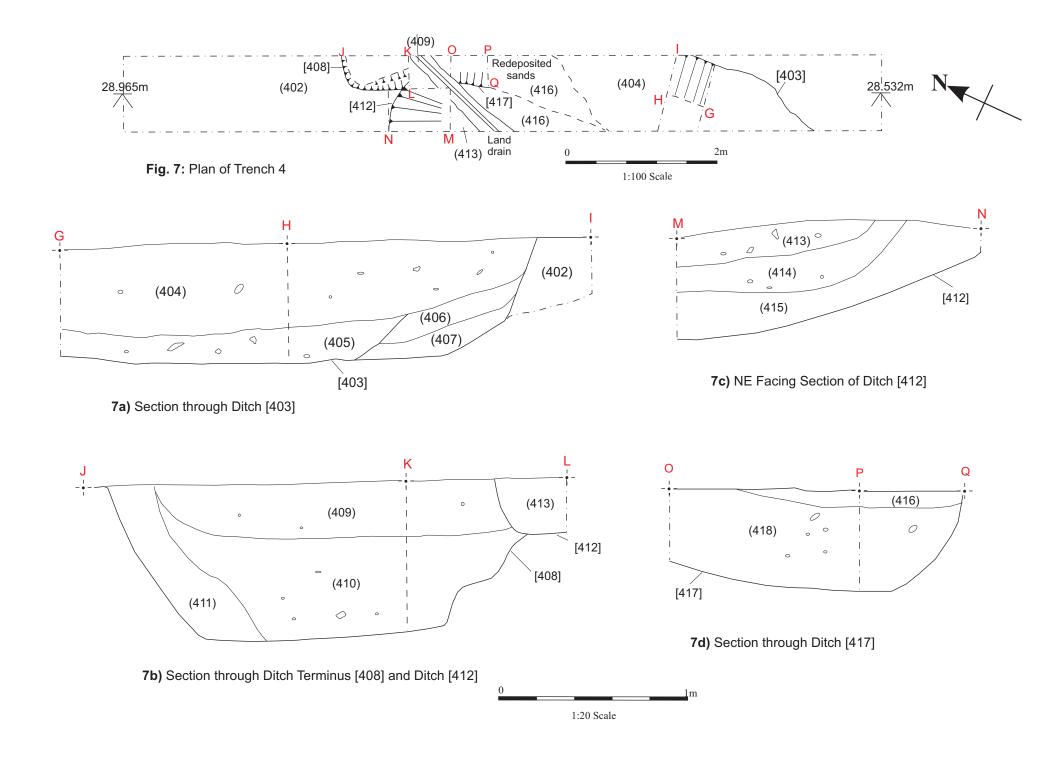


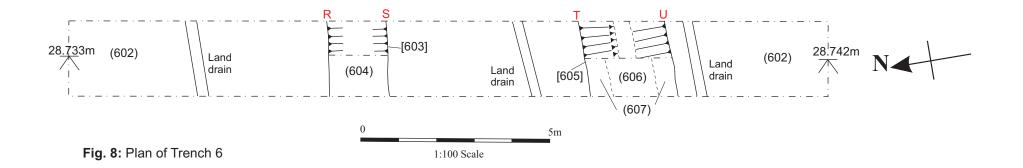
Fig. 5: Plan of Trench 3

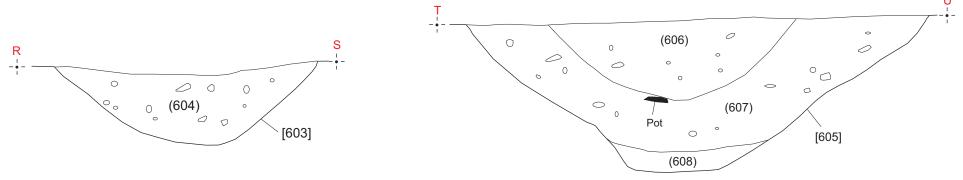


5a) N Facing Section of Ditch [303]









8a) NW Facing Section of Ditch [603]

8b) NW facing Section through Ditch [605]

