Land north of Station Road, Legbourne, East Lindsey, LN11 8LH

Archaeological Evaluation Report

NGR:	TF 36120 84736
Planning Ref.:	East Lindsey District Council
Accession No.:	LCNCC 2016.156
Site code:	SRLE 16
PCAS job no.:	1756
OASIS ref:	preconst3-268356

Prepared for DMC Architecture Ltd

On behalf of Eastfield Services

by

A. Lane

November 2016

Pre-Construct Archaeological Services Ltd
47, Manor Road
Saxilby
Lincoln
LN1 2HX

Tel. 01522 703800
e-mail info@pre-construct.co.uk

Contents

Illustrations

Appendices

Non-Technical Summary

Pre-Construct Archaeological Services Ltd. were requested by DMC Architecture on behalf of Eastfield Services to undertake a scheme of archaeological evaluation trenching on land to the north of Station Road, Legbourne, to investigate the potential for and survival of buried archaeological remains, with the aim of informing a forthcoming planning application.

The site lies on the northwestern periphery of the modern village, adjacent to the site of the 19th century railway station and line. There is little evidence for early occupation in Legbourne, with a small assemblage of Roman pottery being recovered during archaeological investigations nearly 2km from the site, and settlement in Legbourne probably dates from the late Saxon period. In the mid 12th century the Cistercian Legbourne Priory was founded, lying on the north side of the River Eau to the southwest of the village.

The site is currently in use as an agricultural field. Geophysical survey of the site has identified only limited archaeological potential, traces of probable ridge and furrow in the western half of the site and a small number of possible anomalies in the east. Trenches were positioned to investigate these results.

Four trenches excavated on the western half of the site were recorded as being void of any archaeological remains. Trenches 5 & 6 in the east both contained cut features, including one substantial ditch roughly corresponding with a magnetic anomaly on the geophysics. The only dating evidence came from a shallow gully which indicates activity in the early Roman period.

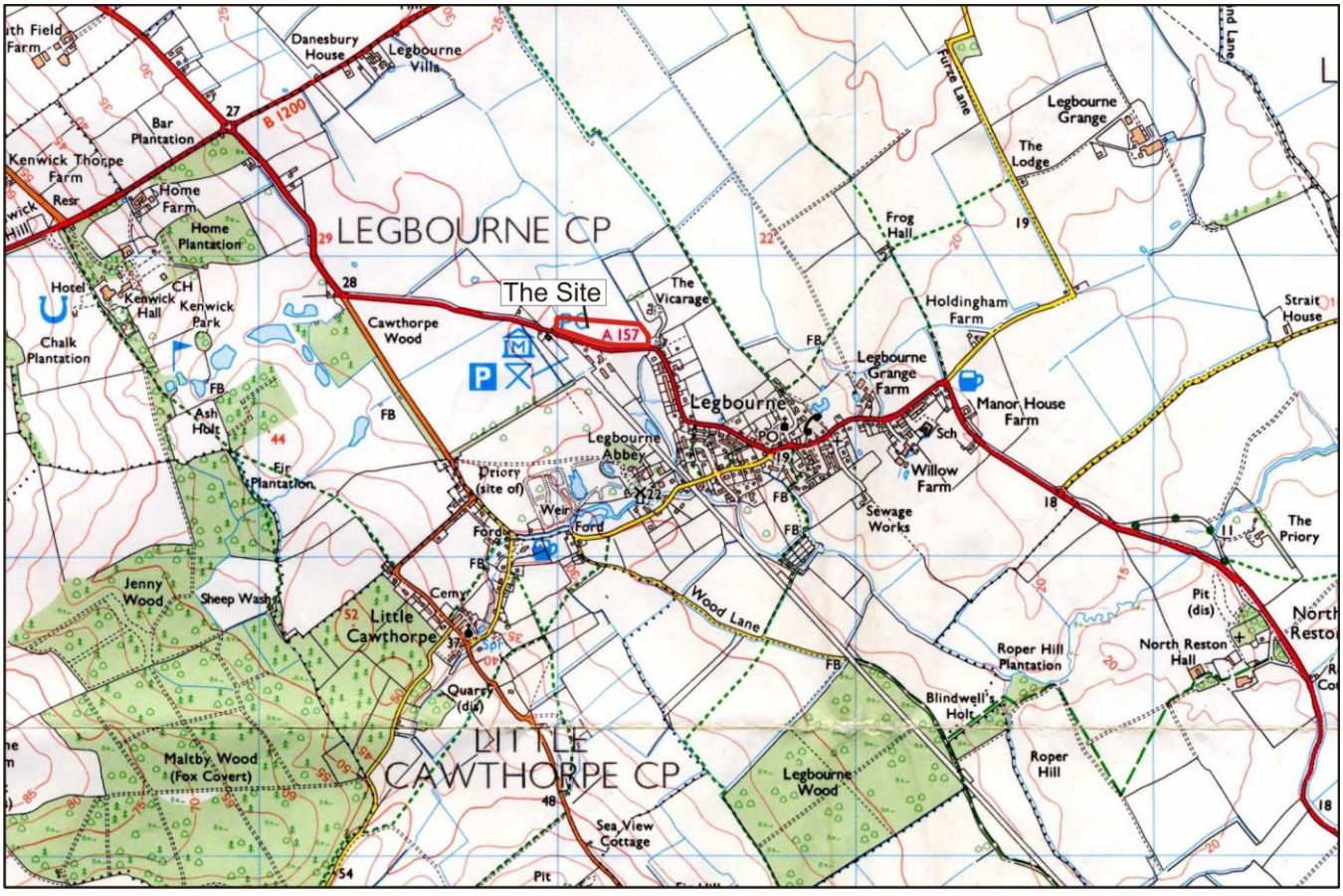


Figure 1: Site location indicated in red. 1:25000. (OS mapping © Crown copyright. All rights reserved. PCAS licence no. 100049278).

1.0 Introduction

Pre-Construct Archaeological Services Ltd (PCAS) was commissioned by DMC Architecture Ltd. on behalf of Eastfield Services to undertake an archaeological evaluation on land to the north of Station Road, Legbourne, on the northern periphery of the town.

The site lies in the southern part of a larger agricultural field on the north side of the A157 approaching the town from the northwest, to the east of the site of the 19th century railway station.

Geophysical survey of the site had previously identified only limited magnetic variation, with a small number of potential archaeological anomalies in the eastern part of the site. Trenches were targeted to investigate the results of the survey, and revealed a small number of cut features in the two eastern most trenches, however dating evidence was very limited.

This work took place to inform and advise a forthcoming planning application for residential development.

2.0 Location and description (Fig. 1)

The village of Legbourne is located on the eastern edge of the Lincolnshire Wolds, approximately 4km south-east of Louth and 40km north-north-east of Lincoln. It lies within the administrative district of East Lindsey. Legbourne lies on either side of the A157 a little southeast of the junction with the A16.

The c.0.9ha site lies to the immediate north of Station Road at the north-western edge Legbourne. It encompasses a narrow strip land at the southern edge of an arable field that was cropped with wheat at the time of survey. A recent residential development is situated to the immediate east, with a single dwelling and attached gardens approximately 50m to the west. A N-S aligned c.50m long metalled track extends across the eastern edge of the site.

The approximate central NGR of the Site is TF 36120 84736.

Looking west across the site.

3.0 Geology and topography

Bedrock geology in Legbourne is recorded by the BGS as being Carstone formation sandstone, sedimentary bedrock deposited in the Cretaceous Period in an environment previously dominated by shallow seas. Slightly to the west of the site bedrock geology changes to Ferriby Chalk. Overlying drift geology is mapped as Devensian – Diamicton Till, deposited in the Quaternary period in ice age conditions, till with deposits of outwash sand and gravel deposited by seasonal and post glacial melt-waters, and an island of Glaciofluvial Deposits, Devensian - Sand and Gravel to the north (http://mapapps.bgs.ac.uk/geologyofbritain/home.html).

Local soil types are recorded as fine loam over clay of the Beccles 1 Association to the north, with fine loamy soils of the Aswarby Association to the east and brashy calcareous fine loamy soils of the Elmton 1 Association to the south and west (SSEW 1983).

The site is generally level and lies between the 20m and 25m contour lines.

4.0 Planning background

The National Planning Policy Framework (NPPF) came into force in March 2012. This places the responsibility for dealing with heritage assets affected by development proposals with the developer.

An extract of Section 128 of NPPF reads:
128. In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected ... Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

To inform and advise a forthcoming planning application for residential development the East Lincolnshire District Council Historic Environment Officer has advised that pre-application archaeological investigations would be required to inform the planning process. A geophysical survey of the site was undertaken (Bunn, 2016), followed by this scheme of targeted trenches.

The archaeological evaluation was undertaken by PCAS in October 2016. This document presents the results of the evaluation to inform and advise the application, the layout, and any archaeological mitigation strategy that may be required in association with the proposals.

5.0 Archaeological and historical background

The Lincolnshire Historic Environment Record (HER) lists two Neolithic flint or stone axe heads recovered from Legbourne, although the exact location of these findspots is not recorded (LHER ref: 41841 & 41842).

Evidence of Roman activity is also limited. Roman pottery has been recovered from Legbourne Grange over 2km northeast of the development site (LHER ref: 41836), and a single pit containing a small corpus of Roman pottery was identified during excavations for the Theddlethorpe to Hatton pipeline (LHER ref: 43350).

Despite the proximity of Louth, a locally important settlement in the Saxon period, home of a monastery and annual market by the eighth century and a pre-Conquest mint (Sawyer, 1998), the physical evidence for Saxon dated occupation in Legbourne represented by an assemblage of artefacts recovered from a pit excavated on the Theddlethorpe to Hatton pipeline, yielding over thirty of middle Saxon pottery (LHER ref: 43349). A late Saxon bead

fragment and sherds of Charnwood Ware, a late Saxon pottery in use between the 5th – 9th centuries, was recovered during archaeological investigations on the southern edge of Legbourne (Lane, 2014).

Legbourne features in the Domesday Book, when it was populated by 39 freemen, 18 villagers and 30 smallholders; the land was divided between Earl Hugh and Roger of Poitou (Morgan & Thorne, 1986). The place name is of Old English origin, derived from *Lecheburne*, meaning 'the trickling stream' (Cameron, 1998).

Legbourne really developed as a settlement in the medieval period. The Cistercian nunnery of Legbourne Priory was established in 1150, lying on the north side of the Long River Eau. The priory was dissolved as part of the Reformation in 1536, however earthworks interpreted as the inner and outer precincts, water control systems and field systems with ridge and furrow all survive on the site (Scheduled Ancient Monument no.22617). Following the dissolution of the nunnery the land was granted to Sir Thomas Heneage, who built what is now the private dwelling of Legbourne Abbey.

The historic core of the village of Legbourne is anticipated to lie around All Saints Church, c.700m southeast of the site (built c. 1380, Grade I Listed Building ref: 1063692). Earthworks of the shrunken village of Legbourne lie around the modern village to the east of the site, surrounded by the earthworks and cropmarks of the surrounding field systems (LHER ref: 46484), and there are more ridge and furrow earthworks to the northwest of the site around Legbourne Villa.

The railway came to Legbourne in the mid 19th century, extending c.NW-SE across the southeast side of the village. The railway station lay c.100m to the west of the site, and was built in 1848. The line was in use throughout the late 19 – early 20th century, but was closed to passenger services in 1953 and to goods in 1964. The line was finally dismantled in 1970, and the station house has been converted into a private property (LHER ref: 43459).

A geophysical survey of the site was undertaken in July 2016 (Bunn, 2016, Figure 2). The survey recorded very little magnetic variation, just two discrete possible pits and a small number of possible linear features, including traces of ridge and furrow activity across the field and a possible former field boundary.

6.0 Methodology

The evaluation comprised five 20m x 2m trenches and one 30m x 2m trench, positioned across the site to investigate both the geophysical anomalies and the magnetically "void" areas. Trenches were measured in based on the approved trenching plan, with final trench locations recorded by GPS accurate to 0.03m (Figure 2).

Trenches were initially machine excavated using a 7 tonne tracked excavator fitted with a smooth 1.6m wide ditching bucket. They were manually cleaned, and archaeological features excavated by hand. Sections were drawn at a scale of 1:10 or 1:20 and features plotted on trench plans drawn at a scale of 1:50. The documentary record was supplemented by a photographic record in colour slide and digital formats; a selection of the latter is reproduced within this report. Deposits were recorded on standard PCAS record sheets, and an excavation site diary was also kept. Finds were stored in labelled bags prior to their removal to the offices of PCAS for initial processing.

Following fieldwork completion, Finds were processed and dispatched to relevant specialists. Pottery identification was undertaken by I. Rowlandson (Appendix 3), and flint by T. Lane (Appendix 4) and environmental analysis was undertaken by Durham University Archaeological Services (Appendix 5).

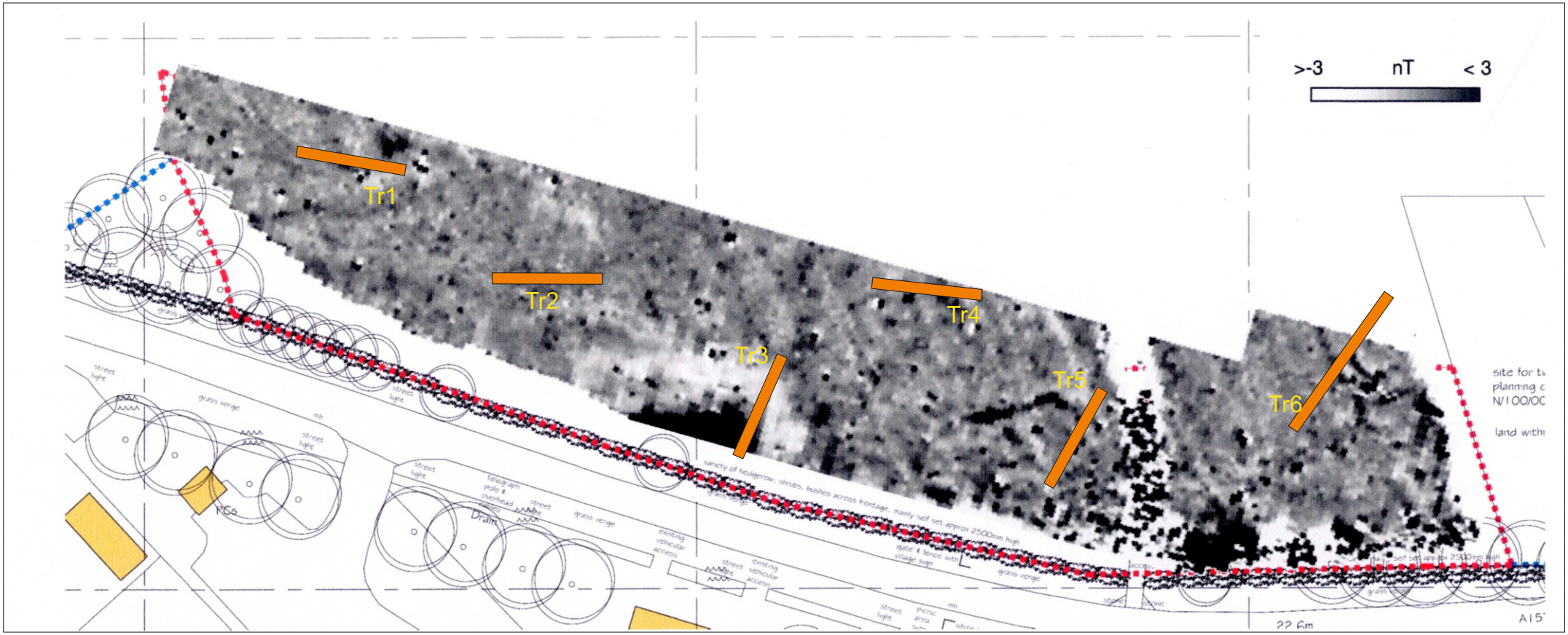


Figure 2a: Proposed trenching plan overlain on geophysics results (Bunn, 2016). 1:1000@ A4

20m x 2m trench

0 5m

1:100 Scale

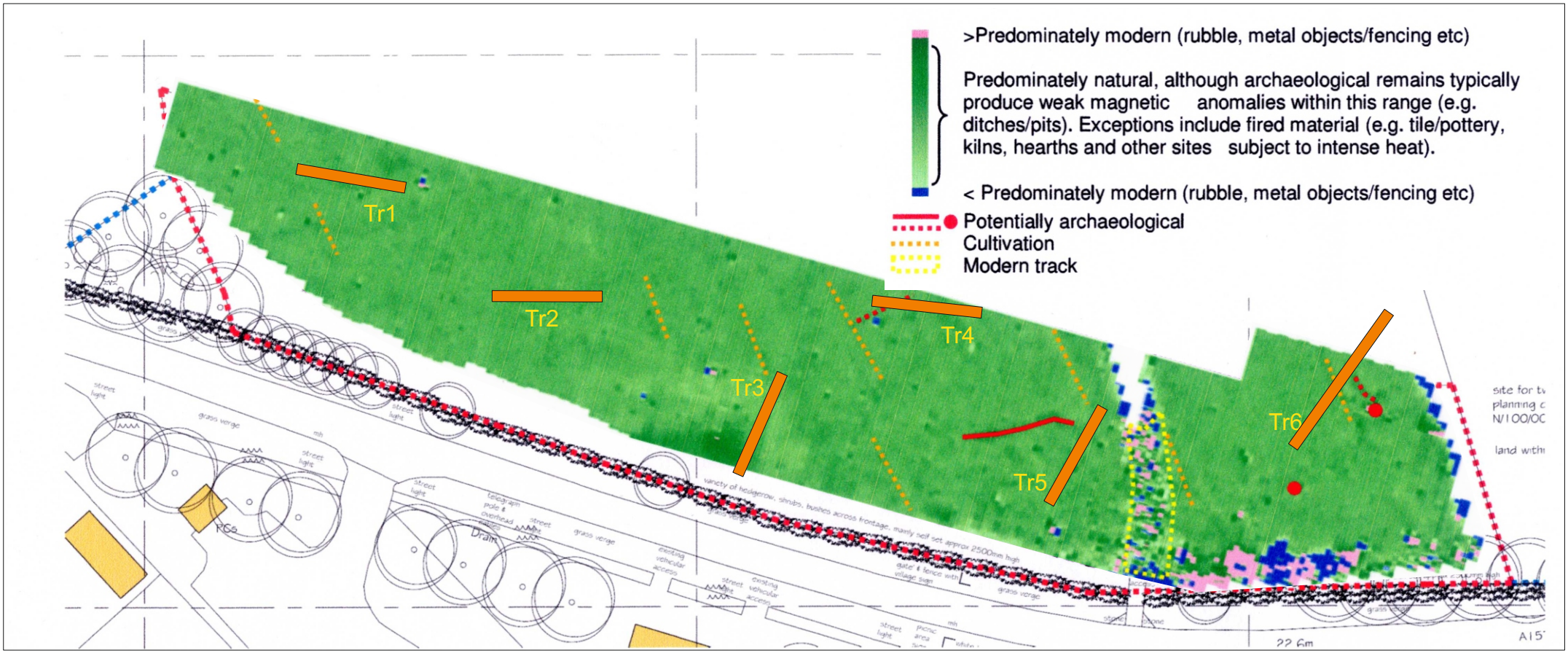


Figure 2b: Proposed trenching plan overlain on geophysics results (Bunn, 2016). 1:1000@ A4

20m x 2m trench

0 5m

1:100 Scale

The fieldwork was completed between 11th October – 25th October 2016 by A. Slater, D. Bower and D. Brown. Ground and weather condition varied throughout the fieldwork with frequent heavy rain and sunny spells.

7.0 Results

Trenches 1, 2, 3 & 4 were all negative for any cut features. In these trenches topsoil is recorded consistently at around 0.30m thick, directly over the natural geology.

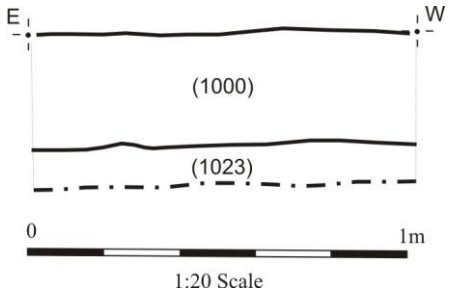


Figure 3: Representative section from Trench 1. 1:20.

Trench 5 (Fig 4)

Trench 5 lay in the central-eastern part of the site, on the west side of the former field boundary. It contained four linear features, including one modern land drain, and a discrete pit or posthole. A single sherd of early Roman pottery was recovered from a gully at the south end of the trench.

Trench 5 lay on a c.NE-SW alignment and targeted two linear anomalies, interpreted as trace remains of ridge and furrow and a possible ditch.

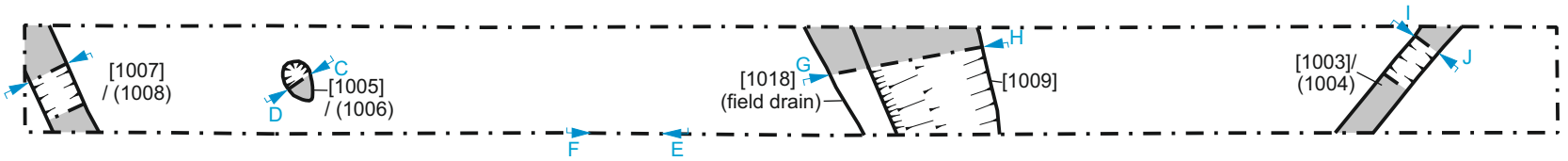
The natural geology was encountered at a depth of 0.46m below the existing ground level. Cut into the natural geology were four linear features and a discrete pit.

At the northern end of Trench 5 lay gully [1003], with moderately sloped sides and a wide flat base. It contained a single fill (1004) of sandy silt, but no artefacts were recovered. This feature roughly corresponded with a linear anomaly identified on the geophysics.

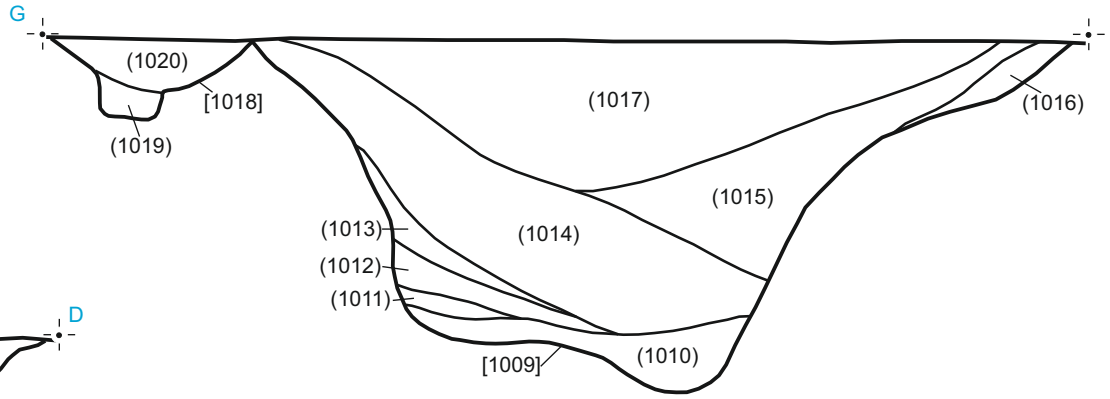
To the south of this and towards the centre of the trench lay a second, considerably larger ditch [1009] measuring nearly 2m wide and 0.90m deep and lying on a c. NW-SE alignment. The steep, slightly convex sides of this ditch and substantial cut would indicate this was a feature of some significance, perhaps a boundary ditch, however there is no evidence to indicate this is part of an enclosure. Ditch [1009] contained a sequence of seven fills; (1010) at the base of the ditch was a light coloured silty clay, which was probably a mixed natural / topsoil type deposit that smoothed the profile of the base of the ditch and was probably deposited soon after the ditch was first excavated. Above this and on the southwest side of the ditch was a sequence of fills: (1011), (1012) and (1013). These horizons appeared to have been deposited as small deposits or slumps from this side of the ditch, the profiles not being typical of a naturally deposited horizon. Above this was deposit (1014), a grey brown silty clay with charcoal flecks. The profile and volume of this horizon would again indicate deposition from the southwest side of the ditch, possibly a slump of bank material, although it should be noted that no evidence of a bank was recorded in the trench sides adjacent to the ditch.

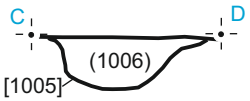
On the northeast side of ditch [1009] there is a small deposit (1016) of orange brown sandy gravel. This deposit smoothed out the slightly irregular profile towards the top of the ditch, and was probably a slump of material settling on the edge of the feature. This is covered by

Figure 4: Trench 5 plan (1:100) and sections (1:20)

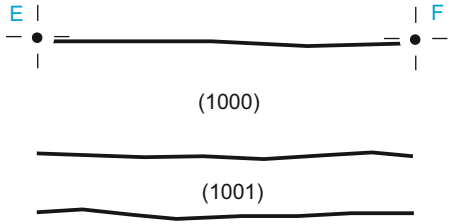


Above: Pit [1005] NW facing section

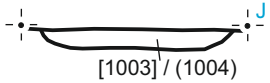




Above: SE facing section of ditch [1009]



Natural



1:20 Scale

1:100 Scale

(1015), a grey sandy silt also with a profile indicating deposition from the northeast side of the ditch and covering both (1016) and partially covering (1014). The upper fill of ditch [1009] was (1017), a dark silty clay with gravel and charcoal inclusions that probably represents the gradual silting of the feature after it has fallen out of use, although the charcoal flecks are evidence of continuing activity in the vicinity. No dating evidence was recovered from this ditch.

A modern land drain, recorded as [1018] and containing fills (1019) & (1020) lay immediately adjacent to and on the southwest side of ditch [1009].

Slightly to the south of this lay the discrete pit [1005], an irregular oval in plan with a max diameter of 0.55m. With almost verticals sides and a concave base this feature is most likely the base of a post-hole, although with only one fill (1006) there is no evidence of a post-pipe.

At the extreme southern end of the trench lay a fourth linear feature, lying on a c.NW-SE alignment. Shallow gully [1007] had gently sloping sides and a wide flat base. It contained a single fill (1008) from which a single sherd of mid-late 1st century Romano-British pottery was recovered. An environmental sample taken from this horizon contained small quantities of spelt wheat and barley, common crops cultivated in the area in the late Iron Age – Romano British period and therefore corresponding with the dated of the pottery sherd. Charred heather twigs, grasses and chickweed were also present, indicating burning in the vicinity, perhaps of turves cut and used for domestic fuel or for construction. The sample also yeilded a broken Mesolithic blade falke, considered residual evidence of earlier activity in the area.

The features in Trench 5 are covered by subsoil (1001) up to 0.16m deep, and topsoil as encountered across the site c.0.30m deep.

Trench 6 (Fig. 5)

Trench 6 lay at the eastern end of the site, revealing two shallow linear features which roughly correspond to geophysical anomalies. Both features remained undated, however a Neolithic – Bronze Age flint was recovered from the topsoil in the vicinity of this trench, considered residual evidence of earlier activity.

Trench 6 lay on a c.NE-SW alignment in the eastern part of the site. It was excavated to a length of 30m, targeting two linear anomalies.

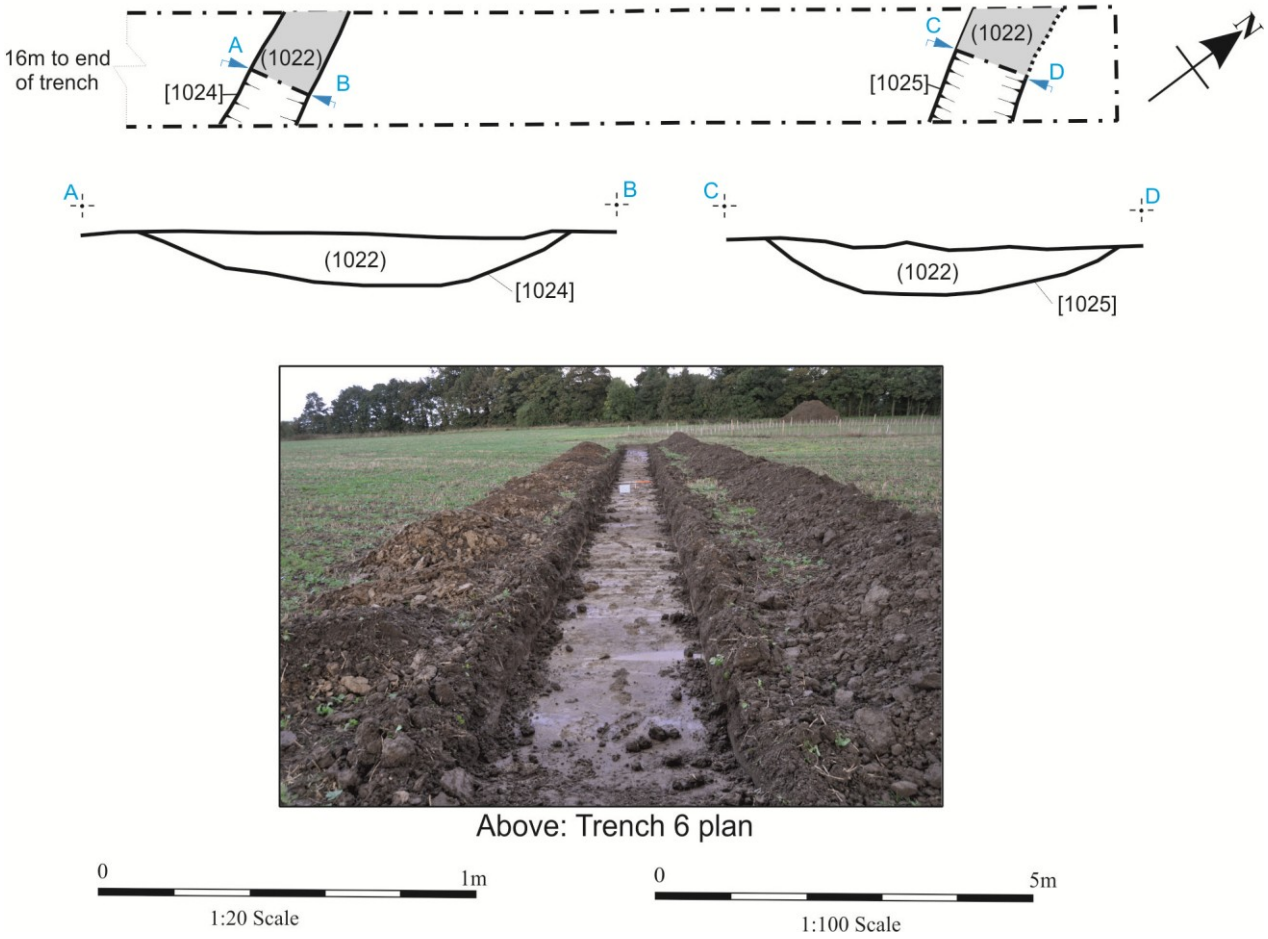
The natural geology was encountered at a depth of c.0.36m below the existing ground level. The two gullies were cut into the natural, both towards the north end of the trench and roughly corresponding with the linear geophysical anomalies.

The northern-most ditch was recorded as [1025]; ditch [1024] lay c. 9m to the south. Both had shallow concave profiles and lay on the same c.NNW-SSE alignments. Both were filled with subsoil (1022), which also extended across the trench to a depth of 0.07m. No artefacts were recovered from these features or the subsoil.

Ditch [1024] corresponded with the northern most of the linear magnetic anomalies, while the northern end of the trench lay outside of the area surveyed by the geophysics.

The topsoil of Trench 6 was consistent in depth with the rest of the site at c.0.30m thick. A flint core with evidence of several flakes being removed, dated to the late Neolithic – early Bronze Age, was recovered from the topsoil in the vicinity of Trench 6. Unstratified, this flint may originate from one of the revealed features in Trench 6, however it is also considered likely that this flint is residual evidence of early activity in the area.

Figure 5: Trench 6 plan (1:100) and sections (1:20)



8.0 Discussion & Conclusions

The evaluation confirmed the results of the geophysical survey which indicated the western half of the site is void of archaeological remains.

Trench 4 targeted a potential linear anomaly, however no corresponding feature was revealed during the excavation. The anomaly was a slight differentation in the magnetic variation across the site, rather than a clear difference, therefore this may relate to geological variation.

Trench 5 was excavated slightly to the east of the identified magnetic anomalies. The northern most ditch [1003] corresponded with the projected line of the northern most anomaly, however it remained undated. The other excavated features in this trench lay to the south of the projected line of the anomalies. All but the southern most of the features in this trench were undated, a single sherd of early Romano-British pottery being recovered from ditch [1007]. A single sherd of pottery is usually considered tentative dating, therefore this should not be considered representative of the dating of the feature without further evidence.

Trench 6 revealed a further two trenches, both also remaining undated, but confirming the presence of archaeological remains at the eastern end of the site. The results also suggest further features may lie to the north of the current redline boundary, and it is possible the exposed features of this evaluation represent activity on the periphery of more intensive occupation and activity, presumably to the east of the site.

The two prehsitoric flints recovered during this evaluation are both considered residual. The microlith from Trench 5 is very small and likely was washed / blown into the feature during the natural silting process. The presence of the flint core from the topsoil of Trench 6 is likely to be the result of ploughing impacts on a buried feature, possibly in the vicinity, however this area may have been ploughed for much of the last 1000yrs and it likely to have been moved from its original deposition site.

Prior to this evaluation there was little known evidence of either prehistoric or Roman occupation around Legbourne, the available records indicating a very disperse activity pattern. The evaluation has confirmed early activity in these periods on the periphery of modern Legbourne, adding to the archaeological knowledge and history of the village.

9.0 Effectiveness of methodology

Intrusive evaluation was an appropriate method for gathering further information about the sites archaeological potential. The evidence gathered during this scheme of works indicates archaeological activity is concentrated at the east end of the site, although dating evidence is limited to a single sherd of early Roman pottery and unstratified prehistoric flints. The body of data produced by this evaluation is considered sufficient to inform the planning and development process.

10.0 Project archive

The site records, currently in the custody of PCAS, will prepared according to published guidelines and deposited with a printed copy of this report at The Collection. Lincoln, where it can be accessed under the museum assigned accession number LCNCC 2016.156. Archiving is provisionally scheduled for April 2017.

11.0 Acknowledgements

Pre-Construct Archaeological Services would like to thank DMC Architecture Ltd & Eastfield Services for this commission.

12.0 References

http://mapapps.bgs.ac.uk/geologyofbritain/home.html

http://www.old-maps.co.uk/maps.html

http://www.oldmapsonline.org/

http://www.heritagegateway.org.uk/

http://www.pastscape.org.uk/

Evans, P, 2016, *Land off Station Road, Legbourne, Lincolnshire: Written Scheme of Investigation: Archaeological Evaluation*. Unpublished document by PCAS

Ordnance Survey, 1999, *Louth & Mablethorpe, Sutton on Sea & North Somercoates: 1:25,000 Ordnance Survey Explorer Series, Sheet 283*. Ordnance Survey, Southampton

Appendix 1: Context Summary SRLE 16

Trench	Context	Feature	Type	Description	Finds
Site	1000	1000	Layer	Topsoil. Mid grey clay silt with frequent natural flint inclusions. <0.30m thick.	
Tr. 5	1001	1001	Layer	Subsoil. <0.16m thick	
Tr. 5	1003	1003	Cut	Cut of gully on c. N-S alignment. Shallow with moderately steep sides and wide flat base. 2m exposed L; W 0.38m; D 0.11m	
Tr. 5	1004	1003	Fill	Dark brown moderate compaction sandy silt. Single fill of **1003**	
Tr. 5	1005	1005	Cut	Cut of discrete pit / post-hole. Slightly irregular oval in plan, steep sides with concave base. Diameter 0.45-0.55m; depth 0.32m	
Tr. 5	1006	1005	Fill	Mid to dark brown moderately compacted silty clay with some charcoal mottling. Single fill of **1005**	
Tr. 5	1007	1007	Cut	Cut of gully on c.NW-SE alignment. Slightly irregular moderately steep sides with wide flat base. 2m exposed L; W 0.60m; D 0.17m.	
Tr. 5	1008	1007	Fill	Mid to dark grey brown sandy silty clay with infrequent charcoal mottling. Single fill of **1007**	Pottery x 1. ◊2 Flint x 1 recovered from sample.
Tr. 5	1009	1009	Cut	Cut of ditch on c.NW-SE alignment. Slightly irregular moderately sloping sides, slightly convex, becoming very steep towards base. Base irregular concave "double dip". 2m exposed L; W 2.2m, D 0.96m	
Tr. 5	1010	1009	Fill	Mid to light orangey grey firmly compacted silty clay. Max depth 0.16m. Lower fill of **1009**	
Tr. 5	1011	1009	Fill	Light grey brown loosely compacted sandy gravey clay lens. Max depth 0.04m	
Tr. 5	1012	1009	Fill	Mid to dark grey brown moderately compacted silty clay with occasional gravels. Max depth 0.11m.	
Tr. 5	1013	1009	Fill	Light orangey brown firmly compacted silty clay. Max depth 0.10m.	
Tr. 5	1014	1009	Fill	Mid grey brown moderately compacted silty clay with occasional small rounded pebbles and charcoal mottling. Max depth 0.34m	
Tr. 5	1015	1009	Fill	Mid grey firmly compacted sand silt with frequent gravel lens'. Max depth 0.38m	

Tr. 5	1016	1009	Fill	Light orangey brown firmly compacted sandy gravel lens. Max depth 0.09m	
Tr. 5	1017	1009	Fill	Dark grey brown moderately compacted silty clay with frequent small angular gravels and occasional charcoal mottling. Max depth 0.39m. Upper fill of **1009**	
Tr. 5	1018	1018	Cut	Cut of ditch on c.NW-SE alignment, parallel and immediately adjacent to 1009. Modern land drain. 2m exposed L; W 0.55m, D0.21m	
Tr. 5	1019	1018	Fill	Lower fill of 1018	
Tr. 5	1020	1018	Fill	Upper fill of 1018	
Tr. 6	1021	1021	Layer	Topsoil. Same as 1000	Flint x 1
Tr. 6	1022	1022	Layer	Subsoil. Same as 1001.	
Site	1023	1023	Layer	Natural geology. Creamy brown clay with occasional natural flint inclusions.	
Tr. 6	1024	1024	Cut	Cut of gully on c. N-S alignment.	
Tr. 6	1025	1025	Cut	Cut of gully on c. N-S alignment	

Appendix 2: SRLE 16 GIS Trench locations

Station	x	y	z	ID
SRLSH01010	536042.5	384776.5	23.634	TRN01
SRLSH01000	536024.6	384782.3	23.638	TRN01
SRLSH02011	536078.6	384760.9	23.43	TRN02
SRLSH02000	536059.6	384757.9	23.544	TRN02
SRLSHS3010	536108.1	384747.9	23.43	TRN03
SRLSHS3000	536101.3	384729.3	23.464	TRN03
SRLSH04010	536146.2	384759.2	23.33	TRN04
SRLSH04000	536124.9	384760	23.241	TRN04
SRLSH05011	536167.3	384743.8	23.056	TRN05
SRLSH05000	536156.5	384723.7	23.311	TRN05
SRLSH06012	536217.3	384761.7	22.628	TRN06
SRLSH06000	536198.1	384736.9	22.712	TRN06

Appendix 3: The Roman Pottery from an Archaeological Evaluation at Land off Station Road, Legbourne, Lincolnshire (SRLE16)

I.M. Rowlandson and H.G. Fiske
November 4th 2016

Methodology

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). A tabulated summary by context and a sherd archive are presented below. The date provided represents 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.

The Assemblage

One sherd (0.023kg, 0.04 RE) was presented for study.

SRLE16 dating summary							
F No	F Type	Context	Spot date	Comments	Sherd	Weight (g)	Total RE %
		1008	ML1	A rim fragment from a handmade shell-gritted handmade large jar or bowl (rim as Rigby & Stead 1976 Fig. 74.9).	1	23	4

SRLE16 Sherd data												
Context	Fabric	Form	Decoration	Vessels	Alt	Drawing	Comments	Join	Sherd	Weight	Rim diam	Rim eve
1008	IASH	JBL	HM	1	VAB		RIM; IRF; ?SOME CP		1	23	30	4

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

Appendix 4: Flint
By Tom Lane

Introduction
A single flint object, a core, from Legbourne was submitted for assessment along with a chip found in environmental samples.
Condition
The core is abraded. No special conservation measures are required before submitting to a museum.
Results

Cxt No	Description	No	Wt(g)	Date
SRLE 16				
1008 <2>	Broken blade flake. Two small flakes have been removed froomm proximal end, possibly mishits during flake removal. Item is patinated. 9 x 7 x <1mm	1	<1	Mesolithic ?
1021	Core. Non Patinated. Squat flakes removed. 43 x 31 x 20mm	1	27	Late Neolithic/Bronze Age

Provenance
The core is a topsoil find.

Potential
A single core was located in the topsoil. Of Late Neolithic/Early Bronze Age date, the core has had squat flakes removed. The core indicates a limited period of flintworking in the vicinity during the Late Neolithic/Bronze Age, possibly a single episode. The tiny flake from the environmental sample is probably of Mesolithic date. Together they suggest intermittent flintworking in the area.

ARCHAEOLOGICAL SERVICES
DURHAM UNIVERSITY

on behalf of
Pre-Construct Archaeological Services Ltd

Land off Station Road Legbourne Lincolnshire

palaeoenvironmental assessment

report 4311
November 2016

Durham University

Contents

South Road · Durham · DH1 3LE · tel 0191 334 1121 · fax 0191 334 1126
archaeological.services@durham.ac.uk · www.dur.ac.uk/archaeological.services

1. Summary

The project

1.1 This report presents the results of palaeoenvironmental assessment of a bulk sample of gully fill [1008] taken during archaeological works at land off Station Road, Legbourne, Lincolnshire.

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

Results

1.3 The small charred plant macrofossil assemblage is typical of late prehistoric and Roman sites in the region. The identified cereal remains were barley and spelt wheat and these is evidence for the use of turves.

Recommendations

1.4 No further analysis is required for the sample, 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 required. If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced.

1.5 The flot should be retained as part of the physical archive of the site. The residue was discarded following examination.

2. Project background

Location and background

2.1 Archaeological works were conducted by Pre-Construct Archaeological Services Ltd (PCAS) at Land off Station Road, Legbourne, Lincolnshire. This report presents the results of palaeoenvironmental assessment of a bulk sample of gully fill [1008] of unknown 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 4th November 2016. Assessment and report preparation was conducted between 7th and 10th November 2016.

Personnel

2.4 Assessment and report preparation was conducted by Dr Charlotte O'Brien. Sample processing was by Stephanie Piper.

Archive

2.5 The site code is **SRLE16**, for **S**tation **R**oad **L**egbourne **E**valuation 20**16**. The flot 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 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 Palaeoenvironmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (2010). Habitat classifications follow Preston *et al.* (2002).

3.2 Charcoal fragments >4mm 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 (Monckton 2006).

4. Results

4.1 The sample comprised small fragments of charcoal, coal, clinker/cinder, fired clay, charred heather twigs and charred rhizomes/tubers. A fragment of pottery and a small flint flake were also recovered. The small charred plant macrofossil assemblage included a barley grain, a spelt wheat glume base, and weed seeds of heath-grass, common chickweed, grasses, vetches and sedges. The few fragments of charcoal were oak and Maloideae (hawthorn, apple and whitebeams).

4.2 The charred plant remains were generally in a poor condition, with the cereal grains being pitted and degraded. The condition of the material is typical of hearth waste, reflecting intense heat, rapid combustion or exposure to repeated burning (Boardman & Jones 1990).

4.3 Material suitable for radiocarbon dating is present. The results are presented in Appendix 1.

5. Discussion

5.1 The assessment provides evidence for the cultivation of spelt wheat and barley, which were the main cereal crops of the late prehistoric and Roman periods in the region (Monckton 2006; Greig 1991). The presence of charred heather twigs, tuber/rhizomes and weeds typical of damp heathy grassland may represent the remains of burnt turves, used as fuel or construction purposes such as roofing or earth ovens (Hall 2003). Some of the weeds could also have been brought to the site with hay for fodder or bedding.

6. Recommendations

6.1 No further analysis is required for the sample, 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 required. 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 flot should be retained as part of the physical archive of the site. The residue was discarded following examination.

7. Sources

Boardman, S, & Jones, G, 1990 Experiments on the effects of charring on cereal plant components. *J Archaeol Sci* **17**, 1-11

Greig, J R A, 1991 The British Isles, in W Van Zeist, K Wasylikowa & K-E Behre (eds) *Progress in Old World Palaeoethnobotany*. Rotterdam

Hall, A, 2003 *Recognition and characterisation of turves in archaeological occupation deposits by means of macrofossil plant remains.* Centre for Archaeology Report **16/2003**. English Heritage

Hather, J G, 2000 *The identification of the Northern European Woods: a guide for archaeologists and conservators*. London

Monckton, A, 2006 Environmental Archaeology in the East Midlands, in NJ Cooper (ed) *The Archaeology of the East Midlands: An Archaeological Resource Assessment and Research Agenda*, 259-286. Leicester

Preston, C D, Pearman, D A, & Dines, T D, 2002 *New Atlas of the British and Irish Flora*. Oxford

Schweingruber, F H, 1990 *Microscopic wood anatomy*. Birmensdorf

Stace, C, 2010 *New Flora of the British Isles*. Cambridge

Appendix 1: Data from palaeoenvironmental assessment

Sample		**2**
Context		**1008**
Feature number		**1007**
Feature		**Gully**
Material available for radiocarbon dating		✓
Volume processed (l)		8
Volume of flot (ml)		40
Residue contents		
Fired clay		(+)
Flint flake		1
Flint (glacially-fractured)		+
Pottery (number of fragments)		1
Flot matrix		
Charcoal		+
Clinker / cinder		+
Coal / coal shale		+
Heather twigs (charred)		(+)
Roots (modern)		+
Tuber / rhizome (charred)		+
Uncharred seeds		(+)
Charred remains (total count)		
(c) Cerealia indeterminate	grain	1
(c) Cerealia indeterminate	twisted awn fragment	1
(c) *Hordeum* sp (Barley species)	grain	1
(c) *Triticum spelta* (Spelt Wheat)	glume base	1
(h) *Danthonia decumbens* (Heath-grass)	caryopsis	4
(r) *Stellaria media* (Common Chickweed)	seed	5
(w) *Carex* sp (Sedges)	trigonous nutlet	1
(x) Poaceae undiff. (Grass family)	<2mm caryopsis	1
(x) Poaceae undiff. (Grass family)	>2mm caryopsis	3
(x) *Vicia* sp (Vetches)	seed	1
Identified charcoal (✓ presence)		
Maloideae (Hawthorn, apple, whitebeams)		✓
Quercus sp (Oaks)		✓

[c-cultivated; h-heathland; r-ruderal; w-wet/damp ground; x-wide niche.
(+): trace; +: rare; ++: occasional; +++: common; ++++: abundant]

OASIS DATA COLLECTION FORM: England

Archaeological Evaluation on land north of Station Road, Legbourne - Pre-Construct Archaeological Services Ltd

OASIS ID - preconst3-268356

Versions

View	Version	Completed by	Email	Date
View 1	1	Alison Lane	alison@pre-construct.co.uk	10 November 2016

Completed sections in current version

Details	Location	Creators	Archive	Publications
Yes	Yes	Yes	Yes	1/1

Validated sections in current version

Details	Location	Creators	Archive	Publications
No	No	No	No	0/1

File submission and form progress

Grey literature report submitted?	No	Grey literature report filename/s	
Boundary file submitted?	No	Boundary filename	
HER signed off?		NMR signed off?	

Grey literature | Upload images | Upload boundary file | Request record re-opened | Printable version

Email Lincolnshire HER about this OASIS record

OASIS:

Please e-mail Historic England for OASIS help and advice

 Created by Jo Gilham and Jen Mitcham, email Last modified Tuesday 9 August 2016

Cite only: http://www.oasis.ac.uk/form/formctl.cfm?oid=preconst3-268356 for this page