

Report 2014/1141



nps archaeology

Archaeological Watching Brief on the Euston Estate Gas Pipeline, Euston, Suffolk

EUN050



Prepared for
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December 2014



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<i>Issue 1</i>		

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Location:	Euston Estate, Park Farm Lane to Barwell Road, Euston/Fakenham Magna, Suffolk
District:	St Edmundsbury
Grid Ref.:	590562,277078 – 591607,276231
Planning Ref.:	SE/13/0899/FULCA
HER No.:	EUN050
OASIS Ref.:	197711
Client:	Little Green Consulting Ltd.
Dates of Fieldwork:	22 September – 29 October 2014

Summary

An archaeological watching brief was conducted for Little Green Consulting Ltd during the laying of a gas pipeline on the Euston Estate at Fakenham Magna, Suffolk.

Two undated pits, two undated ditches and a 19th-century brick culvert were encountered. The find assemblage was limited, comprising two prehistoric flint waste flakes and two sherds of pottery (one Roman and one medieval).

Perhaps the most interesting of the features was one of the pits that was filled with heat-affected flint (often created in the process of heating liquids). The pit had evidence of scorching to the sides. This feature is undated, but by comparison with similar isolated pits with similar fills across the region, it is reasonable to suggest that it is probably of Bronze Age date (2,500 BC – 700 BC).

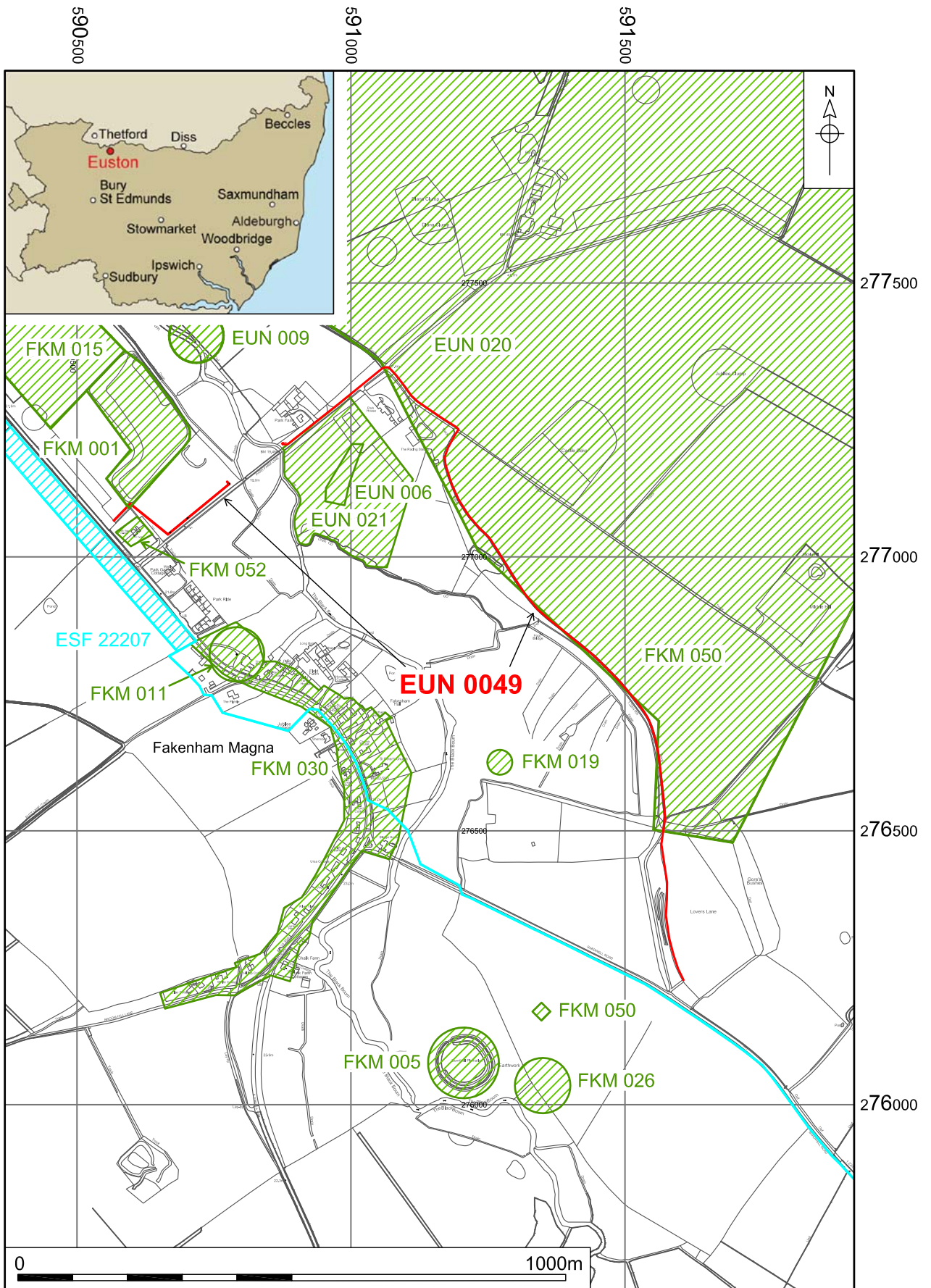
No evidence of the supposed deserted village of Little Fakenham was present

1.0 INTRODUCTION

The laying of a new gas pipe and fibre optic cable on the Euston Estate (Fig. 1) necessitated archaeological monitoring on that part of the cable route not previously subject to investigation as part of Anglian Water's works (Crawley 2014). The route monitored measured 1,850m long.

This work was undertaken to fulfil planning requirements set by St Edmundsbury Borough Council (SE/13/0899/FULCA) and a stipulation from Suffolk County Council Archaeological Service Conservation Team (Matthew Brudenell, 01 August 2013). The work was conducted in accordance with a Project Design and Method Statement prepared by NPS Archaeology (01-04-14-2-1141). This work was commissioned and funded by Little Green Consulting Ltd.

This programme of work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, following the guidelines set out in *National Planning Policy Framework* (Department for Communities and Local Government 2012). The results will enable decisions to be made by the Local Planning Authority about the treatment of any archaeological remains found.



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Figure 1. Site location, with SHER events and monuments in the vicinity. Scale 1:10,000

The site archive is currently held by NPS Archaeology and on completion of the project will be deposited with Colchester and Ipswich Museums Service, following the relevant policies on archiving standards.

2.0 GEOLOGY AND TOPOGRAPHY

The underlying geology consisted of Quaternary alluvium (silt and clay) and Quaternary river terrace deposits (sand and gravel) in the valley bottom, above Cretaceous chalk of the Seaford Chalk Formation. On the sides of the valley, upslope, the underlying geology was deposits of Seaford Chalk (<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>).

The route was set in a valley bottom, either side of the river Black Bourne at a height of c.19.5m OD and up the east slope of the valley to a maximum height in excess of 30m OD. It was located to the north, east and southeast of the village of Fakenham Magna, which lies in Suffolk, 7.5km southeast of Thetford and 13.5km northeast of Bury St. Edmunds.

The land over which the pipeline was laid consisted of pasture, estate road verge and arable.

3.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The information for this section of the report has come from a search of the Suffolk Historic Environment Record for a corridor 500m wide following the pipeline route and from historic mapping sources.

3.1 Evidence from Suffolk Historic Environment Record

3.1.1 Prehistoric

A multi period settlement site (SHER FKM001), 10m north of the northern end of the pipeline, has produced Palaeolithic and Mesolithic material, as well as a Neolithic bored pebble stone mace head and flints. Bronze Age artefacts found include sherds from four domestic Beaker vessels found in a 'pit' together with a leaf-shaped flint dagger (in perfect condition), a scraper and other flakes and a bronze ring. Other pottery found included a portion of a bucket urn. The renowned local archaeologist Basil Brown reported that many of the 'hut sites' contained evidence of Iron Age occupation which included hearths and artefacts. A burnt triangular loom weight was also found together with a Republican silver (286 BC) and pottery.

A scatter (SHER FKM015) of four Bronze Age and one Iron Age pottery sherds and three silver Iron Age (Iceni) coins have been found 210m northwest of northern end of pipeline area

Neolithic leaf shaped arrowheads (SHER FKM026) have been found 310m southwest of southern end of pipeline route.

3.1.2 Roman

A Roman bronze coin (AD 317-326) has been found 320m northwest of the river crossing part of the pipeline (SHER EUN009) route.

A multi period settlement site (SHER FKM001), 10m north of the northern end of the pipeline, has produced Roman material.

First and second century Roman pottery (SHER FKM011) has been found in a bomb crater 340m southeast of the northern end of the pipeline route

Roman material (SHER FKM015), including a range of bronze and silver coins and a bronze female bust have been found 210m northwest of northern end of pipeline area.

3.1.3 Anglo-Saxon

A multi period settlement site (SHER FKM001), 10m north of the northern end of the pipeline, has produced Anglo-Saxon material.

Two sceattas and a strap end (SHER FKM015) have been found by metal detectorists 210m northwest of the northern end of the pipeline route.

An Anglo-Saxon brooch (SHER FKM050) has been found 250m southwest of the southern end of the pipeline route.

3.1.4 Medieval

South of the most northern part of the pipeline route is the site of the deserted medieval village of Little Fakenham (SHER EUN021), just to the south of Park House. Within that is the site of St Andrew's church (one of two churches listed in the village in 1086). In 1668 it is recorded that there was no church.

The medieval village core of Fakenham Magna (SHER FKM030) lay along the A1088, to the southwest of the cable route. Its parish church (St Peter's) has long-and-short quoins at the east end of its nave, suggesting a Late Saxon or Saxo-Norman date.



Plate 1. 'Long-and-short' quoins at the east end of the nave, facing northeast

3.1.5 Post-Medieval

Park Gate Cottages (SHER 284044) are a Grade II listed pair of mid 19th-century estate cottages built of red brick, lying 45m southeast of the northern end of the pipeline route.

Park House (SHER 284159) is a Grade II listed early to mid 16th-century timber-framed house with mid 17th- and 18th-century additions 70m south of the most northerly part of the pipeline route. It is the only surviving house of the lost village of Little Fakenham.

The Racing Stables (SHER 284160), 135m southeast of the most northerly part of the pipeline route is a Grade II listed red brick house dating to the late 17th or early 18th century and was formerly the racing stables of Euston Hall.

Euston Park (SHER EUN020) is a Registered Park and Garden associated with Euston Hall (EUN 019), which may have begun as a medieval deer park. It was landscaped in 1671 by J Evelyn for Lord Arlington, then again in the 1730s and 1740s by Kent for the 2nd Duke of Grafton, then modified again in 1767-83 by Capability Brown for the 3rd Duke.

3.1.6 Modern

The remains of a Second World War air raid shelter (SHER FKM052), possibly a Stanton shelter, lie at Park Gate Cottages, close to the western end of the monitored pipeline. The author also saw another air raid shelter in the verge of the track just to the southwest of the cottages.

3.1.7 Undated

An undated circular earthwork (SHER FKM005) called Burnthall Plantation lies 390m southwest of the east end of the monitored pipeline.

A cropmark complex (SHER FKM015) of unknown date lies 215m northwest of the northern end of the monitored pipeline.

A circular cropmark and earthwork (SHER FKM019) lies in meadow 520m northwest of the southern end of the monitored pipeline with possible interruptions and an entrance on its northeastern side.

3.2 Cartographic Evidence

Hodkinson's 1783 map of Suffolk (Hodkinson 1783) shows that a large part of the eastern part of the pipeline route lay within the formal park of Easton Hall belonging to the Duke of Grafton. The river crossing and the track which the western part of the route followed were all in existence in 1783.

4.0 METHODOLOGY

The objective of this watching brief was to determine as far as reasonably possible the presence or absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits within the development area.

The Brief required that all ground disturbance works associated with the laying of the new pipe, apart from those areas 'previously impacted by Anglian Water pipeline construction' (NPS Archaeology 2014) be monitored by an archaeologist.

Machine excavation was carried out with a hydraulic 360° excavator equipped with a toothless ditching bucket.

Spoil, exposed surfaces and features were scanned with a metal-detector. All metal-detected and hand-collected finds other than those which were obviously modern, were retained for inspection.

Due to an absence of suitable dated deposits, environmental samples were not taken.

All archaeological features and deposits were recorded using NPS Archaeology pro forma. Trench locations, plans and sections were recorded at appropriate scales. Colour, monochrome and digital photographs were taken of all relevant features and deposits where appropriate.

Site conditions were good, with the work taking place in fine weather.

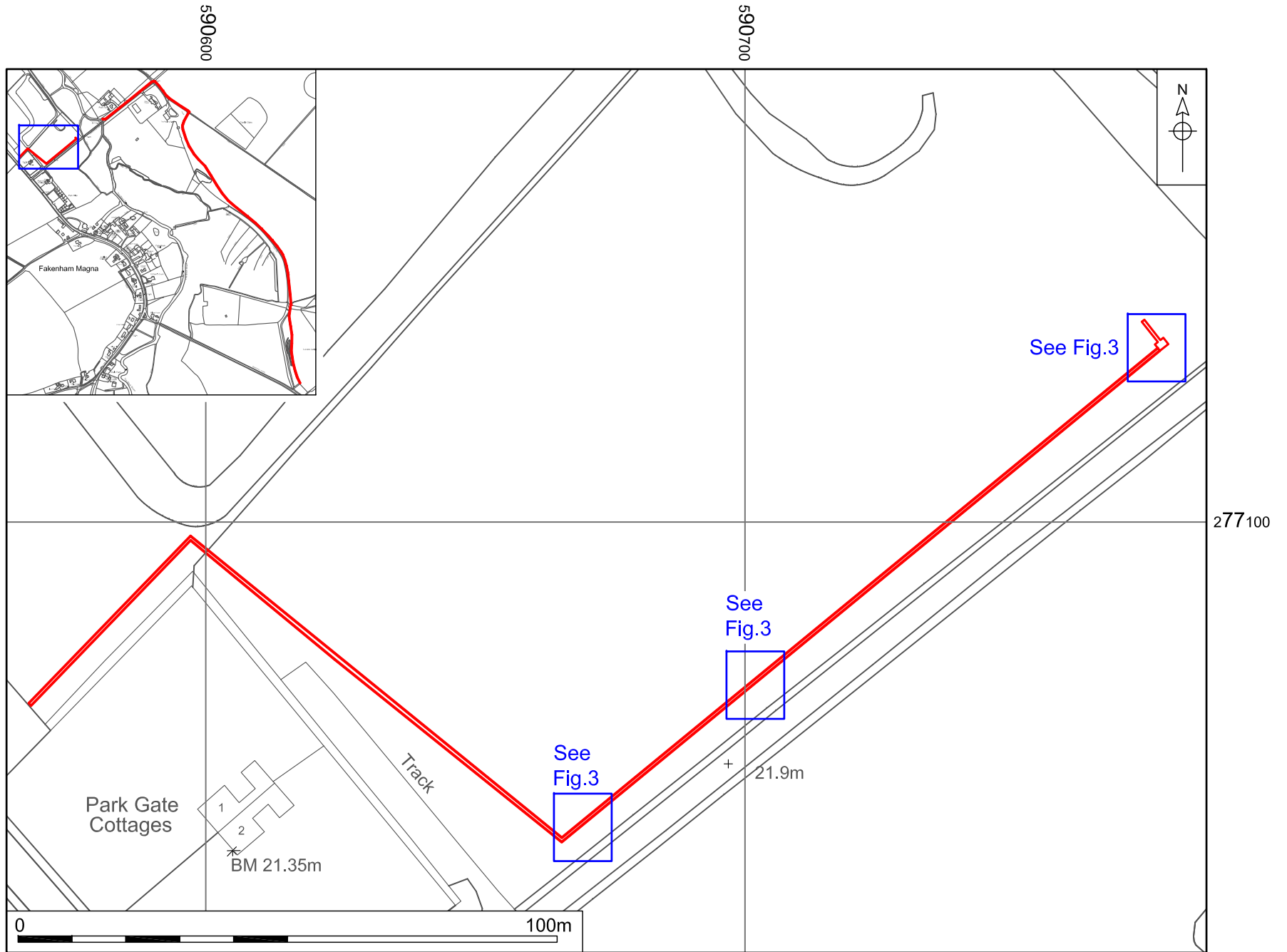


Figure 2. Site plan. Scale 1:1000

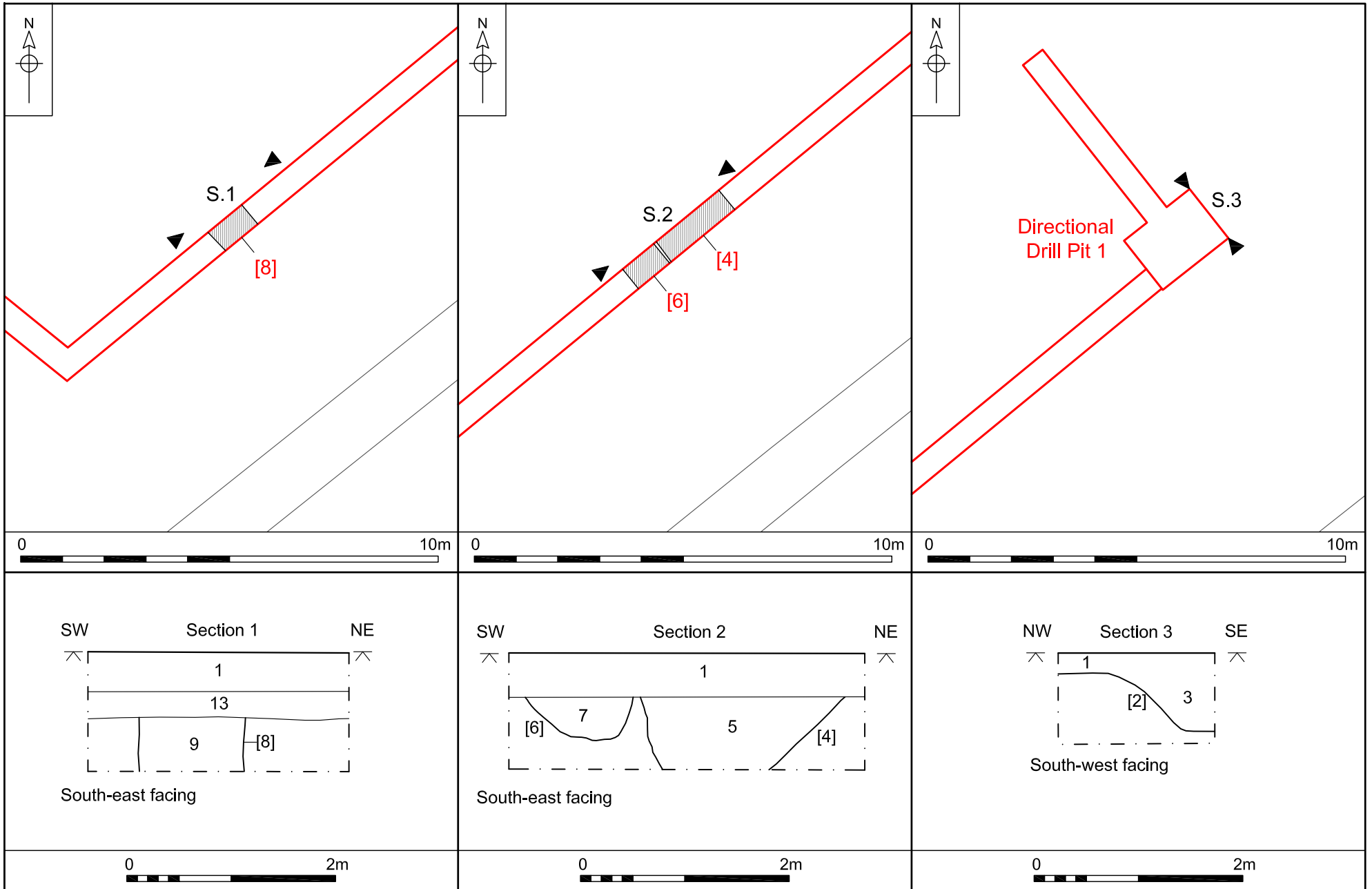


Figure 3. Plan of ditches [4] and [6] and pit [8], scale 1:125, sections at 1:50

5.0 RESULTS

The archaeological evidence encountered and recorded during monitoring of the pipeline on the Euston Estate are discussed below under two headings; the directional drill pits and the pipeline itself

5.1 Directional Drill Pits

Directional drill pits were dug on the 22nd and 24th September 2014

5.1.1 *Drill Pit 2*

Pit 2, on the eastern side of the river crossing, exposed stratigraphy consisting of 0.6-0.7m of topsoil (1) above 0.3-0.4m of pale greyish brown sandy subsoil (13) with moderate amounts of flint gravel. No archaeological features or artefacts were present.



Plate 2. Directional Drill Pit 2, facing northwest

5.1.2 *Drill Pit 1*

Pit 1, on the western side of the river crossing, did produce one feature; probable pit [2].

Only a small part of this feature was exposed, hence the ambiguity about what type of feature it was. The feature measured 0.55m deep and had gently sloping sides. Its fill (3) was mid greyish brown sand with frequent amounts of flint gravel – a very similar matrix to that of the intermittent subsoil seen elsewhere.



Plate 3. Directional Drill Pit 1, facing northeast

5.2 Pipeline

Excavation of the pipeline trench began on the 14th of October and finished on the 29th October 2014. It took the form of an open trench dug without an easement; pipe was laid in each opened section and the open trench was backfilled every day. The trench measured 0.6m wide and was in the region of 1.1m deep.

Towards the northern end of the pipe trench three features were observed within a relatively small area, consisting of two parallel ditches and one pit.

The larger of the two ditches (ditch [4]) was aligned northwest to southeast. It was 1.95m wide and was steeper on its western side, suggesting that the associated bank/hedge would have been on that side. The base was not visible. Its fill (5) was dark brown sand with sparse flint gravel.

Just to the west of ditch [4] was ditch [6] which was on a similar alignment and was 1.0m wide and 0.4m deep with a rounded base and a steeper eastern side, suggesting that its associated bank/hedgerow lay on that side. Its fill (7) was dark greyish brown sand with occasional pieces of flint gravel. Both ditches were undated, but both were probably associated with the same field boundary. The absence of cultural material in their fills suggests that they were some distance from settlement when they were in use.



Plate 4. Ditches [4] and [6] facing north

Pit [8] was 1.0m wide, had vertical sides and the base was not exposed. It was sealed by an intermittent layer of subsoil (13). Its fill (9) was black coarse sand with no visible charcoal flecks but very frequent occurrences of heat-affected flints (used probably to heat liquids). The sides of the pit showed evidence of scorching (reddening of the natural sand), suggesting that these flints had been hot when deposited. The pit was undated.



Plate 5. Pit [8] facing north

Brick culvert {10} was exposed between Lovers Lane field and Bone Pit field (GR 591572, 276517). It was built of 2½ inch soft red brick laid in stretcher bond with an arched roof. It took the drain between the two fields down towards the Black Bourne to the west, under a track/field entrance.



Plate 6. Culvert {10} facing south

The ditches, pits and culverts were the only archaeological features encountered, however the topsoil did yield two prehistoric flint flakes from Bone Pit field, a fragment of Roman pottery from the area of Park Farm Way and a fragment from a 12th-14th-century cooking pot.

6.0 THE ARCHAEOLOGICAL MATERIAL

by Rebecca Sillwood

Finds were processed and recorded by count and weight, and information entered onto an Excel spreadsheet. Each type of material has been considered separately and is presented below. A list of finds in context number order can be found in Appendix 2a.

6.1 Pottery

Two sherds of pottery, one Roman and one medieval, weighing 37g, were recovered from two contexts, both unstratified.

The Roman sherd (25g) is a fragment of base from a greyware vessel - a common type throughout much of the Roman period. This sherd was recovered unstratified from the area of trackway (12).

The medieval piece (12g) is a basal sherd from the topsoil (1). The piece has sooting to the exterior and is likely to be a local unglazed coarseware of 12th-/14th-century date.

6.2 Flint

Two worked flints and seven pieces of heat-affected flint were recovered from two contexts on the site, weighing 140g in total.

The two worked flints are debitage flakes, both unstratified from Bone Pit Field (11). The raw material used is good quality and varies from mid grey to dark bluish-grey in colour. There is some cortex on both pieces, making them probable secondary flakes from separate knapping events at some point in the prehistoric period.

The burnt flint was recovered from fill (9) of pit [8], and was the only type of artefact from this feature. The flint is likely to have been burnt during the heating of liquids, although a precise date of this activity is not known; it may have occurred during the prehistoric period, but the flints could have been affected by heat then rapidly cooled to produce a similar appearance at a later date.

The burnt flint has been discarded.

6.3 Finds Conclusions

The finds from this watching brief are mainly unstratified or from topsoil, apart from the burnt flint from pit [8]. They represent a long period of time – coming from the prehistoric, Roman and medieval periods. The pottery appears to be of domestic origin (the burnt flint perhaps less so) but it is feasible that there may be settlement nearby.

The worked flint is reasonably sharp and may not have moved far from its original deposition location.

7.0 CONCLUSIONS

Although almost 2km of the pipeline route was monitored only five features were encountered - two undated pits, two undated ditches and a 19th-century brick culvert.

Perhaps the most significant of these features was one of the pits that was filled with heat-affected flints that had probably been used to heat liquids. The pit had evidence of scorching on its sides indicating that the flint associated with the pit. There was no independent dating evidence for this feature but comparison with comparable isolated pits with similar fills across East Anglia would suggest that it is probably of Bronze Age (2,500 BC – 700 BC) date.

No evidence of the deserted village of Little Fakenham was encountered. However the sherd of 12th-/14th-century pottery that was found could well have originated from there.

Acknowledgements

The author would like to thank Tony Male (Site Manager) and Peter Morgan (Site Foreman) for their help and cooperation during the fieldwork phase of this project.

James Rolfe of SHER provided the SHER information.

The finds were processed by Louise Weetman and recorded and reported on by Rebecca Sillwood.

This report was illustrated by David Dobson and reviewed by Jayne Bown.

Bibliography and Sources

- | | | |
|---|------|---|
| BGS (British Geological Survey) | 1991 | <i>East Anglia</i> , Sheet 52N 00 Quaternary, 1:250,000 series |
| BGS (British Geological Survey) | 1985 | <i>East Anglia</i> , Sheet 52N 00 Solid Geology, 1:250,000 series |
| Department for Communities and Local Government | 2012 | <i>National Planning Policy Framework</i> |
| Hodkinson, J. | 1783 | <i>The County of Suffolk Surveyed reprinted as 'Hodkinson's Map of Suffolk in 1783'</i> , Yaxley, S. 2003 |
| NPS Archaeology | 2014 | <i>Euston Estate Gas pipeline Suffolk Project Design for Archaeological Watching Brief</i> |

<http://mapapps.bgs.ac.uk/geologyofbritain/home.html> Accessed 10.11.2014

Appendix 1a: Context Summary

Context	Category	Cut Type	Fill Of	Description	Period
1	Deposit			Topsoil	Modern
2	Cut	?Feature		Possible feature	Unknown
3	Deposit		2	Fill of [2]	Unknown
4	Cut			Possible ditch	Unknown
5	Deposit		4	Ditch fill	Unknown
6	Cut	Ditch		Possible ditch	Unknown
7	Deposit		6	Ditch fill	Unknown
8	Cut	Pit		Pit	Unknown
9	Deposit		8	Pit fill	Unknown
10	Masonry			Culvert	19th century
11	U/S Finds			U/S finds, Bone Pit Field	--
12	U/S Finds			U/S finds, trackway	--
13	Deposit			Subsoil	--

Appendix 1b: Feature Summary

Period	Category	Total
Post-medieval	Culvert	1
Unknown	Ditch	2
	Pit	2

Appendix 2a: Finds by Context

Context	Material	Qty	Wt	Period	Notes
1	Pottery	1	12g	Medieval	
9	Flint – Burnt	7	110g	Unknown	DISCARDED
11	Flint – Struck	2	30g	Prehistoric	
12	Pottery	1	25g	Roman	

Appendix 2b: Finds Summary

Period	Material	Total
Prehistoric	Flint – Struck	2
Roman	Pottery	1
Medieval	Pottery	1
Unknown	Flint – Burnt	7

Appendix 3: OASIS Report Summary

OASIS DATA COLLECTION FORM: England

[List of Projects](#) | [Manage Projects](#) | [Search Projects](#) | [New project](#) | [Change your details](#) | [HER coverage](#) | [Change country](#) | [Log out](#)

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OASIS ID: norfolka1-197711

Project details

Project name	Euston Estate Anaerobic Digester Watching Brief
Short description of the project	An archaeological watching brief was conducted for Little Green Consulting Ltd during the laying of a gas pipeline on the Euston Estate at Fakenham Magna, Suffolk. Two undated pits, two undated ditches and a 19th-century brick culvert were encountered. The find assemblage was limited, comprising two prehistoric flint waste flakes and two sherds of pottery (one Roman and one medieval). Perhaps the most interesting of the features was one of the pits that was filled with heat-affected flint (often created in the process of heating liquids). The pit had evidence of scorching to the sides. This feature is undated, but by comparison with similar isolated pits with similar fills across the region, it is reasonable to suggest that it is probably of Bronze Age date (2,500 BC - 700 BC). No evidence of the supposed disserted village of Little Fakenham was present.
Project dates	Start: 22-09-2014 End: 29-10-2014
Previous/future work	Yes / No
Any associated project reference codes	EUN050 - HER event no.
Type of project	Recording project
Site status	None
Monument type	PIT Uncertain
Monument type	DITCH Uncertain
Monument type	BRICK CULVERT Post Medieval
Significant Finds	POT Roman
Significant Finds	POT Medieval
Significant Finds	STRUCK FLINT Late Prehistoric
Significant Finds	BURNT FLINT Uncertain
Investigation type	"Watching Brief"
Prompt	National Planning Policy Framework - NPPF

Project location

Country England

Site location	SUFFOLK ST EDMUNDSBURY EUSTON Euston Estate Anaerobic Digester gas pipeline
Study area	2.00 Kilometres
Site coordinates	590562 277078 590562 00 00 N 277078 00 00 E Line
Site coordinates	591607 276231 591607 00 00 N 276231 00 00 E Line

Project creators

Name of Organisation	NPS Archaeology
Project brief originator	Suffolk County Council Archaeological Services
Project design originator	NPS Archaeology
Project director/manager	Steve Hickling
Project supervisor	NPS Archaeology

Project archives

Physical Archive recipient	Suffolk County Council
Physical Contents	"Ceramics", "Worked stone/lithics"
Digital Archive recipient	NPS Archaeology
Digital Contents	"Ceramics", "Worked stone/lithics", "other"
Digital Media available	"Images raster / digital photography", "Images vector", "Spreadsheets", "Text"
Paper Archive recipient	Suffolk County Council
Paper Contents	"Ceramics", "Worked stone/lithics", "other"
Paper Media available	"Context sheet", "Plan", "Report", "Section"

Project bibliography 1

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OASIS:

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Appendix 4: Archaeological Specification

SCANNED

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Web: <http://www.suffolk.gov.uk>

Our Ref: 2013_0899
Date: 1 August 2013

For the Attention of Chris Board

Dear Ms Baker

Planning Application SE/13/0899/FULCA – Home Farm, Euston Estate, Euston: Archaeology

The proposed development affects an area of archaeological potential, as defined by information held by the County Historic Environment Record (HER). The site of the proposed anaerobic digestion plant lies in a topographically favourable location for early occupation, overlooking the Black Bourn Valley, where sites dating to the Prehistoric, Roman and Saxon periods are known around Euston. In 2012 a Prehistoric pit was excavated c. 300m west of the site (HER no. EUN 049), with further Prehistoric, Roman and Saxon finds recovered within c. 500m (EUN 011, FKM 011, FKM 015). The proposed pipeline follows the course of the Black Bourn Valley. Most of the route has been evaluated by trial trenching for Anglian Water in 2012, and this has revealed archaeological features and finds of Prehistoric and Roman date in several locations (EUN 049, FKM 37, 42-49). The proposed works in this development, both at the anaerobic digestion plant site and pipeline route, will cause significant ground disturbance that has the potential to damage any archaeological deposit that exist.

There are no grounds to consider refusal of permission in order to achieve preservation *in situ* of any important heritage assets. However, in accordance with the *National Planning Policy Framework* (Paragraph 141), any permission granted should be the subject of a planning condition to record and advance understanding of the significance of any heritage asset before it is damaged or destroyed.

In this case the following conditions would be appropriate:

1. No development shall take place within the area indicated [the whole site] until the implementation of a programme of archaeological work has been secured, in accordance with a Written Scheme of Investigation which has been submitted to and approved in writing by the Local Planning Authority.

The scheme of investigation shall include an assessment of significance and research questions; and:

- a. The programme and methodology of site investigation and recording
- b. The programme for post investigation assessment
- c. Provision to be made for analysis of the site investigation and recording
- d. Provision to be made for publication and dissemination of the analysis and records of the site investigation
- e. Provision to be made for archive deposition of the analysis and records of the site investigation
- f. Nomination of a competent person or persons/organisation to undertake the works set out within the Written Scheme of Investigation.
- g. The site investigation shall be completed prior to development, or in such other phased arrangement, as agreed and approved in writing by the Local Planning Authority.

2. No building shall be occupied until the site investigation and post investigation assessment has been completed, submitted to and approved in writing by the Local Planning Authority, in accordance with the programme set out in the Written Scheme of Investigation approved under Condition 1 and the provision made for analysis, publication and dissemination of results and archive deposition.

In this case, an archaeological evaluation will be required to establish the potential of the anaerobic digestion plant site and decisions on the need for any further investigation (excavation before any groundworks commence and/or monitoring during groundworks) will be made on the basis of the results of the evaluation. If the pipeline involves a cut and fill trench 750mm wide, without easement stripping, a programme of continuous archaeological monitoring and targeted palaeoenvironmental sampling would be appropriate for those sections of the pipeline not laid within the stripped easement of the Anglian Water scheme (though the pipe cannot be laid until the archaeological fieldwork involved in this scheme is completed). I would be pleased to offer guidance on the archaeological work required and, in my role as advisor to St Edmundsbury Borough Council, I will, on request of the applicant, provide a brief for the archaeological investigation so that estimates of costs and time can be obtained from contractors.

Yours sincerely

Matthew Brudenell

Archaeological Officer
Conservation Team

NPS ARCHAEOLOGY

**EUSTON ESTATE GAS PIPELINE
EUSTON
SUFFOLK**

**SPECIFICATION
FOR
ARCHAEOLOGICAL EVALUATION**

Prepared for

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by

**NPS Archaeology
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August 2013

Reference No: 01-04-14-2-1141

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1. Introduction

- 1.1 Proposals for the construction of a new gas pipeline and anaerobic digester at Home Farm, Euston, Suffolk (TL 8943 7796) require a programme of archaeological evaluation to investigate the archaeological potential of the digester plant site and determine the likely archaeological implications of its construction..
- 1.2 The proposed digester site lies in an area of known archaeological potential recorded on the Suffolk Historic Environment Record and evidence of prehistoric, Roman and Saxon settlement is known from the surrounding area. Given the known archaeological remains around the area, there is high potential for buried archaeological remains to be present on the site.
- 1.3 Because of the site's location and potential the Archaeological Service Conservation Team of Suffolk County Council have recommended that an archaeological evaluation is required to determine the archaeological potential of the site and the likely impacts of the scheme on that potential. The scope of the evaluation was set out in a planning condition recommended by the Archaeological Service Conservation Team of Suffolk County Council (Matthew Brudenell 1 August 2013).
- 1.4 In order to comply with that requirement Little Green Consulting Ltd have requested that NPS Archaeology prepare costs and this project design for undertaking a programme of archaeological works to fulfil the requirements of the Archaeological Brief.

2. Aims

- 2.1 The Programme of Archaeological Work stipulated by The Archaeological Service Conservation Team of Suffolk County Council is required to recover, by archaeological evaluation, information relating to the extent, date, phasing, character, function, status and significance of the site. A determination of the state of preservation of any features, deposits and structures is also required.
- 2.2 The aims of the archaeological work may therefore be summarised as follows:
 - i. To establish the presence or absence of archaeological remains within the proposed area.*
 - ii. To determine the extent, condition, nature, quality and date of any archaeological remains occurring within the site and the possible impacts of the proposed development on them.*
 - iii. Ensure that any archaeological features discovered during trial trenching are identified, sampled and recorded and, where it is desirable, recommendations for their preservation in situ are made.*
 - iv. To establish, as far as possible, the extent, character, stratigraphic sequence and date of archaeological features and deposits, and the nature of the activities which occurred at the site during the various periods or phases of its occupation*
 - v. To establish the palaeoenvironmental potential of subsurface deposits by ensuring that any deposits with the potential to yield palaeoenvironmental data are sampled and submitted for assessment to the appropriate specialists.*
 - vi. To explore evidence for social, economic and industrial activity.*
 - vii. To disseminate the archaeological data recovered by the evaluation in the form of a formal report which will provide the basis for decisions regarding further archaeological intervention and mitigation proposals.*

3. Method Statement

3.1 Introduction

3.1.1 A three-stage evaluation strategy will be undertaken to assess the archaeological potential of the proposed development site. The stages of this strategy may be summarised as follows.

- i. Trial Trenching.* Manual excavation will be employed to investigate the presence, condition, character and date of any subsurface archaeological deposits and features occurring within the site. Any archaeological features identified will be cleaned and sample excavated to determine function, form and relative date.
- ii Post-fieldwork Processes.* The drawn and written stratigraphic/structural record will be cross-referenced and analysed to provide a synthesis of the results of the work. The cleaning and cataloguing of any artefactual and ecofactual materials recovered will be carried out throughout the duration of the fieldwork. The finds will be cleaned, marked and packaged in accordance with the archive requirements of the Suffolk Store or relevant museum.
- iii. Report and Archive.* The report will describe the results of the window sampling and trial trenching with data presented in tabular, graphic and appendix form. Copies of the reports will be submitted to the client and to The Archaeological Service Conservation Team of Suffolk County Council.

3.1.2 The procedures and methodology for each of the stages outlined above are described in detail below.

3.2 Trial Trenching

3.2.1 Trial trenching will be concerned with establishing the condition, character and date of any subsurface archaeological features and deposits present. Guidelines set out in the documents *Standard and Guidance for an Archaeological Field Evaluation* (Institute for Archaeologists 2008) and *Standards for Field Archaeology in the East of England* (Gurney 2003) will be followed.

3.2.2 Seven trenches, 30m x 1.8m, will be excavated within the footprint of the proposed digester plant to give a c.5% sample of the area (Fig. 1).

3.2.3 The trenches will be set out by NPS Archaeology and CAT-scanned prior to excavation. The final location of the trenches may be determined on the basis of surface or below ground obstructions and all Health and Safety considerations. Other considerations such as public access may also be a factor.

3.2.4 Excavation will be by hand until natural ground or archaeological deposits are identified.

3.2.5 Initial excavation will be undertaken to the top of any undisturbed archaeological deposits or the surface of the underlying natural deposits, whichever is the highest. If neither is encountered it may be necessary to excavate to a maximum depth of 1.2m below the present ground surface in line with Health and Safety legislation for trenches with unsupported sides. If further excavation below 1.2m is required the trench sides may need to be locally stepped or shored. The requirement for excavation below 1.2m will be determined following a site review with the

Archaeological Service Conservation Team of Suffolk County Council. This will then be agreed and costed separately.

- 3.2.6 If the deposits within the trenches are thought to extend too deep to evaluate safely or below the likely level of any development impacts a hand auger may be used to retrieve information about the nature of the lower deposits.
- 3.2.7 The trenches will be fenced using Netlon high-visibility fencing throughout the excavation and appropriate warning signage will be displayed.
- 3.2.8 Spoil from the trenches will not be removed from site. The trenches will not be backfilled by NPS Archaeology until agreement to do so is given by the Archaeological Service Conservation Team of Suffolk County Council. This backfilling will not attempt consolidation or compaction over and above that possible with a mechanical excavator. Full surface reinstatement will not be attempted, but all trenches will be left in a safe condition.
- 3.2.9 Exposed surfaces and all archaeological features and deposits will be excavated by hand and screened by metal detector. A Tesoro Laser B3 or a Fisher 1265X metal detector will be utilised to scan excavated spoil and *in situ* horizons with the operator ensuring that it is used in a correct fashion. All artefactual and ecofactual materials will be collected and bagged by context.
- 3.2.10 Detailed strategies for levels of sampling of buried soils, structures, pits, post-holes and ditches will be determined on site. Allowance will be made for total recovery where appropriate; percentage sampling will apply in areas where complex stratified deposits are encountered. Buried soils will be sampled by sieving to determine artefact densities. In general, the feature/deposit sampling strategy will be employed throughout the evaluation in accordance with the document *Standards for Field Archaeology in the East of England* (Gurney 2003).
- 3.2.11 All archaeological deposits, features and layers will be assigned individual context numbers and recorded on standardised forms employing the NPS Archaeology's pro forma recording system. The records will include full written, graphic and photographic elements with site and context numbering compatible with the Suffolk Historic Environment Record numbering system. Plans will be made at a scale of 1:50, with provision for 1:20 and 1:10 drawings. Sections will be recorded at scales of 1:10 and 1:20 depending on the detail considered necessary. A photographic record in black and white and colour (35mm film/digital) will be maintained of all archaeological deposits, layers and features to record their characteristic and relationships. Photographs will also be taken to record the progress of the evaluation.
- 3.2.12 Human remains will be left *in situ* unless otherwise instructed by The Archaeological Service Conservation Team of Suffolk County Council. If any human remains or burials are encountered which must be removed an application for a Licence For the Removal of Human Remains will be made in compliance with the 1857 and 1981 Burial Acts and within all relevant Ministry of Justice guidelines. Backfilling of features containing human remains will be done manually to ensure that the remains are appropriately protected from any damage or disturbance.
- 3.2.13 Soil samples for palaeoenvironmental materials will be collected if suitable sealed and well-dated deposits are encountered. Standard 80 litre bulk soil samples, column or monolith samples and Kubiena tins will be collected from such deposits as appropriate, in consultation with the English Heritage Regional Advisor for Archaeological Science and other consultant environmentalists. In all instances, sampling procedures will follow the guidelines set out in the document *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage 2002). Full written, graphic and

photographic sample records will be made using NPS Archaeology's pro forma recording system.

3.3 Post-Fieldwork Processes

- 3.3.1 The drawn and written stratigraphic/structural record will be cross-referenced and analysed to provide a synthesis of the results of the work.
- 3.3.2 The cleaning and cataloguing of any artefactual materials recovered will be undertaken on completion of the trial trenching. All retained materials will be cleaned, marked and packaged in accordance with the requirements of the Norfolk Museums and Archaeology Service.
- 3.3.3 Post-fieldwork analyses will start upon completion of the finds processing and will involve the identification and description of the artefactual materials recovered by the relevant specialists. In general, the following strategies will be employed in the analysis of the artefactual materials recovered:
- Pottery*. Analysed to determine date and tabulated by context unit.
 - Worked flint*. Sorted and tabulated by context unit.
 - Metal artefacts*. Assessed for dating and significance, catalogued by context unit and where necessary conserved within four weeks of completion of fieldwork, in accordance with *UK Institute of Conservators Guidelines*.
 - Faunal Remains*. Sorted and tabulated by context unit. Assessed for the potential for further analysis and for sieving for the recovery of smaller bird and fish bones.
 - Environmental Samples*. Processed and assessed for content and significance.
 - Other categories of artefactual materials will be analysed in a similar fashion.
- 3.3.4 All finds work will follow the procedures set out in the document *Standards and Guidelines for the collection, documentation, conservation and research of archaeological materials* (Institute for Archaeologists 2001). Finds data will be stored on a database to aid analysis and report preparation.

3.4 Report and Archive

- 3.4.1 An evaluation report will be prepared. This report will present the results of the desk-based assessment alongside the stratigraphic, structural, artefactual and environmental evidence and analyses of the results of the trial trenching.
- 3.4.2 The report will present data in tabular, graphic and appendix form. A list of archive components generated by the work will also be included in the report. Copyright of the reports will be retained by NPS Archaeology.
- 3.4.3 Multiple copies of the report will be produced as appropriate and presented to Little Green Consulting Ltd. and three copies to the Archaeological Service Conservation Team of Suffolk County Council. An HER form will accompany the evaluation report and will include a reference to the archive and the intended place of archive deposition. The report will be submitted within eight weeks of the completion of the fieldwork.
- 3.4.4 NPS Archaeology supports the OASIS project. An online record will be initiated immediately prior to the start of fieldwork and completed when the final report is submitted to the Archaeological Service Conservation Team of Suffolk County Council. This will include a pdf version of the final report.
- 3.4.5 A single integrated archive for all elements of the work will be prepared according to the recommendations set out in *Environmental standards for the permanent storage of excavated material from archaeological sites* (UKIC, Conservation Guidelines 3,

1984) and *Guidelines for the preparation of excavation archives for long-term storage* (Walker 1990), and in accordance with the Norfolk Museums and Archaeology Service's own requirements for archive preparation, storage and conservation.

- 3.4.6 The archive will be fully indexed and cross-referenced and prepared in such a form that it can be microfilmed on behalf of the National Monuments Record. It will also be integrated with the Suffolk Store or relevant museum Project accession number and the Suffolk Historic Environment Record numbering system. The silver master will be deposited with National Monuments Record and a diazo copy with the Suffolk Historic Environment Record. Deposition of the archive and finds (by prior agreement with the landowners) will take place within six months of the completion of the final report and confirmed in writing to the Suffolk Store or relevant museum. A full listing of archive contents and finds boxes will accompany the deposition of the archive and finds.
- 3.4.7 All archaeological materials, excepting those covered by the *Treasure Act, 1996*, will remain the property of the landowners. NPS Archaeology will seek to reach a formal agreement with the landowners for the donation of the finds to the Suffolk Store or relevant museum.

4. Timetable

- 4.1 The timetable for fieldwork assumes that there are no major delays to the work programme caused by vandalism, repeated plant breakdown, restricted access, programme changes by the Client or major periods of adverse weather conditions.

5. Staffing

- 5.1 The project will be co-ordinated by a Project Officer who will be dedicated to the project throughout its duration. The Project Officer will act under the direction of Project Manager. The Project Manager will assume responsibility for all aspects of the project including finance, logistics, standards, health and safety, and liaison with the client and curators. The Project Officer will have substantial experience in archaeological evaluation and post-excavation analysis.
- 5.2 Other members of staff involved in the project will be the Experienced Excavators and Finds Co-ordinator staff. Experienced Excavator staff will have experience in excavation and experience with NPS Archaeology's *pro forma* recording system or similar systems. The Project Officer and/or Experienced Excavator staff will be experienced metal detector users.
- 5.3 NPS Archaeology staff associated with the project will be as follows:

Project Management	
Archaeology Manager	Jayne Bown BA, MIFA
Project Manager	Nigel Page BA AIFA

Project Staff	
Senior Project Officer	Pete Crawley
Finds Co-ordinator	Becky Sillwood
Experienced Excavators	To be nominated

- 5.4 NPS Archaeology reserves the right, because of its developing work programme, to change its nominated personnel at any time. This will be in consultation with the client and the Archaeological Service Conservation Team of Suffolk County Council.
- 5.5 The analysis of artefactual and ecofactual materials will be undertaken by NPS Archaeology staff or nominated external specialists. Nominated NPS Archaeology and external specialists and their areas of expertise are as follows:

5.5.1 Specialists used by NPS Archaeology

Specialist	Research Field
Andy Barnett	Metal-detectorist, Numismatic Items
Andy Peachey	Roman Pottery, Fired Clay, worked flint
Becky Sillwood <i>AIFA</i>	Metal finds
David King	Window Glass
Debbie Forkes	Conservation
Fran Green <i>BSc, PhD</i>	Palaeoenvironmental
Jo Mills	Worked Stone Artefacts
John Shepherd	Vessel Glass
Julie Curl	Faunal Remains
Richard Macphail	Micromorphology
Roger Doonan	Non-Ferrous Metalworking
Sarah Bates	Worked Flint
Sarah Percival <i>BA, MIFA</i>	Prehistoric ceramics, general finds
Stephen Heywood	Architectural Stonework
Sue Anderson	Post-Roman Pottery, CBM, human remains
Val Fryer	Macrofossil analysis

6. General Conditions

- 6.1 NPS Archaeology will not commence work until a written order or signed agreement is received from the Client. Where the commission is received through an Agent, the Agent is deemed to be authorised to act on behalf of the Client. NPS Archaeology reserve the right to recover unpaid fees for the service provided from the Agent where it is found that this authority is contested by said Client.
- 6.2 NPS Archaeology would expect information on any services crossing the site to be provided by the client.
- 6.3 A 7.4 hour working day is normally operated by NPS Archaeology, although their agents may work outside these hours.
- 6.4 NPS Archaeology would expect the client to arrange suitable access to the site for its staff, plant and welfare facilities on the agreed start date.
- 6.5 NPS Archaeology would expect any information concerning the presence of TPOs and/or, protected flora and fauna on the site to be provided by the client prior to the commencement of works and accept no liability if this information is not disclosed. No excavation will take place within 8m or canopy width (whichever is the greater) of any trees within or bordering the site.
- 6.6 NPS Archaeology shall not be held responsible for any delay or failure in meeting agreed deadlines resulting from circumstances beyond its reasonable control. Such circumstances would include without limitation; long periods of adverse weather conditions, flooding, repeated vandalism, ground contamination, delays in the development programme, unsafe buildings, conflicts between the archaeological excavation method and the protection of flora and fauna on the site, disease restrictions, and unexploded ordnance.
- 6.7 Whether or not CDM regulations apply to this work, NPS Archaeology would expect the client to provide information on the nature, extent and level of any soil contamination present. Should unanticipated contaminated ground be encountered during the trial trenching, excavation will cease until an assessment of risks to health has been undertaken and on-site control measures implemented. NPS Archaeology will not be liable for any costs related to the collection and analysis of soils or other assessment methods, on-site control measures, and the removal of contaminated soil or other materials from site.

- 6.8 Should any disease restrictions be implemented for the area during the evaluation, fieldwork will cease and staff redeployed until they are lifted. NPS Archaeology will not be liable for any costs related to on-site disease control measures and for any additional costs incurred to complete the fieldwork after the restrictions have been removed.
- 6.9 NPS Archaeology will not accept responsibility for any tree surgery, removal of undergrowth, shrubbery or hedges or reinstatement of gardens. NPS Archaeology will endeavour to restrict the levels of disturbance of to a minimum but wishes to bring to the attention of the client that the works will necessarily alter the appearance of any landscaped gardens.

7. Quality Standards

- 7.1 NPS Archaeology is an Institute for Archaeologists Registered Archaeological Organisation and fully endorses the *Code of Practice* and the *Code of Practice for the Regulation of Contractual Arrangements in Field Archaeology*. All staff employed or subcontracted by NPS Archaeology will be employed in line with The Institute for Archaeologists *Code of Practice*.
- 7.2 The guidelines set out in the document *Standards for Field Archaeology in the East of England* (Gurney 2003) will be adhered to. Provision will be made for monitoring the work by The Archaeological Service Conservation Team of Suffolk County Council in accordance with the procedures outlined in the document *Management of Archaeological Projects* (English Heritage 1991). Monitoring opportunities for each phase of the project are suggested as follows:
- during Trial Trenching
 - during Post-Fieldwork Analysis
 - upon completion of the archive
 - upon receipt of the Evaluation Report
- 7.3 A further monitoring opportunity will be provided at the end of the project upon deposition of the integrated archive and finds with the Suffolk Museums and Archaeology Service.
- 7.4 NPS Archaeology operates a Project Management System. Most aspects of this project will be co-ordinated by a Senior Project Officer who is responsible for the successful completion of the project. The Project Manager retains the responsibility for the delivery of this project. The Archaeology Manager has the responsibility for all of NPS Archaeology's work and ensures the maintenance of quality standards within the organisation.

8. Health and Safety

- 8.1 NPS Archaeology will ensure that all work is carried out in accordance with NPS Property Consultants Limited's Health and Safety Policy, to standards defined in *the Health and Safety at Work, etc Act, 1974* and *The Management of Health and Safety Regulations, 1992*, and in accordance with the health and safety manual *Health and Safety in Field Archaeology* (SCAUM 2007).
- 8.2 A risk assessment will be prepared for the fieldwork. All staff will be briefed on the contents of the risk assessment and required to read it. Protective clothing and equipment will be issued and used as required.
- 8.3 NPS Archaeology will provide copies of NPS Property Consultants Limited's Health and Safety policy on request.

9. Insurance

9.1 NPS Archaeology's Insurance Cover is:

Employers Liability	£ 5,000,000
Public Liability	£50,000,000
Professional Indemnity	£ 5,000,000

9.2 Full details of NPS Archaeology's Insurance cover will be supplied on request.