Ex-Crane site, Nacton Road
Ipswich, Suffolk
IPS 658

Archaeological Excavation Report

SCCAS Report No. 2012/116

Client: CgMs

Author: M. Sommers

August 2012

Ex-Crane site, Nacton Road
Ipswich, Suffolk
IPS 658

Archaeological Excavation Report

SCCAS Report No. 2012/116

Author: M. Sommers

Contributions By: A. West

Editor: S. Boulter

Report Date: August 2012

HER Information

Site Code:	**IPS 658**
Site Name:	**Ex-Crane site, Nacton Road, Ipswich**
Report Number	**2012/116**
Planning Application No:	**IP/11/00763**
Date of Fieldwork:	**12th - 13th March 2012**
Grid Reference:	**TM 1956 4193**
Oasis Reference:	**suffolkc1-132828**
Curatorial Officer:	**Dr J. Tipper**
Project Officer:	**M. Sommers**
Client/Funding Body:	**CgMs**
Client Reference:	**NA**

Digital report submitted to Archaeological Data Service:
http://ads.ahds.ac.uk/catalogue/library/greylit

Disclaimer

Any opinions expressed in this report about the need for further archaeological work are those of the Field Projects Team alone. Ultimately the need for further work will be determined by the Local Planning Authority and its Archaeological Advisors when a planning application is registered. Suffolk County Council's archaeological contracting services cannot accept responsibility for inconvenience caused to the clients should the Planning Authority take a different view to that expressed in the report.

Prepared By:	M. Sommers
Date:	August 2012
Approved By:	S. Boulter
Position:	Senior Project Officer
Date:	August 2012
Signed:	

Contents

List of Figures

List of Tables

List of Plates

List of Appendices

Summary

An archaeological excavation was carried out on a small area within a former factory site (Crane Fluid Systems Ltd.), Nacton Road, Ipswich, in advance of the redevelopment of the site. An area of 600 squares metres was reduced to the level of the natural subsoil revealing three pits. As no datable artefacts were recovered from these features radiocarbon dating was undertaken on charcoal samples from the fills. The results suggested that the features are likely to date from the Early Anglo-Saxon period, although a late Roman date for one of the samples is possible. (Suffolk County Council Archaeological Service for CgMs Consulting).

1. Introduction

A large scale development has been proposed for the former Crane Fluid Systems Ltd. factory site off Nacton Road, Ipswich. Planning consent has been granted (IP/11/00763) with an attached condition requiring an agreed programme of archaeological work be undertaken in association with this development.

Following a Desk-Based Assessment of the site (Hawkins, 2010), a trenched evaluation was undertaken in December 2011 (Sommers, 2012). This indicated that there was a very low potential for archaeological remains to be encountered over the majority of the factory site except in a small area close to the south-west boundary where an archaeological feature was revealed. It was recorded in a trench cut across a grassed area between the main factory buildings and an internal roadway and consisted of a single pit. The pit was not dated but its size and the nature of the fill suggested a possibly prehistoric origin. As such, it indicated the presence of a possibly significant archaeological site that would be under threat from the proposed development.

To mitigate against any possible loss of archaeological evidence a Brief and Specification was issued by Dr Jess Tipper of the Suffolk County Council Conservation Team detailing a further phase of archaeological work (Appendix 1). The work specified entailed a controlled strip of the grassed area followed by the full excavation and recording of any features that may be revealed for which a Written Scheme of Investigation was produced (Gardner, 2012).

The National Grid Reference for the approximate centre of the excavated area is TM 1956 4193. Figure 1 shows a location plan of the site.

The archaeological evaluation was undertaken by Suffolk County Council Archaeological Service's Field Team who were commissioned and funded by CgMs Consulting.

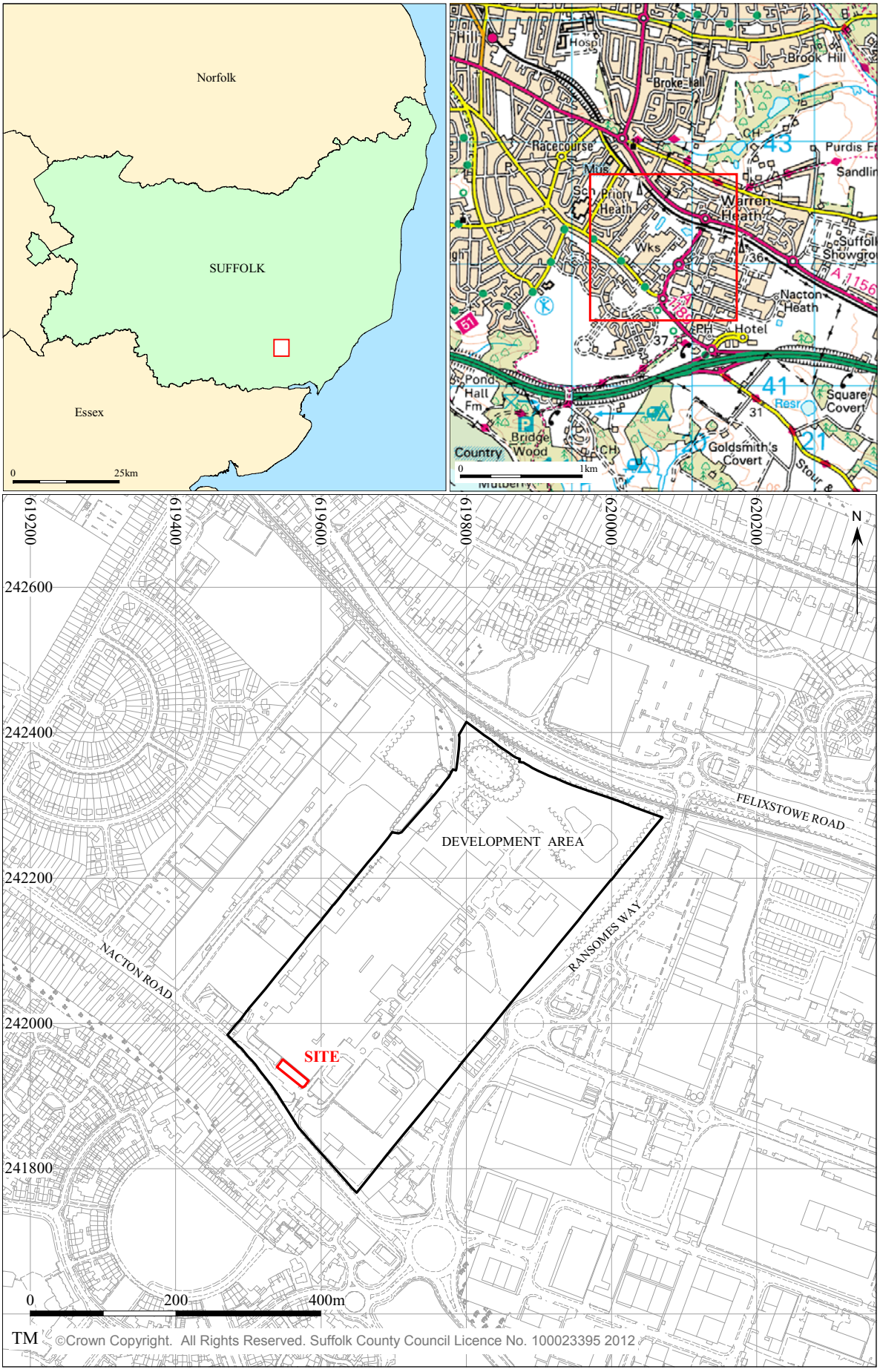


Figure 1. Location map

2. The Excavation

2.1 Site location

The development site comprises 16.2 hectares and is located on the outskirts of Ipswich, the centre of which lies approximately 4km to the north-west. It fronts onto Nacton Road to the south-west and is bounded by Ransomes Way to the south-east, the Ipswich-Felixstowe railway line to the north-east and a small industrial estate to the north-west.

The actual excavation site lies close to the Nacton Road frontage of the development area. It consisted of a rectangular grassed area lying between one of the main factory buildings and an internal roadway and has an area of *c*. 600 square metres. The site lies adjacent a T-junction and the south-east and south-west sides abut internal factory roadways. On the remaining two sides it is bounded by concrete pathways that lie immediately adjacent to buildings.

2.2 Geology and topography

The local geology comprises drift deposits of glacial origin that are uniformly acid and sandy. Additionally there are surface layers of variable thickness of fine-grained loess deposits, derived from windblown material from glacial sources.

2.3 Archaeological and historical background

The archaeological and historical background of the development site is presented in a Desk-Based Assessment undertaken by CgMs, archaeological consultants acting on behalf of their client (Hawkins, 2010).

In summary; no early archaeological sites are known to exist within the proposed development area although a scatter of prehistoric and Roman sites have been recorded in the local area.

Due to the dry mineral soils and the general absence of watercourses the landscape in the vicinity of the development area consisted of formerly open heathland. The

development site itself was located within an area named as Priory Heath on the 3rd edition Ordnance Survey map of 1926 (Fig.2).

Industrial use of the site commenced shortly after the World War I and consisted of a small ironworks known as Nacton Works, as depicted on the 3rd edition Ordnance Survey map (Fig.2). This small works expanded so that by the late 1950s it covered the majority of the development area with buildings, hardstanding and lagoons.

The heathland is not suitable for cultivation and tended to be used for sheep farming with little or no actual occupation. Other than the works, there is very little historic activity recorded in this area until World War II when the heaths were criss-crossed with numerous anti-aircraft obstructions. These obstructions, and a number of bomb craters, are visible on aerial photographs taken in the 1940s (recorded on the County Historic Environment Record under the reference NAC 081).

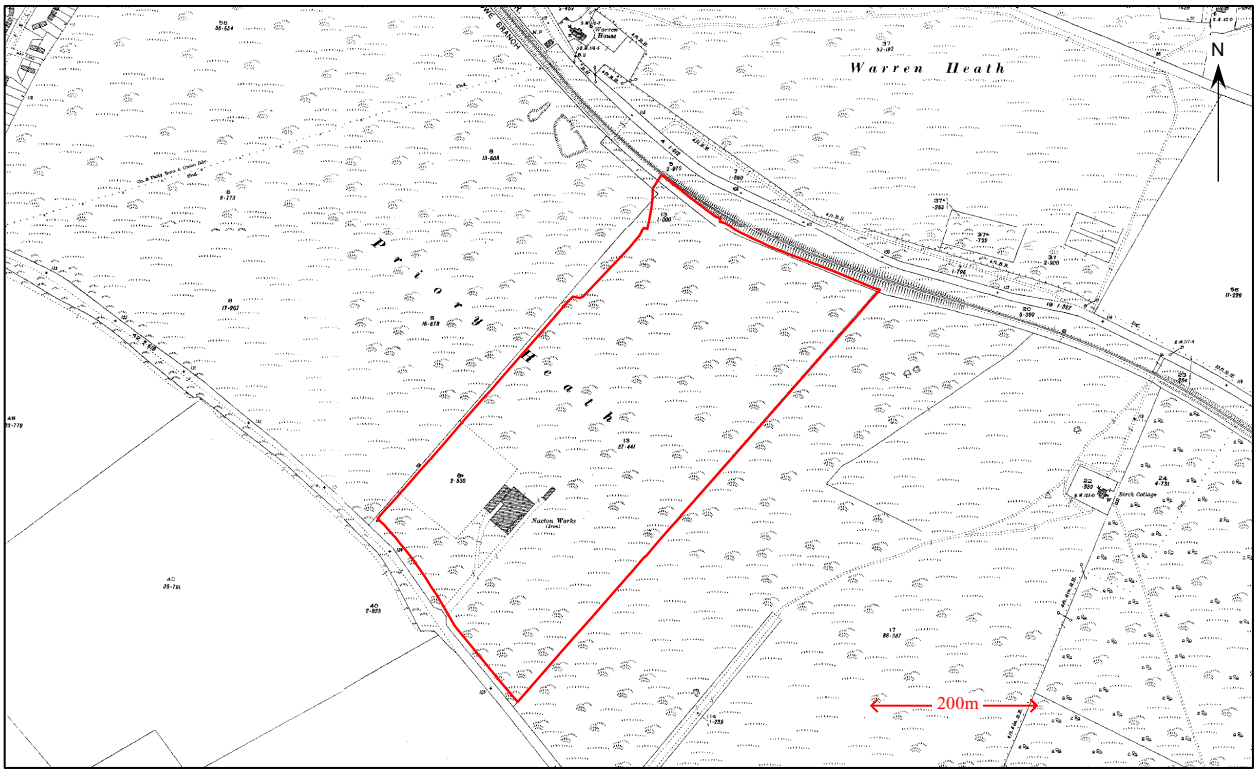


Figure 2. extract from the 2nd edition Ordnance Survey of *c.* 1900
(factory site outlined in red)

3. Methodology

The first stage of the excavation was the mechanical stripping of the topsoil and an underlying masking deposit (believed to consist of a weathered subsoil) to expose the cleanly cut surface of the natural subsoil and any archaeological features that may be present. This was achieved using a large tracked mechanical excavator fitted with a 2.2m wide toothless bucket. Initially, the north-eastern half of the site was stripped and spoil stored on the south-west half. Once this was complete the spoil was replaced and the process reversed. The freshly cut surface of the natural subsoil was left clean and smooth which allowed for the easy identification of the archaeological features that were present.

The archaeological features were sampled through the hand excavation of sections into the fills to reveal the profile and depth of each feature and investigate the nature of the fills.

Context numbers were allocated to all feature cuts and their fills continuing in sequence from those allocated during the trenched evaluation. All profiles and sections were recorded at scales of 1:20 or 1:10 on plastic drafting film and a photographic record was made using a digital camera. A surface plan of the site showing all features and section lines, each tagged with an identifying context number, was drawn.

Bulk soil samples were taken for further analysis, the results of which are presented in Section 6. The environmental evidence.

No finds were recovered from any of the excavated features. In order to obtain dates for the features, fragments of charcoal recovered during the processing of the bulk soil samples were submitted for radiocarbon dating. Three samples were submitted to Scottish Universities Environmental Research Centre (SUERC-40420 [GU27347], SUERC-40421 [GU27348] and SUERC-40422 [GU27349]) for analysis. Calibration of the radiocarbon dates was undertaken using the University of Oxford Radiocarbon Accelerator Unit calibration programme OxCal 4.1 (Bronk Ramsey 2009). The Radiocarbon Dating Certificates can be found in Appendix 2.

4. Results

The soil strip involved the removal of *c.* 0.3m of light sandy topsoil and a *c*. 0.1m thick layer of a mid to light brown sand to reveal a natural subsoil of yellow sand with silt.

Three features were identified within the excavation area, one of which was the pit originally identified in the evaluation trench. See figure 3 for a plan of the excavated area and figure 4 for the recorded sections.

Each feature is described as follows:

Pit 0002: Originally recorded in the earlier evaluation. It was roughly circular in plan with a bowl shaped profile. It measured 1m in diameter and had a depth of 0.3m. The fill (0003) comprised a basal layer of charcoal rich silty sand with occasional charcoal lumps overlain by a mass of grey silty sand with frequent charcoal. No artefacts were recovered from the fill.

Radiocarbon dating of charcoal fragments recovered from the fill indicated a date of 1500 ±35 BP, cal AD 540 to 607 (1σ) [sample GU27347].

Pit 0004: A smaller circular pit, measuring 0.52m in diameter with a depth of 0.21m, adjacent to and cut by Pit 0002. The fill (0005) consisted of mid brown grey silty sand with occasional charcoal flecks. No artefacts were recovered from the fill.

Radiocarbon dating of charcoal fragments recovered from the fill indicated a date of 1655 ±35 BP, cal AD 344 to 428 (1σ) [sample GU27348].

Pit 0006: A small circular pit situated some 3.2m to the north-west of pits 0002 and 0004. It measured 0.43m in diameter with a depth of 0.14m. The fill (0007) consisted of dark brown grey silty sand with charcoal flecks throughout. The colour of the surrounding natural subsoil was slightly reddened, probably by heat. No artefacts were recovered from the fill.

Radiocarbon dating of charcoal fragments recovered from the fill indicated a date of 1310 ±35 BP, cal AD 662 to 766 (1σ) [sample GU27348].

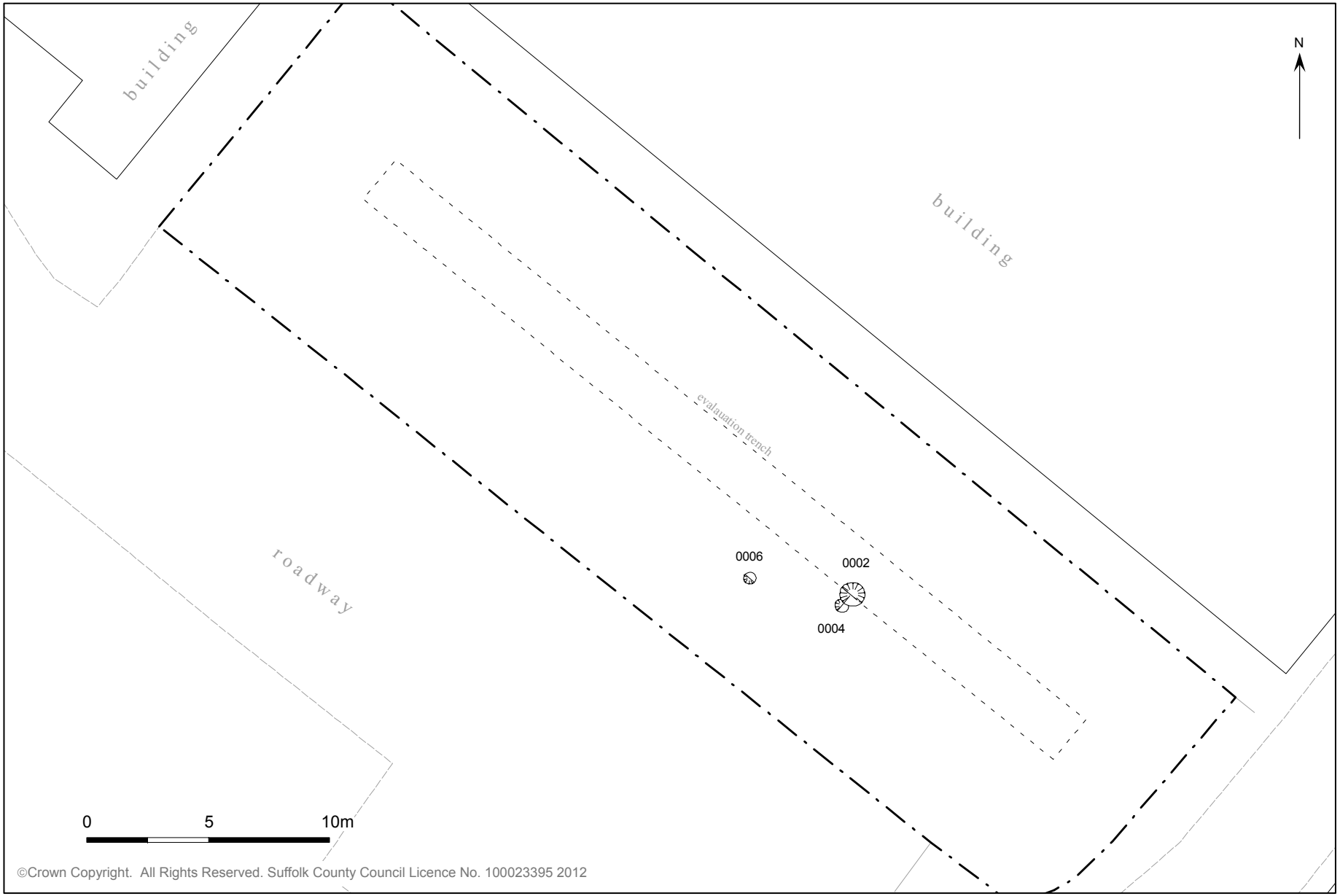


Figure 3. plan of the excavation

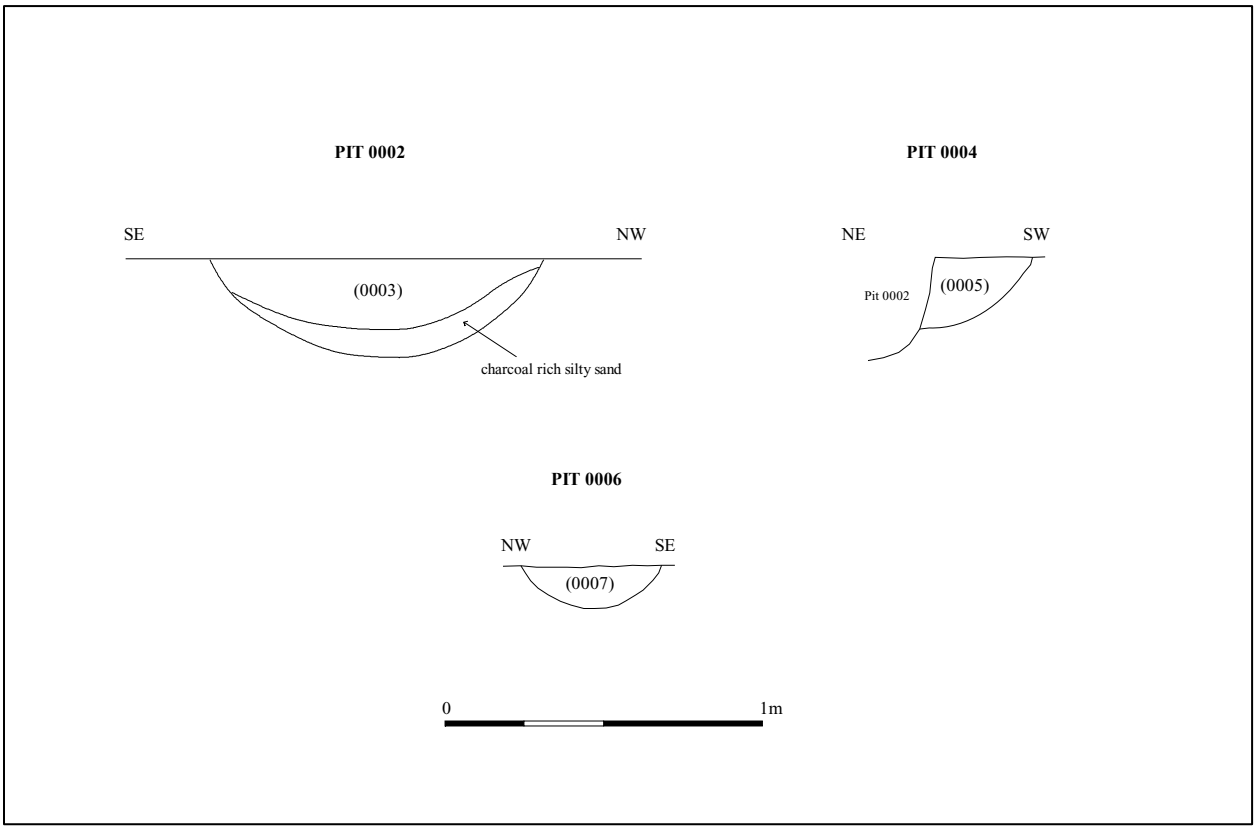


Figure 4. sections

5. The finds evidence

No artefacts were recovered during the excavation works undertaken at this site.

6. The environmental evidence

Anna West

6.1 Assessment of the plant macrofossils

Introduction and Methods

A total of two samples were taken from features during an excavation at the Ex-Crane's site, Nacton Road, Ipswich. Both samples were processed in order to assess the quality of preservation of plant remains and the potential for radiocarbon dating of the features. A single sample was taken during the evaluation carried out on this site; plant macrofossils recovered from this sample are not discussed in this assessment.

The samples were processed using manual water flotation/washover and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned using a binocular microscope at x16 magnification and the presence of any plant remains or artefacts are noted on Table 1. Identification of plant remains is with reference to New Flora of the British Isles (C. Stace).

The non-floating residues were collected in a 1mm mesh and sorted when dry in order to identify any included artefacts/ecofacts.

Quantification

For the purpose of this initial assessment, items such as seeds, cereal grains and small animal bones have been scanned and recorded qualitatively according to the following categories

= 1-10, ## = 11-50, ### = 51+ specimens

Items that cannot be easily quantified such as charcoal, magnetic residues and fragmented bone have been scored for abundance

+ = *rare*, ++ = *moderate*, +++ = *abundant*

Results

SS No	Context No	Feature/ cut no	Feature type	Approximate date of deposit	Flot Contents
2	0005	0004	Pit	L. Roman/EAS	Charcoal +++, charred seeds #
3	0007	0006	Ditch	EAS	Charcoal +++, charred seeds #, un-charred seeds #

Table 1. Results of the environmental assessment

The preservation of the majority of the weed seeds is by charring and is generally fair to poor; there are also a small number of un-charred seeds present. Charred weed seeds were rare but consist of *Chenopodiaeae, Caryphyllaceae* and *Brassicaceae* species.

Discussion

Charcoal fragments were extremely abundant in both samples and made up the majority of the flot material.

Sample 2 (0005) contained a single charred *Caryphyllaceae Sp*. and *Chenopodiaceae Sp.* seed along with five possible *Brassicaceae Sp.* seeds all these species are common wayside and agricultural weeds.

Sample 3 (0007) contained only three possible charred *Brassicaceae Sp.* seeds along with a single un-charred seed each of *Rubus Sp.* and *Caryphyllaceae Sp*. Again these could be interpreted as either wayside or agricultural weeds.

No charred or un-charred cereal remains were recovered from either of the samples. The charred plant remains in this assemblage are however dominated by wood charcoal. Both samples produced moderate to high quantities of charcoal although this may be due to sampling bias (sampling of productive-looking deposits). However, as samples were taken from all of the features identified during this intervention, the influences of this common bias can for the purposes of this site be ignored.

Conclusions

In general the samples were poor in terms of identifiable material. Charcoal is common in both samples in varying quantities. As the archaeological features so far excavated on this site remain undated, the charcoal was assessed for its suitability for radiocarbon dating. The samples were subsequently sent for radiocarbon dating along with that previously recovered during the evaluation (Appendix 2).

As the charred and un-charred seeds recovered from the flots seem to represent either or wayside/wasteland or agricultural weed plants it is suggested that the absence of cereal remains points towards the assemblage representing a non-cultivated environment such as open heathland. Due to the small size of the assemblage, it is suggested that there would be no benefit in submitting the remains to an Archaeobotanist for full species identification and interpretation.

7. Discussion

The three pits were the only features discovered during the excavation. The radiocarbon date ranges at the 1σ level suggest that one could be Late Roman or Early Anglo-Saxon, while the other two are Early Anglo-Saxon. However, given the date ranges available at the wider levels of probability an Early Anglo-Saxon date is considered to be a likely possibility for all three features.

The absence of any artefacts suggests that that the site is either peripheral to an occupation site or, alternatively, they may relate to a less intense activity undertaken in the heathland away from the settlement itself.

8. Conclusions

The three pits relate to a previously unknown site of Early Anglo-Saxon activity within the heathland area, although the character of the activity could not positively be ascertained from the limited evidence recovered.

9. Archive deposition

Paper and photographic archive: SCCAS Bury St Edmunds

Digital archive: SCCAS R:\Environmental Protection\Conservation\Archaeology\ Archive\Ipswich\ IPS 658 Excavation (Cranes)

Digital photographic will held under the references HLW 76 to HLW 85

Finds and environmental archive: SCCAS, Unit 4.

10. Acknowledgements

The fieldwork was carried out by Phil Camps and Mark Sommers.

Project management was undertaken by Dr. Rhodri Gardner who also provided advice during the production of the report.

The environmental report was produced by Anna West

The report was edited by Stuart Boulter who also provided advice during the production of the report.

11. Bibliography

Stace, C., (1997), *New Flora of the British Isles*. Second edition. Cambridge University Press

Appendix 1. Plates

Plate 1. General view of site during soil strip (ref. HLW 76)

Plate 2. Pit 0002, as seen during the evaluation (ref. HLR 83)

Plate 3. Pit 0004 (right), cut by Pit 0002 (left) (ref. HLW 81)

Plate 4. Pit 0006 (ref. HLW 85)

Appendix 2. Radiocarbon Certification

Scottish Universities Environmental Research Centre
Director: Professor A B MacKenzie Director of Research: Professor R M Ellam
Rankine Avenue, Scottish Enterprise Technology Park,
East Kilbride, Glasgow G75 0QF, Scotland, UK
Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE
03 July 2012

Laboratory Code	SUERC-40420 (GU27347)
Submitter	Anna West Suffolk County Council Archaeological Service St Edmund House Rope Walk Ipswich IP4 1LZ
Site Reference	Ex-Crane's Site, Nacton Road, Ipswich
Context Reference	IPS 658
Sample Reference	0003
Material	Charcoal : unknown
$\delta^{13}C$ relative to VPDB	-26.8 ‰
Radiocarbon Age BP	1500 ± 35

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standards, background standards and the random machine error.

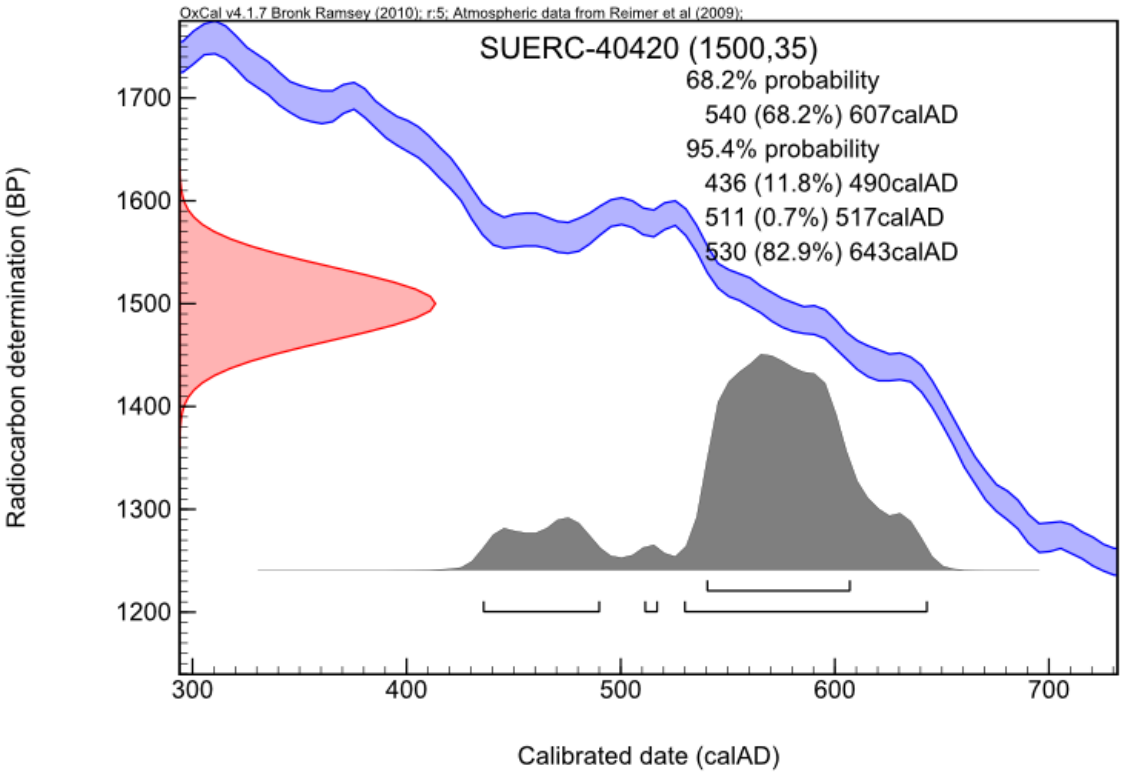
The calibrated age ranges are determined using the University of Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.1 (Bronk Ramsey 2009). Terrestrial samples are calibrated using the IntCal09 curve while marine samples are calibrated using the Marine09 curve.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Calibration Plot



Scottish Universities Environmental Research Centre
Director: Professor A B MacKenzie Director of Research: Professor R M Ellam
Rankine Avenue, Scottish Enterprise Technology Park,
East Kilbride, Glasgow G75 0QF, Scotland, UK
Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

03 July 2012

Laboratory Code	SUERC-40421 (GU27348)
Submitter	Anna West Suffolk County Council Archaeological Service St Edmund House Rope Walk Ipswich IP4 1LZ
Site Reference	Ex-Crane's Site, Nacton Road, Ipswich
Context Reference	IPS 658
Sample Reference	0005
Material	Charcoal : unknown
$\delta^{13}C$ relative to VPDB	-26.9 ‰
Radiocarbon Age BP	1655 ± 35

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standards, background standards and the random machine error.

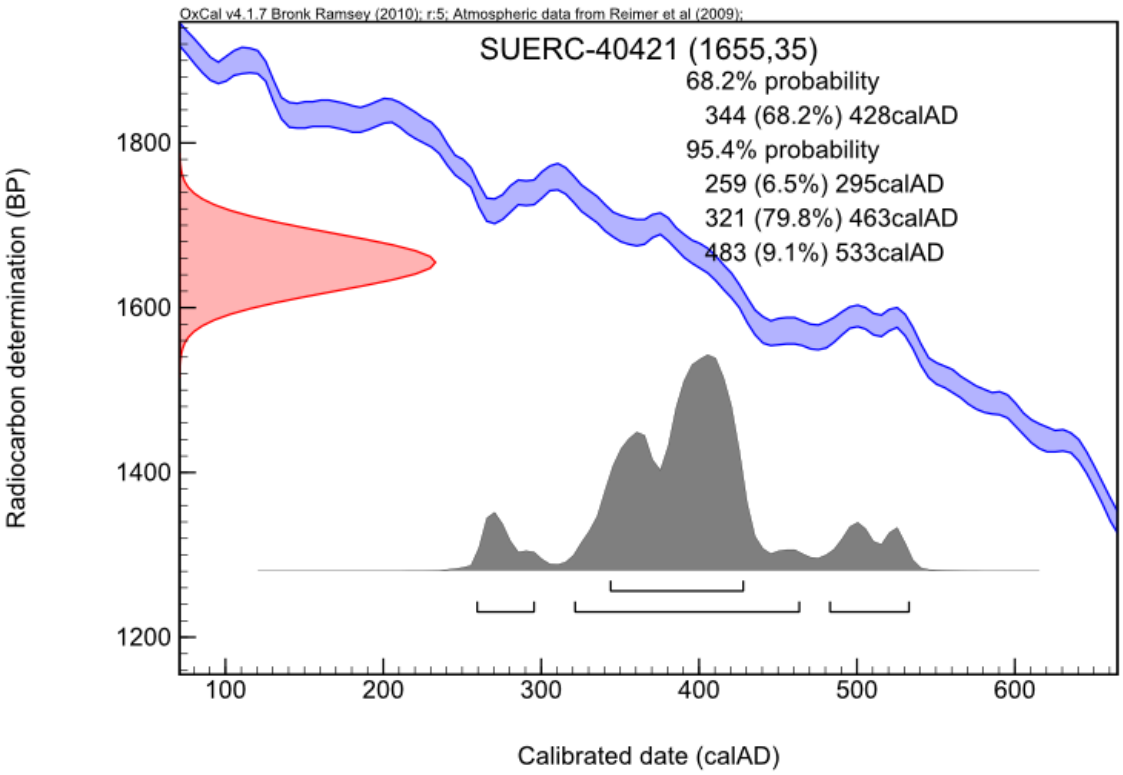
The calibrated age ranges are determined using the University of Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.1 (Bronk Ramsey 2009). Terrestrial samples are calibrated using the IntCal09 curve while marine samples are calibrated using the Marine09 curve.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Calibration Plot



Scottish Universities Environmental Research Centre
Director: Professor A B MacKenzie Director of Research: Professor R M Ellam
Rankine Avenue, Scottish Enterprise Technology Park,
East Kilbride, Glasgow G75 0QF, Scotland, UK
Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

03 July 2012

Laboratory Code	SUERC-40422 (GU27349)
Submitter	Anna West Suffolk County Council Archaeological Service St Edmund House Rope Walk Ipswich IP4 1LZ
Site Reference	Ex-Crane's Site, Nacton Road, Ipswich
Context Reference	IPS 658
Sample Reference	0007
Material	Charcoal : unknown
$\delta^{13}C$ relative to VPDB	-25.6 ‰
Radiocarbon Age BP	1310 ± 35

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standards, background standards and the random machine error.

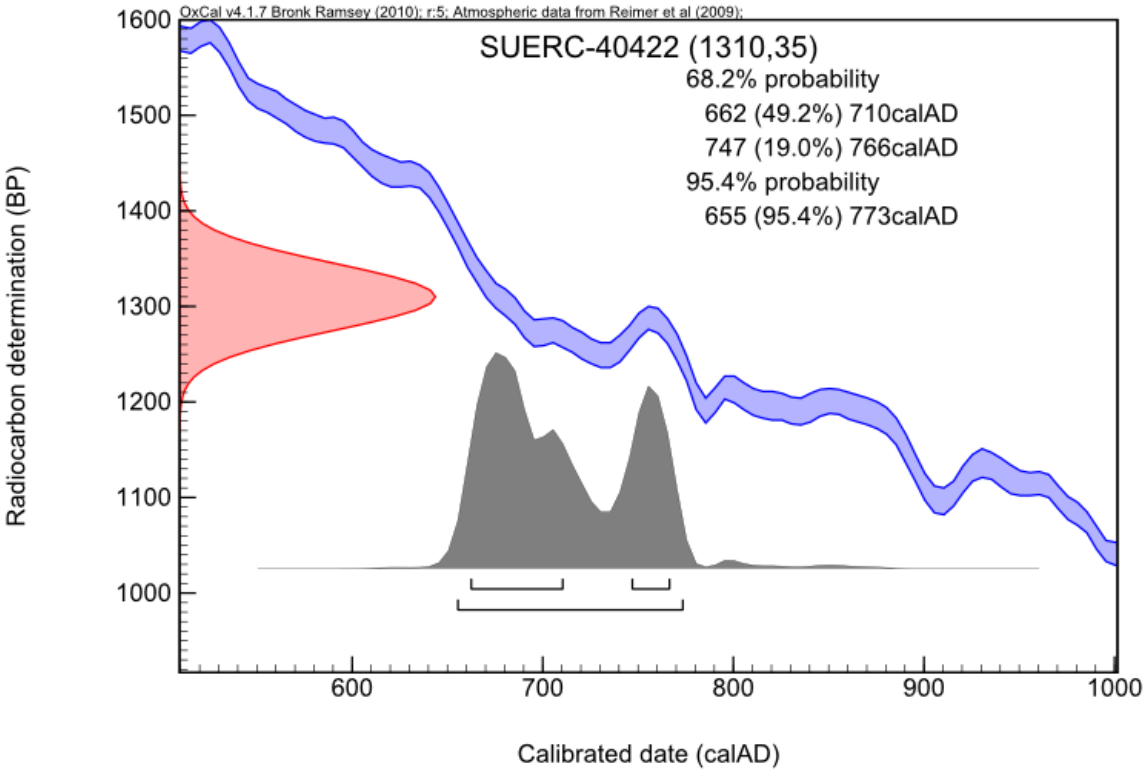
The calibrated age ranges are determined using the University of Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.1 (Bronk Ramsey 2009). Terrestrial samples are calibrated using the IntCal09 curve while marine samples are calibrated using the Marine09 curve.

Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Calibration Plot



Appendix 3. OASIS form

OASIS ID: suffolkc1-132828

Project details

Project name	IPS658 - Ex-Crane site, Nacton Road, Ipswich
Short description of the project	excavation of a small area revealed three pits. No artefacts were recovered but RC dating suggest and Early Anglo-Saxon date is possible for all three
Project dates	Start: 12-03-2012 End: 24-08-2012
Previous/future work	Yes / No
Any associated project reference codes	IPS658 - HER event no.
Any associated project reference codes	IP/11/00763 - Planning Application No.
Type of project	Recording project
Current Land use	Other 12 - Verge
Monument type	PIT Early Medieval
Significant Finds	NONE None
Investigation type	"Full excavation"
Prompt	Direction from Local Planning Authority - PPS

Project location

Country	England
Site location	SUFFOLK IPSWICH IPSWICH IPS658 - Ex-Cranes site, Nacton Road
Study area	590.00 Square metres
Site coordinates	TM 1956 4193 52 1 52 01 54 N 001 12 04 E Point

Project creators

Name of Organisation	Suffolk County Council Archaeological Service
Project brief originator	Consultant
Project design originator	Suffolk County Council Archaeological Service, Field Team

Project director/manager	Rhodri Gardner
Project supervisor	Mark Sommers
Type of sponsor/funding body	Consultant on behalf of client

Project archives

Physical Archive recipient	Suffolk County Council Archaeological Service
Physical Archive ID	IPS658
Physical Contents	"Environmental"
Digital Archive recipient	Suffolk County Council Archaeological Service
Digital Archive ID	IPS658
Digital Contents	"other"
Digital Media available	"Images raster / digital photography","Text"
Paper Archive recipient	Suffolk County Council Archaeological Service
Paper Archive ID	IPS658
Paper Contents	"other"
Paper Media available	"Correspondence","Notebook - Excavation',' Research',' General Notes","Plan","Report","Section"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Excavation Report: Ex-Crane site, Nacton Road, Ipswich
Author(s)/Editor(s)	Sommers, M.
Other bibliographic details	SCCAS 2012/116
Date	2012
Issuer or publisher	SCCAS
Place of issue or publication	Ipswich
Description	printed sheets of A4 paper with card covers and a plastic comb binding

Entered by	MS (mark.sommers@suffolk.gov.uk)
Entered on	24 August 2012

Suffolk County Council

Archaeological services
Field Projects Team

Delivering a full range of archaeological services

- Desk-based assessments and advice
- Site investigation
- Outreach and educational resources
- Historic Building Recording
- Environmental processing
- Finds analysis and photography
- Graphics design and illustration

Contact:

Rhodri Gardner

Tel: 01473 581743 Fax: 01473 288221

rhodri.gardner@suffolk.gov.uk

www.suffolk.gov.uk/Environment/Archaeology/