

Anglian Water The Hollies S98 Scheme, Kessingland



Archaeological Evaluation Report



July 2015

Client: Anglian Water

OA East Report No: 1800

OASIS No: oxfordar3-217583

NGR: TM 534 885

Anglian Water The Hollies S98 Scheme, Kessingland

Archaeological Evaluation

By Ashley Pooley

Editor: Aileen Connor BA (Hons) ACIfA

Illustrator: Séverine Bézine BA MA


Report Date: July 2015

Report Number: 1800
Site Name: Anglian Water The Hollies S98 Scheme Kessingland
HER Event No: ESF23131
Date of Works: April 2015
Client Name: Anglian Water
Client Ref:
Planning Ref: Pre-Application
Grid Ref: TM 534 885
Site Code: GSE 114
Finance Code: XSFHSK15
Receiving Body: SCCAS/CT Archaeological Store

Accession No:

Prepared by: Ashley Pooley
Position: Acting Supervisor
Date: 25th June 2015

Checked by: Aileen Connor
Position: Senior Project Manager
Date: 29th July 2015
Signed:



Disclaimer

This document has been prepared for the titled project or named part thereof and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of Oxford Archaeology being obtained. Oxford Archaeology accepts no responsibility or liability for the consequences of this document being used for a purpose other than the purposes for which it was commissioned. Any person/party using or relying on the document for such other purposes agrees and will by such use or reliance be taken to confirm their agreement to indemnify Oxford Archaeology for all loss or damage resulting therefrom. Oxford Archaeology accepts no responsibility or liability for this document to any party other than the person/party by whom it was commissioned.

Oxford Archaeology East,

15 Trafalgar Way,
Bar Hill,
Cambridge,
CB23 8SQ

t: 01223 850500
f: 01223 850599
e: oaeast@thehumanjourney.net
w: <http://thehumanjourney.net/oaeast>

© Oxford Archaeology East 2011
Oxford Archaeology Limited is a Registered Charity No: 285627

Table of Contents

Table of Contents

Summary..... 5

1 Introduction..... 6

 1.1 Location and scope of work..... 6

 1.2 Geology and topography..... 6

 1.3 Archaeological and historical background..... 6

 1.4 Acknowledgements..... 7

2 Aims and Methodology..... 8

 2.1 Aims..... 8

 2.2 Methodology..... 8

3 Results..... 9

 3.1 Introduction..... 9

 3.2 Trench Summary..... 9

4 Discussion and Conclusions..... 11

 4.1 Discussion..... 11

 4.2 Significance..... 11

 4.3 Recommendations..... 11

Appendix A. Trench Descriptions and Context Inventory..... 12

Appendix B. Bibliography..... 13

Appendix C. OASIS Report Form..... 14

List of Figures

- Fig. 1 Site location map
Fig. 2 Trench plan and section drawing

List of Plates

- Plate 1 General view of trench looking north-east
Plate 2 General view of trench looking south-west

Summary

A 50.00m long archaeological evaluation trench was excavated in advance of pipeline-laying at The Hollies Caravan Park, Kessingland. The only features present were a single tree throw and a modern quarry pit. The features were not considered to be archaeologically significant.

1 INTRODUCTION

1.1 Location and scope of work

- 1.1.1 An archaeological evaluation was conducted at The Hollies Caravan Park, Kessingland Suffolk on behalf of Anglian Water.
- 1.1.2 This archaeological evaluation was undertaken in accordance with a Brief issued by Suffolk County Council Archaeological Service Conservation Team (Brudenell 2014), supplemented by a Specification prepared by OA East.
- 1.1.3 The work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, in accordance with the guidelines set out in *National Planning Policy Framework* (Department for Communities and Local Government, March 2012). The results will enable decisions to be made by Suffolk CC, on behalf of the Local Planning Authority, with regard to the treatment of any archaeological remains found.
- 1.1.4 The site archive is currently held by OA East and will be deposited with the appropriate county stores in due course.

1.2 Geology and topography

- 1.2.1 The local bedrock of the area is sand of the Crag Group formation. This is overlain by three superficial layers: at the lowest level lies the Aldeby Sand and Gravel member; overlain by sand from the Happisburgh Glacigenic Formation, with clay and gravels (diamicton) of the Lowestoft Formation at the surface:
<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>
- 1.2.2 The site is located on typical brown sands of Newport 3 Association (511f; Soil Survey of England and Wales 1983). It is situated on flat arable land at about 10m above sea level approximately 50m west of Kessingland cliffs

1.3 Archaeological and historical background

- 1.3.1 This following discussion is a condensed version of that in the Written Scheme of Investigation (Tsybaeva 2015, pp. 2-3). Most of the finds in this area have been the result of metal-detecting and the exposure of artefacts and features as a result of coastal erosion.
- 1.3.2 The site lies within a significant prehistoric landscape that includes an internationally-important artefact scatter of flints (GSE 061) within Lower Palaeolithic Cromer Forest-bed deposits of Cromerian (pre-Anglian glaciation) date was exposed on the foreshore and along the cliffs 70-200m south-east of the site. This is dated to approximately 700,000 BP.
- 1.3.3 Isolated struck flint artefacts and polished axes are recorded from 700m north of the site. These are of Neolithic and Bronze Age date.
- 1.3.4 A cropmark enclosure, possibly prehistoric, lies 850m north of the site with a possible trackway recorded 650m to the west.
- 1.3.5 Isolated coin finds from the beach are dated to the Iron Age.

- 1.3.6 Evidence for Roman occupation close to the site includes a Roman mosaic, presumably once laid within an accompanying high-status building, that was discovered at Pakefield Holiday Camp, which lies approximately 100m north-west of the site. Other isolated features and artefacts have come to light as a result of metal-detecting and coastal erosion.
- 1.3.7 Isolated medieval pits have been exposed due to the collapse of the local cliffs, and metal finds have been reported by local metal detectorists, although none from the immediate vicinity of the site.
- 1.3.8 Coastal defences were established along the Suffolk coast during World War Two. Locally, these comprised a network of pillboxes, trench systems, anti-tank defences, minefields and spigot mortar emplacements.

1.4 Acknowledgements

- 1.4.1 Thanks are due to Anglian Water for commissioning this evaluation. The project was managed by Aileen Connor for OA East, the fieldwork supervised by the author, with assistance from Dave Browne. Bryn Williams machined the trench, and Matt Brudenell from Suffolk County Council monitored the fieldwork. The illustrations were prepared by Séverine Bézie.

2 AIMS AND METHODOLOGY

2.1 Aims

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

2.2 Methodology

- 2.2.1 A single evaluation trench measuring approximately 50m in length and 1.80m wide was excavated along the line of the proposed pipe-line. This was aligned north-south.
- 2.2.2 Machine excavation was carried out under constant archaeological supervision with a tracked excavator using a toothless ditching bucket.
- 2.2.3 Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.
- 2.2.4 All archaeological features and deposits were recorded using OA East's *pro-forma* sheets. Trench locations, plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of all relevant features and deposits.
- 2.2.5 No archaeologically significant deposits were encountered and therefore no environmental samples were taken.
- 2.2.6 The fieldwork took place on a fine bright day, with good dry weather. No groundwater issues were encountered.

3 RESULTS

3.1 Introduction

3.1.1 Two features were exposed within the trench: a possible linear feature (7) of certainly modern date, just to the south-east of its mid-point and a tree throw (5) at the north-eastern extremity of the trench.

3.2 Trench Summary

3.2.1 Firm silty clay (3) was exposed at the base of the trench. A sondage was excavated by machine into this deposit at the north-eastern end of the trench to ascertain its character, it was clearly a natural deposit: its compaction and colour, coupled with lack of any signs of anthropogenic modification confirmed that this was the case.

3.2.2 Cutting through the silty clay was a large linear cut feature (7). It was located just to the south-west of the mid-point of the trench. This was partially exposed in plan by machine (showing its south-western and north-eastern edges). It measured 5.10m from south-west to north-east, it was obviously modern in character; its backfill (6) was a redeposited natural subsoil and topsoil that contained modern brick and concrete.

3.2.3 An irregular hollow (5) was partially uncovered at the north-eastern extremity of the trench, and extended to the south-east beyond its confines. This measured 1.20m south-west to north-east and was exposed for 0.55m from north-west to south-east with a depth of 0.25m. The feature was filled with a pale brown silt that contained no finds or other signs of anthropogenic modification. The edges of this feature were not particularly well-defined and its origin appears to have been natural, it is interpreted as the hollow left after a small tree had been blown over.

3.2.4 Three field drains crossed the trench on a south-west to north-east alignment, two of them cutting features 5 and 7.

4 DISCUSSION AND CONCLUSIONS

4.1 Discussion

- 4.1.1 Of the two features exposed, only **7** was able to be securely dated and appears to be modern. As this lay towards the edge of the field and towards Kessingland Cliff, it may be a quarry pit, possibly for clay extraction preparatory to the manufacture of brick and/or tile.
- 4.1.2 An anti-tank (or anti-glider) ditch is shown on an aerial photograph of this area taken in late 1945 (reproduced in Sommers 2010, fig. 3), although it is possible that this is the same as feature **7** found in the trench it appears to be too far to the north and too wide, the feature shown on the aerial photograph is apparently much wider than that found in the trench (5.10m). Nevertheless it is possible that the feature (**7**) does represent a World War 2 defence, whilst it would seem too modest to be an anti-tank defence: as Wehrmacht tanks of this period had a length of between 4.40m and 6.32m, this feature would have presented scant obstacle to them, anti-glider ditches survive that have a similar if not slightly narrower width. For example there is an anti-glider ditch that still exists as an earthwork at Blaxhall Heath, some 30 miles to the south of the site; it is now 10 feet (a little over 3m) wide (<http://www.geograph.org.uk/photo/923107> accessed 29th July 2015).
- 4.1.3 The tree throw (**5**) contained no datable material and appears to be of entirely natural origin.

4.2 Recommendations

- 4.2.1 Recommendations for any future work based upon this report will be made by the County Archaeology Office.

APPENDIX A. TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench						
General description				Orientation	SW-NE	
Trench contained two features: one modern and one natural.				Avg. depth (m)	0.55	
				Width (m)	1.80	
				Length (m)	50.00	
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
1	Layer	-	0.30	Topsoil	-	Modern
2	Layer	-	0.20	Subsoil	-	Modern
3	Layer	-	-	Natural	-	-
4	Fill	1.20	0.25	Fill of 5	-	Unknown
5	Cut	1.20	0.25	Tree throw	-	Unknown
6	Fill	5.10	-	Fill of 7	-	Modern
7	Cut	5.10	-	Modern quarry pit	-	Modern

APPENDIX B. BIBLIOGRAPHY

Brudenell, M. 2014. *A Provisional Brief for a Trenched Archaeological Evaluation at Anglian Water The Hollies S98 Scheme, Kessingland.*

Sommers, M. 2010. *Pontin's Holiday Centre, Pakefield, Gisleham GSE 067: Historic Buildings Assessment.* Suffolk County Council Archaeology Service unpublished report No. 2010/165.

Tsybaeva, D. 2015. *Written Scheme of Investigation for an Archaeological Evaluation at The Hollies, Kessingland.* Oxford Archaeology East unpublished report.

APPENDIX C. OASIS REPORT FORM

All fields are required unless they are not applicable.

Project Details

OASIS Number	oxfordar3-217583			
Project Name	Evaluation at Anglian Water The Hollies S98 Scheme Kessingland			
Project Dates (fieldwork)	Start	07-04-2015	Finish	07-04-2015
Previous Work (by OA East)	No		Future Work	No

Project Reference Codes

Site Code	GSE 114	Planning App. No.	N/A
HER No.	ESF23131	Related HER/OASIS No.	

Type of Project/Techniques Used

Prompt	Water Act 1989 and subsequent code of practice
Development Type	Pipelines/Cables

Please select all techniques used:

<input type="checkbox"/> Aerial Photography - interpretation	<input type="checkbox"/> Grab-Sampling	<input type="checkbox"/> Remote Operated Vehicle Survey
<input type="checkbox"/> Aerial Photography - new	<input type="checkbox"/> Gravity-Core	<input checked="" type="checkbox"/> Sample Trenches
<input type="checkbox"/> Annotated Sketch	<input type="checkbox"/> Laser Scanning	<input type="checkbox"/> Survey/Recording Of Fabric/Structure
<input type="checkbox"/> Augering	<input type="checkbox"/> Measured Survey	<input type="checkbox"/> Targeted Trenches
<input type="checkbox"/> Dendrochronological Survey	<input checked="" type="checkbox"/> Metal Detectors	<input type="checkbox"/> Test Pits
<input type="checkbox"/> Documentary Search	<input type="checkbox"/> Phosphate Survey	<input type="checkbox"/> Topographic Survey
<input type="checkbox"/> Environmental Sampling	<input type="checkbox"/> Photogrammetric Survey	<input type="checkbox"/> Vibro-core
<input type="checkbox"/> Fieldwalking	<input type="checkbox"/> Photographic Survey	<input type="checkbox"/> Visual Inspection (Initial Site Visit)
<input type="checkbox"/> Geophysical Survey	<input type="checkbox"/> Rectified Photography	

Monument Types/Significant Finds & Their Periods

List feature types using the [NMR Monument Type Thesaurus](#) and significant finds using the [MDA Object type Thesaurus](#) together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
Pit	None		Select period...
Tree throw	Late Prehistoric -4k to 43		Select period...
	Select period...		Select period...

Project Location

County	Suffolk	Site Address (including postcode if possible)
District	Waveney	The Hollies Caravan Park London Road Kessingland
Parish	Kessingland	
HER		
Study Area	90 sq m	National Grid Reference
		TM 534 885

Project Originators

Organisation	OA EAST
Project Brief Originator	Matt Brudenell
Project Design Originator	Matt Brudenell
Project Manager	Aileen Connor
Supervisor	Ashley Pooley

Project Archives

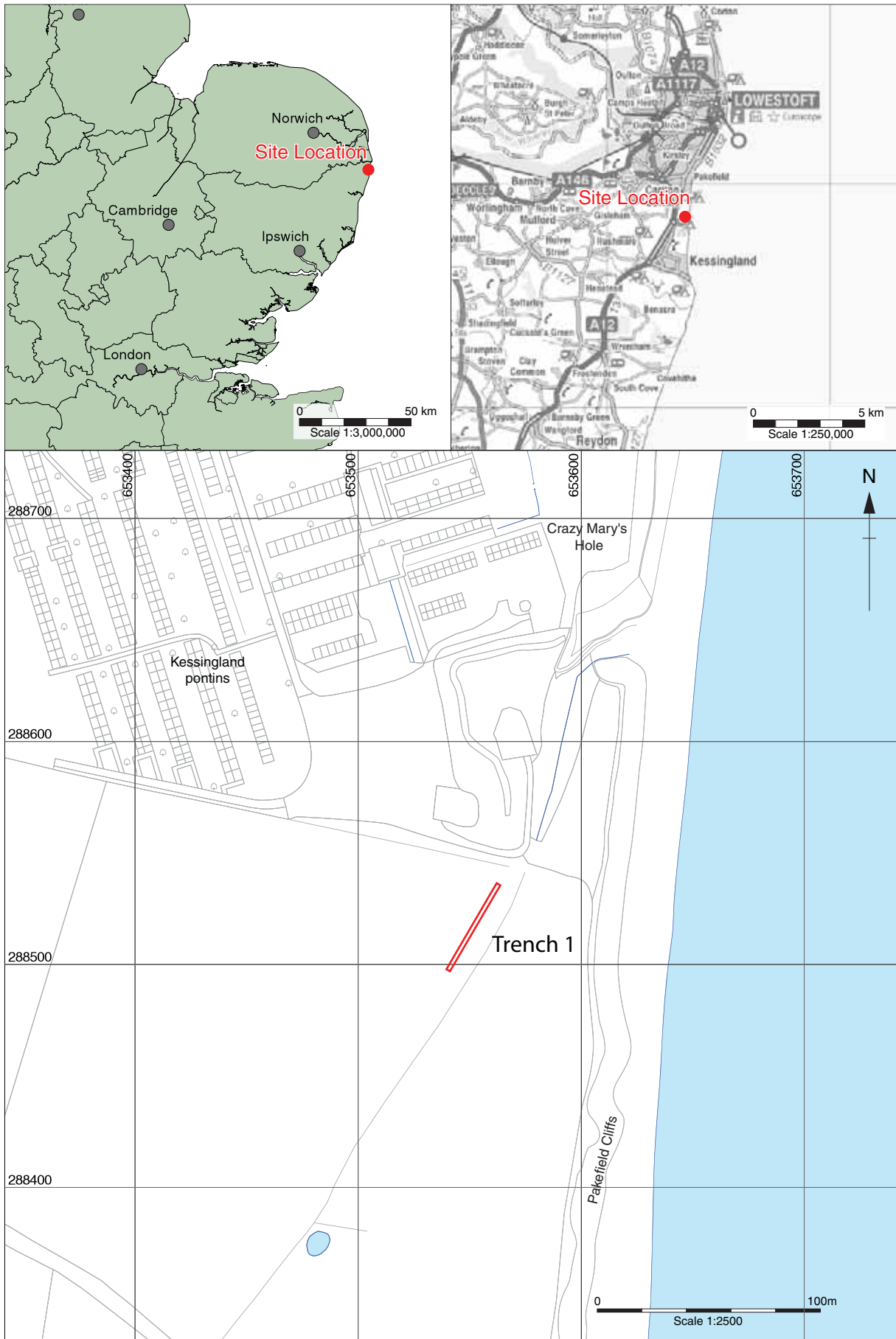
Physical Archive	Digital Archive	Paper Archive
Location ...	Location ...	Location ...
Accession ID ...	Accession ID ...	Accession ID ...

Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
Animal Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ceramics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human Bones	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stratigraphic		<input type="checkbox"/>	<input type="checkbox"/>
Survey		<input type="checkbox"/>	<input type="checkbox"/>
Textiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked Bone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worked Stone/Lithic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Digital Media	Paper Media
<input checked="" type="checkbox"/> Database	<input type="checkbox"/> Aerial Photos
<input type="checkbox"/> GIS	<input checked="" type="checkbox"/> Context Sheet
<input type="checkbox"/> Geophysics	<input type="checkbox"/> Correspondence
<input checked="" type="checkbox"/> Images	<input type="checkbox"/> Diary
<input checked="" type="checkbox"/> Illustrations	<input type="checkbox"/> Drawing
<input type="checkbox"/> Moving Image	<input type="checkbox"/> Manuscript
<input type="checkbox"/> Spreadsheets	<input type="checkbox"/> Map
<input type="checkbox"/> Survey	<input type="checkbox"/> Matrices
<input checked="" type="checkbox"/> Text	<input type="checkbox"/> Microfilm
<input type="checkbox"/> Virtual Reality	<input type="checkbox"/> Misc.
	<input type="checkbox"/> Research/Notes
	<input type="checkbox"/> Photos
	<input checked="" type="checkbox"/> Plans
	<input checked="" type="checkbox"/> Report
	<input checked="" type="checkbox"/> Sections
	<input type="checkbox"/> Survey

Notes:



Ordnance Survey. © Crown copyright 2015. All rights reserved. Licence number 0100031673

Figure 1: Site location

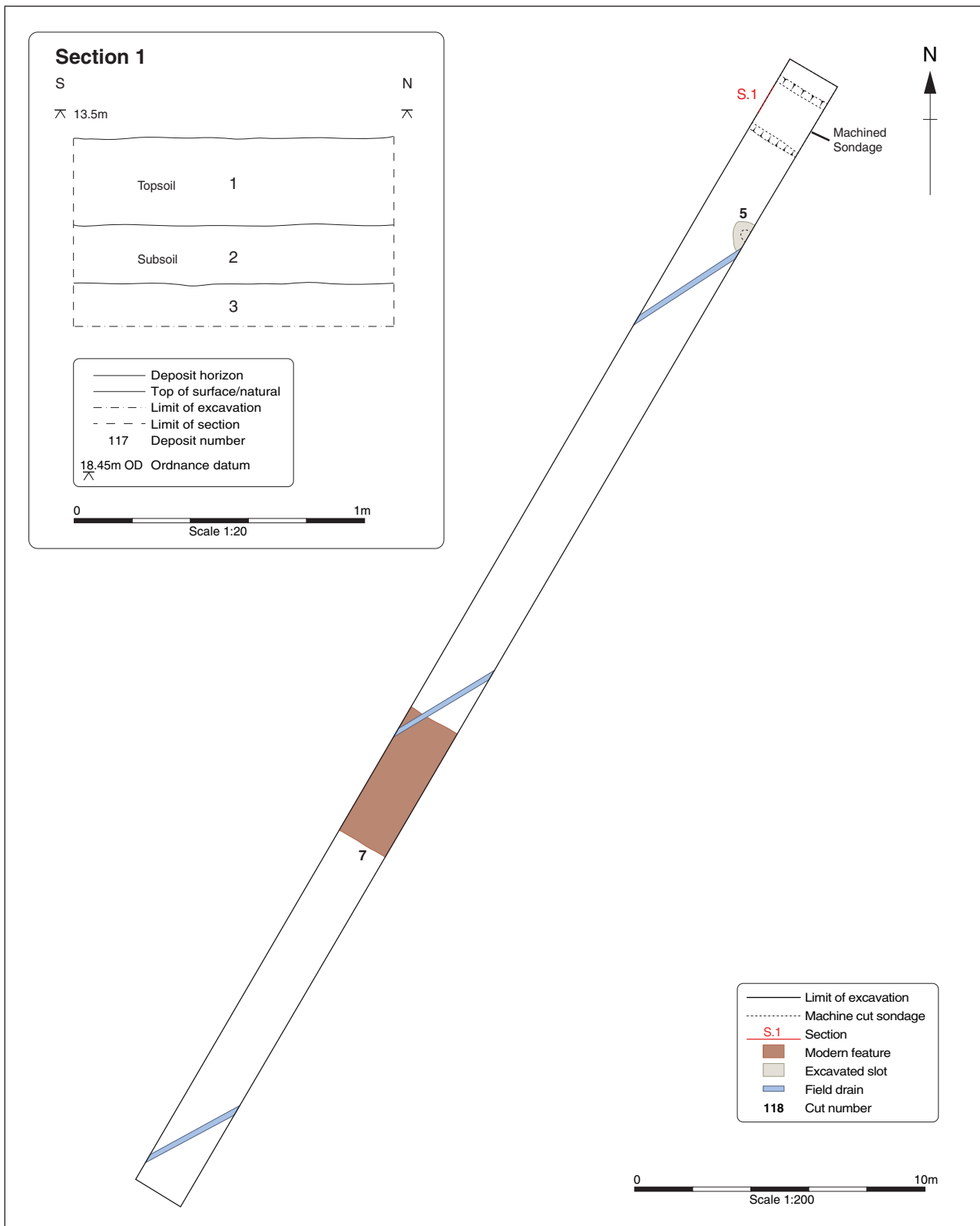


Figure 2: Trench plan and section drawing



Plate 1 General view of trench looking north-east



Plate 2 General view of trench looking south-west



Oxford Archaeology East

15 Trafalgar Way, Bar Hill
Cambridgeshire CB23 8SQ

tel 01223 850 500

fax 01223 850 599

email oeast@oxfordarch.co.uk

web www.oxfordarchaeology.com

Written Scheme of Investigation Archaeological Evaluation

Site name	The Hollies, Kessingland
Site code	XSFKES15
Location	TM 534 885
Project number	17673
Project type	Trenched Archaeological Evaluation
Event number	ESF23131
Planning Application No.	Pre-application
Client	Anglian Water
Date	10 March 2015
Author	Daria Tsybaeva

TABLE OF CONTENTS

1.General background.....	1
1.1.Circumstances of the project.....	1
1.2.The proposed archaeological strategy.....	1
1.3.The geology and topography of the site.....	1
2.Archaeological background.....	2
2.1.Prehistoric.....	2
2.2.Roman.....	2
2.3.Medieval.....	2
2.4.Modern.....	3
3.Aims and objectives.....	4
3.1.Aims of the evaluation.....	4
3.2.Research frameworks.....	4
4.Methods.....	4
4.1.Background research.....	4
4.2.Event number.....	4
4.3.Trial Trenching.....	4
4.4.Recording of archaeological deposits and features.....	5
4.5.Human remains.....	5
4.6.Metal detecting and the Treasure Act.....	6
4.7.Archiving.....	6
5.Reporting.....	6
5.1.Assessment Report.....	6
5.2.Contents of the assessment report.....	6
5.3.Draft and final reports.....	7
6.Timetable.....	7
7.Staffing and support.....	7
7.1.Fieldwork.....	7
7.2.Post-excavation processing.....	7
8.Other matters.....	8
8.1.Monitoring.....	8
8.2.Insurance.....	8
8.3.Services, Public Rights of Way, Tree Preservation Orders etc.....	8
8.4.Site Security.....	8
8.5.Access.....	9
8.6.Site Preparation.....	9
8.7.Backfilling/Reinstatement.....	9
8.8.Monitoring.....	9
8.9.Health and Safety, Risk Assessments.....	9
APPENDIX 1: EXCAVATION AND SAMPLING STRATEGY, AND FINDS PROCESSING PROCEDURES... 10	10
Relevant excavation standards and guidelines.....	10
Excavation of archaeology.....	10

Bulk sampling..... 11
Finds processing..... 12
APPENDIX 2: CONSULTANT SPECIALISTS..... 13

1. General background

This WSI conforms to the principles identified in English Heritage's guidance documents 'Management of Research Projects in the Historic Environment', specifically the MoRPHE Project Manager's Guide (2006) and PPN3 (Project Planning Note 3): Archaeological Excavation.

1.1. Circumstances of the project

Anglian Water is planning to excavate a pipeline at The Hollies, in Kessingland. It will run from Anglian Water's pumping station on the coast, southwest across the fields to the Hollies Camping Site. The fields are currently arable land.

The site is located in an area of high archaeological potential. A Roman mosaic was discovered about 50 metres north of the pumping station, so there is a high likelihood of more Roman archaeology nearby. There is also substantial WWII activity in the area.

As the excavation of the pipeline could impact potential archaeological remains, the Suffolk Archaeological Service requires an archaeological evaluation in a small section of the pipeline to help quantify any archaeological resource.

This Written Scheme of Investigation (WSI) has been prepared on behalf of Anglian Water in response to an Archaeological Brief for Investigation issued by Matthew Brudenell from the Suffolk Archaeology Service.

1.2. The proposed archaeological strategy

Anglian Water proposes to excavate a single trench measuring 50 x 1.8 metres between Manholes 5 and 6. The proposed location of the trench is shown on the plan attached.

1.3. The geology and topography of the site

The local bedrock of the area is sand of the Crag Group formation. This is overlain by three superficial layers: at the lowest level lies the Aldeby Sand and Gravel member; overlain by sand from the Happisburgh Galcienic Formation, with clay and gravels (diamicton) of the Lowestoft Formation at the surface (<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>)

The site is located on typical brown sands of Newport 3 Association (511f) (Soil Survey of England and Wales, 1983). The site is situated on flat arable land at about 10m above sea level.

2. Archaeological background

2.1. Prehistoric

There are several recorded Prehistoric spot finds within a kilometre of the site. These include worked flints (MSF1612), a flint axe (MSF21192), a polished flint axe (MSF1614) and flint flakes (MSF1613) found 750m north-west of the site. Worked flints – probably Bronze Age, including arrowhead, axehead and hammerstone (MSF1611) – were collected 700m north on the coast.

An internationally-important artefact scatter of flints (GSE 061) within Lower Palaeolithic Cromer Forest-bed deposits of Cromerian (pre-Anglian glaciation) date was exposed on the foreshore and along the cliffs 70-200m south-east site.

Also nearby are two undated cropmarks, possibly prehistoric: an irregular oval enclosure (GSE 027) 850m north, and a trackway (KSS 026) running north-to-south around 650 to the west.

2.2. Iron Age

A Late Iron Age gold quarter stater of Icenii, and a bronze coin of a Greek emperor (c 2nd century BC), were found on the beach (GSE 030) 200m north-east of the site.

2.3. Roman

A Roman mosaic (GSE 062) was found in Pakefield Holiday Camp starting about 80m north-west of the site. There is an unconfirmed report that it was excavated, but then reburied due to the outbreak of World War II.

A scatter of Roman artefacts (GSE 031) including pottery, roof and floor tiles, and a coin of Valentinian II (AD 378-383) were identified in black soil layer near Medieval pit (GSE 028), 300m north of the site. A Roman pit (GSE 034) containing pottery, quern fragments and roof tile was also exposed by cliff erosion in the same location.

Four Roman coins (GSE 037) were found 200m north by a metal detectorist.

2.4. Medieval

Around 250m north of the site a group of four large medieval pits (GSE 024, GSE 028, GSE 029, GSE 033) were exposed by cliff falls and coastal erosion. A fifth is located was found 100m north-east of the site (GSE 032). They contained fragments of pottery, brick, tile, animal remains and iron nails. The third pit (GSE 029), partially excavated, also had fragments of quern and whetstone, architectural stone fragments, a horseshoe, and iron key.

An incomplete earthwork of a rectangular medieval moat (GSE002) is visible about 600m north-west.

Among spot finds in the area are a gold noble of Edward III (AD 1356-1361) (MSF1615) 750m north-west, a broken bronze socket with animal head terminal (MSF1617) 850m north-west and a fragment of limestone mortar (MSF17463) found on the beach about 100m north-east away from site.

2.5. Modern

The area has extensive World War II coastal defences. These include:

- pillboxes (KSS 043) 250m south; (GSE 401) 100 m to the east on the beach; (KSS 051) 800m south, (GSE 056) 150 m north; (GSE 053) 200m north; two at
- slit trenches (KSS 043) 250m south, (KSS 044) 600m south of the site; (KSS 051) 800m south; and (GSE 052) 400 north
- anti-tank trenches (GSE 045) run 50m south of the site for 800 metres to the northwest; and a length of tank trap (KSS 038) runs from Pakefield Hall towards Kessingland, around 650-1400m west of the site
- a line of anti-tank cubes (GSE 046) zig-zags close to site, 70-550m north-west, and another (GSE 056) lies 150 m to the north
- barbed wire obstructions near Pakefield Holiday Centre off London Road (KSS 040) 500m to the west; stretches of barbed wire (GSE 044) 800m to the north; and a section of barbed wire obstruction (GSE 059) 50m east on the beach.
- a minefield (KSS 046) on the beach 650 m to the south
- two possible gun emplacements (KSS 047, 049), a DIVER battery YC and associated Nissen huts (KSS 048) are located 800 metres south of the site
- a possible anti-aircraft artillery site (KSS 041) 320m south-west, and a DIVER anti-aircraft battery and associated Nissen huts (GSE 049) 500 north
- spigot mortar emplacement (GSE 058) 300m west of the site.
- bomb craters (KSS 043) and (KSS 045) 700m south of the site

Off the coast, about 200m north-east of the site, a shipwreck (GSE 055) was a possible landing craft for practising beach landings.

Immediately north of the site, in 'Crazy Mary's Hole' - a natural breach in the cliffs – are a defensive trench (GSE 052) 370m north and an L-shaped line of anti-tank cubes with a possible pillbox (GSE 056) 150m north are located across. Between them are covered trench shelters, a pillbox and Nissen huts (GSE 054).

Several World War II defences are concentrated around Pakefield Hall. An L-shaped line of defensive scaffolding (GSE 057) is 700m west of the site. To the north-west are barbed wire obstructions and 2 possible gun emplacements (GSE 051) 260m away, gun emplacement and slit trenches (GSE 050) 630m away, another possible gun emplacement (GSE 048) and more trenches, three possible bomb craters and a pillbox (GSE 047) about 530m away from site.

3. Aims and objectives

3.1. Aims of the evaluation

The evaluation will seek to establish the character, date, state of preservation, and extent of any archaeological remains within the proposed development area.

In the event that archaeological remains are present, the evaluation will provide sufficient information to construct an archaeological conservation strategy, dealing with preservation, the recording of archaeological deposits, working practices, timetables and orders of cost.

3.2. Research frameworks

This excavation takes place within, and will contribute to the goals of Regional Research Frameworks relevant to this area:

- *Research and Archaeology: A Framework for the Eastern counties: 1. Resource Assessment* (Glazebrook 1997, East Anglian Archaeology Occasional Papers 3);
- *Research and Archaeology: A Framework for the Eastern counties: 2. Research Agenda and Strategy* (Brown & Glazebrook 2000, East Anglian Archaeology Occasional Papers 8)
- *Research and Archaeology Revisited: A Revised Framework for the East of England* (Medlycott 2011, East Anglian Archaeology Occasional Papers 24).

4. Methods

4.1. Background research

A suitable level of documentary research will be undertaken ahead of our excavation. This research will include existing information from historical sources and previous archaeological finds and investigations in the vicinity.

The results of the background study will not be formally presented separately, but will be incorporated into the final evaluation report.

4.2. Event number

An event number ESF23131 has been assigned by the Suffolk HER.

4.3. Trial Trenching

The trenching design conforms to the requirements of the Suffolk County Council's *Requirements for Archaeological Excavation 2012*.

The proposed trench at the Hollies will be positioned between Manholes 5 and 6 along the pipeline. (See the plan attached for the proposed trench location)

A single 50-metre long trench will be excavated.

Trial trench will be excavated by a 12-tonne 360 mechanical excavator to the

depth of geological horizons, or to the upper interface of archaeological features or deposits, whichever is encountered first. A toothless ditching bucket with a minimum bucket size of 1.8m will be used to excavate the trenches.

Topsoil, subsoil, and archaeological deposits will be kept separate during excavation, to allow for sequential backfilling of excavations. Trenches will not be backfilled without the approval the Suffolk Archaeological Service.

All machine excavation will take place under constant supervision of a suitably qualified and experienced archaeologist. The top of the first archaeological deposit will be cleared by machine, but will then be cleaned off by hand. Exposed surfaces will be cleaned by trowel and hoe as necessary, in order to clarify located features and deposits. Trench spoil will be scanned visually and with a metal detector to aid recovery of artefacts.

4.4. Recording of archaeological deposits and features

Records will comprise survey, drawn, written and photographic data.

Each feature will be individually documented on context sheets, and hand drawn in section and plan. Written descriptions will be recorded on pro-forma sheets comprising factual data and interpretative elements.

Where stratified deposits are encountered, a Harris Matrix will be compiled during the course of the excavation.

Site plans will normally drawn at 1:100, but on deeply-stratified sites a scale of 1:50 or 1:20 will be used. Detailed plans of individual features or groups will be at an appropriate scale (1:10 or 1:20). The site grid will be accurately tied into the Ordnance Survey National Grid and located on the 1:2500 or 1:1250 map of the area.

Long sections showing layers will be drawn at 1:50. Sections of features or short lengths of trenches will be drawn at 1:20. A register of sections will be kept. All sections will be tied in to Ordnance Datum.

The photographic record will comprise high resolution digital photographs.

4.5. Human remains

If we encounter human remains, we will immediately inform Anglian Water and the Suffolk Archaeological Service. Human remains will normally be left in situ, but excavation may be required where the remains are under imminent threat, or if information on date and preservation is required.

If excavation of human remains becomes necessary, a mitigation strategy will be prepared and submitted to the Suffolk Archaeological Service before any excavation is undertaken. A Burials License will also be requested from the Home Office. No excavation will be undertaken until approval has been received. Human remains will be excavated in accordance with all appropriate Environmental Health regulations.

Due to the wide range of variables involved with the excavation of human remains, costs for excavation, removal, and analysis of human remains has

not been included in any statement of costs accompanying or associated with this specification.

4.6. Metal detecting and the Treasure Act

Metal detector searches will take place at all stages of the excavation by an experienced metal detector user.

If finds are made that might constitute 'Treasure' under the definition of the Treasure Act (1996), they will if possible be excavated and removed to a safe place. We will report such finds to the local Coroner within 14 days, in accordance with the Act. Should it not be possible to remove the finds that day, suitable security will be arranged. The Suffolk Finds Liaison Officer for the Portable Antiquities Scheme will also be notified.

4.7. Archiving

The site archive will conform to the requirements of MoRPHE and local repository.

5. Reporting

5.1. Assessment Report

A post-excavation Assessment Report will be delivered within 4 weeks of the completion of fieldwork.

Post-excavation analysis and reporting will follow guidance in English Heritage's (2009) *Management of Research Projects in the Historic Environment*.

If substantial remains are recorded during the project, it may be necessary to undertake a full programme of analysis and publication in accordance with the guidelines contained in English Heritage's *Management of Archaeological Projects 2*. If this is the case, then a timetable and programme of work for this aspect of the project will need to be submitted to the Local Planning Authority for agreement.

5.2. Contents of the assessment report

The report will include:

- a title page detailing site address, site code and accession number, NGR, author/originating body, client's name and address
- full list of contents
- a non-technical summary of the findings
- a description of the geology and topography of the area
- a description of the methodologies used
- a description of the findings
- site and trench location plans, and plans of each area excavated showing the archaeological features found
- sections of excavated features
- interpretation of the archaeological features found

- specialist reports on artefacts and environmental finds
- relevant photographs of features
- a predictive model of surviving archaeological remains, where affected by development proposals, and assessment their importance
- the OASIS reference and summary form.

5.3. Draft and final reports

A draft copy of the report will be supplied to Suffolk Archaeology Service (SAS) for comment. Following approval of the draft report, one copy of the approved report will be provided to SAS.

One hard copy and one digital copy of the report will be supplied to the Suffolk Historic Environment Record.

A copy of the approved report will be uploaded to the OASIS database.

6. Timetable

The fieldwork is expected to take 2 working days to complete, based on a five-day week, working Monday to Friday. This does not allow for delays caused by bad weather.

Post-excavation tasks and report writing will take a maximum of 4 weeks following the end of fieldwork, unless there are exceptional discoveries requiring more lengthy analysis.

7. Staffing and support

7.1. Fieldwork

The fieldwork team will be made up of the following staff:

1 x Project Manager (supervisory only, not based on site)

1 x Project Officer/Supervisor (full-time)

1 x Site Assistants (as required)

1 x Finds Assistant (part-time, as required)

1 x Environmental Assistant (part-time, as required)

The Project Manager will be James Drummond-Murray.

All Site Assistants will be drawn from a pool of qualified and experienced staff. Oxford Archaeology East will not employ volunteer, amateur, or student staff, whether paid or unpaid, except as an addition to the team stated above.

7.2. Post-excavation processing

Based on the archaeological background of the area, it is anticipated that the site may produce Roman, Medieval and Modern remains, and environmental remains will also be sampled.

Pottery will be assessed by Alice Lyons (Roman) and Dr Paul Spoerry

(Saxon and medieval).

Environmental analysis will be carried out by OA East staff, in consultation with the OA Environmental Department in Oxford. The results will be reported to the English Heritage Regional Scientific Advisor. Environmental analysis will be undertaken by Rachel Fosberry (charred plant macrofossils, plant macrofossils), Liz Stafford (land molluscs), and Denise Druce and Mairead Rutherford (pollen analysis).

Faunal remains will be examined by Chris Faine.

Conservation will be undertaken by Colchester Museums.

In the event that OA's in-house specialists are unable to undertake the work within the time constraints of the project, or if other remains are found, specialists from the list at Appendix 2 will be approached to carry out analysis.

8. Other matters

8.1. Monitoring

After the completion of fieldwork, representatives of Anglian Water, OA East and the Suffolk Archaeological Service will meet on site to monitor the excavations and to discuss progress and findings to date and excavation strategies to be followed.

8.2. Insurance

OA East is covered by Public and Employer's Liability Insurance. The underwriting company is Allianz Cornhill Insurance plc, policy number SZ/14939479/06. Details of the policy can be seen at the OA East office.

8.3. Services, Public Rights of Way, Tree Preservation Orders etc.

The client will inform the project manager of any live or disused cables, gas pipes, water pipes or other services that may be affected by the proposed excavations before the commencement of fieldwork. Hidden cables/services should be clearly identified and marked where necessary.

The client will likewise inform the project manager of any public rights of way or permissive paths on or near the land which might affect or be affected by the work.

The client will also inform the project manager of any trees subject to Tree Preservation Orders within the subject site or on its boundaries

8.4. Site Security

Unless previously agreed with the Project Manager in writing, this specification and any associated statement of costs is based on the assumption that the site will be sufficiently secure for archaeological work to commence. All security requirements, including fencing, padlocks for gates etc. are the responsibility of the client.

8.5. Access

The client will secure access to the site for archaeological personnel and plant, and obtain the necessary permissions from owners and tenants to place a portable toilet on or near to the site. Any costs incurred to secure access, or incurred as a result of withholding of access will not be OA East's responsibility. The costs of any delays as a result of withheld access will be passed on to the client in addition to the project costs already specified.

8.6. Site Preparation

The client is responsible for clearing the site and preparing it so as to allow archaeological work to take place without further preparatory works, and any cost statement accompanying or associated with this specification is offered on this basis. Unless previously agreed in writing, the costs of any preparatory work required, including tree felling and removal, scrub or undergrowth clearance, removal of concrete or hard standing, demolition of buildings or sheds, or removal of excessive overburden, refuse or dumped material, will be charged to the client, in addition to any costs for archaeological evaluation already agreed.

8.7. Backfilling/Reinstatement

Backfilling but not reinstatement of trenches is included in the cost unless otherwise agreed with the client.

8.8. Monitoring

The relevant planning authority will be informed appropriately of dates and arrangements to allow for adequate monitoring of the works.

8.9. Health and Safety, Risk Assessments

A risk assessment covering all activities to be carried out during the lifetime of the project will be prepared before work commences, and submitted to the Cambridgeshire Historic Environment Team, as required in the Written Brief. This will draw on OA East's activity-specific risk assessment literature and conforms with CDM requirements.

All aspects of the project, both in the field and in the office will be conducted according to OA East's Health and Safety Policy, Oxford Archaeology Ltd's Health and Safety Policy, and Health and Safety in Field Archaeology (J.L. Allen and A. St John-Holt, 1997). A copy of OA East's Health and Safety Policy can be supplied on request.

APPENDIX 1: EXCAVATION AND SAMPLING STRATEGY, AND FINDS PROCESSING PROCEDURES

Relevant excavation standards and guidelines

The proposed archaeological excavation and analysis will be conducted in accordance with current best archaeological practice and the appropriate national and regional standards and guidelines.

All work will be conducted in accordance with the Institute for Archaeologists':

- Code of Conduct
- Standard and Guidance for Archaeological Watching Briefs
- Standard and Guidance for Archaeological Field Evaluations
- Standard and Guidance for Archaeological Excavation.

Additional guidelines, specific to the region, which we also adhere to are:

- *Standards for Field Archaeology in the East of England* (East Anglian Archaeology Occasional Paper 14)

All fieldwork will be undertaken in accordance with the requirements of the OA Field Manual (ed. D Wilkinson 1992), and the revised OA fieldwork manual (publication forthcoming). Further guidance is provided to all excavators in the form of the *OA Fieldwork Crib Sheets – a companion guide to the Fieldwork Manual*. These have been issued ahead of formal publication of the revised Fieldwork Manual.

Excavation of archaeology

All excavation of all archaeological deposits will be done by hand unless it can be shown there will be no loss of evidence using a machine. The method of excavation will be decided by the senior project archaeologist. Significant archaeological features (e.g. solid or bonded structural remains, building slots or post-holes) will be preserved intact, even if fills are sampled.

Exposed surfaces will be cleaned by trowel and hoe as necessary in order to clarify features and deposits. Any archaeological features revealed may be excavated and sampled to gauge their date and character. Trench spoil will be scanned visually and with a metal detector to aid recovery of artefacts.

All features will be investigated and recorded to provide an accurate evaluation of archaeological potential, whilst at the same time minimising disturbance to archaeological structures, features and deposits.

There will be sufficient excavation to give clear evidence for the period, depth, and nature of any archaeological deposit. We will use the following levels for excavating features, unless other are agreed during the project.

<i>Feature Class</i>	<i>Proportion</i>
Layers/deposits/horizontal stratigraphy relating to domestic/industrial activity (e.g. hearths, floor surfaces)	100%
Post-built structures of pre-modern date	100%
Domestic ring-ditches or roundhouse gullies	50%
Pits associated with agricultural & other activities	50%
Linear features (ditches & gullies) associated with structural remains (minimum 1m slot excavated across width)	20%
Pre-modern linear features not associated with structural remains (minimum 1m slot excavated across width)	10%
Human burials, cremations & other deposits relating to funerary activity	100%

The depth and nature of colluvial or other masking deposits will also be established across the site. Any natural subsoil surface revealed will be hand cleaned and examined for archaeological deposits and artefacts.

Spoil will be scanned visually and with a metal detector to aid recovery of artefacts.

Bulk sampling

Features with good potential for retrieving environmental remains will be targeted for sampling.

Bulk samples of up to 40 litres per sample will be taken by the excavator, then tested for the presence and potential of micro- and macro-botanical environmental indicators. Testing will be done in consultation with the English Heritage Regional Scientific Advisor (Helen Chappell) and the projects environmental specialist.

Environmental sampling will follow the guidelines set out in:

- English Heritage (2011, 2nd edition) *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation*.
- Association for Environmental Archaeology (1995) *Environmental archaeology and archaeological evaluations. Recommendations concerning the environmental archaeology component of archaeological evaluations in England*. Working Papers of the Association for Environmental Archaeology 2. York: Association for Environmental Archaeology.
- Dobney, K., Hall, A., Kenward, H. & Milles, A. (1992) *A working classification of sample types for environmental archaeology*. *Circaea* 9.1: 24-26
- Murphy, P.L. & Wiltshire, P.E.J. (1994) *A guide to sampling archaeological deposits for environmental analysis*
- English Heritage (2011) *Environmental Archaeology, A guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-Excavation*.

Finds processing

A finds supervisor will be appointed to oversee the collection, processing, cataloguing, and specialist advice on all artefacts collected. Artefacts will be collected by hand and metal detector, assigned a context number and returned to OAE offices daily for processing.

All artefacts will be treated in accordance with UKIC guidelines, *First Aid for Finds* (1998). All finds will be bagged and labelled according to the individual deposit from which they were recovered, ready for later cleaning and analysis.

Processing will take place in tandem with excavation, and advice will be sought from relevant specialists on key artefact types. (See Appendix 2 for a list of specialists.) The Project Manager and fieldwork project officer will be given feedback to enable them to develop excavation strategies during fieldwork.

Any finds requiring specialist treatment and conservation will be sent for appropriate treatment.

APPENDIX 2: CONSULTANT SPECIALISTS

NAME	SPECIALISM	ORGANISATION
Allen, Leigh	Worked bone, CBM, medieval metalwork	Oxford Archaeology
Allen, Martin	Medieval coins	Fitzwilliam Museum
Anderson, Sue	HSR, pottery and CBM	Suffolk County Council
Bayliss, Alex	C14	English Heritage
Biddulph, Edward	Roman pottery	Oxford Archaeology
Bishop, Barry	Lithics	Freelance
Blinkhorn, Paul	Iron Age, Anglo-Saxon and medieval pottery	Freelance
Boardman, Sheila	Plant macrofossils, charcoal	Oxford Archaeology
Bonsall, Sandra	Plant macrofossils; pollen preparations	Oxford Archaeology
Booth, Paul	Roman pottery and coins	Oxford Archaeology
Boreham, Steve	Pollen and soils/ geology	Cambridge University
Brown, Lisa	Prehistoric pottery	Oxford Archaeology
Cane, Jon	illustration & reconstruction artist	Freelance
Champness, Carl	Snails, geoarchaeology	Oxford Archaeology
Cotter, John	Medieval/post-Medieval finds, pottery, CBM	Oxford Archaeology
Crummy, Nina	Small Find Assemblages	Freelance
Cowgill, Jane	Slag/metalworking residues	Freelance
Darrah, Richard	Wood technology	Freelance
Dickson, Anthony	Worked Flint	Oxford Archaeology
Donnelly, Mike	Flint	Oxford Archaeology
Doonan, Roger	Slags, metallurgy	
Druce, Denise	Pollen, charred plants, charcoal/wood identification, sediment coring and interpretation	Oxford Archaeology
Drury, Paul	CBM (specialised)	Freelance
Evans, Jerry	Roman pottery	Freelance
Faine, Chris	Animal bone	Oxford Archaeology
Fletcher, Carole	Medieval pot, glass, small finds	Oxford Archaeology
Fosberry, Rachel	Charred plant remains	Oxford Archaeology
Fryer, Val	Molluscs/environmental	Freelance
Gale, Rowena	Charcoal ID	Freelance
Geake, Helen	Small finds	Freelance
Gleed-Owen, Chris	Herpetologist	
Goffin, Richenda	Post-Roman pottery, building materials, painted wall plaster	Suffolk CC
Hamilton-Dyer, Sheila	Fish and small animal bones	
Howard-Davis, Chris	Small finds, Mesolithic flint, RB coarse pottery, leather, wooden objects and wood technology;	Oxford Archaeology

NAME	SPECIALISM	ORGANISATION
Hunter, Kath	Archaeobotany (charred, waterlogged and mineralised plant remains)	Oxford Archaeology
Jones, Jenny	Conservation	ASUD, Durham University
King, David	Window glass & lead	
Locker, Alison	Fishbone	
Loe, Louise	Osteologist	Oxford Archaeology
Lyons, Alice	Late Iron Age/Roman pottery	Oxford Archaeology
Macaulay, Stephen	Roman pottery	Oxford Archaeology
Masters, Pete	geophysics	Cranfield University
Middleton, Paul	Phosphates/garden history	Peterborough Regional College
Mould, Quita	Ironwork, leather	
Nicholson, Rebecca	Fish and small mammal and bird bones, shell	Oxford Archaeology
Palmer, Rog	Aerial photographs	Air Photo Services
Percival, Sarah	Prehistoric pottery, quern stones	Freelance
Poole, Cynthia	Multi-period finds, CBM, fired clay	Oxford Archaeology
Popescu, Adrian	Roman coins	Fitzwilliam Museum
Rackham, James	Faunal and plant remains, can arrange pollen analysis	
Riddler, Ian	Anglo-Saxon bone objects & related artefact types	Freelance
Robinson, Mark	Insects	
Rowland, Steve	Faunal and human bone	Oxford Archaeology
Rutherford, Mairead	Pollen, non-pollen palynomorphs, dinoflagellate cysts, diatoms	Oxford Archaeology
Samuels, Mark	Architectural stonework	Freelance
Scaife, Rob	Pollen	
Scott, Ian	Roman, Medieval, post-medieval finds, metalwork, glass	Oxford Archaeology
Sealey, Paul	Iron Age pottery	Freelance
Shafrey, Ruth	Worked stone, cbm	Oxford Archaeology
Smith, Ian	Animal Bone	Oxford Archaeology
Spoerry, Paul	Medieval pottery	Oxford Archaeology
Stafford, Liz	Snails	Oxford Archaeology
Strid, Lena	Animal bone	Oxford Archaeology
Tyers, Ian	Dendrochronology	
Ui Choileain, Zoe	Human bone	Oxford Archaeology
Vickers, Kim	Insects	Sheffield University
Wadson, Stephen	Samian, Roman glass	Oxford Archaeology
Walker, Helen	Medieval Pottery in the Essex area	
Way, Twigs	Medieval landscape and garden history	Freelance
Webb, Helen	Osteologist	Oxford Archaeology

NAME	SPECIALISM	ORGANISATION
Willis, Steve	Iron Age pottery	
Young, Jane	Medieval Pottery in the Lincolnshire area	
Zant, John	Coins	Oxford Archaeology

Radiocarbon dating is normally undertaken for Oxford Archaeology East by SUERC and by the Oxford University Accelerator Laboratory.

Geophysical prospection is normally undertaken by Cranfield University, Geoquest, and Geophysical Surveys, Bradford.



Head Office/Registered Office/ OA South

Janus House
Osney Mead
Oxford OX2 0ES

t: +44 (0) 1865 263 800
f: +44 (0) 1865 793 496
e: info@oxfordarchaeology.com
w: <http://oxfordarchaeology.com>

OA North

Mill 3
Moor Lane
Lancaster LA1 1QD

t: +44 (0) 1524 541 000
f: +44 (0) 1524 848 606
e: [oanorth@oxfordarchaeology.com](mailto: oanorth@oxfordarchaeology.com)
w: <http://oxfordarchaeology.com>

OA East

15 Trafalgar Way
Bar Hill
Cambridgeshire
CB23 8SQ

t: +44 (0) 1223 850500
e: [oaeast@oxfordarchaeology.com](mailto: oaeast@oxfordarchaeology.com)
w: <http://oxfordarchaeology.com>



Director: Gill Hey, BA PhD FSA MCIFA
*Oxford Archaeology Ltd is a
Private Limited Company, N^o: 1618597
and a Registered Charity, N^o: 285627*