

Furrows and Undated Ditches
Maurice Wilkes Building
St Johns Innovation Park
Cowley Road
Cambridge



Archaeological
Evaluation Report



January 2014

Client: St John's College

OA East Report No: 1577

OASIS No: oxfordar3-169523

NGR: TL 4704 6161

**Furrows and Undated Ditches, Maurice Wilkes Building, St Johns Innovation
Park, Cowley Road, Cambridge**

Archaeological Evaluation

By Stuart Ladd BA MA PifA

Editor: Chris Thatcher BA

Illustrator: Stuart Ladd BA MA PifA

Report Date: January 2014

Report Number: 1577

Site Name: Maurice Wilkes Building, St Johns Innovation Park, Cowley Road, Cambridge

HER Event No: ECB 4090

Date of Works: January 2014

Client Name: St John's College, Cambridge

Client Ref:

Planning Ref: S/1510/12/FL

Grid Ref: TL 4704 6161

Site Code: CAMSJI13

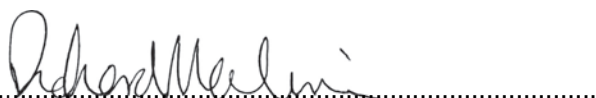
Finance Code: CAMSJI13

Receiving Body: CCC Stores, Landbeach

Accession No:

Prepared by: Stuart Ladd
Position: Supervisor
Date: January 2014

Checked by: Richard Mortimer
Position: Senior Project Manager
Date: January 2014
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: oeast@thehumanjourney.net
w: <http://thehumanjourney.net/oeast>

© Oxford Archaeology East 2014
Oxford Archaeology Limited is a Registered Charity No: 285627

Table of Contents

Summary.....	5
1 Introduction.....	7
1.1 Location and scope of work.....	7
1.2 Geology and topography.....	7
1.3 Archaeological and historical background.....	7
1.4 Acknowledgements.....	8
2 Aims and Methodology.....	9
2.1 Aims.....	9
2.2 Methodology.....	9
3 Results.....	10
3.1 Introduction	10
3.2 Deposit Model.....	10
3.3 Undated Ditch, Gully and Ditch Terminus.....	10
3.4 Furrows.....	10
3.5 Modern feature.....	10
4 Discussion and Conclusions.....	11
4.1 Ditches.....	11
4.2 Furrows.....	11
4.3 Conclusion.....	11
4.4 Recommendations.....	11
Appendix A. Trench Descriptions.....	12
Appendix B. Bibliography	14
Appendix C. OASIS Report Form	15

List of Figures

- Fig. 1 Site location map
Fig. 2 Trench Plan
Fig. 3 Section drawings

List of Plates

- Plate 1 Ditch **14**, looking south-west
Plate 2 Trench 2, looking south-east

Summary

Six evaluation trenches, up to 30m long, were excavated in a field off Cowley Road, Cambridge. Two furrows were recorded crossing two of the trenches and one earlier but undated ditch was excavated in three trenches. A modern feature, possibly a 20th century sewer, was visible in three of the trenches.

1 INTRODUCTION

1.1 Location and scope of work

- 1.1.1 An archaeological evaluation was conducted at the Maurice Wilkes Building, Cowley Road, St Johns Innovation Park, Cambridge.
- 1.1.2 This archaeological evaluation was undertaken in accordance with a Brief issued by Andy Thomas of Cambridgeshire County Council (CCC 2013; Planning Application S/1510/12/FL), supplemented by a Specification prepared by OA East (Moan 2013).
- 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 CCC, 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 site is situated on second terrace river gravels overlying a Gault formation mudstone bedrock (BGS Geology of Britain Viewer, <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>). Deposits of chalk marl were also observed at lower levels in the east of the site.

1.3 Archaeological and historical background

Prehistoric

- 1.3.1 There is extensive evidence for prehistoric activity recorded within the area surrounding the development site. Palaeolithic find spots are recorded to the south-west of site, with a small ovate handaxe found in the garden of 377 Milton Road (MCB19188) and a number of hand axes and flakes recovered from the Milton Road gravel pits (CHER 05224). Worked stone objects dated as “prehistoric” were also recovered from the vicinity in 1949 (CHER 05219).
- 1.3.2 Further records of prehistoric date nearby include Bronze Age beaker fragments from Milton (CHER 05532), a number of Late Bronze Age hoards from gravel pits 900m to the south-west of the development site (CHER 05452) and a number of Bronze Age features 800m to the north north-east (CB14682).
- 1.3.3 Iron Age remains have also been found nearby, including a group of pits (CHER 05452a), 900m to the south-west of site. Prehistoric pottery with no exact date or provenance was also found to the south, somewhere on Green End Road (05218).
- 1.3.4 Two possible ring ditch cropmarks are recorded nearby from aerial photographs with one (CHER 08326) lying only 100m north-west of the development site and another 800m to the north north-west (CHER 08329). Further prehistoric evidence was seen in archaeological evaluations carried out at both the Cambridge Science Park (MCB17525) 700m to the north-west and Nuffield Road (MCB15907) 800m to the south.

- 1.3.5 As a result of the site's location on second terrace river gravels, and the number of prehistoric find spots nearby, the development was considered to have a moderate potential for the presence of prehistoric material.

Roman

- 1.3.6 There is some evidence from the surrounding area for Roman settlement activity, particularly at the site of the sewage works 1km to the east, on the north terrace of the river Cam, where a Romano-British settlement, including human remains, was excavated prior to 1903 (CHER 05281). Further Roman activity is recorded to the north of the sewage works in the form of Roman pottery (CHER 05536) and ditches (CHER 05308). To the south south-west of site a Roman coin was recovered from Green End Road in 1954 (CHER 05541), a Roman ring was also recovered to the west (CHER 05217).
- 1.3.7 From the known records, there was a moderate to low potential for the site to have Roman remains.

Saxon and Medieval

- 1.3.8 The Cambridgeshire HER does not list any remains related to Saxon activity within the vicinity of site. Medieval remains are also sparse, with possible medieval ridge and furrow recorded 600m to the south-east at Cowley Monument Park (MCB15918). The putative site of a medieval cross, depicted on a map circa 1838-1840 (CHER 05229), lies directly to the south of the development area.
- 1.3.9 Due to the lack of any major records of Saxon to medieval date, the site was deemed to have low potential for finding any such remains.

Post medieval and modern

- 1.3.10 Post-medieval records are more common, with ridge and furrow found to the north-west at Cambridge Science Park (MCB17526) and a post medieval boundary ditch recorded directly to the north of the development area (CHER 08330).
- 1.3.11 Records of modern date are numerous and varied near the development. They include a Second World War Pillbox to the north-west (MCB16399), the crash site of a Dornier bomber near the Milton Road Allotments (MCB19267) and records relating to the disused/dismantled railway line (MCB19611, CHER10117, MCB19625). There was a moderate to high potential for the site to contain post-medieval remains, due to the proximity of some HER records.

1.4 Acknowledgements

- 1.4.1 The work was commissioned by Sweett (UK) Ltd for St John's College with machine excavation undertaken by Grant Miller. The site was excavated by Toby Knight and Stuart Ladd, who also carried out the survey. The project was managed by Richard Mortimer and the site was monitored by Andy Thomas of Cambridgeshire Historic Environment Team.

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 Machine excavation was carried out under constant archaeological supervision with a wheeled JCB-type excavator using a toothless ditching bucket.
- 2.2.2 The site survey was carried out using a Leica CPS1200 System using SmartNet technology.
- 2.2.3 Spoil, exposed surfaces and features were scanned with a metal detector. No metal detected objects were found, 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 environment samples were taken due to the paucity of cultural material and activity at the site.
- 2.2.6 Conditions were dry, just freezing, causing some damp topsoil later in the day but the soil and natural deposits drained well.

3 RESULTS

3.1 Introduction

- 3.1.1 The results are presented below by feature. Their limited number and distribution means that they can clearly be interpolated between trenches (see Fig. 2). Trench descriptions are given in Appendix A.

3.2 Deposit Model

- 3.2.1 Top soil was in general 0.2m thick and sandy. Subsoil varied, generally between 0.3-0.4m in thickness in the higher part of the site to the north-west (Trenches 1, 2 and 3) to 0.2m or less towards the lower, eastern side of the site (Trench 5).
- 3.2.2 The western side of site may have been ploughed less intensively, sitting as it did on natural marl deposits rather than the gravel and sand covering much of the site. The subsoil was clean, only rarely producing fragments of brick or tile, suggesting a medieval ploughsoil filling the furrows, with only occasional post-medieval intrusive Ceramic Building Material (CBM) recovered.

3.3 Undated Ditch, Gully and Ditch Terminus

- 3.3.1 A small ditch (0.6-0.9m wide by 0.3-0.4m deep) with a rounded v-shaped base was recorded running from north north-east to south south-west through Trenches 1, 2 and 6 (cuts **3**, **12**, **14** respectively). It was filled with light greyish brown silty sand which produced no finds (4, 11 and 13 respectively). This feature was sealed by the subsoil and although no dating evidence was recovered it is likely to be of pre-medieval date.
- 3.3.2 Five metres to the east, in Trench 1, lay a small gully (**5**), 0.35m wide and 0.2m deep with a curved base. Its fill (6) was similar to that of the ditch and also produced no finds.
- 3.3.3 At the southern end of Trench 5 was a ditch terminus 3.3m in length, 0.4m wide and aligned south-west to north-east. It was truncated to within 80mm of its base and its light brown silty clay fill (8) contained no finds.

3.4 Furrows

- 3.4.1 Two furrows were recorded running broadly parallel with the eastern site boundary (formerly Milton Road, now Cowley Road). They both crossed Trenches 2 and 6 at right angles, about 12m apart, offset in Trench 6 by about 1m to the west, suggesting a slight reverse S-shape. The furrows were not visible further north in Trench 1, but a rise towards the northern site boundary was visible. This may represent modern made ground to retain the neighbouring car park.
- 3.4.2 The fills of the furrows were only slightly darker than the subsoil, with no clear line distinguishing them.

3.5 Modern feature

- 3.5.1 A modern feature approximately 2m in width ran parallel with Old Milton Road, crossing the eastern end of Trench 2 and falling within the eastern ends of Trenches 1 and 6. This feature clearly cut the subsoil and had been backfilled and compacted. It has been suggested this may be a 20th-century sewer connecting to the nearby Sewage Works to the north-east.

4 DISCUSSION AND CONCLUSIONS

4.1 Ditches

- 4.1.1 The ditches, although undated, clearly pre-date the subsoil and furrows. Ditch **3/12/16**, which ran north north-east to south south-west, would be perpendicular to the linear crop marks associated with the ring ditch 100m to the north-west (CHER 08326), now under office buildings. It should be noted that these are described as 'suspect, probably frost cracks' so no real association can be drawn.
- 4.1.2 Ditch **5**, in Trench 1, was situated on the line of a furrow in Trench 2 and may therefore represent the truncated remains of a precursor to the furrow system. However, the furrows were not present this far north.
- 4.1.3 Ditch **7** in Trench 5 did not share an alignment with any of the features either on site or the old Milton Road and remains undated.

4.2 Furrows

- 4.2.1 The furrows uncovered here could be related to either medieval Chesterton or Milton, lying at least 1km from the centre of either. Another example of ridge and furrow recorded nearby is at Cowley Business park, 600m to the south-east (CHER MCB 15918).

4.3 Conclusion

- 4.3.1 The lack of finds, even post-medieval CBM from the subsoil, suggests that the development site lay between settlements. Even if Ditch **3** was of Roman or prehistoric date, it lay far enough from any settlement focus to be completely devoid of finds, despite the excavation of three 1-metre sections.

4.4 Recommendations

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

APPENDIX A. TRENCH DESCRIPTIONS

Trench 1						
General description					Orientation	E-W
Close to northern boundary, but away from slope/buildup for car park. Gravel and sand natural deposits					Avg. depth (m)	0.7
					Width (m)	1.60
					Length (m)	28
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
1	Layer	-	0.3	Topsoil	-	-
2	Layer	-	0.3	Subsoil	-	-
3	Cut	0.8	0.3	Ditch, rounded V-shape, =12, 14	-	-
4	Fill			f/o 3. Silty clay	-	-
5	Cut	0.3	0.18	Linear thin ditch	-	-
6	Fill			f/o 5. Silty clay	-	-

Trench 2						
General description					Orientation	E-W
Two furrows and one ditch cut into sand and gravel.					Avg. depth (m)	0.6
					Width (m)	1.6
					Length (m)	28.1
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
9	Fill	-		f/o 10 mid-light brown sandy silt,	-	-
10	Cut	2m	0.15	Furrow	-	-
11	Fill	-	-	f/o 12 mid greyish brown silty sand	-	-
12	Cut	0.55	0.3	Ditch, rounded V-shape = 3, 14	-	-

Trench 3						
General description				Orientation		N-S
Trench devoid of archaeology. Sand and gravel natural deposits				Avg. depth (m)		0.6
				Width (m)		1.6
				Length (m)		28.6

Trench 4		
General description	Orientation	N-S
	Avg. depth (m)	0.55
	Width (m)	1.6
	Length (m)	24.8
Trench devoid of archaeology. Sand and gravel natural deposits.		

Trench 5							
General description					Orientation		N-S
					Avg. depth (m)		0.5
					Width (m)		1.6
					Length (m)		28.5
Single linear ditch terminus. Sand and marl natural deposits.							
Contexts							
context no	type	Width (m)	Depth (m)	comment	finds	date	
7	Cut	0.4	0.08	Truncated linear ditch terminus	-	-	
8	Fill	-	-	f/o 7 mid-light brown silty clay	-	-	

Trench 6						
General description					Orientation	N-S
Two furrows and one linear ditch.					Avg. depth (m)	0.5
					Width (m)	1.6
					Length (m)	29
Contexts						
context no	type	Width (m)	Depth (m)	comment	finds	date
13	Fill			f/o 14 mid greyish brown silty sand	-	-
14	Cut	0.6	0.25	Linear ditch, rounded V-shape, = 3, 12	-	-

APPENDIX B. BIBLIOGRAPHY

- | | | |
|-------------------------------|------|---|
| British Geological Survey | 2013 | <i>Geology of Britain Viewer</i> ,
http://mapapps.bgs.ac.uk/geologyofbritain/home.html . Accessed 10th January 2014. |
| Cambridgeshire County Council | 2013 | <i>Brief for Archaeological Evaluation, Cowley Road, St John's Innovation Park, The Toe Site</i> , Cambridgeshire HET Brief |
| Moan, P, Mortimer, R | 2013 | <i>Specification for Archaeological Evaluation, Toe Site, Cowley Road, St John's Innovation Park</i> , OAEast Specification |

APPENDIX C. OASIS REPORT FORM

All fields are required unless they are not applicable.

Project Details

OASIS Number	<input type="text"/>		
Project Name	<input type="text"/>		
Project Dates (fieldwork)	Start <input type="text"/>	Finish	<input type="text"/>
Previous Work (by OA East)	<input type="text"/>	Future Work	<input type="text"/>

Project Reference Codes

Site Code	<input type="text"/>	Planning App. No.	<input type="text"/>
HER No.	<input type="text"/>	Related HER/OASIS No.	<input type="text"/>

Type of Project/Techniques Used

Prompt	<input type="text"/>
Development Type	<input type="text"/>

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 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 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
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Project Location

County	<input type="text"/>	Site Address (including postcode if possible)
District	<input type="text"/>	<input type="text"/>
Parish	<input type="text"/>	
HER	<input type="text"/>	
Study Area	<input type="text"/>	National Grid Reference <input type="text"/>

Project Originators

Organisation	
Project Brief Originator	
Project Design Originator	
Project Manager	
Supervisor	

Project Archives

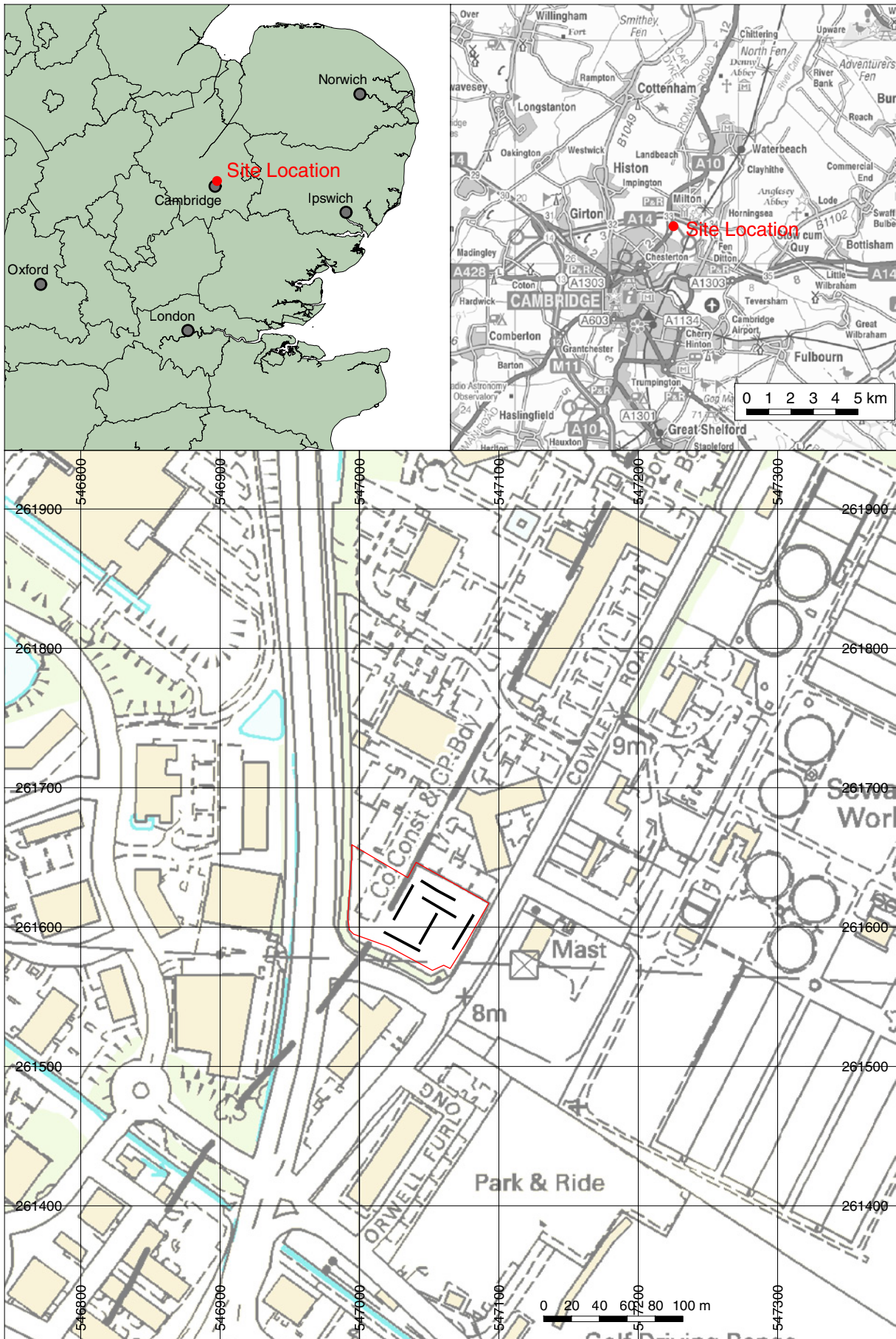
Physical Archive	Digital Archive	Paper Archive

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 type="checkbox"/> Database	<input type="checkbox"/> Aerial Photos
<input type="checkbox"/> GIS	<input type="checkbox"/> Context Sheet
<input type="checkbox"/> Geophysics	<input type="checkbox"/> Correspondence
<input type="checkbox"/> Images	<input type="checkbox"/> Diary
<input 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 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 type="checkbox"/> Plans
	<input type="checkbox"/> Report
	<input type="checkbox"/> Sections
	<input type="checkbox"/> Survey

Notes:



Contains Ordnance Survey data © Crown copyright and database right 2013. All rights reserved. License No. AL 10001998

Figure 1: Site location showing archaeological trenches (black) in development area (red)

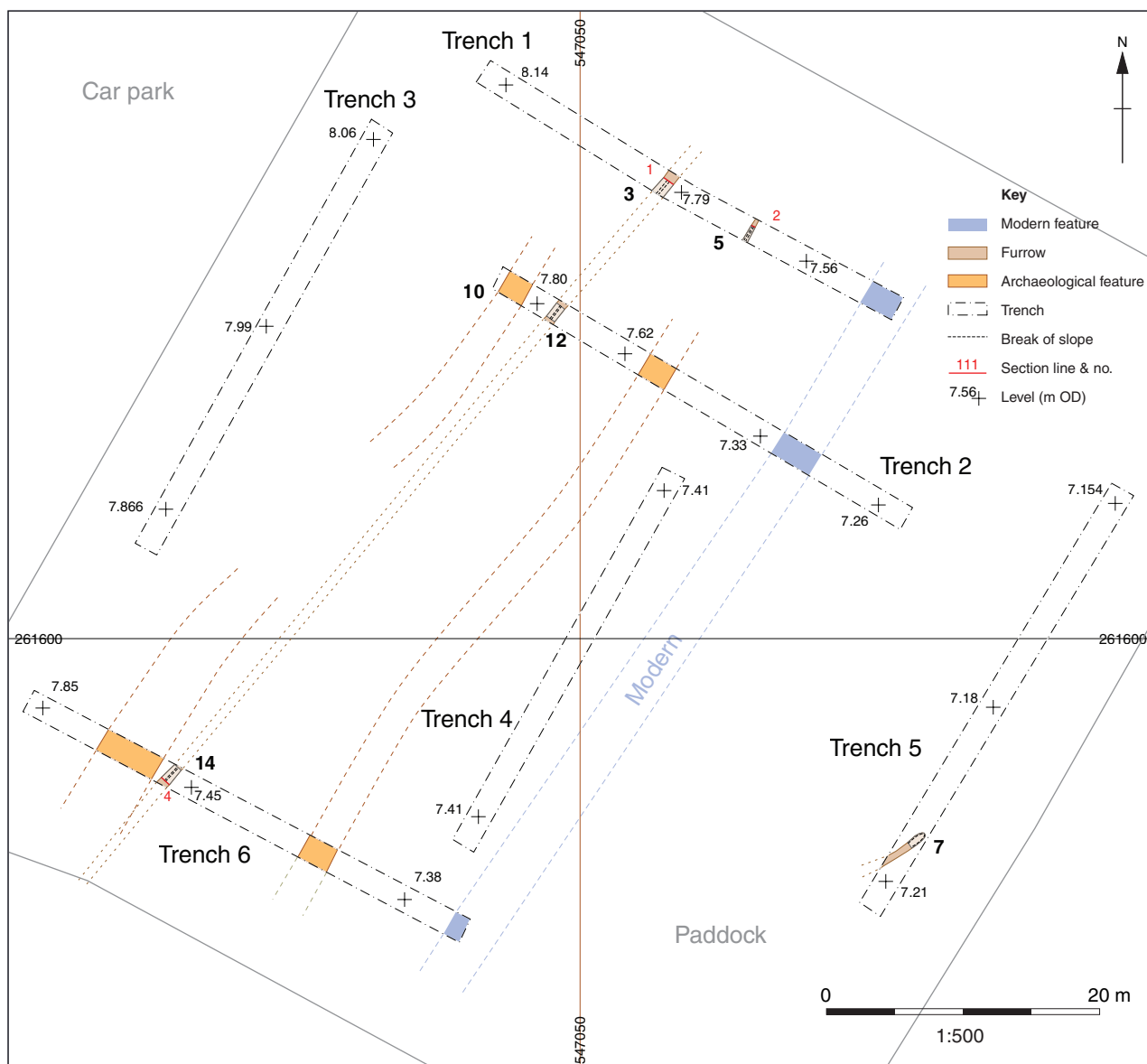


Figure 2: Trench plan

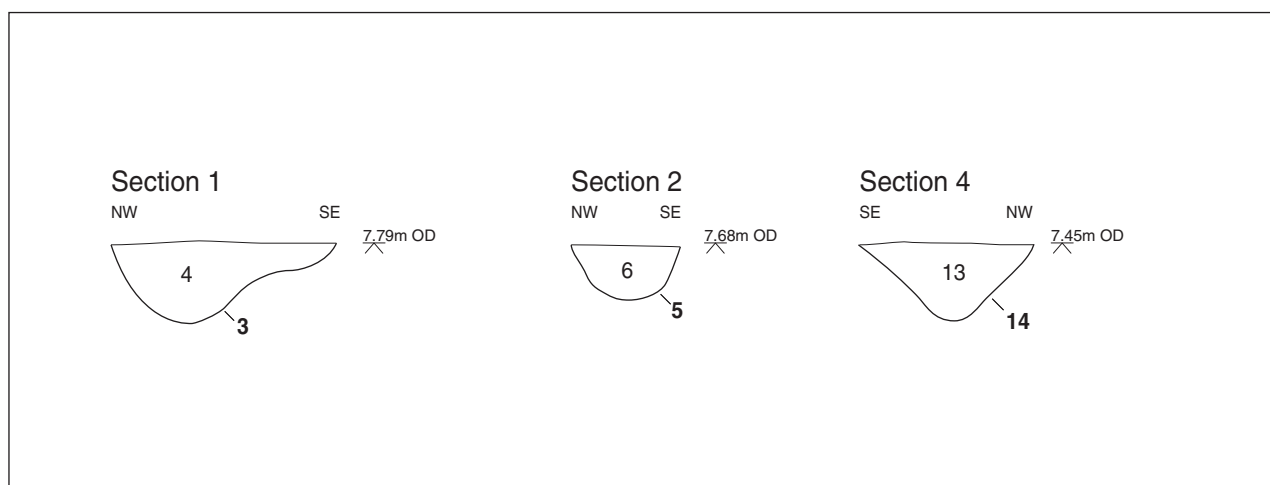


Figure 3: Section drawings

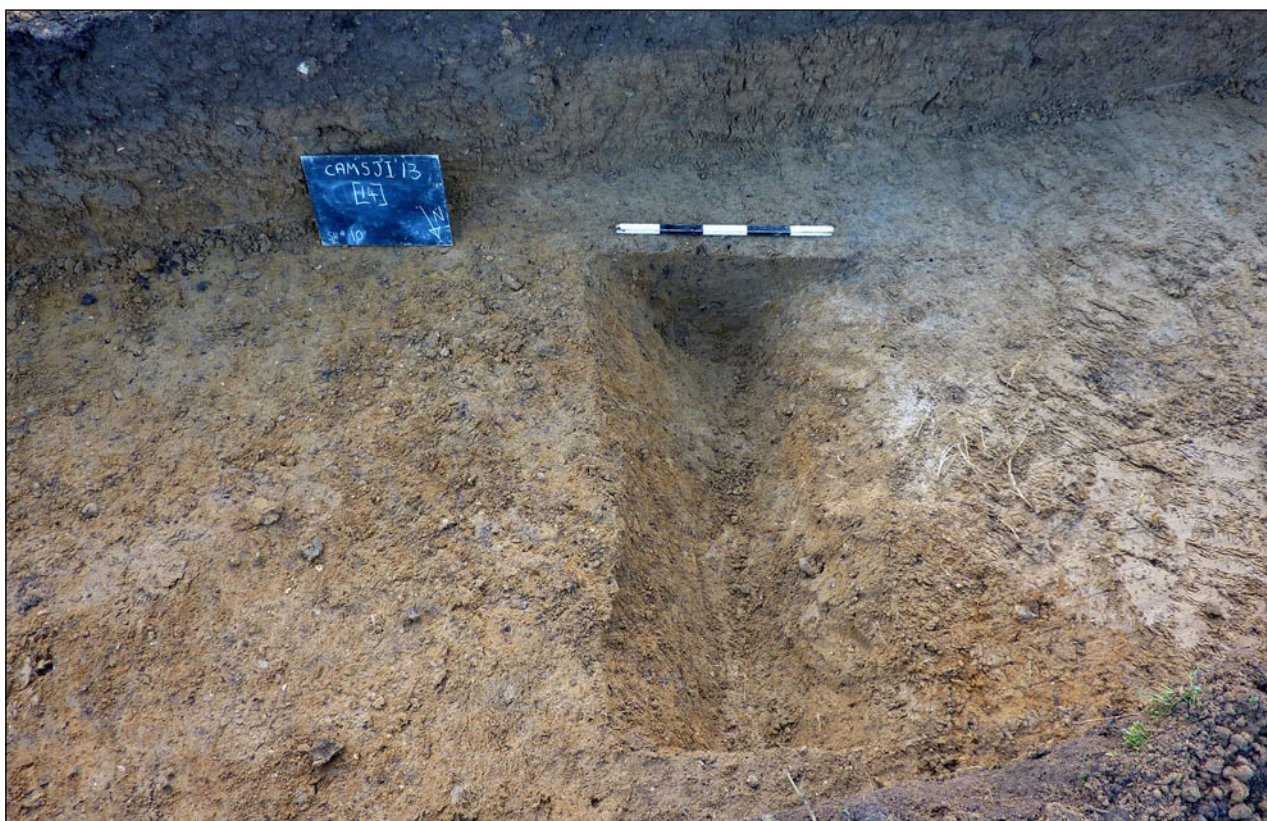


Plate 1: Ditch 14 in Trench 6, looking south-west (1m scale)



Plate 2: Trench 2, looking south-east (1m scale)



**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 1GF

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 850 500
e: [oaeast@oxfordarchaeology.com](mailto: oaeast@oxfordarchaeology.com)
w: <http://oxfordarchaeology.com>



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