Eastbury Village Flood Alleviation Scheme Berkshire

Archaeological Watching Brief Report

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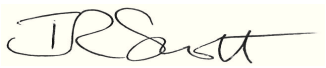
1	Mike Sims Project Supervisor	Katrina Anker Senior Project Manager	Ian Scott Finds Specialist	

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Illustrated by:	Markus Dylewski

Janus House
Osney Mead
Oxford OX2 0ES
t: +44 (0) 1865 263800 e: info@oxfordarch.co.uk
f: +44 (0) 1865 793496 w: oxfordarchaeology.com
Oxford Archaeology Limited is a Registered Charity No: 285627

Eastbury Village Flood Alleviation Scheme, Berkshire

Archaeological Watching Brief Report

Written by Mike Sims

and illustrated by Markus Dylewski

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Summary

Between the 10th and 16th of September 2013, Oxford Archaeology conducted an archaeological watching brief during geo-technical test pitting on the site of the proposed Eastbury Village Flood Alleviation Scheme, Berkshire (centred at NGR: SU 340 777).

The watching briefs observed deep deposits of both colluvium and alluvium overlying the natural deposits. Evidence of undated ridge and furrow working was recorded on the north side of the River Lambourn, but no other significant archaeology was encountered.

1 INTRODUCTION

1.1 Scope of work

1.1.1 Eastbury village suffers from a variety of flooding problems, of which the River Lambourn is a major source.

1.1.2 A feasibility study was undertaken in 2007 to list flood protection options. CH2M HILL subsequently appraised the preferred option for the scheme (CH2M HILL Halcrow 2013a); this set out to create a new river channel and insert a new flood embankment and 'control structure'.

1.1.3 The scheme required a phase of geotechnical ground investigation across the area to be affected by the scheme. As part of the scheme's remit, an archaeological watching brief was to be undertaken during this work.

1.1.4 CH2M HILL produced an archaeological Written Scheme of Investigation (WSI) giving a detailed method statement for archaeological monitoring of the ground investigation (CH2M HILL 2013a).

1.2 Location, geology and topography

1.2.1 The village of Eastbury is situated in a valley in the Lambourn Downs, approximately 10km south of Wantage and 9km north of Hungerford (Fig. 1).

1.2.2 The site of the proposed scheme is located 600m north-west of the centre of the village and lies south of the road connecting Lambourn and Eastbury (centred at NGR: SU 340 777).

1.2.3 The site itself has been laid down to grass and trees and takes the form of two paddocks lying on a narrow strip of roughly level floodplain either side of the River Lambourn at approximately 115m aOD, with arable land rising steeply to the south and pasture rising to the north.

1.2.4 The underlying geology is River and Valley gravels over Upper Chalk (Geological Survey of Great Britain, Sheet no 267).

1.3 Archaeological and historical background

1.3.1 A cultural heritage 'constraints and issues' report (CH2M HILL Halcrow 2013b) established that the village of Eastbury was an historic medieval village and that in the area of the chosen option a number of Bronze Age, Romano-British and early medieval find spots have been recorded. On either side of the scheme option there are areas of

cropmarks, which have been identified as lynchets (relict field systems most likely of medieval and post medieval date).

1.3.2 Visible on the pasture land to the north of the site are distinct terraces and trackways, (although further research has suggested that some of these may relate to the old Lambourn Valley Railway), while traces of ridge and furrow working are visible within the paddock on the northern side of the river.

1.3.3 South of the river there are traces of an earlier river meander visible, but no other features.

2 Project Aims and Methodology

2.1 Aims

2.1.1 The aims of the archaeological monitoring was to:

• preserve any exposed archaeological deposits by record; and

• provide a report on the results, utilizing the data from the Principal Contractor's ground investigation report.

2.1.2 The objectives of the monitoring was to:

• record evidence of medieval and post-medieval agricultural activity;

• recover any artefactual material from the arisings;

• identify any features from the prehistoric, Romano-British, early medieval and post medieval periods;

• locate the presence of peaty/ organic deposits in the trench sections or in the spoil; and to

• identify areas of modern disturbance

2.2 Methodology

2.2.1 The watching brief was undertaken as a continuous archaeological presence during those activities which had the potential to impact upon archaeological deposits. This work included the excavation of geo-technical pits.

2.2.2 The excavation of the trial pits was achieved using a wheeled excavator (JCB) fitted with a toothless bucket. In addition, hand excavated pits were dug prior to drilling bore holes.

2.2.3 All spoil generated by both the machine and hand excavations was examined for the presence of archaeological artefacts.

2.2.4 All features and deposits were issued with unique context numbers, and context recording was in accordance with established OA practices. Bulk finds were collected by context. Black-and-white negative photographs and a digital photographic record was taken of all excavations, general settings and archaeological sections.

2.2.5 A site plan showing the location of any excavations and any recorded sections was maintained (Fig. 2). Section drawings of features and sample sections were drawn at a scale of 1:20.

3 RESULTS

3.1 Description of deposits

3.1.1 The work monitored included the excavation of 5 geo-technical trial pits, 3 pits for drainage testing and 5 hand excavated pits on the site of the bore holes. Each of these will be described separately followed by an overall discussion and conclusion.

3.1.2 All the trial pits measured 3m long by 0.6m wide and was excavated to a maximum depth of 3m below ground level. They were all located on the southern side of the river (Fig. 2).

Trial Pit 1 (fig. 3 – section 1, plate 1)

3.1.3 The weathered top of the underlying chalk (102) was encountered at a depth of 0.82m below ground level. Above this was a 0.45m deep layer of pale brown clayey silt mixed with weathered chalk and quantities of sub-angular flint (101). This was covered by the present day topsoil and turf, a 0.37m deep layer of dark brown silty clay loam (100) which became lighter with depth.

Trial Pit 2 (fig. 3 – section 2, plate 2)

3.1.4 This pit was only excavated to a depth of 1.33m when the sides collapsed making further excavation impractical. The top of a layer of pale brown mixture of waterlogged weathered and decomposed chalk and silts (203) was reached at a depth of 0.8m below ground level. This could be seen to be in excess of 0.5m in depth before the sides collapsed.

3.1.5 Above this was a 0.15m deep band of brownish red clayey silt with chalk flecking (202). This was covered by a loose deposit of small to medium sized sub-angular flints in a dark grey-brown clayey silt matrix (201), 0.45m in depth. Overlying this was the present day topsoil and turf, a layer of dark brown silty clay loam (200) 0.2m deep.

Trial Pit 3 (fig. 3 – section 3)

3.1.6 A layer of off white finely weathered chalk and flints (303), was observed at a depth of 0.9m below ground level. This was overlain by a 0.4m deep layer of pale brown clayey silt mixed with weathered chalk and quantities of sub-angular flint (302).

3.1.7 Above this was a loose layer of sub-angular flints in a light brown sandy silt clay matrix, 0.4m in depth (301). This was sealed by the present day topsoil and turf, a layer of dark brown silty clay loam (300), 0.37m in depth.

Trial Pit 4 (fig. 4 – section 4, plate 3)

3.1.8 The stratigraphy recorded within this pit was similar to that in Pit 3 with the top of of the underlying chalk encountered at a depth of 1.1m below ground level (403). Above this was a layer of pale brown clayey silt containing weathered chalk and sub-angular flints (402) 0.45m in depth.

3.1.9 Overlying 402 was a 0.4m deep layer of light brown clayey silt, flint and weathered chalk (401).

3.1.10 This was covered by a 0.25m deep layer of dark brown silty loam, the present day topsoil and turf, (400).

Trial Pit 5 (fig. 3 – section 5, plate 4)

3.1.11 Chalk layer 503 was encountered at 1.30m below ground level. This was overlain by weathered top of the chalk (502). Above this was a 0.5m deep layer of light grey-brown clayey silt mixed with weathered chalk and sub-angular flint (501). Overlying this was the present day topsoil and turf a 0.3m deep layer of dark brown silty clay loam (500) which became lighter with depth.

Soak-a-way Trial Pits

3.1.12 For these geotechnical pits, a pit of known dimensions was dug and filled with water. A plot of the fall in water level against time was recorded. The stratigraphy within these pits was monitored as they were being excavated. Pit SWT1 was excavated on the southern side of the river while Pits SWT2 and SWT3 were dug on the north side of the river (Fig. 2).

Pit SWT1(fig. 3 – section 6)

3.1.13 This measured 1.5m square and was dug to a depth of 1m. The top of the underlying chalk (1002) was encountered at a depth of 0.9m below ground level. Above this was a layer of light grey-brown clayey silt mixed with weathered chalk and sub-angular flint, 0.5m (1001). This was overlaid by the topsoil and turf, a 0.4m deep layer of dark brown silty clay loam (1000).

Pit SWT2 (fig. 3 – section 7)

3.1.14 This measured 1m square and was machine dug to a depth of 1.5m. The top of the underlying chalk (2003) was encountered at a depth of 1.3m below ground level. Overlying this was a layer of blocky angular flints within a light brown clayey silt matrix (2002), 0.75m in depth. Above 2002 was a 0.3m deep layer of light grey-brown clayey silt (2001). This was covered by a 0.25m deep layer of dark brown silty clay loam (2000) the present day topsoil and turf.

Pit SWT3 (fig. 3 – section 8)

3.1.15 This measured 0.6m square and was hand dug to a depth of 0.5m. Exposed in the base of the pit was a layer of light grey-brown clayey silt mixed with weathered chalk and sub-angular flint (3001). Overlying this was a 0.3m deep layer of grey-brown silty clay loam, the topsoil and turf (3000).

Boreholes

3.1.16 In addition to the geotechnical Trial Pits, 5 boreholes were drilled as part of the investigation. Hand dug holes were dug over the location of the proposed boreholes in order to sample the upper deposits and to determine that there were no obstructions. In general these holes measured 0.5m square and were up to 0.9m deep.

3.1.17 The results from the borehole logs were examined and compared to stratigraphy exposed within the trial pits. The boreholes drilled on the southern side of the river (WS1 and RC2) displayed stratigraphy similar to that in Trial Pit 5. Two of those on the northern side of the river (WS2 and WS3) displayed similar stratigraphy to Soak-a-way trial pit SWT2. Borehole RC1 was excavated approximately 5m closer to the line of the River Lambourn than Trial pit SWT2 and displayed significantly different geology.

3.1.18 The natural chalk was recorded at a depth of 1.2m below ground level. Above this was a 0.2m deep layer of dark brown sandy clay mixed with gravel, chalk and occasional flint nodules.

3.1.19 The top 1m depth was composed of a brown sandy clay silt containing gravels, chalk and frequent angular flint fragments. A small number of brick and land drain fragments were noted within this deposit during later analysis.

3.1.20 It is possible that the dark brown sandy clay may represent an earlier river bed and that the brown sandy clay silt a deposit of made ground, possibly laid in order to repair/extend the river bank.

3.2 Finds

3.2.1 No artefacts or dating evidence was recovered during the course of the watching brief, although the presence of abraded brick fragments and fragments of clay land drain pipe was noted within the arisings from the first 1m depth of Borehole RC1.

3.3 Environmental remains

3.3.1 No deposits containing evidence of activity or organic remains such as peat were observed and no palaeo-environmental samples were taken.

4 Discussion and Conclusions

4.1.1 With the exception of the shallow borehole pits and one of the soak-a-way trial pits the underlying solid geology, Upper Chalk, was exposed. Where encountered this deposit was very soft, probably the result of being below the water table within this area, although the flints within this deposit were observed to be angular rather than nodules which may suggest that the deposit could be formed from weathered and waterborne material.

4.1.2 Within a number of the pits the chalk was overlaid by a loose mixture of sub-angular flints mixed with weathered chalk and soils (201, 301, 401, 1001 and 2002). The loose composition of the material together with the sub-angular flints suggest that these deposits are all layers of colluvium.

4.1.3 The site's location at the base of a valley with rising ground on either side is also a factor in this conclusion.

4.1.4 Layers 101, 202, 302, 402, and 501 are all probable alluvial deposits; again this is consistent with the sites location adjacent to a waterway.

4.1.5 Those pits where the colluvium is over the alluvium, were all located close to the base of the slope which may suggest that the colluvial deposits originated on the slopes but that the event which washed them down was insufficient to transport the material far across the flood plain.

4.1.6 Trail Pit SWT 3 was located on a ridge forming part of the ridge and furrow system visible within the northern paddock. This site and its composition would suggest that Layer 3001 is a buried soil horizon, probably an earlier ploughsoil which has become sealed by the plough ridge. Although no dating evidence was recovered to date it, the spacing of the ridges suggests medieval working rather than post-medieval.

4.1.7 The topsoil deposits on the southern side of the river do not appear to have been worked and are an accumulation of organic debris and flood deposits.

4.1.8 The topsoil on the northern side appears to have been worked and probably represents old plough soil now put down to grass. The deep layer of made ground exposed within the top of Borehole RC1 probably represents a modern repair to the river bank.

4.1.9 Other than the evidence for ridge and furrow working noted on the northern side of the river no evidence for occupation or activity such as residual finds or earthworks was observed.

4.1.10 It is probable that the site's location, within the flood plain surrounding the River Lambourn, would have meant that it was unsuitable for occupation and that it has always been used for agricultural activities such as grazing, with the higher parts being ploughed in the past.

APPENDIX A. ARCHAEOLOGICAL CONTEXT INVENTORY

Context	Type	Depth	Comments	Finds	Date
Trial Pit TP1					
100	Layer	0.37m	Present day topsoil and turf	-	-
101	Layer	0.45m	Alluvium	-	-
102	Layer	> 2m	Weathered chalk	-	-
Trial Pit TP2					
200	Layer	0.2m	Present day topsoil and turf	-	-
201	Layer	0.45m	Colluvium	-	-
202	Layer	0.15m	Alluvium	-	-
203	Layer	> 0.5m	Weathered chalk	-	-
Trial Pit TP3					
300	Layer	0.25m	Present day topsoil and turf	-	-
301	Layer	0.25m	Colluvium	-	-
302	Layer	0.4m	Alluvium	-	-
303	Layer	> 2.1m	Weathered chalk	-	-
Trial Pit TP4					
400	Layer	0.25m	Present day topsoil and turf	-	-
401	Layer	0.4m	Colluvium	-	-
402	Layer	0.45m	Alluvium	-	-
403	Layer	> 1.9m	Weathered chalk	-	-
Trial Pit TP5					
500	Layer	0.3m	Present day topsoil and turf	-	-
501	Layer	0.5m	Alluvium	-	-
502	Layer	> 2.2m	Weathered chalk	-	-
Trial Pit SWT1					
1000	Layer	0.25m	Present day topsoil and turf	-	-
1001	Layer	0.4m	Colluvium	-	-

1002	Layer	> 1.9m	Weathered chalk	-	-
Trial Pit SWT 2					
2000	Layer	0.25m	Present day topsoil and turf	-	-
2001	Layer	0.3m	Buried ploughsoil horizon. Part of ridge and furrow system	-	-
2002	Layer	0.75m	Colluvium	-	-
2003	Layer	> 0.2m	Weathered chalk	-	-
Trial Pit SWT 3					
3000	Layer	0.28m	Present day topsoil and turf	-	-
3001	Layer	> 0.32m	Colluvium	-	-

APPENDIX B. BIBLIOGRAPHY AND REFERENCES

CH2M HILL 2013	Eastbury Flood Alleviation Scheme: Archaeological Written Scheme of Investigation
CH2M HILL Halcrow 2013a	Eastbury Flood Alleviation Scheme: Preferred option – outline description
CH2M HILL Halcrow 2013b	Eastbury Flood Alleviation Scheme Feasibility: cultural heritage constraints and issues report
Costain Ltd, 2013	Factual Investigation on Ground Investigations: Eastbury Flood Alleviation Scheme
IfA 2008	Standard and guidance for archaeological watching brief, Institute for Archaeologists, 1994, revised October 2008
OAU, 1992	*Fieldwork Manual, (Ed. D Wilkinson, first edition, August 1992)*

Appendix C. Summary of Site Details

Site name:	Eastbury Village Flood Alleviation Scheme, Berkshire
Site code:	EASTBY 13
Grid reference:	Centred at NGR SU 340 777
Type of watching brief:	Machine and hand excavation of geo-technical test pits
Date and duration of project:	Between the 10th and 16th of September 2013
Area of site:	Approximately 1.6 hectares
Summary of results:	Oxford Archaeology conducted an archaeological watching brief during geo-technical test pitting on the site of the proposed Eastbury Village Flood Alleviation Scheme, Berkshire (centred at NGR: SU 340 777). The watching brief observed deep deposits of both colluvium and alluvium overlying the natural deposits. Evidence of undated ridge and furrow working was recorded on the north side of the River Lambourn, but no other significant archaeology was encountered.
Location of archive:	The archive is currently held at Janus House and will be deposited with West Berkshire Museum under the following accession number: NEBYM:2013.45

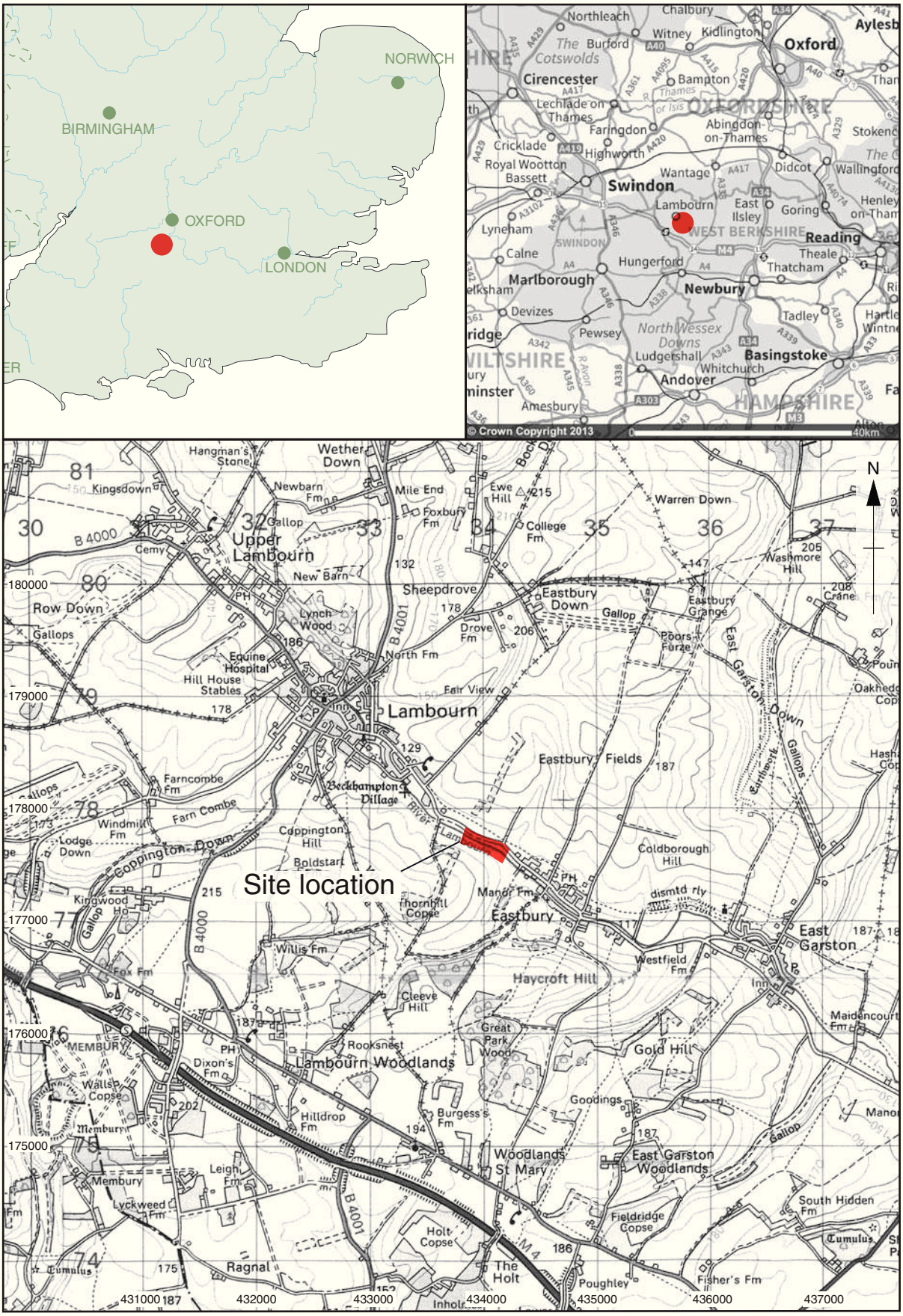


Figure 1: Site location

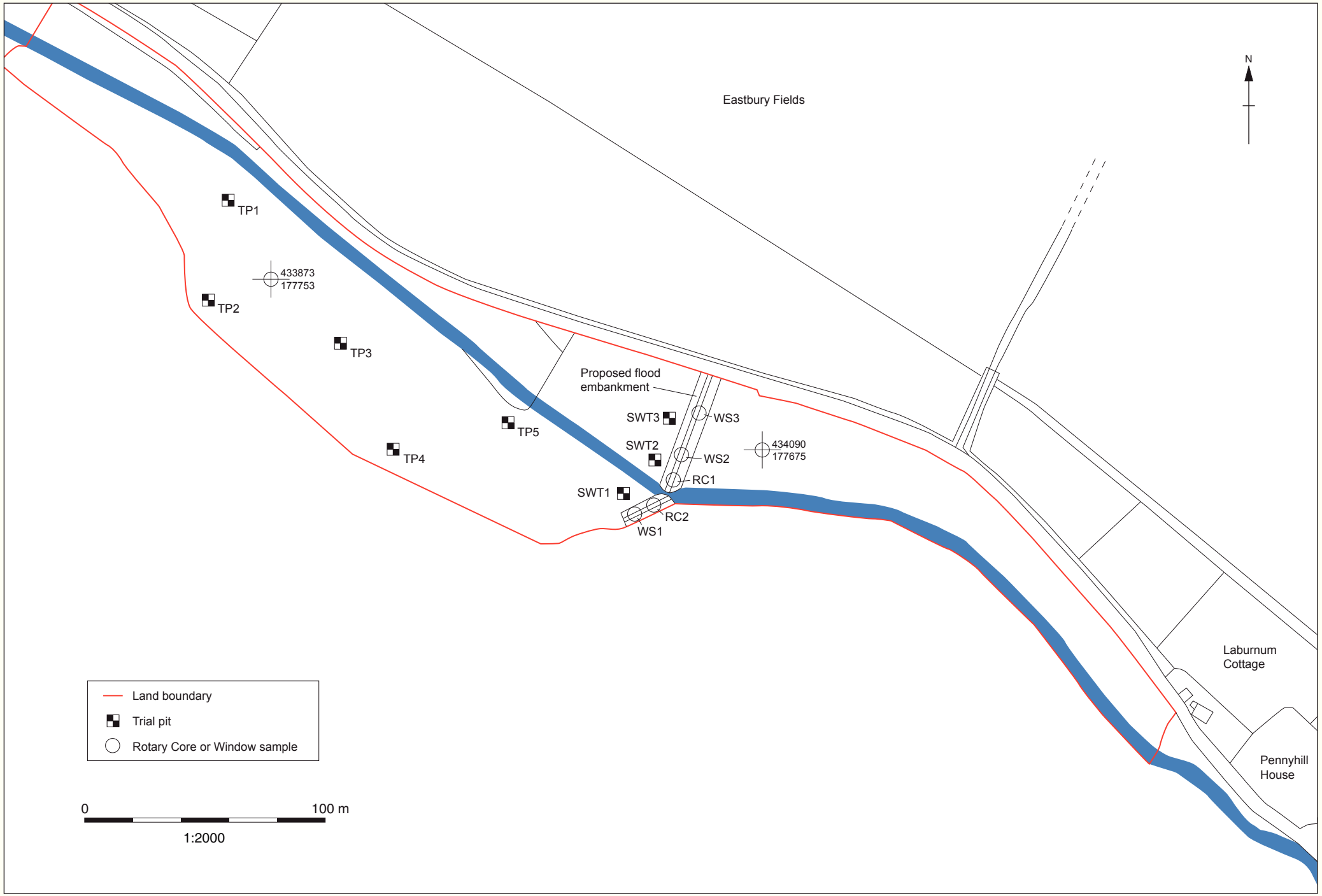
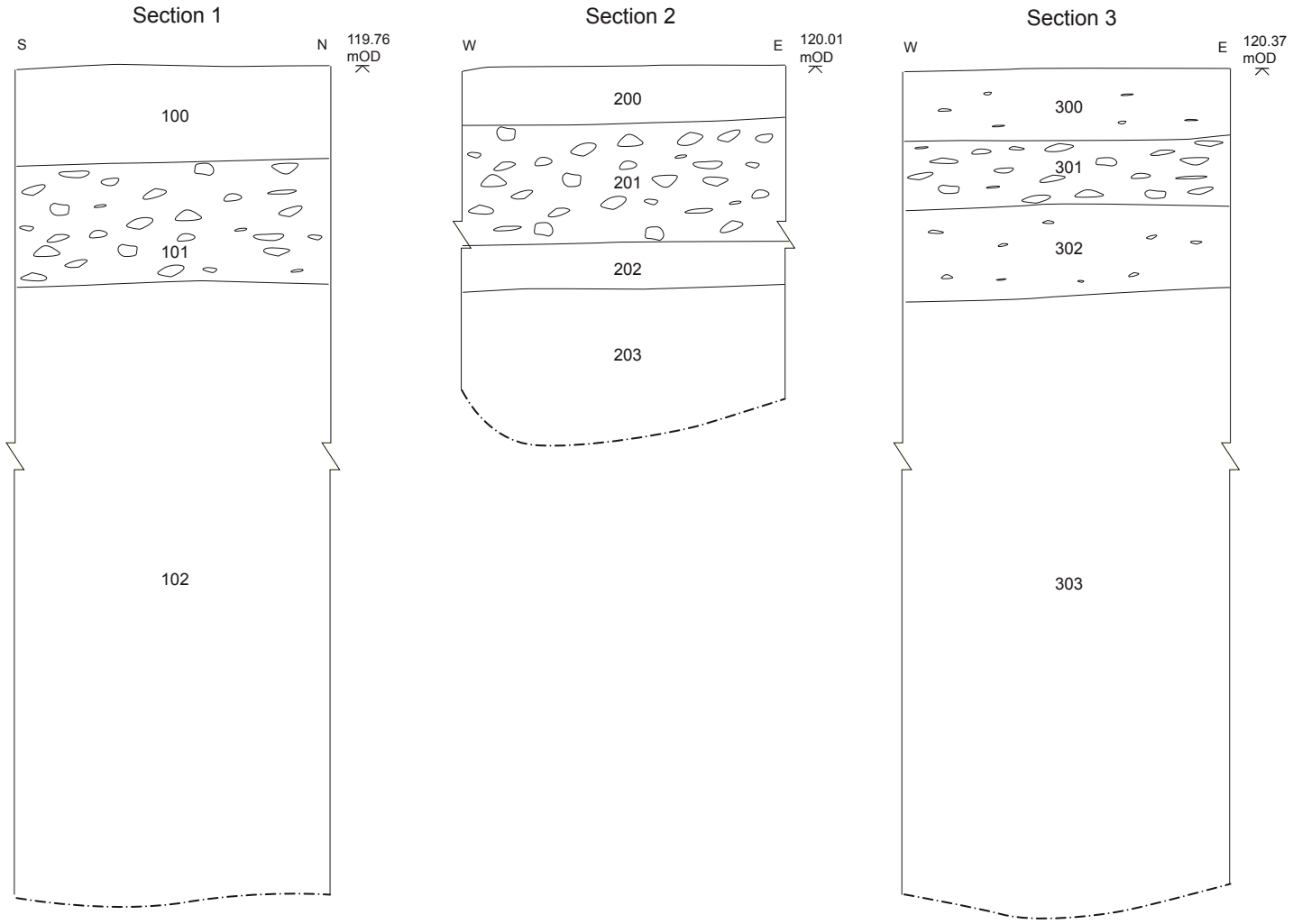


Figure 2: Site plan



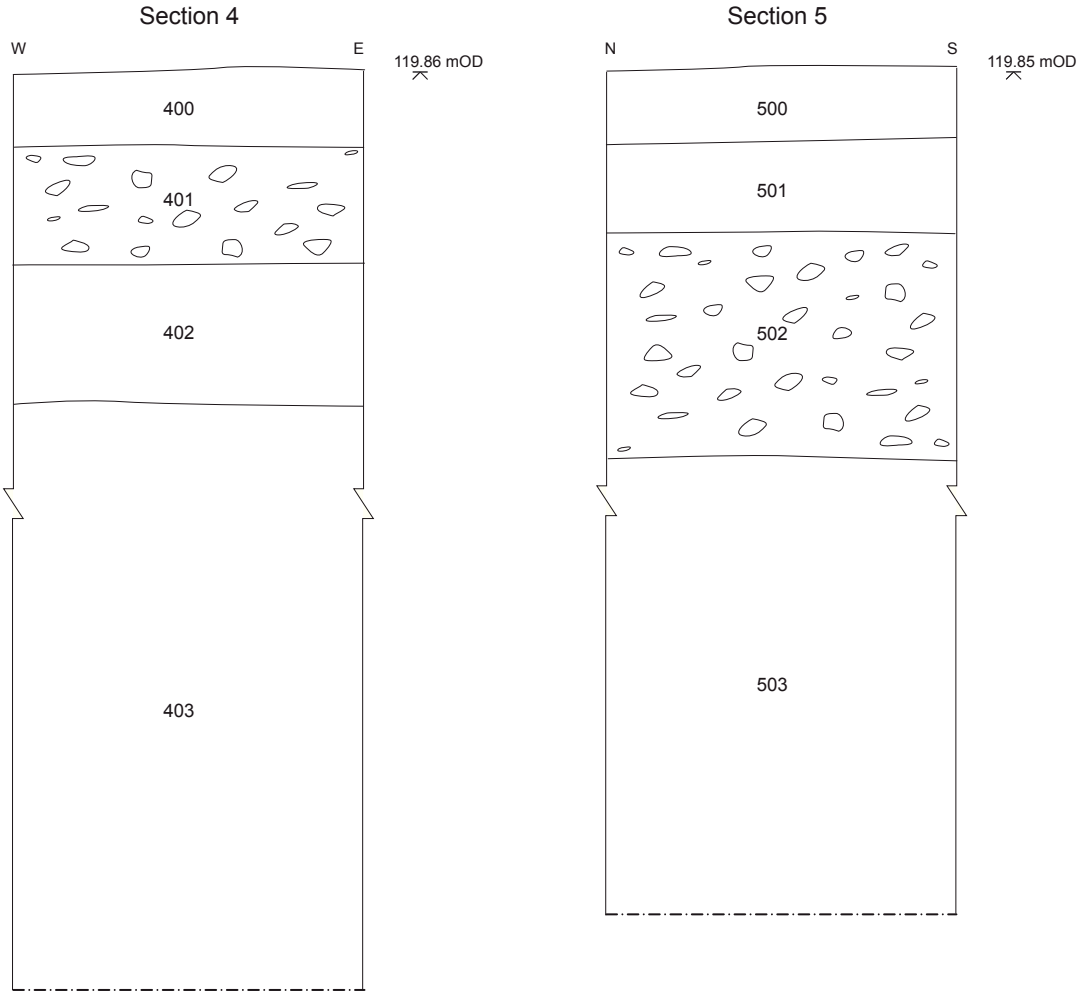


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Figure 3: Sections

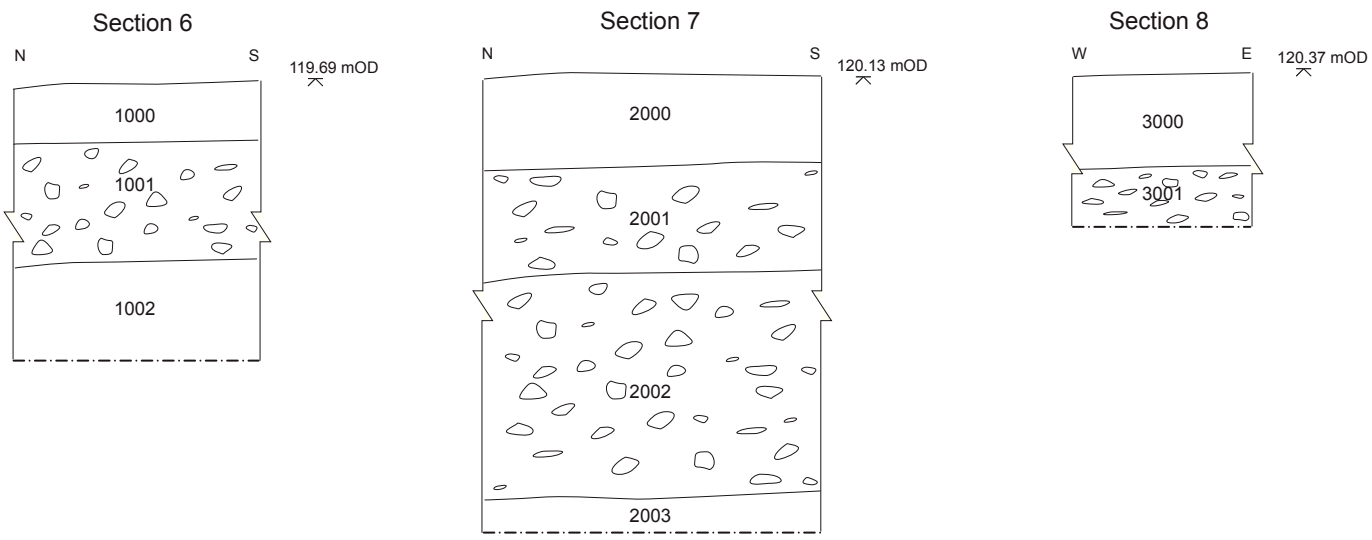

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Figure 4: Sections

Plate 1: Trial pit 1

Plate 2: Trial pit 2

Plate 3: Trial pit 4

Plate 4: Trial pit 5

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
w: http://oxfordarchaeology.com

OA East

15 Trafalgar Way
Bar Hill
Cambridgeshire
CB23 8SQ

t: +44 (0) 1223 850500
e: oaeast@oxfordarchaeology.com
w: http://oxfordarchaeology.com