400 Longwater Avenue, Green Park, Reading

Archaeological Evaluation Report

August 2018

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Prepared by:	Gerry Thacker (Senior Project Manager)
Checked by:	Gerry Thacker (Senior Project Manager)
Edited by:	Andrew Simmonds (Senior Project Manager)
Approved for Issue by:	Dave Score (Head of Fieldwork)
Signature:	

OA South
Janus House
Osney Mead
Oxford
OX2 0ES

t. +44 (0)1865 263 800

OA East
15 Trafalgar Way
Bar Hill
Cambridge
CB23 8SG

t. +44 (0)1223 850 500

OA North
Mill 3
Moor Lane Mills
Moor Lane
Lancaster
LA1 1QD
t. +44 (0)1524 880 250

e. info@oxfordarch.co.uk
w. oxfordarchaeology.com
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400 Longwater Avenue, Green Park, Reading

Archaeological Evaluation Report

Written by Gerry Thacker

With illustrations by Conan Parsons and Charles Rousseaux

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Summary

During August 2018 Oxford Archaeology conducted a trial trench evaluation at 400 Longwater Avenue, Green Park, Reading. The evaluation revealed that engineered ground overlay a layer of disturbed natural gravels up to 0.8m in thickness containing finds of modern date. No archaeological features or deposits were present in any of the trenches.

Acknowledgements

Oxford Archaeology would like to thank Tuffin Ferraby Taylor for commissioning this project on behalf of Mapletree Investments. Thanks are also extended to Kathelen Leary of Berkshire Archaeology for her advice and guidance.

The project was managed for Oxford Archaeology by Gerry Thacker. The fieldwork was directed by Bob McIntosh, who was supported by Edward Tolley. Survey and digitizing was carried out by Conan Parsons and Charles Rousseaux. Thanks are also extended to the teams of OA staff that prepared the archive under the management of Nicky Scott.

1 INTRODUCTION

1.1 Scope of work and planning background

1.1.1 Oxford Archaeology (OA) was commissioned by Tuffin Ferraby Taylor LLP on behalf of Mapletree Investments to undertake a trial trench evaluation at the site of a proposed commercial development with associated car parking and landscaping.

1.1.2 The evaluation was undertaken as a condition of Planning Permission (planning ref. 160569) A specification was agreed with Kathelen Leary of Berkshire Archaeology and a written scheme of investigation was produced by OA detailing the Local Authority's requirements for work necessary to discharge the planning condition (OA 2018).

1.1.3 The site is located within a larger developmental area formerly known as Reading Business Park, now Green Park, which has a long and complex history of planning and development-led archaeological investigation and mitigation.

1.1.4 The archaeological mitigation for Reading Business Park (the area defined on Reading Borough Council 'Plan 15' 1991, and later renamed Green Park) was conceived between 1986-1988 under a Section 106 planning agreement (Reading Business Park Axiom 4) produced firstly by the Trust for Wessex Archaeology, later amended by Oxford Archaeological Unit (now OA) and approved by Berkshire Department of Highways and Planning. Axiom 4 was agreed prior to the use of PPG16 to define archaeological conditions within the planning process.

1.1.5 In 2013 Tuffin Ferraby Taylor LLP, acting on behalf of Oxford Properties, asked Oxford Archaeology to produce an archaeological Desk-Top Assessment in relation to a proposal of development at 400 Longwater Avenue Reading, Berkshire. Discussions with Paul Falcini, the Archaeology Officer for Berkshire Archaeology, concluded that given the background, a Desk-Top Assessment would duplicate information already synthesized and disseminated in the public realm via three publications of previous excavations (Moore and Jennings 1992; Brossler *et al*. 2004*;* Brossler *et al*. 2013). It was therefore agreed that a more useful form of archaeological supporting information for the planning application would be a statement outlining the site's archaeological history, its potential to contain archaeological remains, an assessment of the below ground impact the development may have on any potential archaeological remains and suggested mitigation of any such impact. In 2013 Richard Brown of OA produced an *Archaeological Statement on Development Proposal* for the site, which was updated in February 2016 (OA 2016), and described the site's planning and archaeological history. The statement is summarized below.

1.1.6 The eastern part of the proposed development plot (Areas 3100 and 3000B) has been subject to full excavation, which uncovered a late Bronze Age settlement. The focus of this settlement was located in the south-eastern part of these excavation areas. Trial trenches within and to the west of the proposed development area did not reveal significant archaeological remains. Evidence to date therefore indicates that the western half of the site does not contain significant archaeological remains and those excavated in the eastern half have now been removed and mitigated by archaeological recording and subsequent publication.

1.1.7 Landscaping and significant groundworks have occurred on the site subsequent to the completion of the archaeological excavations (Area 3000B was completed in 1995). This

ground disturbance was undertaken without the archaeological watching brief that is an ongoing requirement of the Section 106 agreement. If archaeological remains existed here, they would have been adversely affected by this disturbance. This has been flagged as an unresolved condition at Reading Borough Council and would appear to be the case for all developed plots along Longwater Avenue.

1.1.8 Referring to the statement summarized above, Kathelen Leary issued a consultation response (April 2016), which is partially reproduced below.

'The statement provides useful information and I acknowledge that parts of the site have been fully archaeologically investigated and that subsequent landscaping work undertaken without the agreed archaeological watching brief will have had an impact on any remaining archaeological remains. However, without more detailed information as to the extent of the landscaping works it is difficult to assess the potential for archaeological remains to survive within this area – for example are any levels available that illustrate the depth of impact of the landscaping and could be compared with the previous archaeological excavations? As the original agreement for the western area of the site was to have a watching brief during development and the statement concludes that there may still be potential, albeit small, for archaeological remains to survive within this area I feel this needs to be clarified in order to assess whether any further work is required here.'

1.1.9 It was agreed that further trial trench evaluation would be a suitable approach to assess the impact of the previous landscaping works, and to investigate whether any archaeological features or deposits were present. This document outlines how OA implemented the agreed requirements.

1.2 Location, topography and geology

1.2.1 The site lies to the south of Reading and is bounded to the west by Longwater Avenue, to the east by the Foundry Brook, to the north by commercial units with associated car parking and to the south by scrubland and an area of hard standing (Fig. 1).

1.2.2 The area of the proposed development consists of scrubland, wider to the north and narrowing to the south.

1.2.3 The geology of the area is mapped as Lambeth Group clay, silt and sand. formed 48 to 59 million years ago. and overlain by sand and gravel of the Beeham Grange Gravel Member. formed up to 2 million years ago (BGS website).

1.3 Archaeological and historical background

1.3.1 As stated above, the eastern part of the proposed development area was subject to full excavation in 1987 (Area 3000: southern area) and 1995 (Area 3000b: northern area), which uncovered extensive evidence for Bronze Age settlement (Moore and Jennings 1992; Brossler *et al*. 2004). This took the form of boundary ditches defining enclosures containing post-built roundhouses and areas of pitting. To the east a large burnt mound and a palaeochannel were identified. Further excavation to the north of the site (Area 5000) revealed Bronze Age field systems (Moore and Jennings 1992). Within area 3000b the surface of the natural geology was measured at 37.3m above Ordnance Datum (aOD).

1.3.2 The western part of the site was subject to limited trial trench evaluation in 1986, when three trenches extended into the footprint of the site. The trenches did not reveal significant archaeological features (Moore and Miles 1988).

1.3.3 A recent soil contamination study (Peter Brett Associates 2016) indicated (through borehole survey) that there is between 1.15m and 1.7m of engineered fill present across the area. The engineered fill, designed to create a development platform above the 1 in 200-year flood level, comprises material from the Lambeth Group (sands silts and clays) derived from the deepening of the Trout Lakes located between the Green Park Village development and the proposed site of the Green Park Station.

2 EVALUATION AIMS AND METHODOLOGY

2.1 Aims

2.1.1 The aims of the evaluation were:

i. To establish the degree of truncation, if any, within the western part of the site by comparing the level of the underlying geology to the known level within Area 3000b;
ii. To determine the presence or absence of any archaeological remains;
iii. To determine or confirm the approximate extent of any surviving remains;
iv. To determine the date range of any surviving remains by artefactual or other means;
v. To determine the condition and state of preservation of any remains;
vi. To determine the degree of complexity of any surviving horizontal or vertical stratigraphy;
vii. To assess the associations and implications of any remains encountered with reference to the historic landscape;
viii. To determine the potential of the site to provide palaeoenvironmental and/or economic evidence, and the forms in which such evidence may survive;
ix. To determine the implications of any remains with reference to economy, status utility and social activity;
x. To determine or confirm the likely range, quality and quantity of the artefactual evidence present.

2.2 Methodology

2.2.1 The trenches were located by an OA surveyor using a GPS system as indicated within the WSI, with a few minor alterations to avoid the route of a water main and localised obstructions (Fig. 2).

2.2.2 Trenches were CAT-scanned prior to and during excavation.

2.2.3 The upper hardcore surface was broken out using a mechanical breaker after it proved too robust to excavate using the machine bucket alone. Once this had been removed, the excavation continued in even spits until the surface of the natural geology was reached.

2.2.4 The exception was the southern end of Trench 3, which was up to 2.4m in depth and where the full sequence was recorded through the excavation of sondages.

2.2.5 A visual check of the arisings was undertaken for artefacts and the presence of asbestos-containing materials.

2.2.6 Once recorded, trenches were backfilled with the arisings.

3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The results of the evaluation are presented below and include a stratigraphic description of the trenches. The full details of all trenches, with dimensions and depths of all deposits can be found in Appendix A.

3.1.2 Context numbers reflect the trench numbers unless otherwise stated, eg layer 1002 is within Trench 1, while layer 3004 is within Trench 3.

3.2 General soils and ground conditions

3.2.1 The soil sequence was the same in all trenches.

3.2.2 Ground conditions throughout the evaluation were generally good, and the trenches remained dry throughout. The natural geology was easy to differentiate from the overlying made ground deposits.

3.3 Trench 1

3.3.1 Trench 1 was located in the north-west of the site. The trench was excavated to an average depth of 1.75m (Fig. 3, section 1000; Plate 1). The natural sandy gravel (1004) was located at a depth of 37.67m aOD. Two service trenches containing dead electric cables were cut through the surface of the gravel at the western end of the trench. The gravel was sealed by a 0.4m thick layer of black organic gravel (1003), which contained pieces of steel reinforcing rods (rebar). This was in turn sealed by a 0.2m thick layer of mottled reddish-grey clay (1002), which was overlain by 0.75m of clean yellow silty sand (1001). The uppermost deposit within the trench was a 0.35m thick layer of compacted hardcore (1000).

3.4 Trench 2

3.4.1 Trench 2 was 1.45m deep and exposed an identical sequence of deposits to Trench 1 (Fig. 3, section 2000; Plate 2). The natural gravels (2004), stained dark grey from contact with the overlying layer 2003, were reached at 37.71m aOD. A former service trench cut through the surface of the gravel extended for the length of the trench. Organic deposit 2003 was 0.25m thick and the overlying clay (2002) was only 0.1m thick. The silty sand deposit (2001) measured 0.7m thick and the hardcore (2000) was 0.5m thick.

3.5 Trench 3

3.5.1 Trench 3 contained the same sequence as described above (Fig. 3, Section 3000; Plates 3 and 4) and was up to 2.4m deep. The natural gravel (3004) was reached at 36.96m aOD at the southern end of the trench and 37.79m at the north end. The organic gravel layer (3003) was up to 0.8m thick. An aluminium drink can was recovered from this deposit, which had been cut by a service trench. The clay layer (3002) was between 0.25m and 0.3m thick, and the silty sand layer (3001) was between 0.8m and 1.1m thick. The hardcore was between 0.4m and 0.5m thick.

3.6 Trench 4

3.6.1 The natural gravel (4004) was reached at 37.6m aOD (Fig. 3, section 4; Plate 5), and the trench was an average of 1.7m deep. The gravel had been cut at the north-western end of the trench by a service trench. The organic gravel layer (4003) was 0.5m thick, the clay layer (4002) was 0.2m deep and both the sand layer (4001) and the hardcore layer (4000) were 0.5m deep.

3.7 Finds summary

3.7.1 No finds were retained during the course of the evaluation.

4 DISCUSSION

4.1 Reliability of field investigation

4.1.1 The natural geology was reached in all trenches, although in Trench 3, which was particularly deep, it was only seen in a sondage. Any archaeological features would have been easily visible against the gravels (as were the service trenches in Trenches 1, 2 and 4).

4.2 Interpretation

4.2.1 The level of the clean natural gravels (1004, 2004, 3004 and 4004) varied between 36.96m (Trench 3) and 37.71m (Trench 2). This lies above the level of the gravel recorded in the 1995 excavation (37.3m; Brossler *et al*. 2004), so it would at first appear that no truncation of the gravel had occurred. Moore and Jennings (1992) do not provide any levels for the gravel in the area nearest to the current site.

4.2.7 The organic gravel deposit (1003, 2003, 3003 and 4003) was present in all trenches, and clearly of modern date, since it sealed service trenches and contained modern material. It is believed that all of the topsoil was removed from the area prior to the formation of the engineered ground, and this deposit, which varied in thickness between 0.25m and 0.8m, is likely to be the result of the churning up of the upper surface of the natural gravels by heavy machinery when the material comprising the engineered ground was deposited, with the consequent inclusion of organic matter and modern debris.

4.2.8 The deposits forming the engineered ground comprised a layer of clay measuring between 0.1m and 0.3m thick sealed by a layer of gravel-rich sand between 0.5m and 1.1 m thick. These layers were sealed by a Terram sheet and a layer of compacted hardcore between 0.35m and 0.5m thick.

4.3 Significance

4.3.1 Given the lack of any archaeological features within the trenches or in the previous evaluation, when combined with the presence of the disturbed organic rich gravels, it is unlikely that any archaeological features or deposits survive within the western part of the site. The area is currently intended for car parking and associated landscaping, neither of which would have a deep enough construction impacts to disturb any archaeology, should it survive.

APPENDIX A TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
General description					**Orientation**	NE-SW
Trench devoid of archaeology. Consists of made ground over disturbed gravels sealing natural gravelly sand.					**Length (m)**	30
					Width (m)	1.8
					Avg. depth (m)	1.75
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1000	Layer	-	0.35	Hardcore	-	-
1001	Layer	-	0.75	Compacted silty sand	-	-
1002	Layer	-	0.2	Compacted mottled reddish-grey clay	-	-
1003	Layer	-	0.4	Black organic gravels	Rebar	Modern
1004	Layer	-	-	Natural	-	-

Trench 2						
General description					**Orientation**	NW-SE
Trench devoid of archaeology. Consists of made ground over disturbed gravels sealing natural gravelly sand.					**Length (m)**	30
					Width (m)	1.8
					Avg. depth (m)	1.45
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
2000	Layer	-	0.5	Hardcore	-	-
2001	Layer	-	0.7	Compacted silty sand	-	-
2002	Layer	-	0.1	Compacted mottled reddish-grey clay	-	-
2003	Layer	-	0.25	Black organic gravels	-	-
2004	Layer	-	-	Natural	-	-

Trench 3						
General description					**Orientation**	NNW-SSE
Trench devoid of archaeology. Consists of made ground over disturbed gravels sealing natural gravelly sand.					**Length (m)**	30
					Width (m)	1.8
					Avg. depth (m)	2.4
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
3000	Layer	-	0.5	Hardcore	-	-
3001	Layer	-	1.1	Compacted silty sand	-	-
3002	Layer	-	0.3	Compacted mottled reddish-grey clay	-	-
3003	Layer	-	0.8	Black organic gravels	Drinks can	Modern
3004	Layer	-	-	Natural	-	-

Trench 4		
General description	**Orientation**	NW-SE
Trench devoid of archaeology. Consists of made ground over disturbed gravels sealing natural gravelly sand.	**Length (m)**	30
	Width (m)	1.8

					Avg. depth (m)	1.7
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
4000	Layer	-	0.5	Hardcore	-	-
4001	Layer	-	0.5	Compacted silty sand	-	-
4002	Layer	-	0.2	Compacted mottled reddish-grey clay	-	-
4003	Layer	-	0.5	Black organic gravels	-	-
4004	Layer	-	-	Natural	-	-

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APPENDIX C SITE SUMMARY DETAILS

Site name:	400 Longwater Avenue, Green Park, Reading
Site code:	RELA18
Grid Reference	SU 69872 69869
Type:	Evaluation
Date and duration:	6th -8th August 2018
Area of Site	*c* 1.1 hectares
Location of archive:	The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with the appropriate museum in due course, under the following accession number: TBC.
Summary of Results:	During August 2018 Oxford Archaeology conducted a trial trench evaluation at 400 Longwater Avenue, Green Park, Reading. The evaluation revealed that engineered ground overlay a layer of disturbed natural gravels up to 0.8m in thickness containing finds of modern date. No archaeological features or deposits were present in any of the trenches.

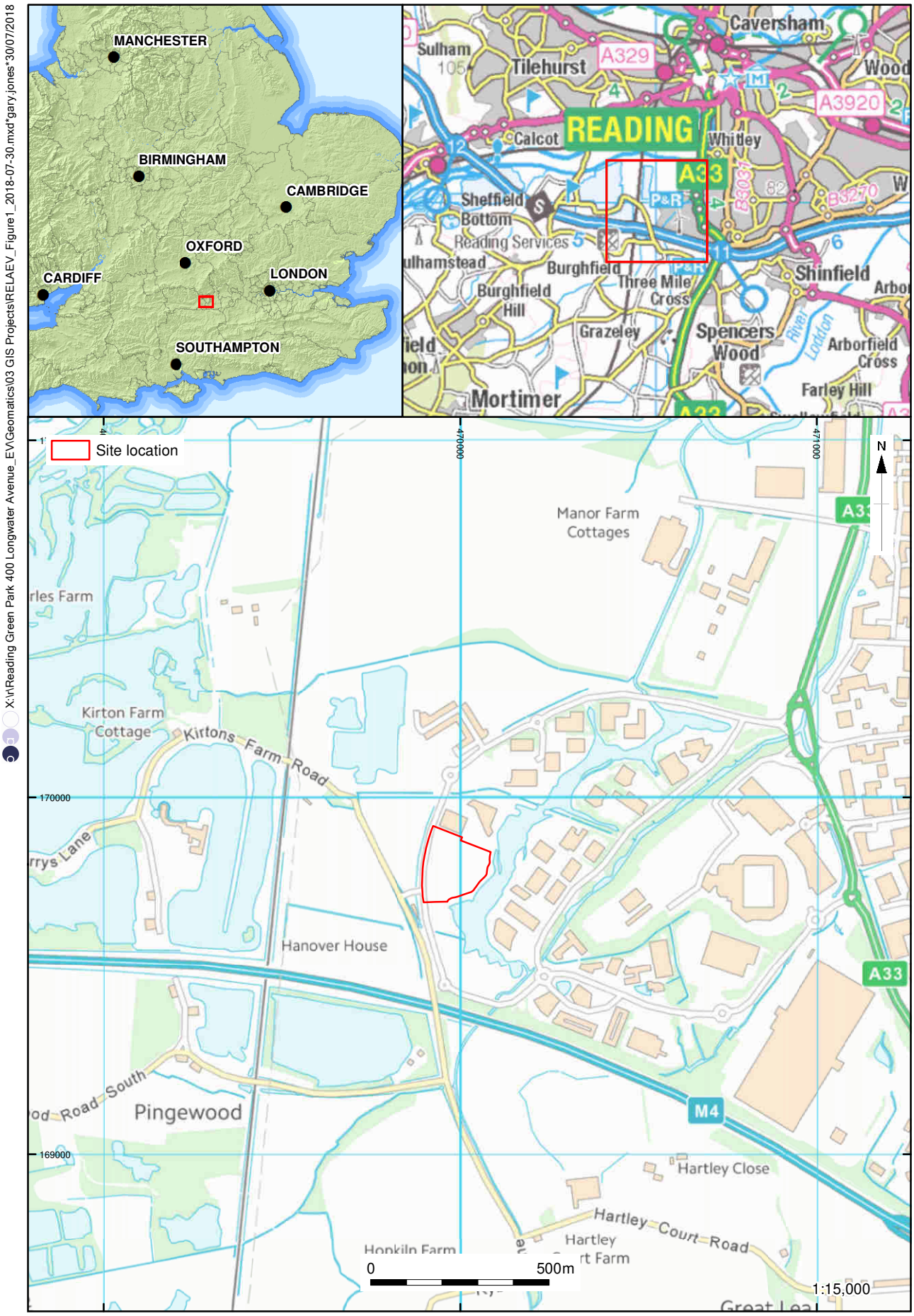

Figure 1: Site location

X:\r\Reading Green Park 400 Longwater Avenue_EV\Geomatics\03 GIS Projects\RELAEV_Figure2_2018-07-30.mxd*conan.parsons*14/08/2018

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 2: Trench and section locations

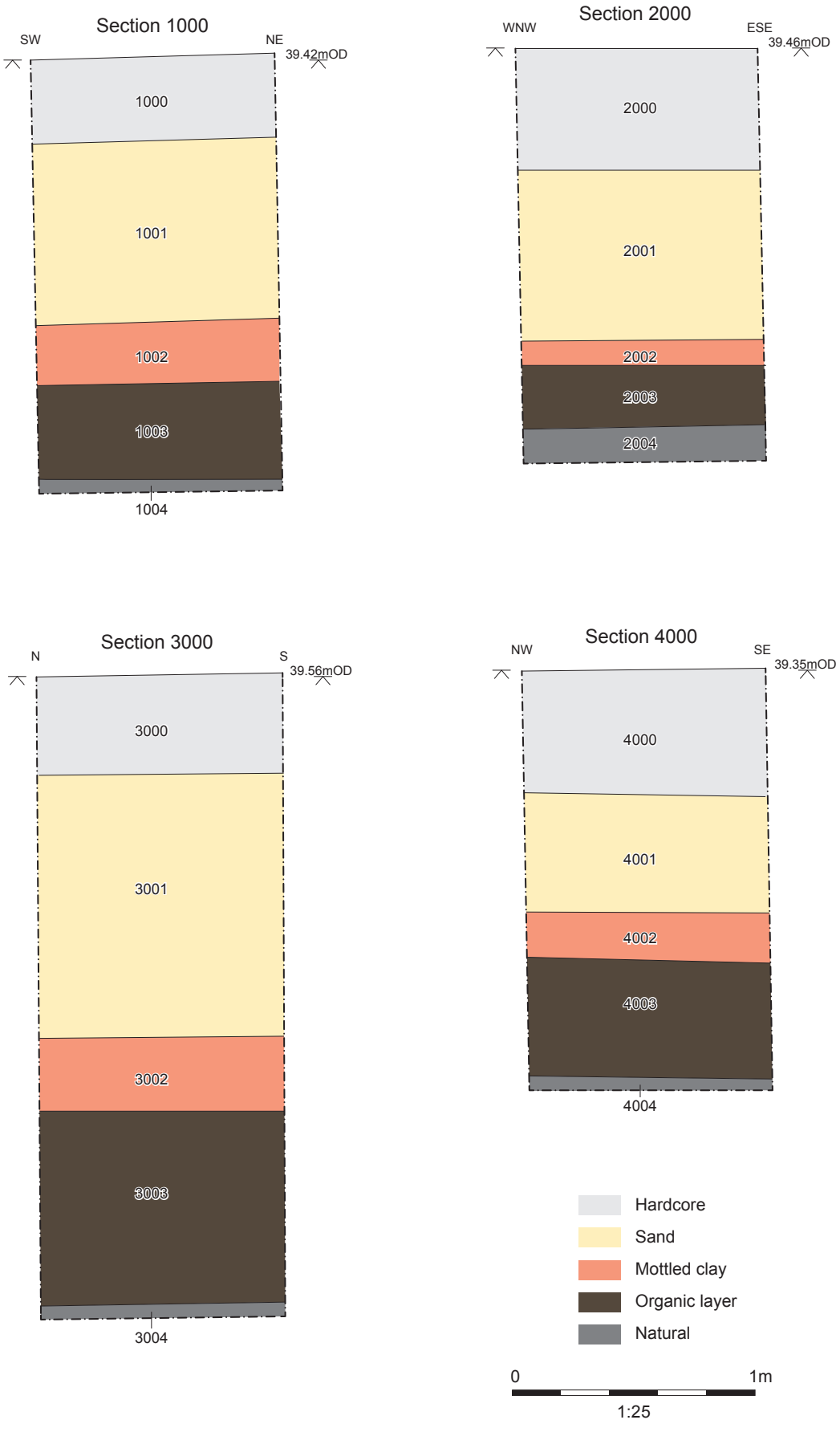

Figure 3: Sections

Plate 1: Trench 1, view to north-east

Plate 2: Trench 2, view to north-west

Plate 3: Trench 3, view to south

Plate 4: Representative section Trench 3

Plate 5: Trench 4, view to south-east

oxfordarchaeology

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
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