New Biochemistry Building, Dorothy Hodgkin Road, Oxford: Phase 2



Archaeological Watching Brief Report



April 2015

Client: Oxford University Estates Directorate

Issue No: 1 OA Job No: 6062 NGR: SP 5154 0700



Client Name:	Oxford University Estates Directorate
Document Title:	New Biochemistry Building, Dorothy Hodgkin Road, Oxford: Phase 2
Document Type:	Archaeological Watching Brief Report
Issue/Version Number:	1
Grid Reference:	SP 5154 0700
Planning Reference:	05/00643/FUL
Invoice Code:	OXBIOLWB
OA Job Number:	6062
Site Code:	OXBIOL14
Receiving Museum:	Oxfordshire County Museum Services
Museum Accession No.:	OXCMS: 2014.248

Issue	Prepared by	Checked by	Approved by	Signature
	Mike Sims	Ben Ford	Ben Ford	
1	Supervisor	Senior Project	Senior Project	
	-	Manager	Manager	

Document File Location: Graphics File Location: Illustrated by:

Projects on Server 1/o/OX_Biol/2014/Report/OXBIOLWB Report.odt \\Samba-1\Invoice codes a thru h\S_codes*OXBIOLWB*MD*28.1.15 Markus Dylewski and Conan Parsons

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 or liability for this document to any party other than the person/party by whom it was commissioned.

© Oxford Archaeology Ltd 2015

 Janus House

 Osney Mead

 Oxford OX2 0ES

 t: +44 (0) 1865 263800

 f: +44 (0) 1865 793496

 Oxford Archaeology Limited is a Registered Charity No: 285627

New Biochemistry Building,

Dorothy Hodgkin Road, Oxford: Phase 2

Archaeological Watching Brief Report

Written by Mike Sims

Illustrated by Markus Dylewski and Conan Parsons

Table of Contents

Summary
1 Introduction
1.1 Scope of work
1.2 Location, geology and topography3
1.3 Archaeological and historical background3
1.4 Potential4
2 Project Aims and Methodology4
2.1 Aims4
2.2 Methodology5
3 Results
3.1 Description of deposits6
3.2 Finds
3.3 Environmental remains8
4 Discussion and Conclusions8
Appendix A. Archaeological Context Inventory9
Appendix B. Finds Reports11
B.1 Pottery11
B.2 Ceramic building material11
Appendix C. Bibliography and references12
Appendix D. Summary of Site Details13



List of Figures

- Fig. 1 Site location
- Fig. 2 Site plan
- Fig. 3 Sections
- Plate 1 Section 1
- Plate 2 Section 2
- Plate 3 Sample section for the north-south transect showing depth of made ground over the terrace gravel
- Plate 4 Differing depths of disturbed terrace gravels within northern area

v.1



Summary

Between October 2014 and January 2015 Oxford Archaeology undertook an archaeological watching brief during the demolition and ground preparation work on the site of the Phase 2 New Biochemistry Building, Dorothy Hodgkin Road, Oxford (NGR: SP 5154 0700).

The watching brief observed that the majority of the site had been severely truncated by the construction and demolition of the buildings on the site, with any intact archaeological stratigraphy and the upper part of the underlying terrace gravel deposits having been greatly disturbed.

Within a narrow band along the north and north-east edges of the site the supranatural sub-soils overlying the natural gravels of the 2nd terrace had partially survived, with the truncated base of an east-west aligned early Post-medieval ditch observed and recorded.

No other significant archaeology was encountered, no other archaeological remains are likely to be present on the site.

1 INTRODUCTION

1.1 Scope of work

- 1.1.1 Oxford Archaeology (OA), were instructed by Colin McCauley of RBDM Ltd on behalf of Oxford University Estates Directorate to undertake an Archaeological Watching Brief during, and following the demolition of the former Hans Krebs Building (Figure 1).
- 1.1.2 The work was undertaken as a condition of Planning Permission 05/00643/FUL, in advance of Phase 2 of the development; Phase 1 saw the construction of the New Department of Biochemistry.
- 1.1.3 All work was undertaken in accordance with local and national planning policies including the *Standard and Guidance for archaeological watching briefs* (IFA 1999).

1.2 Location, geology and topography

- 1.2.1 The development area lies north of the cities historic centre within the Oxford University Science Area; it is bounded to the north by Sherrington Road, to the east by Hinshelwood Road, to the south by Dorothy Hodgkin Road and to the east by the new Department of Biochemistry. The site was formerly occupied by the Hans Krebs Building and is centred on National Grid Reference SP 5154 0700.
- 1.2.2 Hans Krebs Building consisted of a multi-storey concrete tower with basement in the south-eastern part of the site with various other contemporary smaller buildings, access roads, hard landscaping and paths to its north and west.
- 1.2.3 The underlying geology is 2nd Terrace River Gravel with the gravels lying at approximately 61.5 m OD, (BGS Sheet 236).

1.3 Archaeological and historical background

1.3.1 In response to the Planning Application (referenced above) a desk-based assessment (DBA) was produced by the then City Archaeologist, Brian Durham which outlined the archaeological potential for the area (OCC 2006).



- 1.3.2 Durham highlighted that the site fell within an area of known Bronze Age funerary monuments, first identified as parch marks on aerial photographs to the north of the Science Area in University Parks, but proved to extend southwards with results from recent archaeological excavations on three redevelopments within the Science Area; Rex Richards, Gene Function and the Earth Sciences Building. The Gene Function excavations (Boston, C, et al, 2003) revealed part of a late Neolithic/early Bronze Age ring ditch enclosing the crouched inhumations of a child and three adult females. Radiocarbon dating of the four skeletons indicated that the barrow was used as a place of burial over several centuries.
- 1.3.3 The Bronze Age barrow cemetery area was later encroached upon by Iron Age and Roman farming activity with two phases of Roman settlement reported at the New Chemistry Research Laboratory site on South Parks Road to the south, and further features to the west at the Pitt Rivers extension site.
- 1.3.4 Little archaeological evidence has been revealed to inform us the nature of activity in the area between the post-Roman and post-medieval periods. Although historic maps from the 16th century onwards show that the area is clearly beyond the significant suburban developments along the principal routeways of St Giles and Broad Street, and sits within field systems which probably had their origins in the late-Saxon period.
- 1.3.5 De Gommes 17th century plan shows the Civil War defences were pushed into this area to protect the vulnerable northern limits of the town. Part of these works were encountered at the New Chemistry Research Laboratory where a large ditch was revealed; its alignment was also picked up during work on the Pitt Rivers extension. It was thought unlikely that it would occur on the present site, unless the ditch enclosing the corner bastion under the Dyson Perrins Laboratory had a major forework.
- 1.3.6 In 2006 Archaeological Watching Brief work during the demolition of the Rudolph Peters Building (Phase 1 of the redevelopment) immediately to the west of the current part of the site, showed that any significant horizon where archaeology may be encountered had been truncated within the footprint of the building. But ground reduction outside the footprint revealed linear features of Iron Age/Roman date, which were interpreted as field system/drainage ditches; Post-medieval pits were also recorded (OA, 2006).

1.4 Potential

- 1.4.1 The current site lies within an area which has yielded significant archaeological remains from multiple periods, the site had the potential to expose continuations of those features.
- 2 PROJECT AIMS AND METHODOLOGY

2.1 Aims

- 2.1.1 The general aims of the watching brief were:
 - To determine the presence or absence of any archaeological remains which may survive. Where remains are found to ensure their preservation by record to the highest possible standard.
 - To determine or confirm the approximate extent of any surviving remains
 - To determine the date range of any surviving remains by artefactual or other means.
 - To determine the condition and state of preservation of any remains.



- To determine the degree of complexity of any surviving horizontal or vertical stratigraphy.
- To determine the potential of the site to provide palaeoenvironmental and/or economic evidence, and the forms in which such evidence may survive.
- To determine the implications of any remains with reference to economy, status, utility and social activity.
- To determine or confirm the likely range, quality and quantity of the artifactual evidence present.
- 2.1.2 The specific aim of the investigation was:
 - To assess the associations and implications of any remains encountered with reference to previous archaeological discoveries.

2.2 Methodology

- 2.2.1 The watching brief was conducted in two separate phases. In the first phase a continuous archaeological presence was maintained during the demolition and removal of below ground structures within the north-western part of the site. In the second phase an archaeological investigation was conducted within the remainder of the site after the demolition and foundation removal had taken place. This investigation consisted of the mechanical removal (under archaeological supervision) of the temporary post-demolition surface of crushed building materials down to either the first archaeologically significant layer or until the undisturbed natural deposits were encountered, or to a level where complete truncation of the significant/natural horizons could be confirmed.
- 2.2.2 The second phase of investigation was designed to determine the presence, extent nature and date of archaeological remains within the areas not seen in the first phase, and outside the known basement footprint of the Hans Krebs Building. Immediately to the west of the Hans Krebs basement an area measuring 15 x 5m was exposed; immediately to the north the area was explored using a series of coaxial trenches with a further open area measuring 22 x 15m in the centre of the site.
- 2.2.3 Overburden was removed in spits until the required depth was achieved.
- 2.2.4 Where such evidence was observed it was hand cleaned and sampled sufficiently to characterise and date the remains in accordance with the project objectives.
- 2.2.5 All spoil generated during these excavations was examined for the presence of archaeological artefacts.
- 2.2.6 All structures and deposits were issued with unique context numbers, and context recording was in accordance with established OA practices.
- 2.2.7 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.
- 2.2.8 A site plan showing the location of any excavations, features and any recorded sections was maintained (Fig. 2). Section drawings of features and sample sections were drawn at a scale of 1:20.

April 2015



3 RESULTS

3.1 Description of deposits

Monitoring of the demolition

- 3.1.1 Prior to the monitoring, the above ground parts of the building had been demolished and moved off site. The works monitored consisted of the removal of basements, service ducts and foundations. This was undertaken using two mechanical tracked excavators.
- 3.1.2 In total an area measuring approximately 28m north-south and 20m east-west, located in the north-west corner of the site, was effected by these works (Fig.2).
- 3.1.3 Because of the nature of the structures to be removed they had to be broken up in-situ by the use of a machine mounted concrete breaker. The structures included brick built culverts and service runs and reinforced concrete foundations. Subsequent to this the pieces of the structure were removed by machine.
- 3.1.4 Following the removal of the debris the underlying terrace gravel (101) was observed at depths between 0.7m and 1.5m below ground level, depending on the level of truncation from the foundations and services. Within the areas subject to the least truncation a layer of dark reddish brown clay silt (100), up to 0.2m in depth was observed overlying the gravel. The surface of this deposit had been disturbed suggesting that it had been truncated, most likely during the construction of the original building.
- 3.1.5 No features were observed within the surface of layer 100, which was directly overlaid by modern deposits of made ground.
- 3.1.6 No archaeologically significant deposits or features were encountered during this phase of work.

Archaeological Investigation

- 3.1.7 During this stage of work three open areas were excavated. The southern area was located in the south-west corner of the site and measured 15m by 5m, while the second was located in the centre of the northern half of the site, and measured approximately 22m by 15m. A third area to the east of the larger open area was investigated with a series of trenches/transects (Fig. 2).
- 3.1.8 Each of the areas and transects will be described separately followed by an overall discussion and conclusion.

The southern area

- 3.1.9 This measured 15m x 5m. Within the southern half, approximately a 1.2m depth of crushed demolition material ("Type 1") was removed exposing the top of the underlying severely truncated terrace gravel (21). In the northern half of the trench the depth of impact was reduced to between 0.5m and 0.6m below ground level, exposing a dirty layer of dark reddish brown silty clay (20) overlying the gravel. The surface of this deposit had been heavily disturbed and it is probable that it represents the truncated base of a deeper deposit.
- 3.1.10 No significant archaeology was observed within the surface of either deposit.



The central area

- 3.1.11 This measured 22m x 15m and was located approximately in the centre of the site. The depth of impact within this area was between 0.5m and 0.6m, with a layer of heavily disturbed dirty dark reddish brown silty clay (30) exposed throughout the area. Cutting across the south edge of the area was the construction cut for the basement of the Hans Kreb Building. Also observed in the surface of layer 30 were three modern service trenches.
- 3.1.12 Layer 30, was very similar to, and is a probable continuation of layer 20. No features pre-dating the modern buildings construction were observed

The northern area

- 3.1.13 This comprised of a strip approximately 3m wide and 35m long dug along the northern edge of the site. The eastern part of the trench revealed depths in excess of 1.2m of crushed modern building materials (Type 1) which truncated the significant horizon. Within the western part of this trench the depth of impact was approximately 0.5m below ground level, and a layer of heavily disturbed dirty dark reddish brown silty clay layer (9) was revealed. This was similar to that exposed within the two open areas.
- 3.1.14 Surviving within the top of layer 9 was the truncated base of a east-west aligned linear feature (2) (Sections 1 and 2, Plate 1). This measured 0.9m wide by 0.14m deep and could be traced for approximately 8m before becoming indistinct. Although only the base of the feature appears to have survived truncation, it could be seen to have moderately sloping sides and a flat base. Filling the feature was a single context, a reddish grey-brown silty clay (1), which produced fragments of bone, roof tile and pottery.
- 3.1.15 A second section dug across this feature (Section 3) recorded a similar profile to the cut (10) and fill (11) (Plate 2).
- 3.1.16 Cutting across the top of the feature was a modern cable trench (4), backfilled with redeposited material (3), this in turn had been disturbed by a modern posthole (5) (Section 2) and a modern disturbance (12). A second modern posthole, (7) was also observed south of the cable trench.
- 3.1.17 No other features were observed within this area.

The transects

- 3.1.18 Three separate transects or trenches were dug across the area north of the Hans Krebs basement. A single north-south aligned trench was excavated centrally and this was crossed by two east-west trenches to give full coverage of the remaining area (Fig. 2).
- 3.1.19 The north-south transect exposed terrace gravel (41) throughout its length, with the depth of impact increasing from 1.1m at its in northern end, down to 1.4m at its southern end (Plate 3). No surviving archaeological strata were exposed.
- 3.1.20 The southern east-west transect also exposed the terrace gravel, 40, throughout its length, with the depth of impact ranging from 1.4m at its eastern end increasing to 1.7m at its western end. Again no surviving archaeological strata were encountered.



3.1.21 The northern east-west transect exposed the patchy remnants of a truncated deposit of dark reddish brown silty clay (40) at a depth of 0.6m below ground for approximately 3m at the eastern end of the transect (Plate 4). This could be seen to directly overlie the terrace gravel. Elsewhere within the trench the depth of impact was between 1.4m and 1.6m, increasing to 1.8m where a brick built service duct crossed the trench.

3.2 Finds

3.2.1 Artefacts of archaeological significance were only recovered from the fill (2=11) of the linear (1=10) in the northern area. These included a single small glazed sherd of early post-medieval redware, dating to 1580-1700. Elsewhere numerous modern material relating to the construction and demolition of the earlier building was observed. The presence of this material was recorded, but it was not retained.

3.3 Environmental remains

- 3.3.1 No deposits suitable for palaeo-environmental sampling were encountered during the course of the Watching Brief.
- 4 DISCUSSION AND CONCLUSIONS
- 4.1.1 The archaeological works undertaken during the demolition and site preparation of the Phase 2 area of the New Biochemistry development were designed to reveal, excavate record and mitigate any archaeological remains that may survive within that area.
- 4.1.2 The results of the investigation have shown that substantial parts of the site had been truncated and rendered sterile, either by ground reduction undertaken as part of the construction of the earlier buildings, including basements, foundations and services or by grubbing out of existing foundations during this phase of demolition.
- 4.1.3 All areas of the site where the natural terrace gravels were overlain by in-situ loess (supranatural) were identified, and the surviving upper horizon of this deposit were revealed by mechanical excavators under archaeological control. It was clear that this significant horizon had been heavily disturbed by previous modern activity.
- 4.1.4 Despite this wide-spread and ubiquitous disturbance of the loess a single feature, the post-medieval east-west aligned linear tentatively identified as a post-medieval ditch, dating between 1580 and 1700 was revealed at the northern extreme of the site. This feature probably represents a field boundary. No other archaeological deposits or features survived/or were present.
- 4.1.5 Given the density and distribution of prehistoric and Romano-British remains in the immediate vicinity of the Phase 2 area it is likely that contemporary archaeological features had once existed at the site, but that these had been removed by modern activity.
- 4.1.6 The development area has no further potential for archaeological remains, and therefore no futher work is considered to be required.

Context	Туре	Depth	Width	Length	Comments	Finds	Date
Northern Area							
1	Fill	0.14m	0.92m	> 8m	Fill of Ditch 2, silting deposit	Pot, bone	C16th - C17th
2	Cut	0.14m	0.92m	> 8m	East-west aligned ditch	-	C16th - C17th
3	Fill	0.1m	0.14m	> 3m	Modern backfill of 4	Brick	C20th
4	Cut	0.1m	0.14m	> 3m	Modern cable trench	-	C20th
5	Cut	0.05m	0.06m	0.08m	Base of modern post hole	-	C20th
6	Fill	0.05m	0.06m	0.08m	Modern backfill of 5	Tarmac	C20th
7	Cut	0.1m	0.12m	0.14m	Base of modern post hole	-	C20th
8	Fill	0.1m	0.12m	0.14m	Modern backfill of 7	Tarmac	C20th
9	Layer	> 0.2m	>3m	>20m	Truncated layer of alluvium overlying the terrace gravel	-	-
10	Cut	0.13m	0.62m	> 3m	Fill of Ditch 2, silting deposit	-	C16th - C17th
11	Fill	0.13m	0.62m	> 3m	East-west aligned ditch	-	C16th - C17th
12	Cut	0.15m	0.15m	>3m	Modern disturbance	-	C20th
13	Fill	0.15m	0.15m	> 3m	Backfill of Cut 12, redeposited material	Brick, tarmac	C20th
14	Layer	0.6m – 1.4m	> 20m	> 20m	Crushed demolition material "Type 1". Levelling of the site post demolition	Brick, iron	C21st
Southern Area							
20	Layer	0.2m	>5m	>15m	Truncated layer of alluvium overlying the terrace gravel. Continuation of layer 9	-	-
21	Layer	> 0.5m	> 5m	> 15m	Terrace gravel	-	-

APPENDIX A. ARCHAEOLOGICAL CONTEXT INVENTORY



Central Area							
30	Layer	> 0.2m	>3m	>20m	Truncated layer of alluvium overlying the terrace gravel. Continuation of layer 9	-	-
Transects	\$						
40	Layer	> 0.2m	>25m	>25m	Truncated layer of alluvium overlying the terrace gravel. Continuation of layer 9	-	-
41	Layer	> 0.5m	> 25m	> 25m	Terrace gravel	-	-
Monitoring of the demolition							
100	Layer	> 0.2m	>25m	>20m	Truncated layer of alluvium overlying the terrace gravel. Continuation of layer 9	-	-
101	Layer	> 1m	> 25m	> 20m	Terrace gravel	-	-



APPENDIX B. FINDS REPORTS

B.1 Pottery

Pottery by John Cotter

Context	Spot-Date	No	Weight	Comment
2	1580 - 1700	1	9g	Single glazed sherd of early post-medieval redware
Table 1: Potteny				

Table 1: Pottery

Description and recommendations

B.1.1 The assemblage is of low potential and requires no further work.

B.2 Ceramic building material

Identified by John Cotter and Geraldine Crann

Context	Spot-Date	No	Weight	Comment
2	13 th - 14 th Century	1	19g	Single sherd of worn early post-medieval pegtile

 Table 2: Ceramic building material

Description and recommendations

B.2.1 The assemblage is of low potential and requires no further work.



APPENDIX C. BIBLIOGRAPHY AND REFERENCES

Boston, C et al, 2003	Excavation of a Bronze Age Barrow at the proposed Centre for Gene Function, South Parks Road, Oxford, 2002, Oxoniensia 68, 179-200
IFA, 2001	Standards and Guidelines for Archaeological Watching Briefs
OA, 1992	Fieldwork Manual, (ed. D Wilkinson)
OA, 2006	Biochemistry Building Phase I, South Parks Road, Oxford: Archaeological Watching Brief Report
OCC, 2006	Biochemistry Building Phase I, South Parks Road, Oxford :Brief for Archaeological Fieldwork, Mitigation including Watching Brief

Site name:	New Biochemistry Building, South Parks Road, Oxford		
Site code:	OXBIOL14		
Grid reference:	Centred at NGR SP 5154 0700		
Type of watching brief:	Watching brief on the removal of foundations and services during demolition and ground investigation over other parts of the site		
Date and duration of project:	Between October 2014 and January 2015		
Area of site:	c. 2100m²		
Summary of results:	The watching brief observed that the majority of the site had been severely truncated by the construction of the earlier building on the site, with any intact archaeological stratigraphy and the upper part of the underlying terrace gravel deposits having been destroyed.		
	Within a narrow band along the north and north-east edges of the site the base of the alluvial deposits above the gravels had survived, with the truncated base of an east-west aligned earlier Post-medieval boundary ditch, probably a field boundary, was observed and recorded.		
	No other significant archaeology was encountered.		
Location of archive:	The archive is currently stored at Janus House, and will be deposited with Oxfordshire Museum Service in due course, under the Accession Number OXCMS:2014.248.		

APPENDIX D. SUMMARY OF SITE DETAILS





Contains Ordnance Survey data © Crown copyright and database right 2014 (c) OpenStreetMap and contributors, Creative Commons-Share Alike License (CC-BY-SA)

Figure 1: Site location











6



Plate 1: Section 1



Plate 2: Section 3



Plate 3: Sample section, north-south transect showing depth of made ground over the terrace gravel



Plate 4: Differing depths of disturbed terrace gravels within northern area



Head Office/Registered Office/ OA South

Janus House Osney Mead Oxford OX20ES

t:+44(0)1865263800 f:+44(0)1865793496 e:info@oxfordarchaeology.com w:http://oxfordarchaeology.com

OA North

Mill 3 MoorLane LancasterLA11QD

t: +44(0)1524 541000 f: +44(0)1524 848606 e: oanorth@oxfordarchaeology.com w:http://oxfordarchaeology.com

OAEast

15 Trafalgar Way Bar Hill Cambridgeshire CB238SQ

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



Director: GIII Hey, BA PhD FSA MIFA Oxford Archaeology Ltd is a Private Limited Company, N⁰: 1618597 and a Registered Charity, N⁰: 285627