

Tinbergen Building, South Parks Road, Oxford



Archaeological
Evaluation Report



December 2015

Client: CPC Project Services on behalf
of Oxford University Estates Ltd

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Tinbergen Building, South Parks Road, Oxford

Archaeological Evaluation Report

Written by Robin Bashford

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Summary

In November 2015 Oxford Archaeology (OA) carried out an archaeological evaluation at Tinbergen Building on South Parks Road Oxford. OA were appointed for the project by CPC Project Services on behalf of Oxford University Estates. The investigation was in relation to a proposed development on the site.

One trench revealed apparently re-deposited natural strata, which was cut into by a pit containing a 17th century claypipe. The potential for the site had been identified as the possible presence of prehistoric and Civil War remains. The feature and deposits recorded on the site maybe associated with the Civil War earthworks known to be this general area from historic map sources, however the exact nature of the remains was not clarified within the confines of the trenches.

1 INTRODUCTION

1.1 Scope of work

- 1.1.1 Oxford Archaeology (OA) were appointed by CPC Project Services on behalf of Oxford University Estates to carry out an archaeological investigation at Tinbergen Building on South Parks Road, Oxford. The investigation was intended to provide information to the Oxford City Archaeologist to enable advice to be given on an application to develop the site.
- 1.1.2 The proposed development programme comprises demolition and grubbing up of single storey structures and hard-standings at the southern boundary of the site property followed by the erection of a two-storey building on raft/basemented foundations. Prior to submission of the planning application for the development preliminary discussions with David Radford the Oxford City Archaeologist and archaeological planning advisor for Oxford City Council indicated that due to the archaeological potential of the site a programme of archaeological work would be likely to be a condition attached to any consent to development. Consequently a Desk Based Assessment (DBA) of the site was commissioned by CPC Project Services from Oxford Archaeology (OA 2015a)
- 1.1.3 In response to the conclusions of the DBA the Oxford City Archaeologist issued a 'Brief for an Archaeological Field Evaluation' describing the works that would be advised as required in association with any consents given (OCC 2015). OA then produced a Written Scheme of Investigation (WSI, OA 2015b) which outlined how OA would address the aims of/ and conform to the standards required by the Brief.

1.2 Location, geology and topography

- 1.2.1 The site (see Fig.1) is bordered to the north by South Parks Road and to the east by St Cross Road, and is mostly covered by the Tinbergen Building. Light ancillary buildings immediately to the south of the main building were used as aviaries. These had been demolished and the area had been levelled at the time of investigation.
- 1.2.2 The site lies within the administrative area of Oxford City Council and covers an area of around 0.7ha. It is located outside the medieval city and immediately outside the Central Oxford Conservation Area
- 1.2.3 The site is located on the second river gravel terrace and the underlying geology is Oxford Clay. The site is mostly level, and lies at c.60m OD.

- 1.2.4 The site can be broken into two distinct parts, roughly a northern and southern section. The northern portion represents the majority of the site and is within the footprint of the concrete Tinbergen Building, which was completed in 1970, and ranges in height from two storeys at the periphery to five storeys at the centre. The southern portion of the site, was previously covered by lightweight structures with concrete foundations and is the proposed area of re-development.

1.3 Archaeological and historical background

- 1.3.1 The site has been the subject of a desk-based assessment (OA 2015a). The results of the DBA are not reproduced in detail here and the DBA should be read in conjunction with this document.
- 1.3.2 The DBA noted the following archaeological potential:
- 1.3.3 There is a high potential for prehistoric remains to be present within the site as it is located c.50m from a known prehistoric field system. There have also been significant prehistoric remains identified from elsewhere in the DBA Study Area (a 250m radius around the site was used as the DBA Study Area) including Neolithic and Bronze Age ritual landscapes and funerary monuments. A number of findspots of prehistoric flint artefacts recorded from within the DBA Study Area suggests further isolated artefacts may be present within the gravels that underlie the site.
- 1.3.4 There is a high potential for Roman remains to be present within the Site. Previous work c.50m away identified that a prehistoric field system continued in use into the early Roman period. There have been a number of Roman artefacts found within the Study Area. The presence of Roman features that date from the 1st – 4th centuries has been shown through previous investigations in the Study Area, and there is the potential for the site to have remains relating to Roman agriculture and settlement.
- 1.3.5 There is low potential for early medieval remains to be identified within the site. Only one feature dating to this period has been identified within the Study Area and this is c.180m south-west of the site. The site lies outside both the Saxon defences of Oxford and the area of Saxon town settlement. The site was located within the open fields of Holywell Manor throughout the medieval period.
- 1.3.6 There is low potential for later medieval remains to be present within the site. No archaeological remains have been identified within the Study Area that date to this period. The presence of artefacts that date to this period within the soil is likely to represent manuring.
- 1.3.7 There is high potential, in the area of the lightweight structures, for remains relating to the Civil War defences being identified within the site. The location of a bastion or ravelin is shown on Loggan's map of 1675 as lying within the south western corner of the site (although De Gomme's 1644 plan of the proposed defences places it slightly further to the east and north).
- 1.3.8 Where portions of the Civil War defences have been excavated previously the ditch has been found to be very substantial, c.6 - 7m wide and over 2m deep.

Some notes on the character of the Civil War defences with particular reference to the northern defence line:

- 1.3.9 *"It is obvious that all concerned were aware of the fact that the north front was the vulnerable point and it was there that work started in 1642. Both the 1645 and 1646 siege operations were directed from the north."* (Kemp 1977)

- 1.3.10 *"Protruding from the banks might be horizontal sharpened stakes called storm poles.....Hidden pits called pitfalls were dug at Oxford in 1645 to disrupt the Parliamentarians should they storm the place. At Newark, the pitfalls were described as 'two rows of holes ye height of a man in depth, and so near it might hinder their sudden assaulting the works.'" (Harrington et al 2003)*
- 1.3.11 *The rampart is likely to have been fronted with 'storm poles'; these were rows of sharpened stakes which would have prevented infantry storming the ramparts. Similarly 'chevaux de frise' (iron tipped spiked wooden barriers) or 'abbatis' (mounds of tree branches) may have been placed on the outer side of the rampart. Below the rampart lay the ditch which may have been strengthened by a palisade (open fence) or additional stakes. Beyond the ditch was the counterscarp bank and glacis (sloped ground covered by fire from the rampart). On works of this importance and scale it is possible that the counter-scarp bank was provided with a 'covered way', this being a pathway with parapet covered by fire from the rampart behind. This would allow troops to move along the lines of the defences and provide an additional tier of musketry in the event of an attack.*
- 1.3.12 *Beyond the counterscarp lay the glacis; although not clearly shown on any of the historic mapping the glacis may have been extensive and would consist of a gently sloping bank on the far side of the counterscarp. Beyond this would be an artificially enhanced field of fire which would be cleared of all obstacles and in which hollows would have been filled and raised ground flattened. In this area 'pitfalls' (small hidden pits often filled with stakes) may have been placed to impede any attempt to storm the fortifications." (Munby and Simons in Bradley et al 2005)*
- 1.3.13 *"The strength of the new fortifications is shown in Col. Fairfax's report of May 3rd, 1646, which described the line as being 'very high, having many strong bulwarks so regularly flanking one another, that nothing could be more exactly done; round about the line, both upon the bulwarks and upon the curtain, was strongly set with stormpoles; upon the outside of the ditch, round the line, it was strongly pallisadoed.'*
- 1.3.14 *This report is confirmed by a contemporary pamphlet entitled P. Ruperts Marching out of Oxford which asserts that there was 'a complete line of strong works on the north outside the wall, from Isis to Cherwell, and also beyond Magdalen Bridge, and regular works on the West and South.'" (Lattey et al 1936 p167)*

2 PROJECT AIMS AND METHODOLOGY

2.1 Aims

- 2.1.1 The specific aims and objectives of the investigation were:

To investigate the presence /absence of archaeological remains within the locality of the extant and proposed building.

2.2 Project Specific Excavation and Recording Methodology

Trenches

- 2.2.1 Two trenches totalling a linear length of c 24 m was excavated across the southern area. These were located (see Fig.1) in regard to the mapped modern impacts and the potential line(s) of the Civil War earthworks. The spatial distribution of these trenches is also appropriate for assessing the presence/absence of the prehistoric potential highlighted in the DBA.
- 2.2.2 Trench excavation and recording methodologies were set out in OA's WSI.

3 RESULTS

3.1 Description of deposits

Trench 1

- 3.1.1 Trench 1 was c 12.5 m long and was excavated in the central western part of the proposed development area.
- 3.1.2 A sterile deposit (100=106) predominantly composed of bright yellow brown clay was encountered at c 0.8m below existing ground level (57.68m OD). This had a concentration of gravel overlying it at the western end of the trench, and within a sondage at the eastern end of the trench it overlay layer of sand and gravel (107) which in turn overlay a band of mid reddish brown sand (108) with occasional gravel fragments. The sondage was excavated to a maximum depth of 2.1m below ground level (55.99m OD) and revealed that the interface between the yellow brown clay, the sand and gravel and the underlying reddish brown sand was at an angle of 45°, sloping from north to south (Section 101, Figure 3). The reddish brown sand was approximately 0.6m thick and overlay a second deposit of bright yellow brown clay very similar in composition to the deposit at the top of the sequence. The interpretation of these deposits is discussed in Section 4 below.
- 3.1.3 Deposit 100 was overlain by a mixed deposit (104) of bright yellowish brown clay and mid reddish brown sandy clay, which may have represented the re-worked upper element of Deposit 100. The interface between these deposits was diffuse and Deposit 104 appeared to vary in thickness from 0.2m to 0.4m.
- 3.1.4 A sub-circular pit (101) was partially revealed at the eastern end of the trench. Pit 101 was approximately 2.3m in diameter and at least 0.85m deep, although the base of the feature was not established within the confines of the trench. The fills of the pit comprised a mid reddish-brown sandy silt with occasional concentrations of bluey grey clay (102), which was overlain by an upper fill composed of tenacious mid reddish brown silty clay (103). A claypipe bowl and a quantity of animal bone were recovered from the lower fill (102) which indicate a mid-17th century date for the fill(s) of the feature.
- 3.1.5 Some truncation from a foul water pipe and the foundations for the stairs formerly leading to the terrace on the Tinbergen Building were apparent within the trench. The remaining deposits comprised a mixed layer of mid grey brown silty clay with modern construction debris throughout (105).



Plate 1: Trench 1 facing west

Trench 2

- 3.1.6 Trench 2 was c 11.5 m long and was excavated in the eastern part of the proposal area.
- 3.1.7 A sterile bright yellow sandy clay (200) was encountered at c 0.6m below existing ground level (57.66m OD). A sondage was excavated through this layer at the western end of the trench to a maximum depth of 1.7m below ground level (56.53m OD) and revealed some localised variations in the concentration of sand within the deposit.
- 3.1.8 Deposit 200 was overlain by a mid reddish brown clay silt (201) which varied in thickness from 0.14m to 0.30m and may have represented the post-glacial brickearth which overlies the second gravel terrace. A lens of gravel in the location of Section 200 (Fig. 4) marked the interface between this deposit and the underlying sterile sandy clay. Overlying Deposit 201 was a layer very similar in composition, but greyer in colour (202) which was in turn overlain by a humic clayey silt (203). The remaining deposit at the top of the sequence comprised a mixed layer of modern material.

4 DISCUSSION AND CONCLUSIONS

General

- 4.1.1 The deposit (100=106/200) encountered at the same elevation in the base of both trenches was very sterile and was initially thought to represent a geological variation in the composition of the second gravel terrace, possibly reflecting the location of the site on the periphery of the promontory between the Thames and the Cherwell. The relative consistency in the composition of the deposit within Trench 2, and the fact that it was overlain by possible *in-situ* brickearth (201), appeared to be consistent with this interpretation. However, the banding and compositional variation noted within the sondage in Trench 1 may suggest that the material was re-deposited, particularly as

the interfaces between a number of these variations were not horizontal (Section 101, Fig. 3).

- 4.1.2 Given the projected line of the Civil War defences, it is possible that this apparent re-deposited material formed part of the earthworks, particularly as the bank would have been formed by the use of sterile natural material generated from the excavation of the ditch. However, if the deposit in Trench 2 does represent *in-situ* natural geology, then the fact that Deposit 100 was at the same elevation would suggest that if re-deposited, then it must be filling a negative feature. Given the potential for the site it is possible this strata represents infilling of the Civil War defensive ditch.
- 4.1.3 The dating evidence recovered from the pit (101) which truncated this deposit would suggest an early-mid 17th century date for the feature. This also appears to be inconsistent with the interpretation of the sterile deposit in Trench 1 backfilling the Civil War ditch. The function of the pit was unclear, although the lack of other features and the anticipated proximity of the Civil War defences may suggest a relationship between the two.

Other deposits

- 4.1.4 The fact that the possible *in-situ* brickearth deposit recorded in Trench 2 was not present in Trench 1 would imply that a greater degree of truncation has occurred in the western part of the site. It is possible, although highly conjectural, that the more mixed deposit (104) overlying deposit 100 in Trench 1 may reflect the creation of an "*artificially enhanced field of fire*" beyond the glacis, with Pit 101 representing a pitfall.
- 4.1.5 The slight variation in colour between deposit 201 and 202 may suggest that the latter represents the re-worked upper element of the brickearth, possibly as a result of ploughing. The humic layer (203) at the top of the sequence (excepting modern disturbance) probably represented a buried topsoil.
- 4.1.6 The remaining deposits, modern services and foundations encountered within the trenches relate to the construction of the Tinbergen Building.
- 4.1.7 It should cautiously be noted that large-scale redeposition of natural deposits may have taken place during the construction of the Tinbergen Building. During a pre-investigation site visit it was noted to the OA project manager that traversing crane bases were present on site (although the evidence for this was unclear). The construction and subsequent burying or removing of such structures could easily result in large-scale redeposition of materials. However should this be the origin of redeposited soils in Trench 1 this would also require the pit containing a 17th claypipe bowl and stem to be modern with residual artefacts.

5 IMPACT OF THE PROPOSED CONSTRUCTION

- 5.1.1 The proposed development (see figure 4) is a deep basemented construction with raft foundation. It should be assumed that impact of the development will be complete removal of all strata in the proposal area to a depth of at least 2 m.



APPENDIX A. ARCHAEOLOGICAL CONTEXT INVENTORY

Trench 1						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
100	Deposit			Redeposited (?) natural		
101	Cut			Pit cut		
102	Deposit			Fill of pit cut 101	claypipe bone	17th century
103	Deposit			Fill of pit cut 101		
104	Deposit			Historic post medieval plough horizon?		
105	Deposit			Modern overburden		
106	Deposit			Redeposited natural		
107	Deposit			Redeposited sand and gravel		
108	Deposit			Reworked brick earth (?)		
Trench 2						
Context no	Type	Width (m)	Depth (m)	Comment	Finds	Date
200	Deposit			Natural (?)		
201	Deposit			Brick earth		
202	Deposit			Historic plough remnant		
203	Deposit			Modern disturbed soil		
204	Deposit			Modern overburden		



APPENDIX B. BIBLIOGRAPHY AND REFERENCES

Bradley, P, Charles, B, Hardy, A, and Poore, D, 2005, 'Prehistoric and Roman Activity and a Civil War Ditch: Excavations at the Chemistry Research Laboratory, 2-4 South Parks Road, Oxford', *Oxoniensia* **LXX**

Harrington, P, and Spedaliere, D, 2003, *English Civil War Fortifications 1642-51*

Kemp, R, 1977, 'The Fortification of Oxford during the Civil War', *Oxoniensia* **XLII**

Lathey, R, T, Parsons, E, J, S, and Philip, I, G, 1936, 'A Contemporary Map of the Defences of Oxford in 1644', *Oxoniensia* **I**

OA 2015a Tinbergen Building, South Parks Road, Oxford. Desk-Based Assessment

OA 2015b Tinbergen Building, South Parks Road. Written Scheme of Investigation for an Archaeological Watching brief and Trench Evaluation.

OCC 2015 Brief for an Archaeological Field Evaluation (Trial trenching). Project: Tinbergen

Building, South Parks Road, Oxford. Oxford City Council Heritage and Specialist

Services Team

APPENDIX C. FINDS REPORTS

FINDS REPORTS

C.1 Clay Pipe

C.1.1 Context (102). 1x clay pipe bowl (11g).

C.1.2 Description: Complete clay pipe bowl with broad circular heel and 70mm length of surviving stem. The bowl form is of Oxford Type A c1630-1650. On the heel is a stamped maker's mark in incuse letters 'EC'. The mark has yet to be identified and the pipe may be a non-local product.

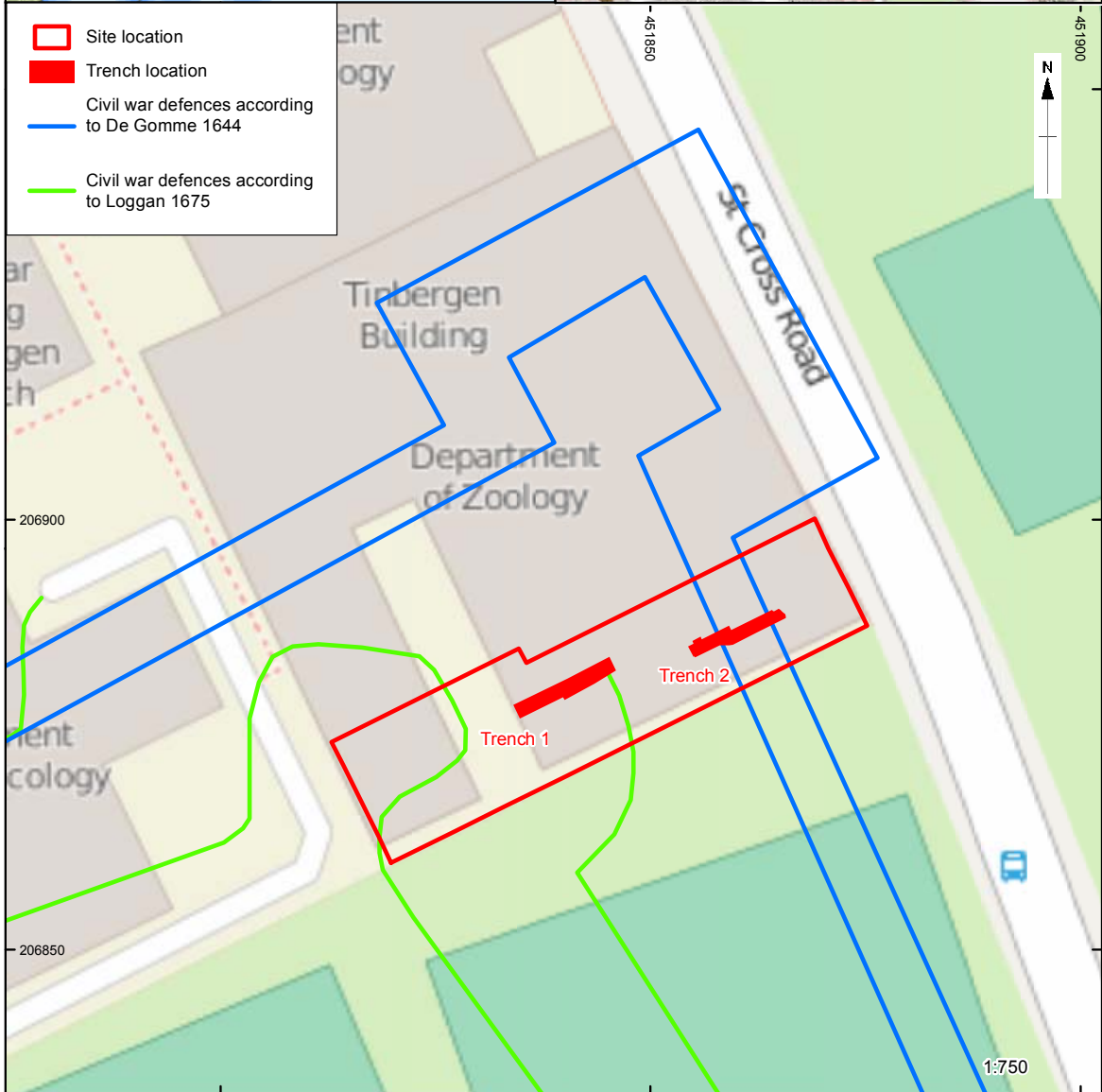
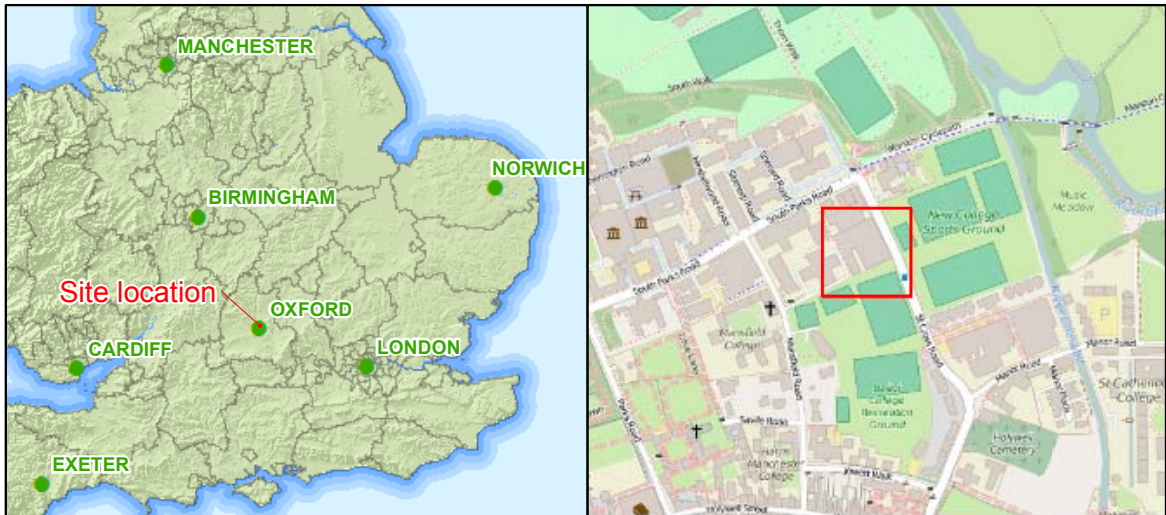
C.2 Animal Bone

Context	Description
102	1 cattle metacarpal fused distally, 1 cattle humerus fused distally, 1 sheep/goat scapula, 1 large mammal vertebra. 228g



APPENDIX D. SUMMARY OF SITE DETAILS

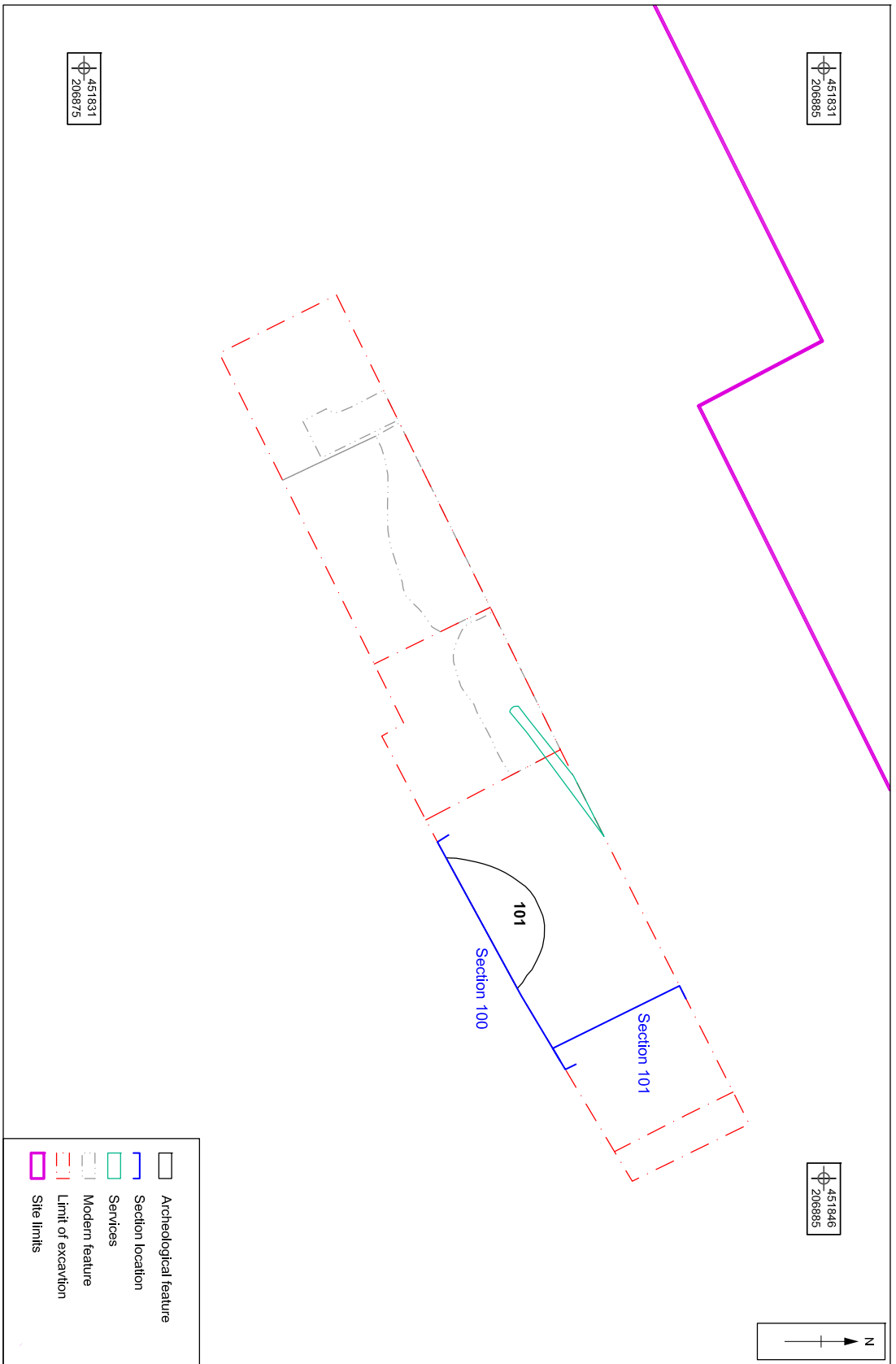
Site name:	Tinbergen Building, South Parks Road, Oxford
Site code:	OXTINB15
Grid reference:	Centred at NGR SP 5182 0692
Date and duration of project:	19th-20th November
Area of site:	24 m linear trenching
Summary of results:	One of two trenches revealed a large pit containing animal bone and a claypipe dating to the mid 17th century. This was cut into apparently re-deposited natural strata that may be related to Civil War earthworks
Location of archive:	Oxford Archaeology prior to OCMS



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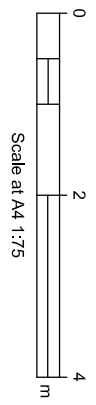
Contains Ordnance Survey data © Crown copyright and database right 2014
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Figure 1: Site location



CHECKED BY: MB*02/12/15

Figure 2: Plan of trench 1



- Archeological feature
- Section location
- Services
- Modern feature
- Limit of excavation
- Site limits

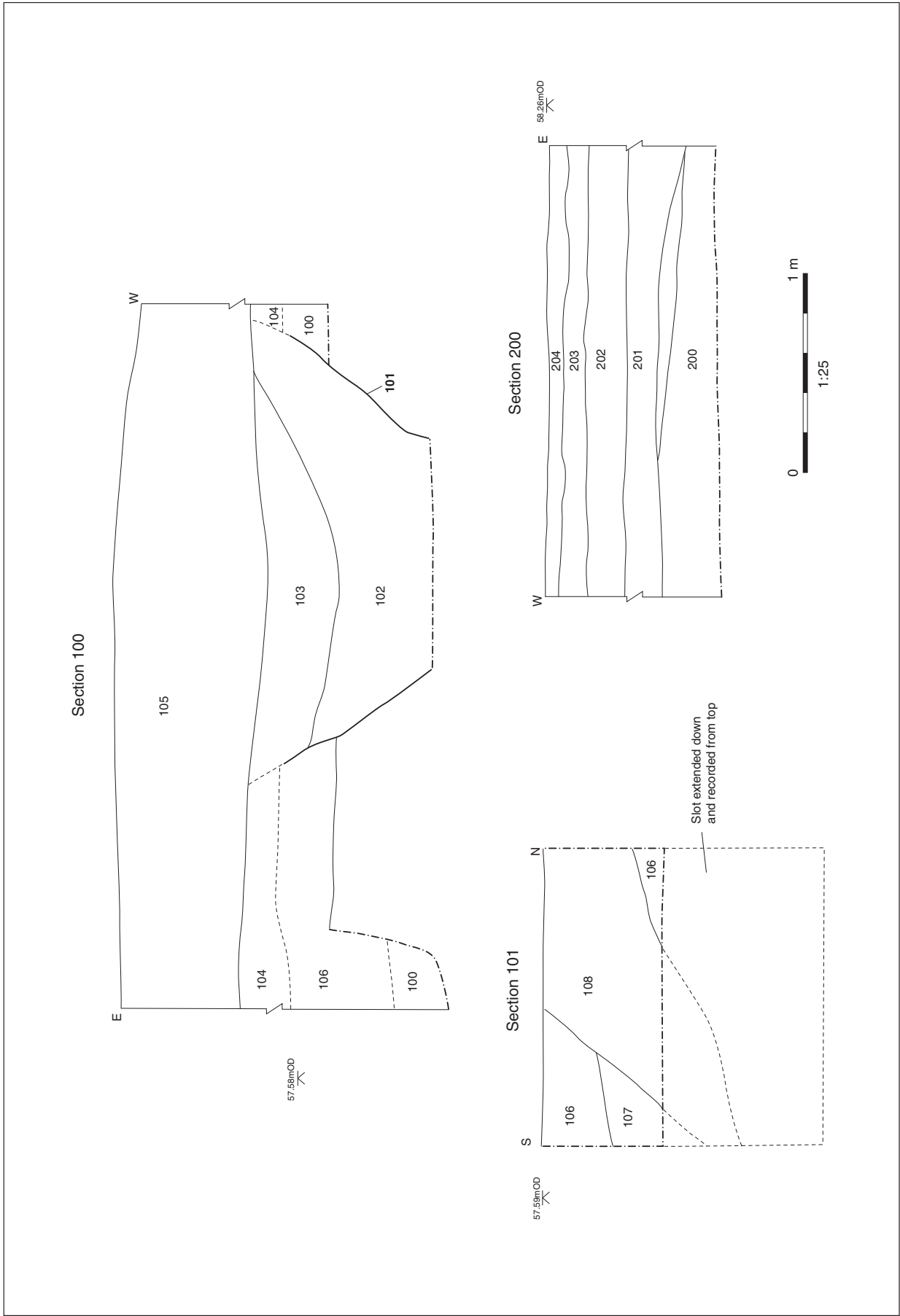
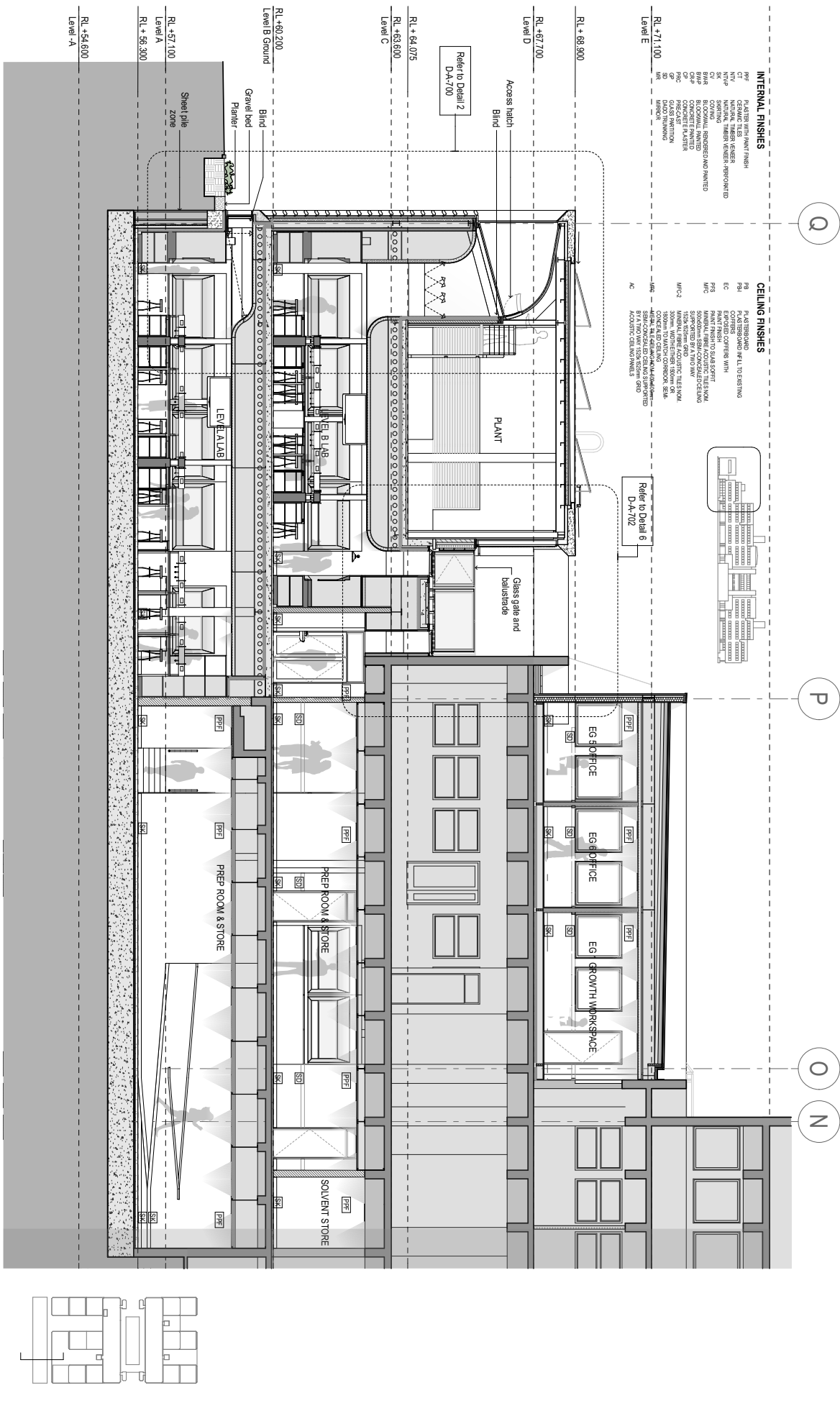


Figure 3: Sections from trenches 1 and 2



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Do not scale. All dimensions are to be taken as indicated on the drawing. The client is responsible for the accuracy of the information provided. The client is responsible for the accuracy of the information provided. The client is responsible for the accuracy of the information provided.

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PROJECT

Thames Valley University Building
South Park Road
University of Oxford

STAGE 3

TITLE

Section
Chemistry North South Section A-A - Typical Laboratory

SCALE 1:50 (0.1:1)

DATE 10/08/2024

PROJECT CODE UOX TB

DRAWING NO. DA-371

REGION A