



# Life and Mind Building (Tinbergen Building), Oxford

## Archaeological Evaluation Report

February 2022

**Client: Wates Construction Limited**

Issue No: 2

OA Reference No: 7876

NGR: SP 5183 0691





Client Name: Wates Construction Ltd  
Document Title: Life and Mind Building (Tinbergen Building), Oxford  
Document Type: Archaeological Evaluation Report  
Report No.: 7876  
Grid Reference: SP 5185 0687  
Planning Reference: 19/01636/FUL and 20/02471/FUL  
Site Code: OXTBB21  
Invoice Code: OXTBBEV  
Receiving Body: Oxfordshire County Museum Services  
Accession No.: OXCMS:2019.151

OA Document File Location: \\10.0.10.86\Projects\o\Oxford\_Tinbergen\_Building\_Demolition\EVALUATION

OA Graphics File Location: \\10.0.10.86\Projects\o\Oxford\_Tinbergen\_Building\_Demolition\EVALUATION\010Geomatics

Issue No: 2  
Date: March 2022  
Prepared by: Adam Fellingham (Supervisor)  
Checked by: Ben Ford (Senior Project Manager)  
Edited by: Andrew Simmonds (Senior Project Manager)  
Approved for Issue by: David Score (Head of Fieldwork)  
Signature:



**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.*

**OA South**

Janus House  
Osney Mead  
Oxford  
OX2 0ES

t. +44 (0)1865 263 800

**OA East**

15 Trafalgar Way  
Bar Hill  
Cambridge  
CB23 8SQ

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](mailto:info@oxfordarch.co.uk)

w. [oxfordarchaeology.com](http://oxfordarchaeology.com)

Oxford Archaeology is a registered Charity: No. 285627



Director and Chief Executive  
Gill Hey, BA PhD FSA MCIFA  
Private Limited Company, No: 1618597  
Registered Charity, No: 285627  
Registered Office: Oxford Archaeology Ltd  
Janus House, Osney Mead, Oxford OX2 0ES

## Life and Mind Building (Tinbergen Building), Oxford

### *Archaeological Evaluation Report*

*Written by Adam Fellingham*

*With contributions from Leigh Allen, Anni Byard, John Cotter,  
Michael Donnelly, Adrienne Powell and illustrations by  
Matthew Bradley and Magdalena Wachnik.*

### Contents

Summary.....	vii
Acknowledgements.....	viii
<b>1 INTRODUCTION.....</b>	<b>1</b>
1.1 Scope of work.....	1
1.2 Location, topography and geology.....	1
1.3 Archaeological and historical background.....	1
<b>2 AIMS AND METHODOLOGY.....</b>	<b>5</b>
2.1 General.....	5
2.2 Specific aims and objectives.....	5
2.3 Methodology.....	6
<b>3 RESULTS.....</b>	<b>7</b>
3.1 Introduction and presentation of results.....	7
3.2 General soils and ground conditions.....	7
3.3 General distribution of archaeological deposits.....	7
3.4 Former Tinbergen Building.....	7
3.5 Former Erith compound.....	8
3.6 Sports field.....	9
<b>4 DISCUSSION.....</b>	<b>11</b>
4.1 Reliability of field investigation.....	11
4.2 Evaluation objectives and results.....	11
4.3 Interpretation.....	11
4.4 Significance.....	13
<b>APPENDIX A TRENCH DESCRIPTIONS AND CONTEXT INVENTORY.....</b>	<b>14</b>
<b>APPENDIX B FINDS REPORTS.....</b>	<b>21</b>
B.1 Post-Roman pottery.....	21

---

B.2	Clay tobacco pipe.....	22
B.3	Ceramic building material.....	23
B.4	Glass .....	23
B.5	Animal bone.....	24
B.6	Flint.....	24
B.7	Metalwork .....	26
APPENDIX C	BIBLIOGRAPHY .....	27
APPENDIX D	SITE SUMMARY DETAILS / OASIS REPORT FORM .....	29

## List of Figures

- Fig. 1 Site location
- Fig. 2 Trench locations
- Fig. 3 Detailed trench plan of northern area
- Fig. 4 Detailed trench plan of the sports field
- Fig. 5 Trenches 1, 2 and 4 sections
- Fig. 6 Hand-augered sections relating to the Civil War ditch
- Fig. 7 Hand-excavated sections relating to the Civil War ditch
- Fig. 8 Trenches 10, 11 and 13 sections
- Fig. 9 De Gomme's contemporary plan of Oxford's defences (1644)
- Fig. 10 Loggan's map of Oxford (1675)

## List of Plates

- Plate 1 Trench 2, Section 1100, looking north
- Plate 2 Trench 10, posthole 1912 and tree-throw hole 1914, Section 1904, looking west
- Plate 3 Trench 10, ditch 1910, Section 1903, looking north
- Plate 4 Trench 12, civil war ditch 2104, Section 2100, looking west-south-west
- Plate 5 Trench 14, civil war ditch 2304, Section 2300, looking north-west

## Summary

Oxford Archaeology was commissioned by main contractors Wates Construction Limited on behalf of Project Managers Arups to undertake an archaeological evaluation on the site of the proposed redevelopment of the Life and Mind Building (formerly the Tinbergen Building), Oxford (NGR: SP 5183 0691).

The first phase of the evaluation work was undertaken during April 2021 and consisted of 13 archaeological evaluation trenches (Trenches 1–7 and 10–15). The second phase was undertaken in October 2021 when the area became available and involved the excavation of a single trench combining Trenches 8 and 9.

The trenches demonstrated that possible late Iron Age to Roman activity, Civil War defensive features and post-medieval and Victorian deposits survive within the site.

The possible late Iron Age and Roman features are likely to relate to ditched field system boundaries and low-density structures. These features have the potential to contribute to the understanding and development of this activity within the wider landscape and could be considered significant, as similar activity was recorded c 50m west of the site.

The Civil War defensive ditch was first observed as a cropmark and was revealed within Trenches 8, 10, 12 and 14, providing confirmation of the layout and position of the levelled earthworks shown on the maps of De Gomme (1644) and Logan (1675).

Archaeological remains in the southern half of the site (south of the 2016 excavation area) will be preserved *in situ* below the construction compound area, and subsequently during the reinstatement of the University sports field.

## Acknowledgements

Oxford Archaeology would like to thank Wates Construction Ltd for commissioning this project on behalf of Project Managers, Arups. Thanks are also extended to David Radford, who monitored the work on behalf of Oxford City Council.

The project was managed for Oxford Archaeology by Ben Ford. The fieldwork was directed by Adam Fellingham, who was supported by Elizabeth Kennard. Survey and digitising were carried out by Marjanna Kohtamaki, Matthew Bradley and Magdalena Wachnik. Thanks are also extended to the teams of OA staff that cleaned and packaged the finds under the supervision of Leigh Allen, and prepared the archive under the supervision of Nicola Scott.



## 1 INTRODUCTION

### 1.1 Scope of work

1.1.1 Oxford Archaeology (OA) was commissioned by main contractors Wates Construction Limited on behalf of Project Managers Arups to undertake an archaeological evaluation and watching brief on the site of the proposed redevelopment of the Life and Mind Building (formerly the Tinbergen Building), Oxford. The site is centred on NGR: SP 5183 0691 (Fig. 1).

1.1.2 The work was undertaken as a condition of Planning Permission (refs: 19/01636/FUL and 20/02471/FUL). Although the local planning authority did not set a brief for the work, discussions with David Radford (Archaeologist at Oxford City Council (OCC)) established the scope of work required, which OA set out in a written scheme of investigation (OA 2021).

1.1.3 The works required were:

- Stage 1 - Archaeological trench-based evaluation in the area of the impact from the basement extension, compound extension and an archaeological watching brief during the excavation of geotechnical test pits.
- Stage 2 – Any archaeological mitigation work that may be required from Stage 1.

1.1.4 All work was undertaken in accordance with the Chartered Institute for Archeologists' 'Standards and Guidance for Archaeological Field Evaluation' (CIFA 2014) and local and national planning policies.

### 1.2 Location, topography and geology

1.2.1 The site includes the University Sports Club playing field and the area previously occupied by the Tinbergen Building (now demolished) and is located on relatively level ground at a height of c 59.5m OD. The underlying geology consists of second terrace river gravels, underlain by Oxford Clay formation (BGS 2021).

### 1.3 Archaeological and historical background

1.3.1 The archaeological and historical background of the site has been described in detail in a desk-based assessment (OA 2015) and its 2019 addendum (OA 2019a), and will not be reproduced here.

1.3.2 Discoveries made in a series of archaeological investigations since the desk-based assessment and addendum are summarised below and their locations shown on Figure 1.

#### **Excavation at the Tinbergen Building (2016)**

1.3.3 In April 2016, Oxford Archaeology undertook an archaeological strip, map and sample within the footprint of an extension to the Tinbergen Building (OA 2016). The works were followed by a watching brief on associated groundworks undertaken between

May and August 2016 (*ibid.*). An evaluation of the site had previously been undertaken by OA in 2015 (OA 2015).

- 1.3.4 The works revealed a roughly NW–SE-aligned ditch in the western half of the site and a configuration of pits to the east on the same alignment. Although the fills of the ditch did not produce any datable artefactual material, it is almost certain that it is associated with the Civil War defensive circuit, as contemporary cartographic sources indicate a bastion in the vicinity.
- 1.3.5 The fills of the pits produced 17th-century finds, including a Charles I Rose farthing minted between 1636 and 1644, as well as a horse burial complete with horseshoes, the form of which suggest a late 17th or 18th century date. Consequently, the pits probably represent ‘pitfalls’ (a device to trap/disrupt charging cavalry and troops) providing an additional line of defence outside the main circuit of the ditch and bank. The fact that the ditch was relatively shallow in comparison to other excavated segments of the defences may indicate a degree of truncation had occurred, possibly during the construction of the Tinbergen Building in the 1960s, as well as the Sports Field to the south.

#### **Watching brief and evaluation at the Department of Zoology and Administrative Modular Building (2017)**

- 1.3.6 Six possible archaeological features were identified during the three phases of investigations undertaken by Oxford Archaeology (OA 2017). These include a possible ditch terminus, a possible ditch terminus or pit and two possible pits in the centre of Building 1. Additionally, two possible pits were investigated but interpreted as either tree-throw holes or of geological origin. No archaeological features were identified during works associated with Building 2 or the attenuation tank. No artefacts were recovered.

#### **Balliol College Master’s Field (2016, 2018 and 2019)**

##### ***Evaluation 2016 (OA 2016)***

- 1.3.7 Oxford Archaeology carried out a trial-trench evaluation at Balliol College Master’s Field. Two evaluation trenches around the edge of the sports field each uncovered a ditch of medieval date, probably agricultural boundaries. A pit of similar date was also present. The trenches excavated through the car park and gardens on the eastern side of the site all exhibited truncation of the natural gravels and no archaeological features remained. Several well-preserved glass bottles and stoneware vessels of Victorian date were recovered from a made-ground deposit.

##### ***Watching brief 2018 Area B1 (OA 2020a)***

- 1.3.8 These works revealed a substantial NNW-SSE aligned ditch of defensive proportions that was revealed within Area B1. It is likely to represent part of the inner Civil War defensive earthwork that was constructed during 1642–3. The ditch was 6.0m wide and 2.5m deep and had steep (*c* 45 degree) sides and a concave base. It contained a series of fills likely to have largely represented deliberate backfill. A small amount of pottery was recovered from its fills, most of which was medieval in date, presumably residual material derived from the earlier pits that it cut. Sherds of stoneware pottery

date to 1550–1700 and clay pipe fragments dated to c 1630–55 were recovered from one of its intermediate fills. It is likely that the ditch had been infilled shortly after the Civil War, as Loggan’s map of 1675 shows the area as part of a bowling green by that date. The ditch cut an earlier and approximately NE–SW aligned ditch that was 1.14m wide and 0.67m deep. It contained pottery dated to 1580–1650 and probably represented a field boundary or drainage ditch.

### ***Evaluation 2019 (OA 2019b)***

- 1.3.9 The earliest feature revealed was a possible medieval pit or ditch terminus dating from 1075–1300. The earliest phase of structural activity recorded within the site was the limestone foundations for the southern wall and buttress of a substantial building, which corresponds with the southern extent of a large medieval barn shown on the 1:500 1st Edition OS map published in 1876, prior to its demolition towards the end of the 19th century. Archaeological evidence for a later internal structure and associated mortar surfaces confirms documentary evidence indicating that the barn was modified and added to during the post-medieval period.
- 1.3.10 Trenches 7, 8 and 9 of this evaluation all recorded post-medieval activity; a boundary ditch running NW–SE, which was later replaced by a limestone wall and appears on the 1st Edition OS map, quarry pits and a rubbish pit. The post-medieval activity within the site was sealed by late 19th-century made ground. Concrete wall foundations for the 20th century tennis courts were also revealed. The entire sequence was sealed by modern deposits associated with landscaping and ground raising for the current buildings. Adjacent to St Cross Road part of a large amorphous pit was revealed which truncated the full archaeological sequence; this was probably the result of construction activity associated with the current buildings at the site.

### ***Excavation (OA 2020a)***

- 1.3.11 Although no features or activity was recorded that dated prior to the 12th century several undated postholes and small pits revealed during this excavation could potentially date to this earlier pre-Conquest period.
- 1.3.12 The earliest activity comprised several ditches and quarry/rubbish pits likely to be associated with a largely rural or agricultural landscape during the 12th and 13th centuries. The pits in particular contained considerable quantities of domestic refuse that was presumably deposited from nearby settlement within the manor of Holywell, which at this time fell outside the liberty of Oxford. This material will help to clarify the status and activity within the parish/manor.
- 1.3.13 Although the excavations did not reveal a firm date for the construction of the medieval barn, there is good evidence for its structural modification during the post-medieval period. The finds of musket balls together with coins in levels possibly associated with these modifications offers rare archaeological evidence for the possible use of a building during the Civil War. The position of the barn, between the inner and outer earthworks of the Civil War defences, was probably a convenient strategic location. The excavation sectioned part of the ditch of the inner defensive earthwork, which also contained material pertaining to the Civil War period and its immediate aftermath. This material could potentially derive from the Royalist

garrisons that occupied the city during the sieges of 1642–6. Although the quantity of the material from the ditch is small, it could be compared with contemporary levels associated with the barn and its surroundings, including Building 2 which seems to date to the early post-medieval period.

### **Watching brief at the Tinbergen Building for Chemistry Teaching Laboratory flues and compound (2020)**

- 1.3.14 Works comprised observations on test pits to locate modern services, and intermittent observation of the topsoil strip to install a pile mat and base for the Plant Room, as well as to establish Erith's works compound (OA 2020b). Due to the limited nature of groundworks in combination with disturbance from modern services the significant archaeological horizon was not reached and therefore no archaeological deposits of significance were observed.

## 2 AIMS AND METHODOLOGY

### 2.1 General

2.1.1 The archaeological evaluation aimed to gather sufficient information to generate a reliable predictive model of the extent, character, date, state of preservation and depth of archaeological remains within the area to be impacted by the proposal.

2.1.2 The project considered pertinent elements of the following city and regional resource assessments and research agendas:

- Solent Thames Research Framework (Hey and Hind 2014)
- Oxford Archaeological Action Plan 2013-2018 (OCC)
- Oxford Urban Archaeological Resource Assessment and Research Agenda (2012)

2.1.3 The general project aims, and objectives were as follows:

- To determine the nature and extent of any remains present within the trenches using sample excavation.
- To determine the date or date range of any remains, by means of artefactual or other evidence, such as scientific dating.
- To determine the nature and state of preservation of any ecofactual remains.
- To avoid excavation in areas where there are known existing services.
- To produce a client report, and/or publish in a local journal, significant archaeological remains

### 2.2 Specific aims and objectives

2.2.1 The specific aims and objectives were:

- i. To ascertain the level of truncation, both in the vertical and horizontal planes, upon the former ground levels, and potentially significant archaeological horizon from the construction of the Tinbergen Building.
- ii. To further define and confirm the layout, nature and form of any medieval features or activity that may survive within the site.
- iii. To further define and confirm the layout, nature and form of any Oxford Civil War defensive features or activity that may survive within the site.
- iv. To rapidly assess the results of the Stage 1 site works, ahead of the production of a formal report to be able to advise and agree with OCCs Archaeologist, David Radford, on the suitable methodology, aims and extent of any Stage 2 archaeological mitigation works that may be required.
- v. To gain information as to the nature, preservation, date and extent of the potential archaeological remains in the Sports Field (Compound Extension) area by plotting the extent of the Civil War ditch and sample excavating other features and deposits. This will inform reinstatement and the potential larger scheme of sports field construction.

## 2.3 Methodology

- 2.3.1 The works comprised the excavation of 14 evaluation trenches over two separate phases of fieldwork. During the first phase of evaluation Trenches 1–7 and 10 to 15 were excavated. Trenches 1–7 were positioned in the NW area of the former building to determine the extent of modern disturbances and truncations. These measured 7m x 4m in plan. Trenches 10–15 were situated in the sports field to the south of the building and were positioned to target the projected line of the civil war defensive ditch to determine the character, nature and extent of this feature. These trenches measured 1.8m wide and up to 30m in length (Fig. 2).
- 2.3.2 During a second phase of investigations during October 2021, the remaining trenches, 8 and 9 were amalgamated into a single trench measuring 27m x 1.8m (Trench 8). This was excavated in the area formerly occupied by the Erith compound and was also targeted the projected line of the civil war defensive ditch.
- 2.3.3 The trenches were excavated by a mechanical excavator fitted with a toothless bucket under constant archaeological supervision. Machining continued in spits down to the first significant archaeological horizon, natural geology or to a maximum depth of 2.2m below ground level, depending on which was encountered first. Once archaeological features and deposits were exposed, further excavation of significant remains was undertaken by hand, but large modern features were partially excavated with the assistance of the mechanical excavator.
- 2.3.4 Further investigation of the deeper sequence of the civil war ditch was undertaken in Trenches 8, 10, 12 and 14 using a hand-auger fitted with a selection of different auger heads (predominantly Dutch and screw auger) until the top of the natural was encountered (AH1700.1-7, AH1900.1-5, AH2100.1 and AH2300.3).
- 2.3.5 Hand-auger holes AH2200.1-3 and AH2300.1-2 were undertaken due to a variation in the natural geology and to confirm whether a discrete archaeological feature was present. These were augered to 1.4m below the base of the trench and confirmed these areas were a variation within the natural geology.

### 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 that contained archaeological remains. The full details of all trenches with dimensions and depths of all deposits can be found in Appendix A. Finds data and spot dates are tabulated in Appendix B.

#### 3.2 General soils and ground conditions

3.2.1 The soil sequence in the trenches was relatively uniform and similar within the two areas of the site. The natural geology of sand was overlain by a mid-yellowish brown sandy silt deposit which was in turn overlain by either modern deposits beneath the existing concrete slab (Trenches 1–7 and 15) or subsoil and topsoil /turf (Trenches–14).

3.2.2 Ground conditions throughout the evaluation were generally good, and the site remained dry throughout. Archaeological features, where present, were easy to identify against the underlying natural geology.

#### 3.3 General distribution of archaeological deposits

3.3.1 Archaeological features and deposits were present within Trenches 1, 2, 4, 8 and 10 to 14. The archaeological features encountered within the northern area consisted of a buried soil cut by pits, whilst postholes, pits and ditches were encountered within the sports field.

3.3.2 The other trenches (3, 5–7 and 15) were machine excavated to a maximum depth of 2.20m below ground level and contained no archaeological deposits or features. Deposits encountered within these trenches were modern in nature and will not be discussed further.

#### 3.4 Former Tinbergen Building

##### *Trench 1 (Figs 3 and 5)*

3.4.1 Trench 1 was located within the north-west area of the former building, immediately in front of the current Gate 1 entrance on the lower concrete slab. It was orientated NE–SW and measured 7 x 4m and 2m deep.

3.4.2 The mid-whiteish yellow clay sand natural (1010) was encountered at 1.70m bgl. This was overlain by a 0.20m thick layer of moderately firm yellowish brown silty sand (1009). This was cut by undated pit 1007, which measured 1.30m wide and 0.60m deep with relatively steep sides and a concaved base. It contained a single fill (1008), composed of moderately soft light brownish-yellow silty sand and was overlain by a modern deposit of blue clay and brick. This was cut by the cut (1003) for concrete slab 1005, which was overlain by a single fill (1004). This sequence was overlain by a mixed brick and rubble deposit (1002), which was in turn overlain by modern crush leveling (1001) for concrete slab 1000.

### ***Trench 2 (Figs 3 and 5, Plate 1)***

- 3.4.3 Trench 2 was located to the east of Trench 1 on the lower concrete slab. It was orientated NE–SW and measured 7m long by 4m wide and 1.50m deep.
- 3.4.4 The mid-whiteish yellow clay sand natural (1104) was encountered at 1.40m bgl and was overlain by a moderately firm yellowish brown silty sand (1103) that contained a single piece of pottery dating from 1225–1625. This was encountered at 1.16m bgl. Deposit 1103 was cut by undated pit 1109, which measured 0.60m wide and 0.48m deep with relatively steep sides and a concave base. The single fill (1110) comprised a deposit of moderately firm, mid-yellow brown sandy silt. This was overlain by Victorian garden soil 1102, which was encountered at 1m bgl. The soil was cut by the foundations for the former Victorian house (1105 and 1108) located within the site. This was overlain by modern made ground 1111, which was cut by a modern pit 1112, which measured more than 3.50m wide and 0.92m deep. The sequence was overlain by modern leveling (1101) for the current concrete slab (1100) and foundations (1115).

### ***Trench 4 (Figs 3 and 5)***

- 3.4.5 Trench 4 was located between Trenches 1 and 2 to the south on the higher concrete slab area. It was orientated NW–SE and measured 7m long by 4m wide and 2m deep.
- 3.4.6 The mid-whiteish yellow clay sand natural (1305), which was overlain by a moderately firm yellowish brown silty sand (1304). This was overlain by Victorian garden soil 1303, which was in turn overlain by modern sand and brick or pebbles leveling deposits (1301 and 1302) for the current concrete slab (1300).

## **3.5 Former Erith compound**

### ***Trench 8 (Figs 4 and 6)***

- 3.5.1 Trench 8 contained a mix of mid-yellowish orange and mid-brownish red sand natural (1703), which was cut by three pits, four postholes, the NNW-SSE orientated Civil War ditch, and a tree-throw hole. The ditch (1704) extended through the middle part of the trench and was investigated by hand-auger (AH1700.1-7) at 1m intervals across the full 6.90m width of the feature until the natural geology was encountered. The resulting profile based on the auger data is shown on Figure 6 (Section 1700). The ditch measured 2.10m deep (AH1700.3) and contained a total of five fills (1705 to 1709) with the lower fill 1707 becoming saturated with water. No finds were recovered from the ditch.
- 3.5.2 Two intercutting pits (1712 and 1714) were situated c 5m east of the ditch. They measured 1.40–1.48m wide and 0.28–0.38m deep, with concave bases and moderately shallow sides. Each pit contained a single fill (1713 and 1715) and no finds were recovered.
- 3.5.3 The third pit (1710), located within the western extent of the trench, measured 1.62m wide and 0.20m deep with a single fill (1711) that produced a piece of worked flint.
- 3.5.4 The four postholes (1716, 1718, 1720 and 1722) measured 0.16–0.30m wide and 0.10–0.18m deep and each contained a single fill (1717, 1719, 1721 and 1723) consisting of



mid-yellowish brown sandy silt. No finds were recovered from any these features. Feature 1724 was interpreted as a tree-throw hole. It measured more than 2m wide with a depth of 0.52m and contained a single fill (1725).

- 3.5.5 All features encountered within the trench were overlain by a mid-reddish brown sandy silt deposit (1702), which was 0.32m thick. This was in turn overlain by a mid-yellowish-brown subsoil (1701), sealed beneath the topsoil and turf (1700).

### 3.6 Sports field

#### *Trench 10 (Figs 4, 6 and 8, Plates 2 and 3)*

- 3.6.1 Trench 10 contained a natural of mid-yellowish orange and mid-brownish red sand (1903), which was cut by three postholes, two ditches and a tree-throw hole. Two postholes were hand excavated (1906 and 1912) and measured 0.36–0.40m wide and 0.20–0.25m deep. Each contained a single fill (1907 and 1913) comprising a mid greyish-red silty sand. The other posthole (1916) was not excavated. The tree-throw hole (1914) measured 1.08m wide and 0.25m deep and contained a single fill (1915). None of these features produced any finds.
- 3.6.2 The N–S orientated Civil War ditch (1904) extended across the middle part of the trench and was investigated by hand-auger (AH1900.1-5) at 1m intervals across the full width 5.50m of the ditch until the natural geology was encountered. The resultant profile is shown on Figure 6 (Section 1905). The ditch measured 2.10m deep (AH1900.3) and contained a total of five fills (1905 and 1918–1921) with the lower fills 1918 and 1919 being saturated with water. The uppermost fill (1905) contained pottery dating from 1225–1625 and clay tobacco pipe from the 17th century. Fill 1918 was directly beneath 1905 and produced pottery dating from 1150–1350.
- 3.6.3 Located within the eastern extent of the trench was a second N–S ditch (1910). It measured 1.24m wide and 0.28m deep, with relatively steep sides and a slightly concaved base, and appeared to terminate in the southern baulk of the trench. The single fill (1911), a moderately firm mid-brownish yellow clayey sand, produced no artefacts.
- 3.6.4 The features were overlain by moderately firm mid-reddish brown sandy silt deposit (1902), which was 0.20–0.30m thick beneath the buried ploughsoil layer (1922). Sealing this was a layer of mid-yellowish-brown subsoil (1901). This was cut by a single posthole (1908) which measured 0.35m wide and 0.58m deep. This contained a single fill (1909) of sterile, soft mid-reddish grey clayey sand, which was in turn overlain by topsoil and turf (1900).

#### *Trench 11 (Figs 4 and 8)*

- 3.6.5 Trench 11 revealed the natural geology of mid-yellowish orange and mid-brownish red sand natural (2003) at a depth of 1.05m below ground level. It was overlain by a mid-orangish-brown deposit (2005), which contained a single piece of pottery dating from 1225–1450. This was overlain by a moderately firm mid-reddish brown sandy silt deposit (2004) that was 0.20m thick. Deposit 2004 was sealed beneath subsoil (2001) and topsoil/turf (2000).

### ***Trench 12 (Figs 4 and 7, Plate 4)***

- 3.6.6 Trench 12 contained a natural geology of mid-yellowish orange and mid-brownish red sand (2103), which was cut by the Civil War ditch (2104) at the southern extent of the trench. The ditch measured more than 4.50m wide and was augured to a depth of 1.80m (AH2100.1). The earliest fill encountered was a soft pale yellowish brown clayey sand (2107) 0.20m thick, which was saturated with water. It was overlain by a moderately firm mid-greyish brown clayey sand (2106), which was 0.98m thick and contained flint gravel and charcoal inclusions. Fill 2106 was overlain by fill 2105, which was a firm mid-orange-brown clayey sand 0.68m thick. It contained pottery, glass, animal bone, and metalwork dating from 1225–1440.
- 3.6.7 Fill 2105 was overlain by a moderately firm mid-reddish brown sandy silt deposit (2102), which was 0.15m thick. This was overlain by the subsoil (2101), which was in turn overlain by topsoil and turf (2100).

### ***Trench 13 (Figs 4 and 8)***

- 3.6.8 Trench 13 exposed a mid-yellowish orange and mid-brownish red sandy natural geology (2203), which was cut by two E–W aligned intercutting ditches (2204 and 2210). The earlier ditch was 2210, which had relatively shallow sides and a slightly concave base and measured 0.20m wide and 0.24m deep. It contained a single fill (2211), a moderately soft mid-greyish brown clayey sand that produced no finds. Fill 2211 was cut by ditch 2204, which measured 0.70m wide and 0.26m deep with shallow sides and a concave base. It contained a single fill (2205) which was a soft mid-orangish brown clayey sand and produced a small sherd of Roman pottery. The natural geology was also cut by two tree-throw holes (2206 and 2208), which measured 0.30m wide and 0.10–0.26m deep.
- 3.6.9 The features were overlain by a moderately firm mid-reddish brown sandy silt deposit (2202), which was 0.15m thick. This was overlain by the subsoil (2201), which was in turn overlain by topsoil and turf (2200).

### ***Trench 14 (Figs 4 and 7, Plate 5)***

- 3.6.10 Trench 14 contained a natural geology of mid-yellowish orange and mid-brownish red sand (2303), which was cut by the Civil War ditch (2304) at the north-east end of the trench. Ditch 2304 measured more than 2.40m wide and was 1.84m deep with steep sides. The earliest fill encountered was within AH2300.3 was a soft pale yellowish brown clayey sand (2308), which was 0.42m thick and saturated with water. It was overlain by a moderately firm mid-brownish grey clayey silt (2307) which was 0.55m thick and contained flint gravel and charcoal inclusions. Fill 2307 was overlain by fill 2306, which was a firm mid-brownish orange clayey sand and was 0.60m thick. This was overlain by fill 2305, a moderately soft mid-greyish brown clayey sand 0.14m thick. Fills 2305, 2306 and 2307 contained pottery (1380–1550), clay tobacco pipe (late 17th century), ceramic building material (13th–14th century), glass (17th–18th century), animal bone and metal. The ditch was overlain by a moderately firm mid-reddish brown sandy silt deposit (2302), which was 0.34m thick. This was overlain by the subsoil (2301), which was in turn overlain by topsoil and turf (2300).

## 4 DISCUSSION

### 4.1 Reliability of field investigation

- 4.1.1 The area and distribution covered by the trenches provided a good representative sample of the site.
- 4.1.2 The fieldwork was undertaken during a period of fine weather that provided good conditions for the identification and interpretation of the archaeology and where present, archaeological features were easily identified. The stratigraphic sequences within the trenches were well understood and provide sufficient information to allow an informed judgement about the impact of the proposed development on any buried remains.

### 4.2 Evaluation objectives and results

- 4.2.1 This results of the evaluation are considered to have achieved both the general and specific aims and objectives of the investigation as outlined in sections 2.1 and 2.2. Archaeological remains were identified in seven of the trenches, with a range of discrete features and ditches present across the site, including the Civil War defensive ditch. The recovery of artefacts has provided good evidence for the dates of the activity revealed and the extent and nature of the remains has been established.
- 4.2.2 In the northern part of the site the level of truncation by the Tinbergen Building has been established through the recording of the concrete slabs and modern features with up to 1m of vertical stratigraphy surviving beneath the concrete slabs and between footings.
- 4.2.3 Although medieval finds were recovered during the investigations these do not appear to have been related to any distinct activity.
- 4.2.4 The layout, nature and form of part of the Oxford Civil War defensive features were recorded within the site. This allowed for a detailed assessment of the potential impact of the reinstatement process in the sports field.

### 4.3 Interpretation

#### *Natural*

- 4.3.1 The natural geology was encountered only within Trenches 1, 2 and 7 within the northern area, and comprised a mid-whiteish yellow clay sand. Within these trenches this was encountered at depths between 1.4m and 1.7m bgl.
- 4.3.2 Within the sports field the natural geology was a mix of mid-yellowish orange and mid-brownish red sand within Trenches 10–14, between 0.30m and 1m below topsoil and turf.

#### *Prehistoric activity*

- 4.3.3 The small assemblage of residual flints provides limited insight into the nature of human activity within the development area during this period and may only represent casual discards of transitory activity. Nevertheless, prehistoric activity is well

documented along this raised gravel terrace, and it is possible that discrete features of Neolithic or Bronze Age date are present in the vicinity.

### ***Possible Roman activity***

- 4.3.4 A late Iron Age field system has been recorded c 50m to the west of the site and continued in use into the early Roman period (OA 2015). Whilst the scrap of Roman pottery from ditch 2204 is insufficient to reliably date this feature, it is possible that ditches 2204 and 2210 represent an extension of this activity.

### ***Civil War features***

- 4.3.5 There are several cartographic representations of the system of defences built at Oxford (Figs 9–10), none of which are entirely accurate (Kemp 1977; Lattey *et al.* 1936). However, most representations of the defences suggest the likelihood of a bastion somewhere in the vicinity of the former Tinbergen Building.
- 4.3.6 The ditches encountered within Trenches 8 (1704), 10 (1904), 12 (2104) and 14 (2304) most likely form part of the defensive circuit as shown by De Gomme and Logan and form part of the NW–SE aligned ditch leading to the bastion (Trenches 8 and 10) and turning to the east prior to Holywell (Trenches 12 and 14).
- 4.3.7 The alignment of the ditch passing through the sports field suggests that the part of the ditch that was excavated in 2016 is part of the bastion ditch rather than the section of ditch south of the bastion. The previously recorded pit falls (OA 2016) were not encountered within this evaluation and perhaps these are extra defences located only around the bastion itself rather than along the entire line of the rampart.

### ***Post-Civil War deposits***

- 4.3.8 The Civil War ditch was overlain by a mid-reddish brown sandy silt deposit which was 0.20–0.30m thick across the sports and most likely represents a buried post-medieval ploughsoil.
- 4.3.9 Away from areas of modern disturbances within the former Tinbergen Building area, similar deposits were encountered at 1.20m bgl (Trenches 1, 2 and 4). The undated pits in Trenches 1 and 2 are most likely from this period, based on their stratigraphic positions.

### ***Victorian***

- 4.3.10 The Victorian house as shown on the 1st edition OS map has been heavily truncated or completely removed by modern activity associated with the now-demolished Tinbergen Building. Away from these disturbances the foundations for the house and associated garden soils survived within Trench 2 and were recorded at 1m bgl.

### ***Modern***

- 4.3.11 Modern activity located across the northern area of the site (Trenches 1–7 and 15) included former service trenches, former concrete slabs and modern leveling deposits

for the existing concrete slab and former basement wall for the former Tinbergen Building.

### ***Undated features***

- 4.3.12 A number of features were undated, including the postholes and pits revealed in Trenches 8 and 10. Given the range of archaeological remains in and around the site, these features could be the result of activity during both the prehistoric or historic periods. However, the lack of finds possibly suggests an earlier date, probably Roman or earlier given the likelihood of medieval features accumulating residual finds.
- 4.3.13 The site is located on the periphery of a prehistoric landscape to the north and west of the site. Situated c 50m south-west of the site is evidence for late Iron Age settlement activity and an agricultural landscape (OA 2015). It is possible that the undated features derive from activity related to this settlement.

## **4.4 Significance**

- 4.4.1 The trenches demonstrated that possible late Iron Age to Roman activity, Civil War defensive features and post-medieval and Victorian deposits survive within the site.
- 4.4.2 The possible late Iron Age and Roman features which are likely to relate to the field system and occupational activity record c 50m to the west of the site. These features have the potential to contribute to the understanding and development of this activity within a wider landscape and could be considered significant.
- 4.4.3 The presence of the Civil War defensive ditch (Trenches 8, 10, 12 and 14) further confirms the layout and position of the ramparts shown on historical maps (De Gomme and Logan). This represents a significant discovery for the city and will assist in determining future mitigation strategies for developments in this area.
- 4.4.4 The survival of post-medieval ploughsoils and associated features across the site, and the foundations of the former Victorian building (located within Trench 2), demonstrate the development and expansion of the city and the university but are of local significance only.

## APPENDIX A TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
<b>General description</b>					<b>Orientation</b>	NE-SW
Trench 1 contained archaeological features and deposits at 1.50m bgl. This consisted of an undated probable pit cutting a yellowish-brown silty sand buried soil horizon which in turn was overlying natural.					<b>Length (m)</b>	7
					<b>Width (m)</b>	4
					<b>Avg. depth (m)</b>	2
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1000	Layer	4+	0.30	Concrete slab	-	-
1001	Deposit	4+	0.35	Mix of crush and blue clay	-	-
1002	Deposit	4+	0.45	Brick and rubble	-	-
1003	Cut	2.40+	1.10	Cut for concrete 1005	-	-
1004	Fill	2.40+	1.10	Fill of 1003	-	-
1005	Structure	2.40+	0.20+	Concrete slab at western end	-	-
1006	Deposit	2+	0.50	Mix of rubble and blue clay	-	-
1007	Cut	1.30	0.60	Possible pit	-	-
1008	Fill	1.30	0.60	Fill of 1008	-	-
1009	Layer	0.70	0.20	Yellowish brown silty sand	-	-
1010	Layer	-	-	Natural	-	-

Trench 2						
<b>General description</b>					<b>Orientation</b>	NE-SW
Trench 2 contained archaeological features and deposits at 0.98m bgl. This consisted of an undated pit cutting a yellowish-brown silty sand buried soil horizon which in turn was overlying natural. Victorian foundations were also revealed within this trench.					<b>Length (m)</b>	4
					<b>Width (m)</b>	7
					<b>Avg. depth (m)</b>	1.50
<b>Context No.</b>	<b>Type</b>	<b>Width (m)</b>	<b>Depth (m)</b>	<b>Description</b>	<b>Finds</b>	<b>Date</b>
1100	Layer	4+	0.30	Concrete slab	-	-
1101	Deposit	4+	0.25	Demolition (brick and rubble)	-	-
1102	Layer	2+	0.20	Garden soil	-	-
1103	Layer	2+	0.25	Buried (plough) soil	Pottery	1225-1625
1104	Layer	-	-	Natural	-	-
1105	Structure	0.90	-	Concrete foundation	-	-
1106	Cut	0.90	-	Cut for 1105	-	-
1107	Cut	0.90	-	Cut for 1108	-	-
1108	Structure	0.90	-	Concrete and brick foundation	-	-
1109	Cut	0.60	0.48	Pit	-	-
1110	Fill	0.60	0.48	Fill of 1110	-	-
1111	Deposit	4+	0.40	Modern made ground	-	-
1112	Cut	3.50+	0.92+	Modern pit	-	-
1113	Fill	3.50+	0.82+	Fill of 1113	-	-

1114	Cut	0.90	-	Cut for 1115	-	-
1115	Structure	0.90	-	Concrete foundation	-	-
1116	Fill	0.90	-	Fill of 1107	Clay pipe	C17-18th

Trench 3						
General description					Orientation	NE-SW
Trench 3 devoid of archaeology and consisted of modern deposits.					Length (m)	4
					Width (m)	7
					Avg. depth (m)	2.40
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1200	Layer	4+	0.20	Concrete slab	-	-
1201	Deposit	4+	1.10	Modern made ground	-	-
1202	Structure	2	0.30	Concrete slab at 1.75m bgl	-	-
1203	Deposit	2+	1+	Mixed deposit of yellowish grey sandy silt and brick	-	-

Trench 4						
General description					Orientation	NE-SW
Trench 4 contained <i>in-situ</i> archaeological deposits at 1.20m bgl consisting of garden soil, buried plough soil and untruncated natural					Length (m)	4
					Width (m)	7
					Avg. depth (m)	2
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1300	Layer	4+	0.20	Concrete slab	-	-
1301	Deposit	4+	0.50	Sand and flint pebble levelling	-	-
1302	Deposit	4+	0.60	Brick demolition	-	-
1303	Layer	2+	0.30	Garden soils	-	-
1304	Layer	2+	0.45	Buried (plough) soil	-	-
1305	Layer	-	-	Natural	-	-

Trench 5						
General description					Orientation	NE-SW
Trench 5 devoid of archaeology and consisted of modern deposits					Length (m)	4
					Width (m)	7
					Avg. depth (m)	2.20
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1400	Layer	4+	0.30	Concrete slab	-	-
1401	Deposit	4+	0.60	Modern crush levelling	-	-
1402	Deposit	4+	1.20+	Mix of brick, concrete and blue clay	-	-
1403	Deposit	2+	0.60	Brick and rubble	-	-

1404	Deposit	2+	0.50+	Modern deposit of yellowish brown silt with brick	-	-
------	---------	----	-------	---	---	---

Trench 6						
General description					Orientation	NE-SW
Trench 6 devoid of archaeology and consisted of modern deposits and concrete					Length (m)	7
					Width (m)	4
					Avg. depth (m)	2.20
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1500	Layer	4+	0.25	Concrete slab	-	-
1501	Deposit	4+	0.70	Modern crush leveling	-	-
1502	Structure?	0.50	-	Concrete (ENE-WSW)	-	-
1503	Structure?	0.50	-	Concrete (E-W)	-	-
1504	Deposit	4+	0.80	Brick rubble	-	-
1505	Deposit	2+	0.30+	Limestone rubble	-	-

Trench 7						
General description					Orientation	NE-SW
Trench 7 devoid of archaeology and consisted of modern crush and the former basement.					Length (m)	7
					Width (m)	4
					Avg. depth (m)	2.90
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1600	Deposit	4+	2.90	Modern crush	-	-
1601	Structure	0.50	2	Former basement wall and floor	-	-
1602	Fill	1+	1+	Construction backfill for 1601	-	-

Trench 8						
General description					Orientation	NE-SW
Trench 8 contained archaeological deposits and features consisting of undated postholes and pits, a tree throw, and the civil war ditch for Oxford. These were overlain by a buried plough soil which in turn was overlain by subsoil and topsoil.					Length (m)	27
					Width (m)	2
					Avg. depth (m)	0.76
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1700	Layer	2	0.20	Topsoil	-	-
1701	Layer	2	0.42	Subsoil	-	-
1702	Layer	2	0.32	Buried plough soil	-	-
1703	Layer	2	-	Natural	-	-
1704	Cut	6.90	2.10	Civil war ditch	-	-
1705	Fill	-	0.20	Fill of 1704 (AH1700.1-7)	-	-
1706	Fill	-	0.82	Fill of 1704 (AH1700.1-7)	-	-
1707	Fill	-	1.14	Fill of 1704 (AH1700.1-7)	-	-
1708	Fill	-	0.34	Fill of 1704 (AH1700.1-7)	-	-



1709	Fill	-	0.28	Fill of 1704 (AH1700.1-7)	-	-
1710	Cut	1.62	0.20	Pit	-	-
1711	Fill	1.62	0.20	Fill of 1710	Flint	-
1712	Cut	1.40+	0.38	Pit	-	-
1713	Fill	1.40+	0.38	Fill of 1712	-	-
1714	Cut	1.48	0.28	Pit	-	-
1715	Fill	1.48	0.28	Fill of 1714	-	-
1716	Cut	0.30	0.10	Posthole	-	-
1717	Fill	0.30	0.10	Fill of 1716	-	-
1718	Cut	0.26	0.18	Posthole	-	-
1719	Fill	0.26	0.18	Fill of 1718	-	-
1720	Cut	0.18	0.10	Posthole	-	-
1721	Fill	0.18	0.10	Fill of 1720	-	-
1722	Cut	0.16+	0.10	Posthole	-	-
1723	Fill	0.16+	0.10	Fill of 1722	-	-
1724	Cut	2+	0.52	Tree-throw	-	-
1725	Fill	2+	0.52	Fill of 1724	-	-

#### Trench 9

Trench 9 was amalgamated into Trench 8

#### Trench 10

General description					Orientation	E-W
Trench 10 contained archaeological deposits and features consisting of undated postholes, a N-S ditch, and the civil war ditch for Oxford. These were overlain by a buried plough soil which in turn was overlain by subsoil and topsoil.					Length (m)	23
					Width (m)	1.80
					Avg. depth (m)	0.60
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
1900	Layer	1.80	0.20	Topsoil	-	-
1901	Layer	1.80	0.15	Subsoil	-	-
1902	Layer	1.80	0.05-0.10	Dirty natural?		
1903	Layer	-	-	Natural	-	-
1904	Cut	5.50	2.10	Civil war ditch	-	-
1905	Fill	5.50	0.52	Fill of 1904	Pottery Clay pipe	1225-1625 C17th
1906	Cut	0.40	0.25	Posthole	-	-
1907	Fill	0.40	0.25	Fill of 1906	-	-
1908	Cut	0.58	0.35	Posthole	-	-
1909	Fill	0.58	0.35	Fill of 1908	-	-
1910	Cut	1.24	0.28	N-S ditch	-	-
1911	Fill	1.24	0.28	Fill of 1910	-	-
1912	Cut	0.36	0.20	Posthole	-	-

1913	Fill	0.36	0.20	Fill of 1912	-	-
1914	Cut	1.08	0.25	Tree-throw	-	-
1915	Fill	1.08	0.25	Fill of 1914	-	-
1916	Cut	0.30	-	Posthole (unexcavated)	-	-
1917	Fill	0.30	-	Fill of 1916 (unexcavated)	-	-
1918	Fill	-	0.44	Fill of 1904 (AH 1900.1-5)	Pottery	1150-1350
1919	Fill	-	1.06	Fill of 1904 (AH 1900.1-5)	-	-
1920	Fill	-	0.26	Fill of 1904 (AH 1900.1-5)	-	-
1921	Fill	-	0.16	Fill of 1904 (AH 1900.1-5)	-	-
1922	Layer	1.80	0.30	Buried plough soil		

### Trench 11

General description				Orientation	NW-SE	
Trench 11 consisted of the natural geology which was overlain by a possible late medieval soil, however, it should be noted that this soil could be a fill of a larger feature that was not encountered within this trench. This was overlain by a buried plough soil, which was in turn overlain by subsoil and topsoil.				Length (m)	20	
				Width (m)	1.80	
				Avg. depth (m)	1.05	
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
2000	Layer	1.80	0.15	Topsoil	-	-
2001	Layer	1.80	0.25	Subsoil	-	-
2002	Layer	1.80	0.45	Mid orangish-brown clay sand	Pottery	1225-1450
2003	Layer	-	-	Natural	-	-
2004	Layer	1.80	0.20	Buried (plough) soil	-	-

### Trench 12

General description				Orientation	NW-SE	
Trench 12 contained part of the civil war ditch which was overlain by a buried plough soil which in turn was overlain by subsoil and topsoil				Length (m)	20	
				Width (m)	1.80	
				Avg. depth (m)	0.60	
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
2100	Layer	1.80	0.10	Topsoil	-	-
2101	Layer	1.80	0.30	Subsoil	-	-
2102	Layer	1.80	0.15	Buried plough soil	Flint	Late Neo/EBA
2103	Layer	-	-	Natural	-	-
2104	Cut	4.50+	1.80	Civil war ditch	-	-
2105	Fill	4.50+	0.68	Fill of 2104	Pottery Glass Animal bone	1225-1400 Post-Med
2106	Fill	1.40+	0.98	Fill of 2104	-	-
2107	Fill	-	0.20	Fill of 2104 (AH 2100.1)	-	-

Trench 13						
General description					Orientation	E-W
Trench 13 contained a tree throw and two intercutting ditches which was overlain by a buried plough soil which in turn was overlain by subsoil and topsoil					Length (m)	30
					Width (m)	1.80
					Avg. depth (m)	0.56
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
2200	Layer	1.80	0.20	Topsoil	-	-
2201	Layer	1.80	0.20	Subsoil	-	-
2202	Layer	1.80	0.14	Buried plough soil	-	-
2203	Layer	-	-	Natural	-	-
2204	Cut	0.70	0.26	ESE-WNW Ditch	-	-
2205	Fill	0.70	0.26	Fill of 2204	Pottery	Roman
2206	Cut	0.30	0.26	Tree-throw	-	-
2207	Fill	0.30	0.26	Fill of 2206	-	-
2208	Cut	0.30+	0.10	Tree throw	-	-
2209	Fill	0.30+	0.10	Fill of 2208	-	-
2210	Cut	0.20	0.24	ESE-WNW ditch	-	-
2211	Fill	0.20	0.24	Fill of 2210		

Trench 14						
General description					Orientation	E-W
Trench 12 contained part of the civil war ditch which was overlain by a buried plough soil which in turn was overlain by subsoil and topsoil					Length (m)	20
					Width (m)	2
					Avg. depth (m)	0.30
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
2300	Layer	1.80	0.20	Topsoil	-	-
2301	Layer	1.80	0.35	Subsoil	-	-
2302	Layer	1.80	0.34	Buried plough soil		
2303	Layer	-	-	Natural	-	-
2304	Cut	2.40+	1.84	Civil war ditch	-	-
2305	Fill	2.40+	0.28	Fill of 2304	Clay pipe	M-L17th
2306	Fill	1.70+	0.50	Fill of 2304	Pottery Glass Metal Animal bone	1380- 1525 C17-18th
2307	Fill	1.90+	0.54	Fill of 2304	Pottery CBM Metal Animal bone Flint	1255- 1400 13-14th
2308	Fill	0.60+	0.40	Fill of 2304	Pottery Metal	1350- 1550

Trench 15						
General description					Orientation	E-W
Trench devoid of archaeology and consisted of modern deposits					Length (m)	7
					Width (m)	4
					Avg. depth (m)	2.20
Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
2400	Layer	4+	0.40	Concrete slab	-	-
2401	Deposit	4+	0.60	Crush levelling	-	-
2402	Deposit	2	0.80	Mixed blue clay with brick and rubble	-	-
2403	Deposit	2	0.20+	Redeposited natural? With brick and rubble	-	-
2404	Structure	2	0.30	Concrete on southern side of trench	-	-

## APPENDIX B FINDS REPORTS

### B.1 Post-Roman pottery

*By John Cotter*

#### *Introduction and methodology*

- B.1.1 A total of 16 sherds (51g) of pottery were recovered from nine contexts. A range of medieval wares (up to c 1480), and possibly some early post-medieval wares (c 1480+), are represented. One or two sherds of residual Roman pottery were also present.
- B.1.2 All the pottery was scanned during the present assessment and spot-dates were provided for each context. Each context group was quantified by sherd count and weight and recorded on a spot-dating spreadsheet. The pottery is in a very fragmentary condition and consists, almost entirely of small, abraded body sherds.
- B.1.3 The context spot-date is the date-bracket during which the latest pottery types or fabrics are estimated to have been produced or were in general circulation. Comments on the range of fabrics were recorded, usually with mention of vessel form (jugs, bowls etc) and any other attributes worthy of note (eg decoration etc). Fabric codes referred to are those of the Oxfordshire type series (Mellor 1994). The range of pottery is described in some detail in the spreadsheet (Table 1) and therefore only summarised below.

*Table 1: Description of pottery by context*

Context	Spot-date	No.	Wt (g)	Comments
1103	c 1225–1625	1	1	Brill/Boarstall ware (OXAM). Small bo (body sherd) probably from the base of a small jar/bowl or oil lamp with int green glaze (gg)
1905	c 1225–1625	1	4	Abraded bo OXAM, unglazed
1918	c 1150–1350	1	2	Abraded bo Kennet Valley B ware (OXAQ)
2002	c 1225–1450?	1	6	Fresh bo OXAM gg jug with plain vertical applied strip decoration
2105	c 1225–1400	2	6	1x small bo (weight 2g) OXAM gg jug with traces of rouletted strip decoration (late 13/14C?). 1x very abraded bo (4g) grey sandy ware with some large rounded quartz inclusions – possibly medieval (OXY or OXAW?), or possibly Roman?
2205	Roman	1	4	Abraded bo fine grey sandyware – probably Roman. Contains v fine mica and possibly fine black glauconite
2306	c 1380–1525	2	6	1x small bo (weight 1g) Brill Tudor Green ware copy (OXBC), probably from a thin-walled cup/drinking vessel with int gg. 1x slightly abraded bo (5g) OXAM (or late med Brill OXBX, c 1400–1625?), probably a flattish basal sherd with specks of yellow glaze
2307	c 1225–1400	4	12	Abraded bos from 4 vessels. 1x bo OXAM jug with yellow glaze and possible trace of applied strip decoration. 1x small bo/scrap grey sandy ware with

Context	Spot-date	No.	Wt (g)	Comments
				greenish-brown glaze – probably early Brill/Boarstall ware (OXAW, c 1175–1400). 2x small bos OXAQ
2308	c 1350–1550?	3	10	Bos from 3 vessels – all Brill-types. 2x bos from OXBC gg jugs (1 with gg int and ext). 1x bo OXAM small jar/pipkin with int yellow glaze and ext sooting from use as cooking vessel
Total		16	51	

### Discussion

- B.1.4 The pottery mostly comprises ordinary domestic pottery typical of the Oxford area. All of this is present as small – and mostly abraded – body sherds, which probably suggests that all, or most of it, is residual/redeposited in its contexts. A limited range of local and regional medieval fabrics is present – the earliest of these being a few small sherds of Kennet Valley B ware (OXAQ, c 1150–1350). Most of the remainder comprises Brill/Boarstall ware (OXAM, c 1225–1625). At least one decorated jug sherd in this ware probably dates from the later 13th or 14th century. Three sherds of Brill Tudor Green-type ware (OXBC) probably fall within the period c 1350–1550, and possibly even as late as c 1625, taking the latest pottery dates into the early post-medieval period.
- B.1.5 Two small, abraded sherds of Roman greyware were also identified. The fine greyware sherd from context 2205 is fairly certainly of this date; the coarser sherd from 2105 is possibly of this date. Rare sherds of redeposited Roman pottery are occasionally found on Oxford sites.

### Recommendations regarding the conservation, discard and retention of material

- B.1.6 The pottery here has some, albeit limited, potential to inform research through re-analysis and it is recommended that it should all be retained.

## B.2 Clay tobacco pipe

*By John Cotter*

### Description

- B.2.1 Five pieces of clay tobacco pipe weighing 22g were recovered from three contexts. Given the small amount these have not been separately catalogued but are fully described below. Pipe bowl forms are referred to the local Oxford typology (Oswald 1984).
- B.2.2 **Context 1116.** Spot-date: Late 17th to early 18th century. Description: 2 pieces (weight 10g). 1x fairly abraded stem fragment, probably late 17th to early 18th century. 1x fairly abraded broken bowl base with a broad oval 17th-century type heel and a short

length of attached stem with a large stem bore diameter (c 4mm); the bowl is possibly of Oxford Type A (c 1630–55)?

**B.2.3 Context 1905.** Spot-date: 17th century. Description: 2 pieces (weight 4g). 2x short pieces of stem with large bore diameters.

**B.2.4 Context 2305.** Spot-date: Mid to late 17th century. Description: 1 piece (weight 8g). Fresh stem fragment with large bore diameter (c 3mm). Fairly good burnishing.

***Recommendations regarding the conservation, discard and retention of material***

**B.2.5** The pipes here are only of use for dating and have little potential for further analysis. As they have been adequately recorded, they could be discarded.

**B.3 Ceramic building material**

*By John Cotter*

***Description***

**B.3.1** A single piece of ceramic building material weighing 12g was recovered. This has not been separately catalogued but is fully described below.

**B.3.2 Context 2307.** Spot-date: 13th to 14th century? Description: 1 piece (12g). A small, abraded body fragment of flat roof tile (probably peg tile?). Sandy, light orange-pink fabric with a light grey core and moderate fine calcareous inclusions (Oxford tile Fabric 7B).

***Recommendations regarding the conservation, discard and retention of material***

**B.3.3** The piece has little potential for further research. As it has been adequately recorded it could be discarded.

**B.4 Glass**

*By Anni Byard*

***Introduction***

**B.4.1** Two heavily weathered shards of glass were recovered from two contexts during the evaluation.

*Table 2: Description of glass by context*

<b>Context</b>	<b>Material</b>	<b>Count</b>	<b>Weight</b>	<b>Type</b>	<b>Date</b>
2105	Glass	1	0.8	Drinking vessel	Post-medieval
2306	Glass	1	22.4	Wine bottle	17–18th century

## Results

- B.4.2 A thin shard from the rim of a probable drinking glass was recovered from context 2105. The rim is slightly thickened with an estimated complete diameter of 8cm. The shard is extremely weathered and flaking, very fragile and the original colour of the glass cannot be determined. It is of post-medieval date.
- B.4.3 A thick fragment of weathered glass from context 2306 is probably the remains of the heel of the base of a mallet or onion-type wine bottle. The glass is highly weathered which obscures the original colour, but it may have been dark olive green/brown. Such bottles were common from the mid-17th century and into and throughout the 18th century. The context suggests this fragment may be of Civil War date.

### *Recommendations regarding the conservation, discard, and retention of material*

- B.4.4 The drinking vessel fragment could be retained but will need stabilisation and conservation. The wine bottle fragment holds no further potential and can be discarded.

## B.5 Animal bone

*By Adrienne Powell*

- B.5.1 Three contexts associated with the Civil War ditch produced one fragment of hand-collected bone each. All were in fairly good condition but showed no evidence of butchery or gnawing.
- B.5.2 Context 2105: one sheep/goat right lower molar (3g); context 2306: one sheep-sized mammal rib (2g); context 2307: one domestic fowl radius (<1g), length = 60.1mm, distal breadth = 6.0mm.

### *Recommendations regarding the conservation, discard and retention of material*

- B.5.3 No further information can be gained from these bones and retention in the archive is not merited.

## B.6 Flint

*By Michael Donnelly*

### *Introduction*

Four struck flints were recovered. They were largely undiagnostic but one short end scraper was most likely to be of late Neolithic or early Bronze Age date while another inner flake also displayed a faceted platform and is likely to be of the same date. Buried soil 2102 contained two of the three flints. The short end scraper has semi-abrupt retouch limited to its distal margin with a convex outline and was formed on a quite squat side-trimming flake with a faceted platform. Such a piece could have a wide range of dates but is most likely late Neolithic or early Bronze Age. The second flint



from this context was a central flake or blade segment that was quite thin with regular negative scars on its dorsal surface and could also be easily accommodated by this date range. Fill 1711 contained one inner flake with a wide and quite broad heavily faceted platform and probably represents a failed levallois flake of late Neolithic date. Ditch fill 2307 contained one distally snapped core preparation flake in very poor condition struck from a rolled gravel nodule.

B.6.1 While it is clear that the flints are residual, the presence of these associated with a buried former land surface here may be of note. Central Oxford, along the raised terrace area running through much of the university land to the north of the river, has revealed many prehistoric monuments including a henge and numerous ring ditches associated with burials and presumably barrow mounds. The scraper and regular flake found in buried soil 2102 and the probable failed levallois flake would most likely belong to this same lengthy phase of activity and while they may relate to a surface midden or other more casual surface spread, they could also be from partially ploughed or otherwise disturbed pits, ring ditches or burial contexts. Any further work in this location could identify flint rich features dated to the late Neolithic to early Bronze Age given the often very discrete nature of features such as pits and pit clusters.

### Methodology

B.6.2 The artefacts were catalogued according to OA South's standard system of broad artefact/debitage type (Anderson-Whymark 2013; Bradley 1999), general condition noted and dating was attempted where possible. The assemblage was catalogued directly onto an Open Office spreadsheet. During the assessment additional information on condition (rolled, abraded, fresh and degree of cortication), and state of the artefact (burnt, broken, or visibly utilised) was also recorded. Retouched pieces were classified according to standard morphological descriptions (eg Bamford 1985, 72–7; Healy 1988, 48–9; Bradley 1999). Technological attribute analysis was initially undertaken and included the recording of butt and termination type (Inizan *et al.* 1999), flake type (Harding 1990), hammer mode (Onhuma and Bergman 1982), and the presence of platform edge abrasion.

Table 3: Description of flint by context

Context	Type	Sub-type	Notes	Date
1711	Flake	Inner	Inner flake with wide faceted platform, probable failed levallois flake	L Neo–EBA
2102	End scraper	Side-trimming flake	Squat thumbnail-like scraper but retouched limited to distal convex margin, faceted platform	L Neo–EBA
2102	Flake	Inner	Regular flake or blade segment	
2307	Blade	Preparation	Snapped distal and heavily rolled	

## **B.7 Metalwork**

*By Leigh Allen*

### ***Introduction***

- B.7.1 A total of four iron objects were recovered from the evaluation, all from Civil War ditch fills. Nail fragments came from fill 2105 of ditch 2104 and fills 2307 and 2308 of ditch 2304. The fourth object is a hook with a plate recovered from context 2306, fill of ditch 2304. The hook is robust with a rectangular section, the plate is solid. This type of hook may have been driven into timber or masonry joints.

### ***Recommendations regarding the conservation, discard and retention of material***

- B.7.2 The iron objects are undiagnostic and of limited potential. The nail fragments can be discarded.

## APPENDIX C      BIBLIOGRAPHY

Anderson-Whymark, H, 2013 The flint, in *Opening the wood, making the land: the archaeology of a Middle Thames landscape. The Eton College Rowing Land Project and the Maidenhead, Windsor and Eton Flood Alleviation Scheme. Volume 1: Mesolithic to early Bronze Age* (T Allen, A Barclay, A M Cromarty, H Anderson-Whymark, A Parker and M Robinson), Oxford Archaeology Thames Valley Landscapes Monograph **38**, Oxford

Bamford, H, 1985 *Briar Hill: excavation 1974-1978*, Northampton Development Corporation Archaeological Monograph **3**, Northampton

Bradley, P, 1999 The worked flint, in *Excavations at Barrow Hills, Radley, Oxfordshire. Volume 1: the Neolithic and Bronze Age monument complex* (A Barclay and C Halpin), Oxford Archaeology Thames Valley Landscapes Monograph **11**, Oxford, 211–27

BGS, 2020 *Geology of Britain viewer*, British Geological Survey, <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> [accessed December 2020].

CIFA, 2014 (revised 2020), *Standard and guidance for archaeological field evaluation*, Chartered Institute for Archaeologists, Reading

Harding, P, 1990 The worked flint, in *The Stonehenge environs project* (ed. J C Richards), English Heritage, London

Healy, F, 1988 *The Anglo-Saxon Cemetery at Spong Hill, North Elmham, Part VI: occupation during the seventh to second millennia BC*, East Anglian Archaeological Report **38**, Gressenhall

Hey, G, and Hind, J, 2014 *Solent-Thames Research Framework for the Historic Environment Resource Assessments and Research Agendas*. Project Report. Oxford Wessex.

Inizan, M-L, Reduron-Ballinger, M, Roche, H, and Tixier, J, 1999 *Technology and terminology of knapped stone*, Cercle de Recherches et d'Etudes Préhistoriques, CNRS, Nanterre

Kemp, R, 1977 The fortification of Oxford during the Civil War, *Oxoniensia* **42**, 237-46

Lathey, R T, Parsons, E J S, and Philip, I G, 1936 A contemporary map of the defences of Oxford in 1644, *Oxoniensia* **1**, 161-72

Mellor, M, 1994 Oxfordshire pottery: a synthesis of middle and late Saxon, medieval and early post-medieval pottery in the Oxford Region, *Oxoniensia* **59**, 17–217

OA, 2015 Tinbergen Building, South Parks Road, Oxford: desk-based assessment, Oxford Archaeology unpublished client report

OA, 2016 Tinbergen Building, South Parks Road, Oxford: strip map and sample report, Oxford Archaeology unpublished client report

OA, 2017 Department of Zoology and Administrative Modular Building: archaeological watching brief and evaluation report, Oxford Archaeology unpublished client report

OA, 2019a Tinbergen Building, South Parks Road, Oxford: addendum to 2015 desk-based assessment, Oxford Archaeology unpublished client report

OA, 2019b Balliol College Master's Field, Jowett Walk, Oxford: archaeological evaluation report, Oxford Archaeology unpublished client report

OA, 2020a Balliol College Recreation Ground, Jowett Walk, Oxford: post-excavation assessment statement, Oxford Archaeology unpublished client report

OA, 2020b Tinbergen Building, Oxford Chemistry Teaching Lab Flues: archaeological watching brief, Oxford Archaeology unpublished client report

OA, 2021 Life and Mind Building (Tinbergen Building), Oxford: written scheme of investigation, archaeological evaluation and watching brief, unpublished client report

Onhuma, K and Bergman, C A, 1982 Experimental studies in the determination of flake mode, *Bull the Inst Archaeol London* **19**, 161–71

Oswald, A, 1984 Clay pipes, in Excavations in St. Ebbe's, Oxford, 1967–1976: part II: post-medieval domestic tenements and the post-Dissolution site of the Greyfriars (T G Hassall, C E Halpin, and M Mellor), *Oxoniensia* **49**, 251–62

Oxford City Council, 2018, *Oxford Archaeological Action Plan 2013-1018*.

[https://www.oxford.gov.uk/downloads/download/447/oxford\\_archaeological\\_action\\_plan\\_2018](https://www.oxford.gov.uk/downloads/download/447/oxford_archaeological_action_plan_2018) [accessed 02/03/2022]

Oxford City Council, 2012, *Oxford Urban Archaeological Resource Assessment and Research Agenda*. <https://www.oxford.gov.uk/download/downloads/id/1618/introduction.pdf> [accessed 02/03/2022]

## APPENDIX D SITE SUMMARY DETAILS / OASIS REPORT FORM

<b>Site name:</b>	Life and Mind Building (Tinbergen Building), Oxford
<b>Site code:</b>	OXTBB21
<b>Grid Reference</b>	SP 5183 0691
<b>Type:</b>	Evaluation
<b>Date and duration:</b>	8 days, 12th - 23rd April 2021, plus 2 days in October 2021
<b>Area of Site</b>	
<b>Location of archive:</b>	The archive is currently held at Oxford Archaeology, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Oxfordshire County Museum Services in due course, under the following accession number: OXCMS:2019.151
<b>Summary of Results:</b>	Oxford Archaeology was commissioned by main contractors Wates Construction Limited on behalf of Project Managers Arups to undertake an archaeological evaluation on the site of the proposed redevelopment of the Life and Mind Building (formerly the Tinbergen Building), Oxford (NGR: SP 5183 0691).

The first phase of the evaluation work was undertaken during April 2021 and consisted of 13 archaeological evaluation trenches (Trenches 1–7 and 10–15). The second phase was undertaken in October 2021 when the area became available and involved the excavation of a single trench, combining Trenches 8 and 9.

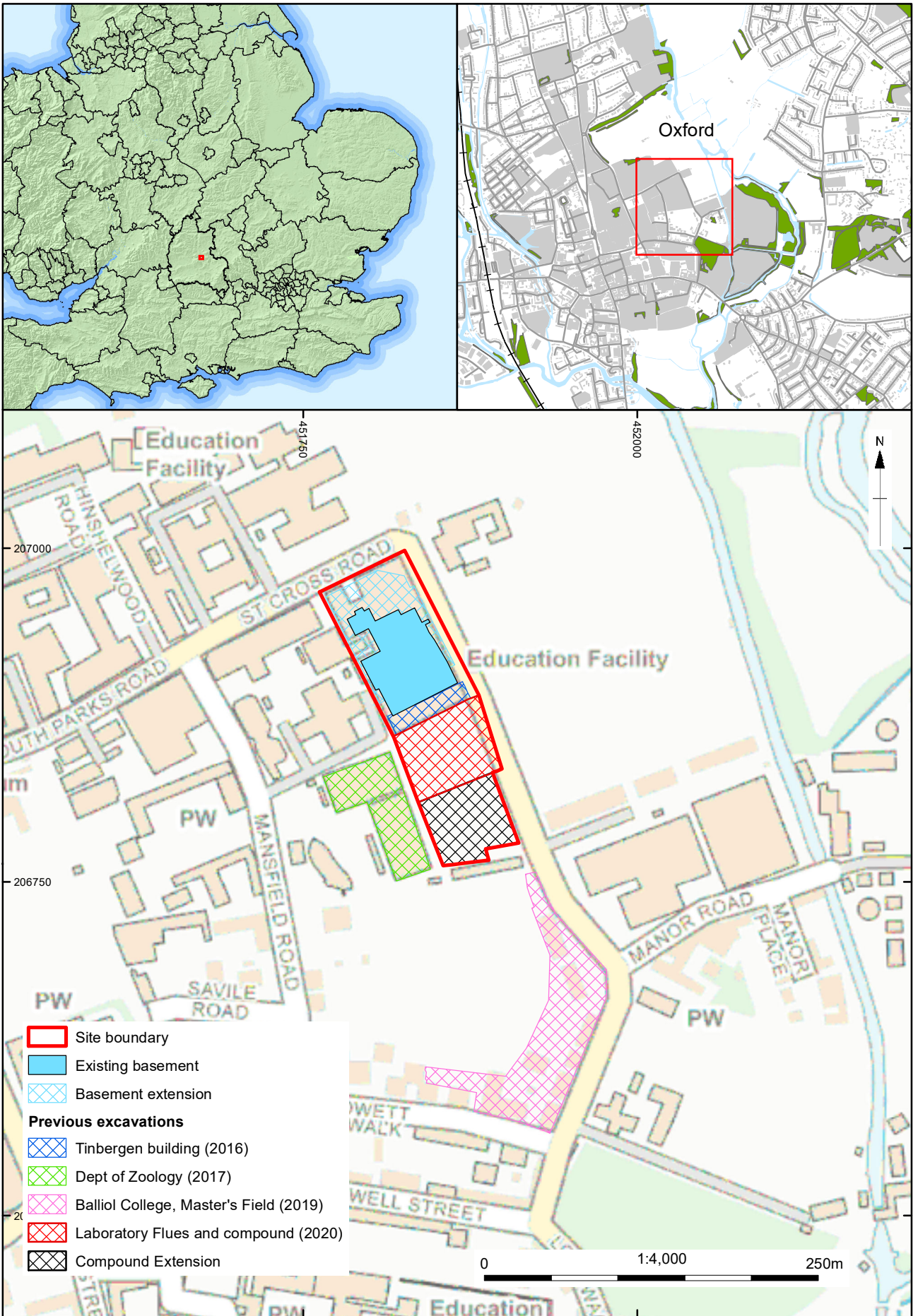
The trenches demonstrated that possible late Iron Age to Roman activity, Civil War defensive features and post-medieval and Victorian deposits survive within the site.

The possible late Iron Age and Roman features are likely to relate to ditched field system boundaries and low-density structures. These features have the potential to contribute to the understanding and development of this activity within the wider landscape and could be considered significant, as similar activity was recorded c 50m west of the site.

The Civil War defensive ditch was first observed as a cropmark and was revealed within Trenches 8, 10, 12 and 14, providing confirmation of the layout and position of the levelled earthworks shown on the maps of De Gomme (1644) and Logan (1675).

Archaeological remains in the southern half of the site (south of the 2016 excavation area) will be preserved in situ below the construction compound area, and subsequently during the reinstatement of the University sports field.

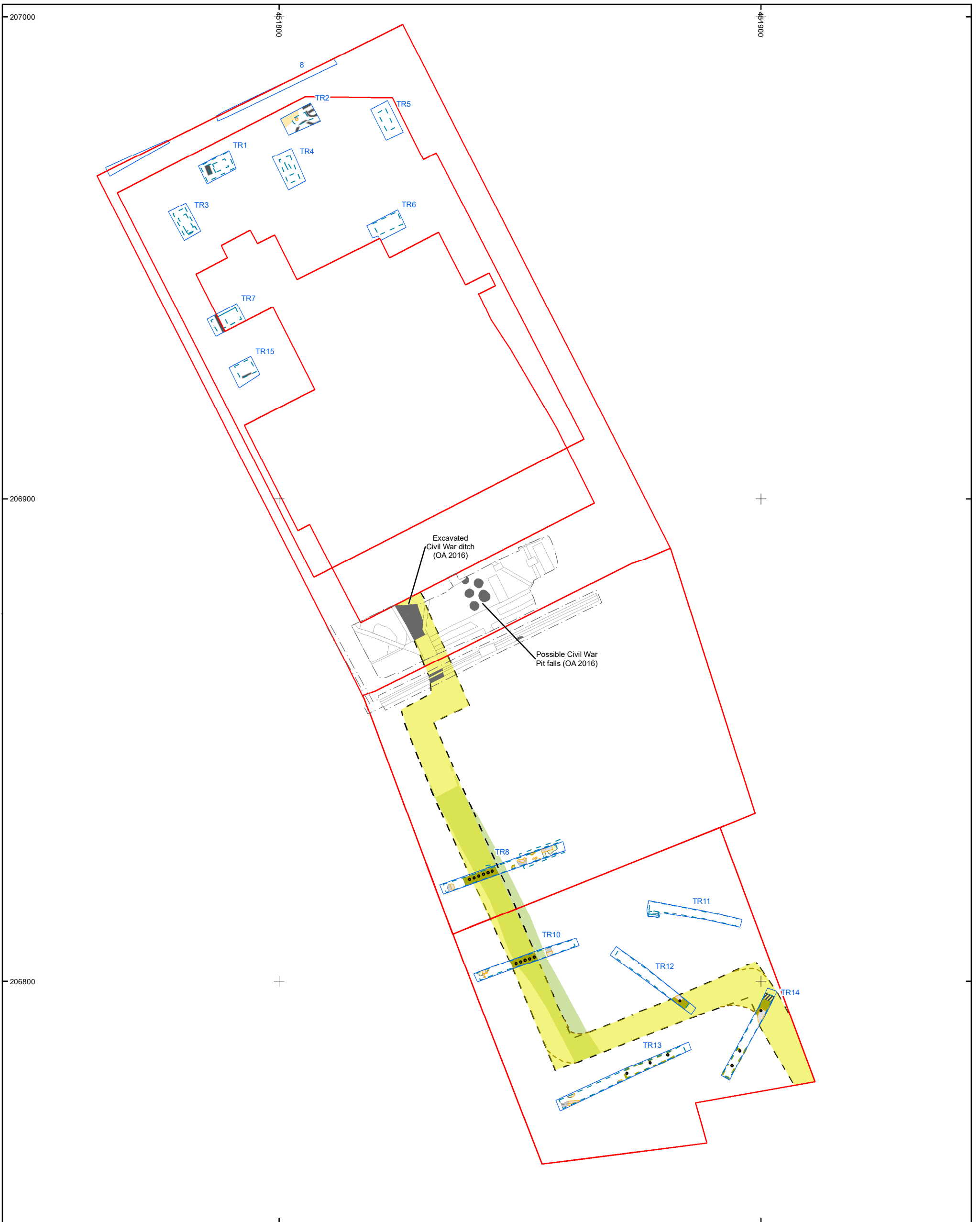
X:\Oxford\_Timbergen\_Building\_Demolition\011\_Evaluation\_WB\_2021-2022\010Geomatics\11\_Evaluation\_GIS Projects\Figures\OXTBBEV\_Figure1\_2022-03-03.mxd\*caroline.souday\*03/03/2022



Contains OS data © Crown Copyright and database right 2020

Figure 1: Site location

X:\Oxford\_Timbergen\_Building\_Demolition\011\_Evaluation\_WB\_2021-2022\010Geomatics\11\_Evaluation\_CIS Projects\Figures\CXTBBEV\_Figure 2\_2021-11-05.mxd\*caroline.souday\*24/02/2022



### Legend

Site boundary	Modern	Auger hole
Evaluation trench	Tree-throw hole	Projected ditch corner
Trench bottom and steps	Geological change	Projected ditch
Feature	Structures	Civil War ditch (excavated)
Intervention	Truncation	Cropmark

0 20m  
1:750 @ A3

Figure 2 : Overall site plan



### Legend

- Site boundary
- Evaluation trench
- Trench bottom and steps
- Feature
- Intervention
- Modern
- Section
- Structures

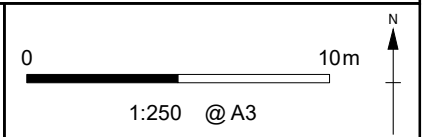
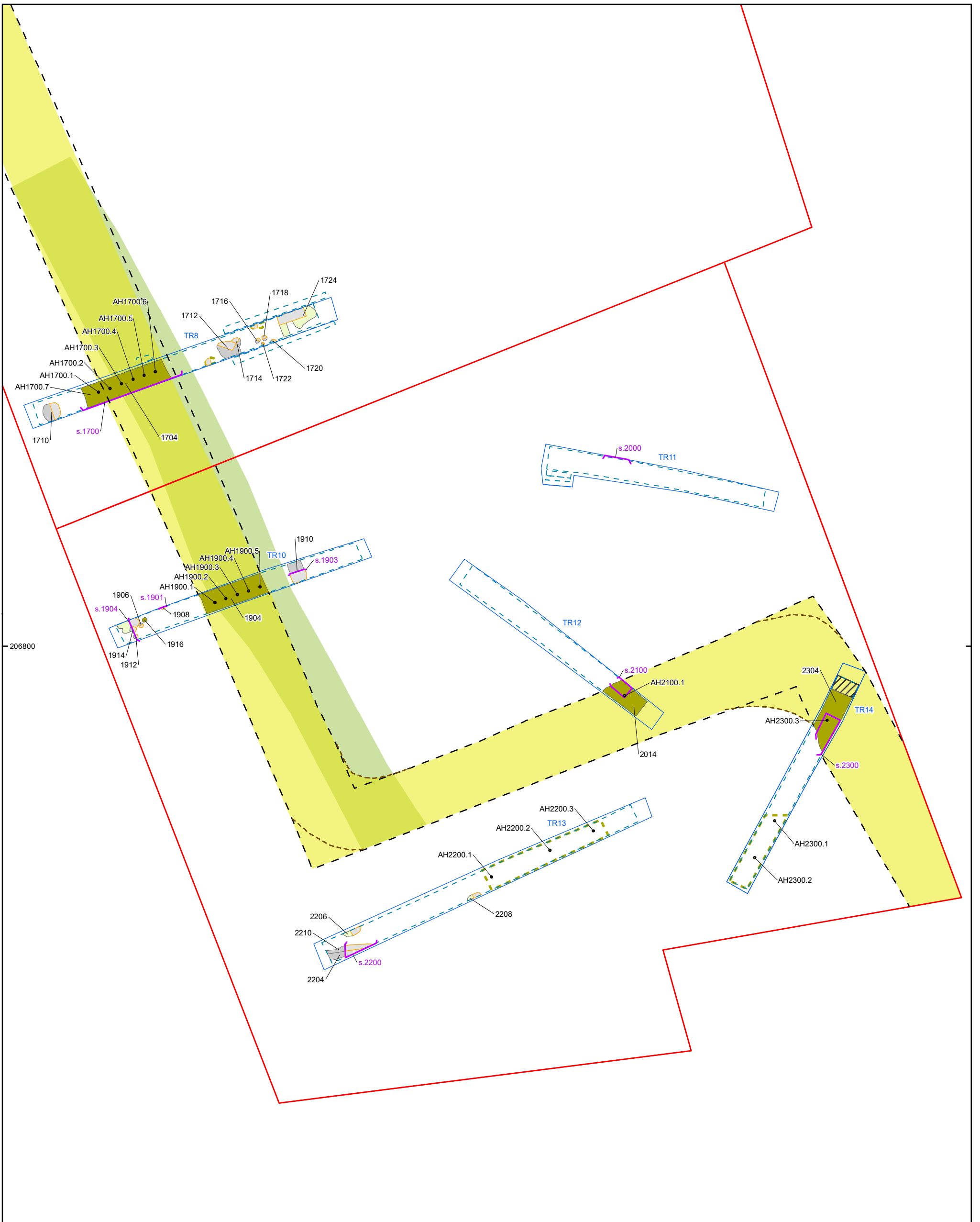


Figure 3: Detailed trench plan of northern area



X:\o\Oxford\_Timbergen\_Building\_Demolition\011\_Evaluation\_WB\_2021-2022\010Geomatics\11\_Evaluation\_CIS Projects\Figures\OXTBBEV\_Figure 4\_2021-11-05.mxd\*caroline.souday\*24/02/2022



### Legend

- |                         |                   |                             |
|-------------------------|-------------------|-----------------------------|
| Site boundary           | Tree-throw hole   | Projected ditch corner      |
| Evaluation trench       | Geological change | Projected ditch             |
| Trench bottom and steps | Section           | Civil War ditch (excavated) |
| Feature                 | Truncation        | Cropmark                    |
| Intervention            | Auger hole        |                             |

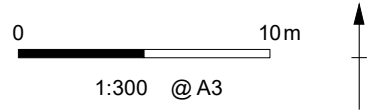
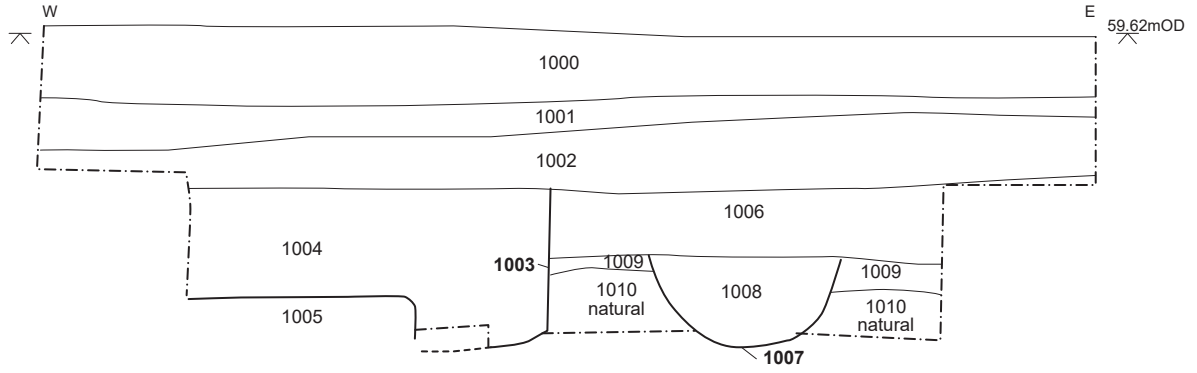
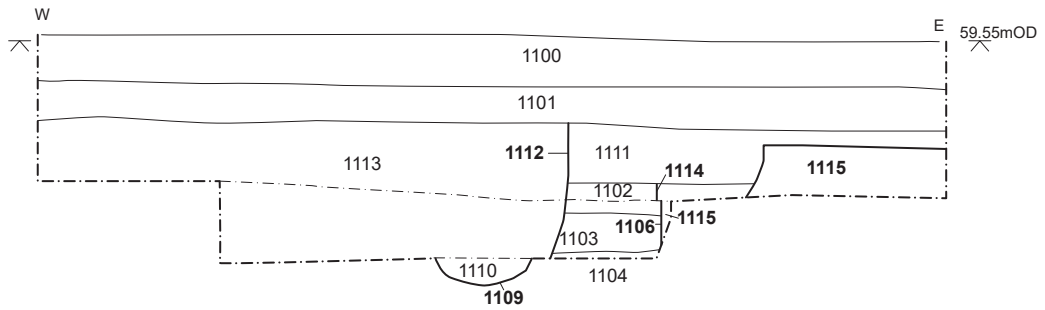


Figure 4: Detailed trench plan of the sports field

### Trench 1 Section 1000



### Trench 2 Section 1100



### Trench 4 Section 1300

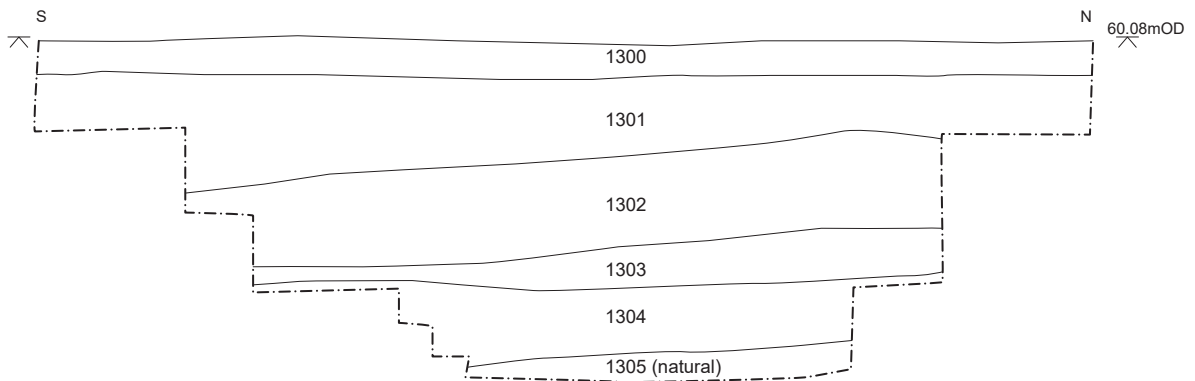


Figure 5: Trenches 1, 2 and 4 sections

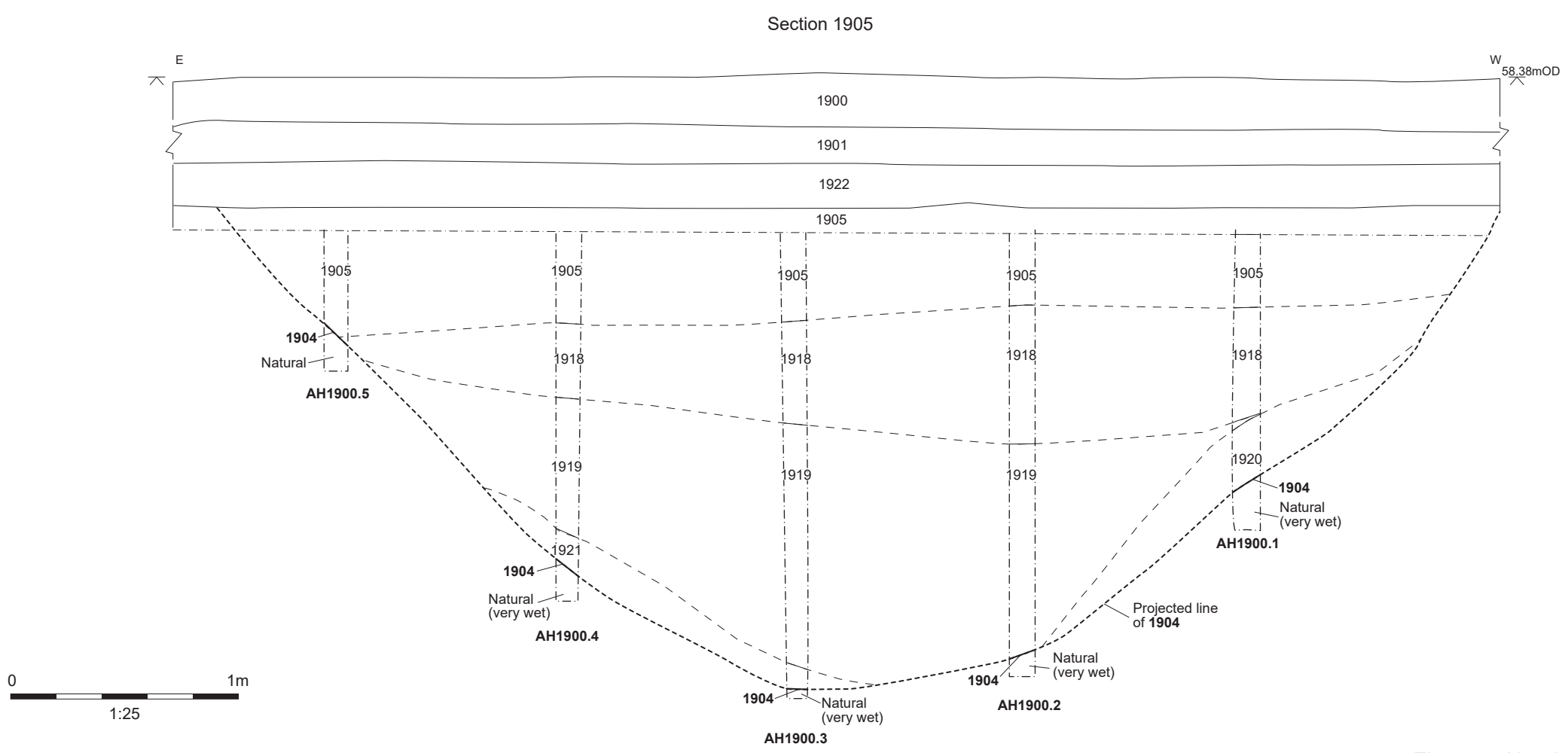
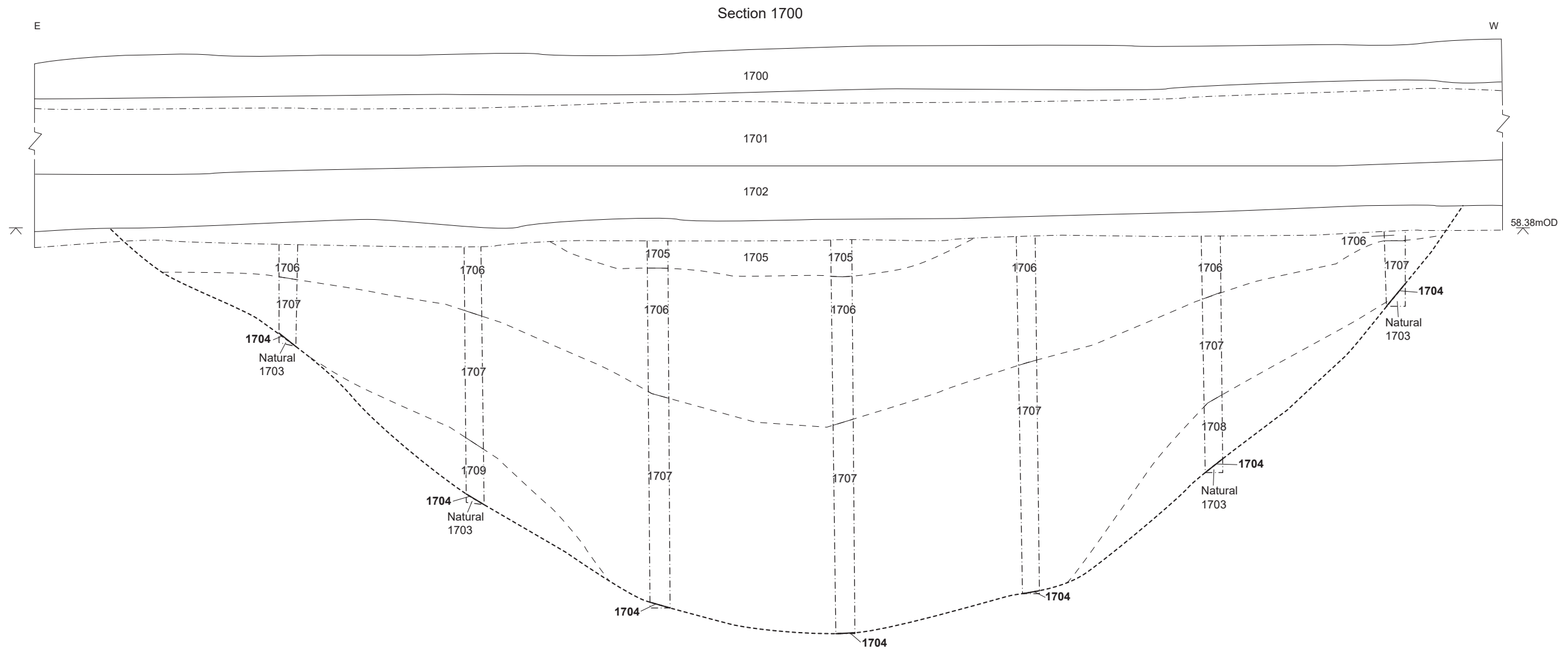


Figure 6: Hand-augured sections relating to the Civil War ditch

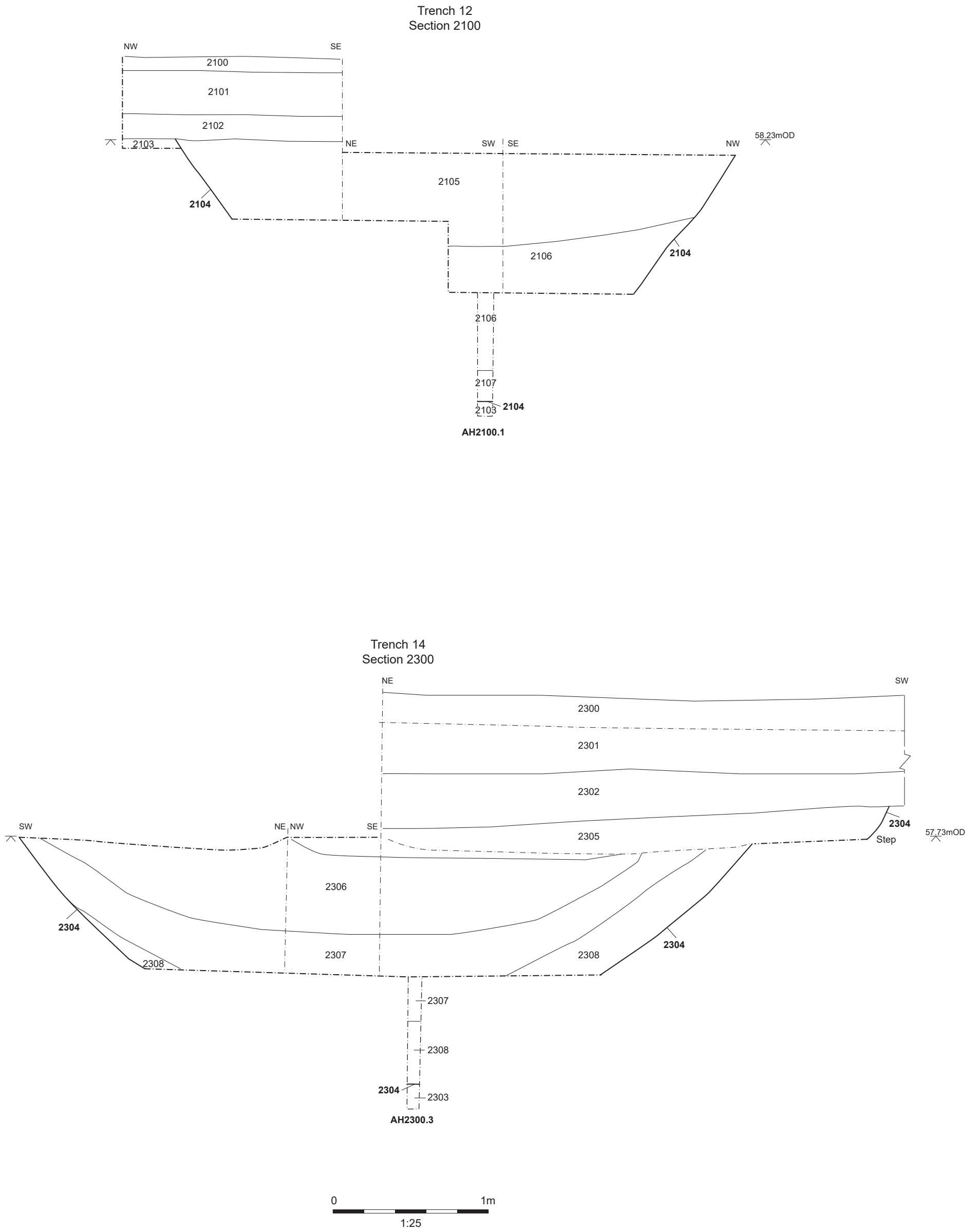


Figure 7: Hand-excavated sections relating to the Civil War ditch

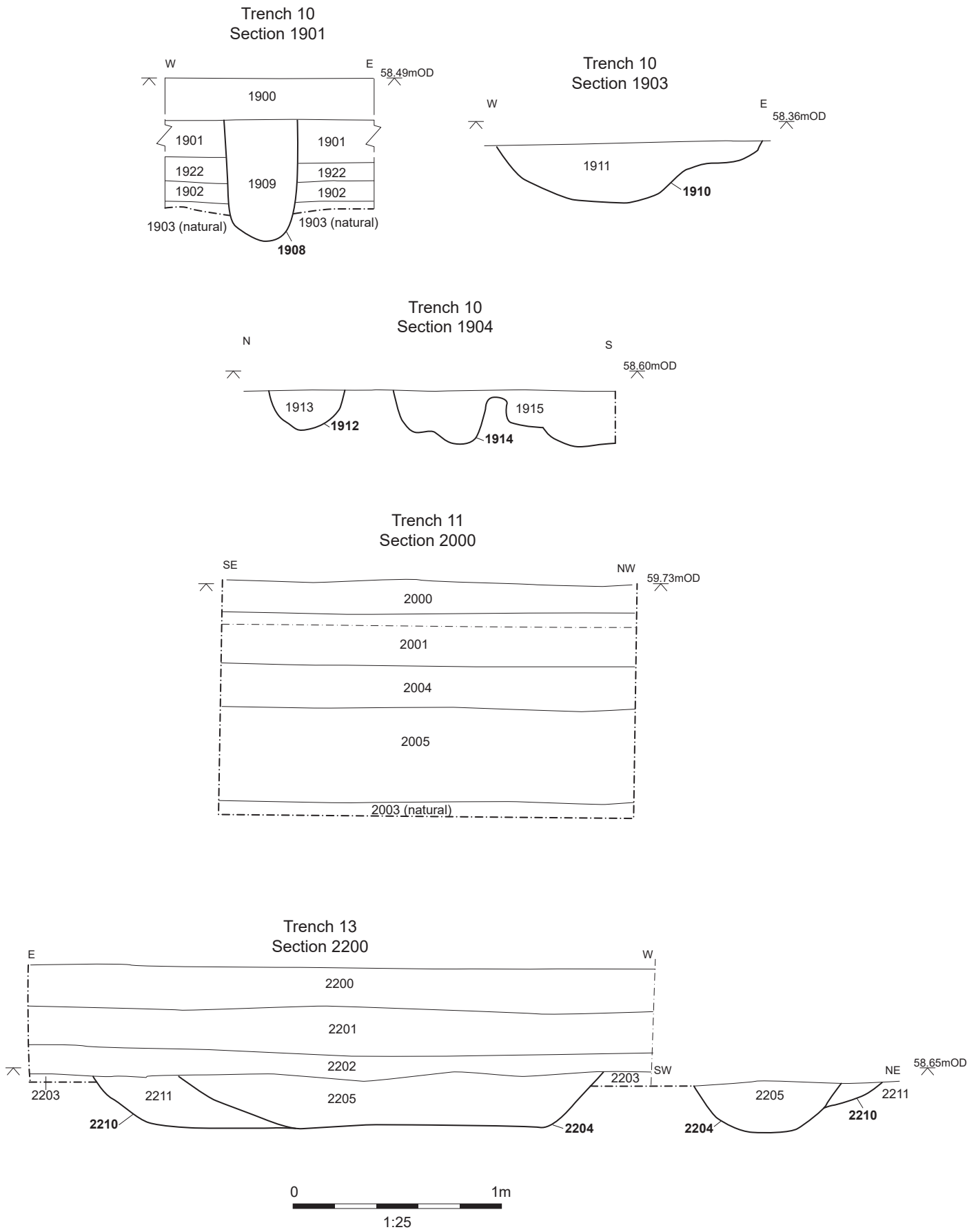


Figure 8: Trenches 10, 11 and 13 sections

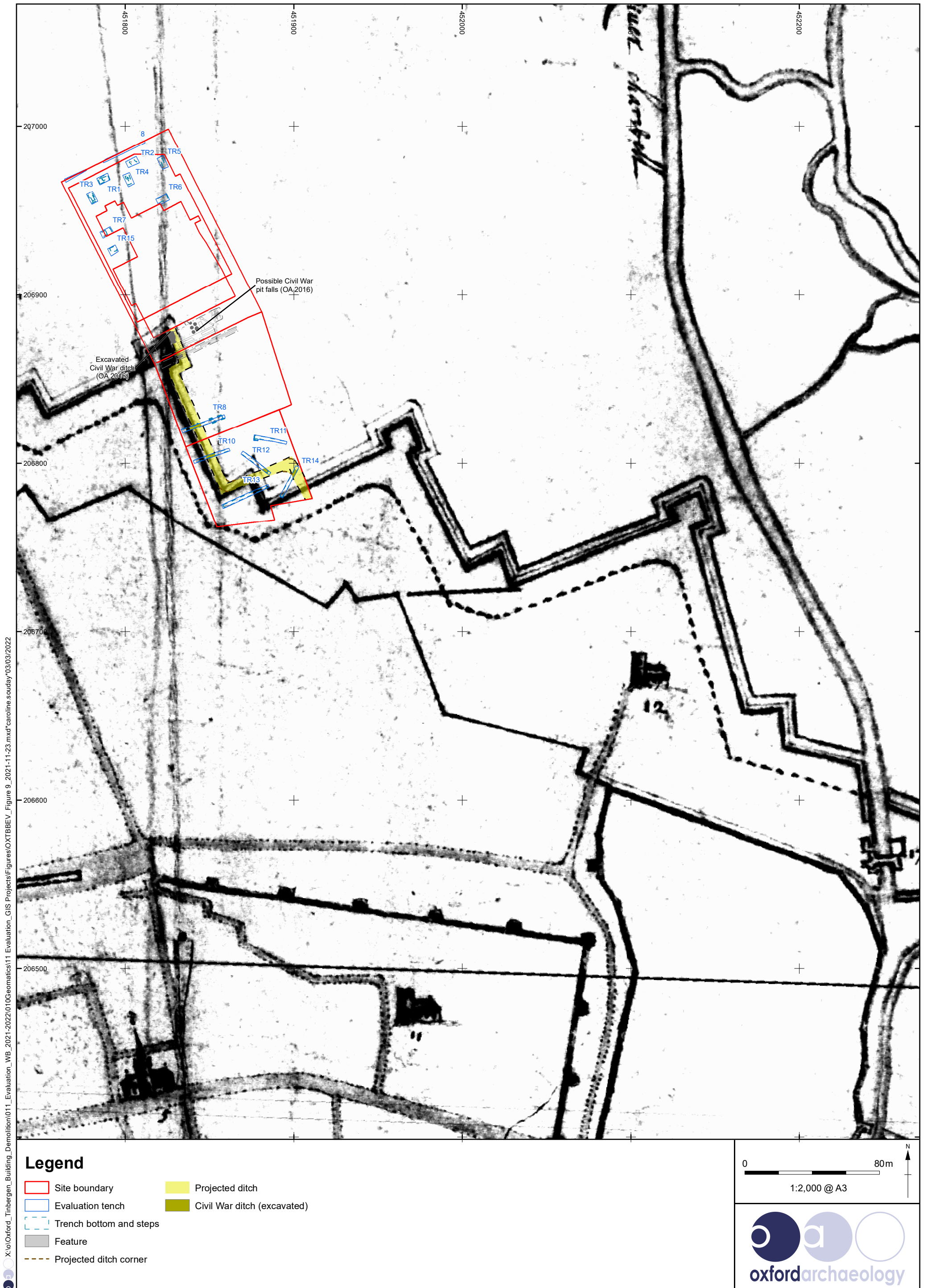
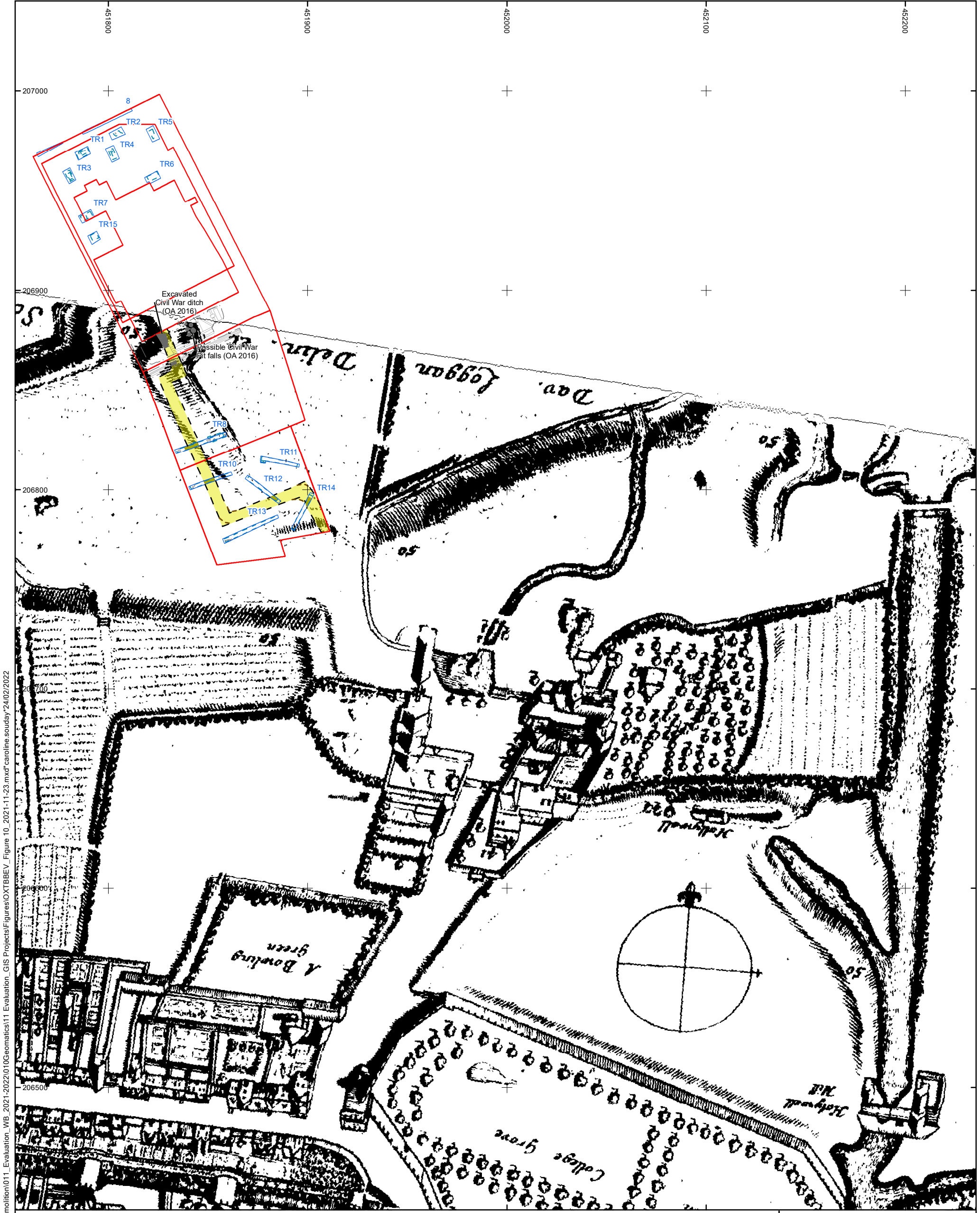


Figure 9: De Gomme's contemporary plan of Oxford's defenses (1644)



X:\Oxford\_Timbergen\_Building\_Demolition011\_Evaluation\_WB\_2021-2022\010Geomatics\11\_Evaluation\_CIS\Projects\Figures\OXTBBEV\_Figure 10\_2021-11-23.mxd caroline.soudry 24/02/2022

**Legend**

- Site Boundary
- Evaluation Trench
- Trench bottom and steps
- Feature
- Projected ditch corner
- Projected ditch
- Civil War ditch (excavated)

0 40m

1:1,800 @ A3

oxfordarchaeology

Figure 10 : Logan's map of Oxford (1675)



Plate 1: Trench 2, Section 1100, looking north



Plate 2: Trench 10, posthole 1912 and tree-throw hole 1914, Section 1904, looking west





Plate 3: Trench 10, ditch 1910, Section 1903, looking north



Plate 4: Trench 14, civil war ditch 2304, Section 2300, looking north-west



Plate 5: Trench 12, civil war ditch 2104, Section 2100, looking west-southwest



**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](mailto: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](mailto: 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](mailto: oaeast@oxfordarchaeology.com)  
w: <http://oxfordarchaeology.com>



Chief Executive Officer  
Ken Welsh, BSc, MCIFA  
Oxford Archaeology Ltd is a  
Private Limited Company, N<sup>o</sup>: 1618597  
and a Registered Charity, N<sup>o</sup>: 285627