
# Paradise Street Oxford

## Archaeological Evaluation Report

**Oxford Archaeology**

28th January 2003

**Client Name: Ambroseden Court Ltd**

Issue N$^{O}$: 1
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# Paradise Street, Oxford

## *ARCHAEOLOGICAL EVALUATION REPORT*

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**SUMMARY**

*Oxford Archaeology (OA) carried out a field evaluation at Paradise Street, Oxford on behalf of Ambroseden Court Ltd. The evaluation revealed a layer of rubble within the Castle Ditch which may have acted as a ford or weir at the point at which the ditch meets the Mill Stream. A channel forming part of a ?16th-century sluice house was seen, into which a later brick culvert had been constructed. A possible 18th-century pitched stone surface was encountered which was cut by a large 19th-century feature; both may be related to the sluice house, which is known from 16th- and 17th- century maps of the area.*

# 1 INTRODUCTION

## 1.1 Location and scope of work

1.1.1 In November and December 2002 Oxford Archaeology (OA) carried out a field evaluation at the former Thames Water depot on Paradise Street, Oxford on behalf of Ambroseden Court Ltd in respect of a planning application for the development of student accommodation (Planning Application No. 02/02135/FUL).

1.1.2 A Brief outlining the archaeological requirements of the development was set by Brian Durham, the City Archaeological Officer. A Written Scheme of Investigation (WSI), outlining how OA would implement the brief, was then agreed with Brian Durham.

1.1.3 The development site is situated on the site of a former business centre and is *c.* 0.33 hectares in area.

## 1.2 Geology and topography

1.2.1 The site is bound to the east by the Castle Mill Stream branch of the Thames, to the south by Paradise Street and by the wall of Oxford Prison to the north (Fig. 1).

1.2.2 The underlying geology comprises the southern spur of the Summertown-Radley gravel terrace, to the east of the River Thames and to the west of the River Cherwell. The site lies at approximately 57 m OD.

## 1.3 Historical background

1.3.1 The historical background of the site has been extensively studied in 'Oxford Castle – a Heritage Survey', which was commissioned by Oxfordshire County Council (OAU 1996b). The following (reproduced from the WSI) is based on the information contained in that document, where full references will also be found. The date references given below (e.g. 1952, 1972 etc.) refer to the entries in Appendix B of that document.

1.3.2 The castle was built in 1071 by Robert d'Oilli at the west side of the late-Saxon town, known to have been in existence as early as AD 911. There is no known evidence for

activity pre-dating the Saxon period. Pre-conquest late Saxon material has been found beneath the Castle mound (1952) and within the vicinity of the castle at Nuffield College (1948-9) and New County Hall (1972), indicating that the Saxon town extended as far west as the river – as represented by the present Castle Mill Stream.

1.3.3 Jope's excavations at the mound in 1952 revealed pits, occupation debris and traces of the houses overlain by the castle and part of a Saxon timber house was observed recovered during construction of the new County Hall in 1972. OAU undertook an evaluation of the prison site in 1999, including two trenches near the base of the castle mound (OAU 1999) that identified a post-medieval ditch cut into earlier deposits.

1.3.4 Originally the castle consisted of a motte and bailey, much of the latter of which survived into the 18th century, and the motte (the castle mound) still remains. Within the mound is a well chamber that is Listed Grade I, with an entrance on the upper SE side of the mound.

## 1.4 Archaeological Background

1.4.1 The following, also reproduced from the WSI, is a brief summary of results from recent archaeological work carried out in the vicinity of the proposed development site.

***Boreham's Yard, Tidmarsh Lane (now St George's Gate) excavation 1994-5 (OA unpublished)***

1.4.2 A programme of archaeological work in advance of redevelopment by St Peter's College revealed a sequence of cobbled surfaces and other structural fragments probably of 12th-14th century date outside the west gate of Oxford Castle, c 50 m to the north-west of the proposed development. Part of the 13th-century curtain wall and the likely position of the gate itself were located. The external surfaces probably fronted onto the river channel (Castle Mill Stream) to the west, while a possible channel linking the river with the water-filled moat of the castle was located at the northern end of the site. Post-medieval developments included the establishment of a ditched boundary and successive realignments of the river channel before the construction of 18th- and 19th-century buildings, some of which still survived immediately prior to the redevelopment. The results of the excavation are integrated with documentary and cartographic evidence for the site to refine understanding of the topography of this important part of Oxford Castle.

***Oxford Castle Mill Weir Desktop (OAU 1996a)***

1.4.3 OAU carried out a Desktop study of the Castle Mill Weir, approximately 20 m to the north-west of the proposed development, prior to its refurbishment and as part of the planning application to OCC. The existing weir is on the site of the Castle Mill, demolished in 1930 after a millennium of use. Records from the 1930s suggest that the remains of an early mill were found beneath the 18th-century building, but it is uncertain whether any of these survive. The Castle mill is one of the well-documented

early mills in Oxford, held by the Constable of Oxford, Robert d'Oilli in Domesday Book (1086). It was rebuilt in 1781 and the building that was demolished in 1930 was almost certainly of that period.

***Paradise Street (N), Thames Water Authority Depot (OAU 1991)***

1.4.4 An archaeological evaluation was carried out by OAU on the site of the former Thames Water Authority depot on Paradise Street, immediately adjoining the wall of Oxford Prison and c 40 m to the south east of the proposed investigation area. Two trenches were dug and revealed two water courses. One followed the line of the Castle ditch on the 17th-century plans and beneath the exposed silts there was evidence of wattle sided water courses. The second water course was a stone culvert which was aligned towards 17th-century (or earlier) houses on the abutments of Swan Bridge and was probably a water supply to the same.

***1977 Test Pits (Oxford University Archaeological Society)***

1.4.5 Test pits excavated on the Canteen Site (see below) by OUAS revealed 12th-century deposits truncated by a 15th-century structure.

***Former Canteen Site, Paradise Street, Oxford (OAU 1993a and b)***

1.4.6 OAU undertook a field evaluation for Thomas and Co. on the former canteen site at Paradise Street, Oxford during November 1993 in advance of the construction of flats and a car park. The site was located on the opposite side of Paradise Street from the 1991 evaluation, c 50 m to the south of the proposed development. Two 10 m long trenches revealed a stone lined and capped culvert which presumably carried out a similar function to that observed during the 1991 evaluation on the opposite side of Paradise Street (ie – a water supply to the hous(es) on Swan Bridge). Additionally, a small section of stone wall was revealed and may correspond to a phase of 12th-century building noted during the test pitting in 1977. This could possibly be interpreted as part of a building on the Paradise Street frontage.

***The Site***

1.4.7 The following (3.7) is extracted from the Brief supplied by OCC.

1.4.8 The site includes the outer half of the Castle/moat ditch, the north boundary being the former prison wall running roughly along the centre of the medieval ditch. Paradise Street itself curves round the outer lip of the ditch. It is assumed that the moat water flowed from east to west along this arm of the defences, emptying into the Castle Mill Stream at the west end of the proposed site. At this point, a map drawn up for Christ Church College in c 1615 shows a building astride the moat, with paired arches to the Mill Stream at water level (see Fig. 9). This may be a watergate, or alternatively a sluice house controlling the water level in the moat. The mapped building on Paradise Street could be the residue of more extensive medieval settlement on what was the direct route from the town West Gate to St Thomas parish and Oseney Abbey. Taylor's map (1750) shows more buildings along the street, a residual watercourse on the centre line of the ditch and possible alterations to the sluice house. Within 39 years the prison had been built and the site is shown as a garden.

## 2 EVALUATION AIMS

2.1.1 To determine the location, extent, date, character, and state of preservation of any archaeological remains surviving on the site, and specifically to determine the plan of and survival quality of the mapped watergate/sluice house; culverts and timber gates/sluices and adjoining buildings.

2.1.2 Attention was to be given to remains of all periods, including evidence for past environments, with provision for environmental sampling included. The level and quality of organic preservation within the moat/ditch was to be established in order to inform the piling/foundation design of the proposed development.

2.1.3 To clarify the nature and extent of any modern disturbance and intrusion on the site.

2.1.4 To make available the results of the investigation.

## 3 EVALUATION METHODOLOGY

### 3.1 Scope of fieldwork

3.1.1 The field evaluation was to initially comprise the excavation of three machine-dug trenches, two measuring 6 m long by 1.8 m wide and one measuring 8 m long by 1.8 m wide. After scanning the area for services and taking into account the high water level of the Castle Mill Stream, combined with the close proximity of the trenches to the retaining wall of the stream, new trench designs were implemented. Trench 1 measured 5 m by 2.5 m, Trench 2 measured 4 m by 2.5 m and Trench 3 measured 5 m by 2.5 m (Fig. 2).

3.1.2 The trenches were located in order to target the locations of the buildings visible on the 16th- and 17th-century maps of the area (see Fig. 9). Specifically, Trenches 1 and 2 were designed to locate evidence for the possible sluice house and associated channels or culverts relating to the Castle ditch (see Section 1.4.8); Trench 3 was positioned in order to locate evidence of a building possibly fronting onto Paradise Street.

3.1.3 The trenches were be excavated under archaeological supervision by a mechanical excavator (JCB) equipped with a toothless ditching bucket. Machine excavation proceeded to the top of the first significant archaeological horizon. All subsequent excavation was by hand.

### 3.2 Fieldwork methods and recording

3.2.1 The trenches were cleaned by hand and the revealed features were sampled to determine their extent and nature, and to retrieve finds and environmental samples. All archaeological features were planned and where excavated their sections drawn at scales of 1:20. All features were photographed using colour slide and black and white print film. Recording followed procedures laid down in the *OAU Fieldwork Manual* (ed. D Wilkinson, 1992).

### 3.3 Finds

3.3.1 Finds were recovered by hand during the course of the excavation and bagged by context. Finds of special interest were given a unique Small Find number.

### 3.4 Palaeo-environmental evidence

3.4.1 Samples were taken from archaeologically significant deposits which appeared to have large quantities of charred remains or material which may have been waterlogged.

### 3.5 Presentation of results

3.5.1 Section 5 comprises a detailed description of archaeological observations within each trench and includes individual context descriptions, with archaeological deposits and features described from earliest to latest. Each trench is also shown in plan and section, where appropriate (see figures at back of report). Context information is summarised in the context inventory (Appendix 1).

## 4 RESULTS: GENERAL

### 4.1 Soils and ground conditions

4.1.1 The site is located on terrace gravels overlying Oxford Clay; the deposits encountered were mixtures of sands and clays and were relatively well drained. Although the level of the Mill Stream was high during the period of evaluation the ground water table was at 2.2 m below ground level (bgl), so excavation was generally unaffected. In Trench 1 a culvert, which ran into the Castle Mill Stream, was encountered. The local water level was higher than the top of the culvert due to a direct link with the Mill Stream. Any excavation greater than 0.80 m bgl proved too difficult during this stage of the works, due to the speed at which excavated areas were flooded.

## 5 RESULTS: DESCRIPTIONS

### 5.1 Description of deposits

***Trench 1 (Figs 3 and 4)***

5.1.1 Trench 1 was aligned E-W, measured 5 m by 2.5 m and was excavated to a maximum depth of 55.63 m OD (1.40 m bgl). At 56 m OD a masonry structure (105) was encountered, aligned NE-SW and constructed from limestone ashlar blocks. The blocks were overlain by rough stones which may have formed the base of an arch. The stones were bonded with a lime mortar and formed a wall at least 0.50 m wide. The south side was well faced but the north face was not seen as it appeared to extend beyond the northern limits of the trench. It was also disturbed by an E-W aligned construction cut (107) for another limestone wall (106). Parallel to structure 105, 0.96 m to the south, was a wall (118) constructed from roughly hewn blocks of limestone with a clay loam bond. The wall was faced on the north side and was more than 0.60 m wide; the south side was not seen. Walls 106 and 118 are interpreted as retaining

walls forming a channel which may have run through the sluice house visible on the 17th-century maps of the area.

5.1.2 At its western extent the wall 105 was truncated by a construction cut (116) for a limestone buttress (117), 0.70m wide and 0.80 m long, which supported the retaining wall of the Mill Stream. A possible 19th-century arched brick culvert (110) had been constructed between the channel walls. The culvert was obscured by the high level of the water in the trench and so the bond was not seen, but the bricks measured 0.23 m by 0.10 m by 0.075 m. It was sealed by dumps of mortar rich silty clay and clay (104, 112, 113 and 115). Wall 106 was sealed by a dump of gardensoil (102) and was truncated by a robber cut (109) . This was aligned E-W and was 0.30 m deep and over 0.40 m wide and was filled with rubble and silty clay (103 and 111). The deposits were sealed by a layer of gardensoil (101) which was truncated by services (114) to the east and overlain by a layer of concrete (100).

***Trench 2 (Figs 5 and 6)***

5.1.3 Trench 2 measured 4 m by 2.5 m and was excavated to a maximum depth of 55.17 m OD (1.90 m bgl). Natural gravel was not reached. The earliest deposit excavated was a brown silty clay (219) provisionally dated, by the pottery evidence, to the 13th century and assumed to be a dump of material into the Castle ditch. This was truncated by a linear feature (218) aligned N-S and filled with dumps of gravels and clays (215-217). The pottery suggested a 15th-century date, but the base was not reached. A surface of pitched limestone (203) sealed 215 and appeared to be dated, by the pottery and ceramic building material (CBM), to the mid 18th-century. The surface was overlain by a dump of blue clay (202), and both deposits were truncated by a possible robber cut (205) filled by a mortar rich silt (204).

5.1.4 A large feature (211), with an undercut northern edge, truncated the deposits to the south of the trench. The base of the feature was not reached but it was over 4 m wide and over 2 m deep and filled with horizontal bands of clay, gravel and coke (209, 210 and 212). The deposits contained 19th-century pottery and CBM. The fills were truncated by a 19th-century post hole (213) filled with a clay loam (214) which was sealed by a dump of gardensoil (201). This was cut by a service trench (206 and 207) and a brick garden feature (208) which were sealed by a layer of concrete (200).

***Trench 3 (Figs 7 and 8)***

5.1.5 Trench 3 was orientated NW-SE and measured 5 m by 2.5m; natural gravel (312) was reached at 54.80 m OD (2.2 m bgl). Patches of flat loose limestone fragments (317) overlay 312. The stones were *c* 0.20 m square and sealed by late 11th-century deposits of clay and gravely silt (308-310 and 313-315), which were in turn overlain by 13th-century dumps of clay and gravely silts (305-307). The deposits were dated by the pottery recovered and were truncated by a possible landscaping feature (316) filled with clay and a clayey loam (303 and 304). These were sealed by a gravely make-up layer (302) beneath an 18th-century garden soil (301). The area appeared to have been landscaped (311), suggested by a large N-S aligned cut, and a gardensoil deposited (300), which was then sealed by a 20th-century layer of concrete.

## 5.2 Finds

5.2.1 The following are summaries of the full reports (see Appendices 2 and 3).

***Medieval and Post Medieval Pottery***

5.2.2 The pottery assemblage comprised 72 sherds with a total weight of 1,229 g. All the pottery was early medieval or later (Medieval Oxford ware, with a date range of AD1075 – 1350, was particularly common), and suggests that there was occupation at the site from the beginning of the period to the present day. The range of material present indicates that there was domestic activity and possibly some sort of industrial process taking place at the site in the medieval period.

5.2.3 The range of fabric types present is fairly typical of contemporary sites in Oxford, although some of the less common wares such as OXZ, OXBK and OXBG are present, which is slightly unusual for such a small assemblage. A sherd of Stamford ware was seen, which may be pre-conquest, although the rim-form is a fairly long-lived type, and it is difficult to be absolutely certain of its date.

5.2.4 The range of vessel types is in the main unremarkable, although two sherds merit comment. A complete handle from a Surrey Whiteware (OXBG) dripping dish was noted in context 216, and the base-pad of a Brill Boarstall (OXAM) vessel with multiple, pre-firing piercing was present in context 112.

5.2.5 The medieval pottery was generally in good condition, although a few sherds, such as a fragment of OXAM from context 217, showed evidence of being water-worn.

***Animal Bone***

5.2.6 A total of 81 fragments (1869g) of bone were recovered by hand during the excavations. An additional small quantity of bone was recovered from environmental samples and was briefly scanned to assess the potential. The majority of the material from the site came from deposits probably associated with the Castle ditch, in Trench 3. Whilst it is clear that all the main domestic species were eaten, the small number of bone recovered limits the interpretation of the site.

5.2.7 It is probable that both the majority of cattle and sheep would have been older animals taken from the wool and dairy farming with few young individuals other than those surplus to the industries, whilst pigs would have been bred primarily for their meat and may have been farmed in small numbers within the city.

## 5.3 Palaeo-environmental remains

5.3.1 The following is a brief summary of the full report (see Appendix 4).

***Carbonized plant remains and charcoal***

5.3.2 The environmental evidence consisted of high concentrations of grain in sample 1, context 308, and low concentrations of grain in samples 2 and 3, contexts 313 and 310. The absence of chaff suggests that cereals were not processed on the site.

# 6 DISCUSSION AND INTERPRETATION

## 6.1 Reliability of field investigation and integrity of the remains

6.1.1 Health and safety considerations (buried services and the height of the water level in the Castle Mill Stream) lead to the slight relocation of all three of the trenches, which meant that neither the Paradise Street frontage nor the river wall were evaluated in as much detail as specified in the brief. The water level in Trench 1 did not allow for evaluation significantly below the depth at which significant structural remains were encountered, and therefore evaluation aim 2.1.1 was not fully realised.

6.1.2 The archaeology in all of the trenches was disturbed to a limited extent by later intrusions - in most cases this disturbance was in the form of services associated with the former Thames Water depot buildings that stand on the site, or possibly landscaping associated with the use of the site as gardens in the 18th and 19th centuries. The deposits and structures in Trenches 2 and 3 had a good level of stratigraphical integrity; deposits relating to the sluice house in Trench 1 were not evaluated to sufficient depth to fully assess likely disturbance but there was no sign of major truncation at the levels that were reached. The evidence from the historic maps of the area indicate the site to have been gardens between the later 18th century and the 20th century, when the current buildings were constructed. It seems likely, therefore, that the remains of the buildings shown on the 16th-, 17th- and early 18th-century maps will survive in good condition beneath the surface.

## 6.2 Overall interpretation

### *The Castle ditch*

6.2.1 A sequence of deposits interpreted as fills of the Castle ditch was revealed in Trench 3, which was very similar to a sequence seen 20 m to the south in the 1991 Trench 2 (OAU 1991). A spread of stones (310) was seen at the base of the sequence overlying the gravel, which may have been used to stop the erosion of the base of the ditch and/or to act as a causeway or ford, at a point where the structure may also have acted as a weir. The current levels of the bed at the edge of the Mill stream and the levels of the spread of stones are very similar. It may therefore be that the ditch was originally dug to stop just short of the Mill stream, with a weir, between the ditch and the stream, that also acted as a ford on Paradise Street (pre-dating Swan Bridge) - the water in the ditch would therefore only empty into the Mill Stream when at a certain height. This area seems to have initially silted up in the late 11th century and was later back-filled/made-up in the 13th century, possibly coinciding with the construction of the bridge and perhaps the Sluice House.

### *The Paradise Street frontage*

6.2.2 No evidence of structures fronting Paradise Street was seen in Trench 3, although a garden soil was recorded which may have represented a backyard, suggesting that the frontage may once have stood further south.

### *The Sluice House and other water management features*

6.2.3 The Christ Church College map of *c* 1615 (see Fig. 9) shows a building astride the moat with paired arches to the Mill Stream at water level. The E-W aligned parallel walls seen in Trench 1 are assumed to form one of the channels. No evidence of the N-S aligned walls of the house were seen although the current retaining wall of the Mill stream had truncated the western limits of the structure. If the sluice house had replaced the possible weir to the south it may originate during the 13th century. The sluice structure had also been truncated by an E-W aligned limestone wall which may have represented an alteration to the sluice house, as suggested by Taylor's map of 1750.

6.2.4 The earliest deposits in Trench 2 are likely to represent the infilling of the Castle ditch in the 13th century. The possibly 15th-century linear feature (218) may have represented a drainage channel through the ditch fills or perhaps a robbed foundation cut for a building either fronting Paradise Street, or associated with the sluice house. This was sealed by a possibly 18th-century pitched stone yard surface (203) which may also have been associated with the sluice house. The large feature to the east (211) may have represented the void and robber trench left after a retaining wall had been removed in the 18th or 19th century. The robbing of a wall is suggested by the slightly undercut western edge of the feature. This wall may have revetted the end of the Castle ditch as it was channelled towards the sluice house. Alternatively the feature may simply be a large pit.

# APPENDICES

## APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

| TRENCH | CONTEXT NO. | TYPE | COMMENTS | DATE |
|---|---|---|---|---|
| 1 | 100 | Layer | Concrete car park | 20th |
| | 101 | Layer | Gardensoil | |
| | 102 | Layer | Gardensoil | |
| | 103 | Fill | Robber cut fill | L11th |
| | 104 | Layer | Dump over culvert | 19th |
| | 105 | Masonry | Sluice house wall | |
| | 106 | Masonry | Alteration to Sluice house | |
| | 107 | Cut | Construction cut | |
| | 108 | Fill | Construction cut fill | |
| | 109 | Cut | Robber cut fill | |
| | 110 | Masonry | Brick culvert | 19th |
| | 111 | Fill | Robber cut fill | |
| | 112 | Layer | Dump over culvert | M16th |
| | 113 | Layer | Dump over culvert | |
| | 114 | Layer | Services | 20th |
| | 115 | Fill | Dump over culvert | |
| | 116 | Cut | Construction cut | |
| | 117 | Masonry | Revetment wall buttress | |
| | 118 | Masonry | Sluice house wall | |
| 2 | 200 | Layer | Concrete car park | 20th |
| | 201 | Layer | Gardensoil | |
| | 202 | Layer | Levelling | |
| | 203 | Surface | Pitched stone surface | M18th |
| | 204 | Fill | Robber cut fill | |
| | 205 | Cut | Robber cut | |
| | 206 | Cut | Service cut | |
| | 207 | Fill | Service backfill | |
| | 208 | Masonry | Garden feature | |
| | 209 | Fill | Dump into ditch | 19th |
| | 210 | Fill | Dump into ditch | 19th |
| | 211 | Cut | Robber cut | 19th |
| | 212 | Fill | Dump into ditch | 19th |
| | 213 | Cut | Post hole | 20th |
| | 214 | Fill | Post hole fill | 20th |
| | 215 | Fill | Robber cut fill | |
| | 216 | Fill | Robber cut fill | 15th |
| | 217 | Fill | Robber cut fill | 13th |
| | 218 | Cut | Robber cut | |
| | 219 | Layer | Ditch fill | 13th |
| 3 | 300 | Layer | Gardensoil | |
| | 301 | Layer | Levelling | |
| | 302 | Layer | Gardensoil | |
| | 303 | Layer | Landscaping | |
| | 304 | Layer | Landscaping | L11th |
| | 305 | Layer | Ditch fill | |
| | 306 | Layer | Ditch fill | 13th |

| TRENCH | CONTEXT NO. | TYPE | COMMENTS | DATE |
|---|---|---|---|---|
| | 307 | Layer | Ditch fill | 13th |
| | 308 | Layer | Ditch fill | L11th |
| | 309 | Layer | Ditch fill | L11th |
| | 310 | Layer | Ditch fill | L11th |
| | 311 | Cut | Landscaping | |
| | 312 | Layer | Natural gravel | |
| | 313 | Layer | Ditch fill | |
| | 314 | Layer | Ditch fill | |
| | 315 | Layer | Ditch fill | |
| | 316 | Cut | Landscaping | |
| | 317 | Layer | Stone spread | |

## APPENDIX 2 POTTERY ASSESSMENT/SPOT DATING

by Paul Blinkhorn

### Introduction

The pottery assemblage comprised 72 sherds with a total weight of 1,229 g. The estimated vessel equivalent (EVE), by summation of surviving rimsherd circumference was 0.81. All the pottery was early medieval or later, and suggests that there was occupation at the site from the beginning of the period to the present day. The range of material present indicates that there was domestic activity and possibly some sort of industrial process taking place at the site in the medieval period.

### Methodology

The pottery was recorded utilizing the coding system and chronology of the Oxfordshire County type-series (Mellor 1984; 1994), as follows:

OXZ: Stamford ware, 850-1100. 1 sherd, 7 g, EVE = 0.06.
OXAC: Cotswold-type ware, AD975-1350. 11 sherds, 141 g, EVE = 0.27.
OXY: Medieval Oxford ware, AD1075 – 1350. 32 sherds, 495 g, EVE = 0.34.
OXBK: Medieval Shelly Coarseware, AD1100-1350. 1 sherd, 11 g, EVE = 0.03.
OXAM: Brill/Boarstall ware, AD1200 – 1600. 11 sherds, 154 g, EVE = 0.11.
OXBG: Surrey Whiteware, M13th – M15th C. 1 sherd, 192 g, EVE = 0.
OXBN: Tudor Green Ware, late 14th century - c. 1500. 2 sherds, 27 g, EVE = 0.
OXDR, Red Earthenwares, 1550+. 3 sherds, 100 g, EVE = 0.
OXFH: Border wares, 1550 - 1700. 1 sherd, 16 g, EVE = 0.
OXFM: Staffordshire White salt-glazed Stoneware, 1730 – 1800. 1 sherd, 1 g, EVE = 0.
WHEW: mass-produced white earthenwares, mid 19th - 20th C. 8 sherds, 85 g.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 1. Each date should be regarded as a *terminus post quem*.

### Results

The range of fabric types present is fairly typical of contemporary sites in Oxford, although some of the less common wares such as OXZ, OXBK and OXBG are present, which is slightly unusual for such a small assemblage. The sherd of Stamford ware may be pre-conquest, although the rim-form is a fairly long-lived type, and it is difficult to be absolutely certain of its date.

The range of vessel types is in the main unremarkable, although two sherds merit comment. A complete handle from a Surrey Whiteware (OXBG) dripping dish was noted in context

216, and the base-pad of a Brill Boarstall (OXAM) vessel with multiple, pre-firing piercing was present in context 112. These sherds indicate that medieval cookery was taking place at the site and possibly some sort of industrial process, although it is difficult to clarify this on the basis of such a small assemblage.

**Conclusions**
The medieval pottery was generally in good condition, although a few sherds, such as a fragment of OXAM from context 217, showed evidence of being water-worn. No further work on this assemblage is required at this stage, but if further work is to take place on the site, it would be useful to publish some of the sherds noted above.

*Table 1: Pottery occurrence by number and weight (in g) of sherds per context by fabric type*

| | OXZ | | OXAC | | OXY | | OXBK | | OXAM | | OXBG | | OXBN | | OXDR | | OXFH | | OXFM | | WHEW | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cntxt | No | Wt | No | Wt | No | Wt | No | Wt | No | Wt | No | Wt | No | Wt | No | Wt | No | Wt | No | Wt | No | Wt | Date |
| 103 | 1 | 7 | | | 3 | 56 | | | | | | | | | | | | | | | | | L11thC |
| 104 | | | | | | | | | | | | | | | | | | | | | 1 | 23 | 19thC |
| 112 | | | | | | | | | 1 | 17 | | | | | 2 | 78 | 1 | 16 | | | 2 | 10 | M16thC |
| 203 | | | | | | | | | | | | | | | | | | | 1 | 1 | | | M18thC |
| 209 | | | | | | | | | | | | | 1 | 26 | 1 | 22 | | | | | 1 | 3 | 19thC |
| 210 | | | | | | | | | | | | | | | | | | | | | 4 | 49 | 19thC |
| 216 | | | | | | | | | 4 | 31 | 1 | 192 | 1 | 1 | | | | | | | | | 15thC |
| 217 | | | | | | | | | 1 | 26 | | | | | | | | | | | | | 13thC |
| 219 | | | | | 2 | 17 | | | 1 | 20 | | | | | | | | | | | | | 13thC |
| 304 | | | 1 | 17 | 2 | 57 | | | | | | | | | | | | | | | | | L11thC |
| 306 | | | 3 | 28 | 7 | 125 | 1 | 11 | 2 | 43 | | | | | | | | | | | | | 13thC |
| 307 | | | 4 | 73 | 8 | 71 | | | 2 | 17 | | | | | | | | | | | | | 13thC |
| 308 | | | | | 4 | 52 | | | | | | | | | | | | | | | | | L11thC |
| 309 | | | 1 | 4 | 2 | 75 | | | | | | | | | | | | | | | | | L11thC |
| 310 | | | 2 | 19 | 4 | 42 | | | | | | | | | | | | | | | | | L11thC |
| Total | 1 | 7 | 11 | 141 | 32 | 495 | 1 | 11 | 11 | 154 | 1 | 192 | 2 | 27 | 3 | 100 | 1 | 16 | 1 | 1 | 8 | 85 | |

## APPENDIX 3 ANIMAL BONE

by Bethan Charles

**Introduction**
A total of 81 fragments (1869g) of bone were recovered by hand during the evaluation. An additional small quantity of material was recovered from environmental samples. The material was briefly scanned in order to assess the potential of further work.

**Condition**
The majority of the bone from the site was in good condition with little attritional damage. However, there was some encrustation on some of the bone from context 310 indicating that it is likely to have been waterlogged at one point. Almost half of the material from the site had evidence of butchery marks. Most were chop marks with some dismembering cut marks. Carnivore gnaw marks were only observed on a pig ulna from a late 11th-century deposit, and no burnt bones were identified from the assemblage. There was no evidence of pathology apart from a large muscle attachment on the lateral side of the proximal shaft of a sheep metatarsal from 15th century context 216.

**Methodology**
Identification of the bone was done at Oxford Archaeology with access to the reference

collection and published guides. The calculation of the species recovered was done through the use of the total fragment method. All fragments of bone were counted including elements from the vertebral centrum, ribs and long bone shafts. The separation of sheep and goat bones was done using the criteria of Boessneck (1969), Prummel and Frisch (1986) in addition to the use of the reference material housed at OA. However, since no positive identification of goat was made all caprine bones are listed as sheep.

The ageing of the animals was based on tooth eruption and epiphyseal fusion. Silver's (1969) tables alone were used to give the timing of epiphyseal closure for cattle, sheep, pigs and horses. Sheep's tooth eruption and wear was measured using a combination of Payne (1973) and Grants (1982) tables. Cattle tooth eruption and wear was measured using Halstead (1985) and Grants (1982) tables. Pig tooth eruption and wear was measured using Higham (1967), Bull and Payne (1982) and Grant (1982), defined by Hambleton (1999).

The sex of the animals was ascertained depending on the preservation of indicative fragments of bone. None of the bones identified from this site could be sexed. The measurements taken were those defined by von den Driesch (1976), all measurements can be found in the archive.

**Results**

It is clear from Table 2 that the main domestic species (cattle, sheep and pig) are likely to have provided the majority of meat to the inhabitants of the site. Identified elements recovered consisted mostly of fragments of metapodials (foot bones), ribs, mandible, scapulae and long bone shaft fragments. The material is likely to represent part domestic and part butchery waste and it is probable that at least some of the butchering was occurring at the site.

*Table 2: Total number of bones according to period and species*

| Period | Horse | Cattle | Sheep | Pig | Cat | D.Goose | L. Mammal | M. Mammal | S. Mammal | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| L11th | 0 | 12 | 4 | 2 | 0 | 0 | 6 | 6 | 0 | 30 |
| 13th | 1 | 7 | 9 | 4 | 1 | 1 | 12 | 1 | 1 | 37 |
| 15th | 0 | 1 | 3 | 1 | 0 | 0 | 2 | 0 | 0 | 7 |
| Unphased | 0 | 1 | 0 | 1 | 0 | 0 | 4 | 1 | 0 | 7 |
| Total | 1 | 21 | 16 | 8 | 1 | 1 | 24 | 8 | 1 | 81 |

L. Mammal = Approximate size of cattle/horse
M. Mammal = Approximate size of sheep/goat
S. Mammal = Approximate size of rabbit or smaller

It was only possible to age some of the bones from the site. Teeth from a single sheep mandible from a late 11th-century landscaping deposit were aged between 6 - 8 years of age and a single pig mandible from a 15th-century robber cut fill of between 21 and 27 months. It is unlikely that many of the pigs would have been kept beyond this age since they provided little in the way of secondary products and would have reached their optimum weight at around two years of age. Epiphyseal fusion of the bones did not provide much information due to the small sample size. However, bone from at least one calf (tibia) and one lamb (metatarsal) was identified from 13th-century fills 207 and 307 respectively.

The size of the animals from the site did not appear to indicate much improvement in the animals during the medieval period. Most improvements to the size of sheep and cattle tended to occur during the late Medieval and Post Medieval periods.

A fragment of the distal end of a horse tibia was recovered from 13th-century ditch fill 307. There was no evidence that the bone had been butchered. A single cat humerus was also identified from this deposit. The proximal end had been broken off and there was no indication of butchery marks. It is unlikely that cats would have been eaten an it may be a

natural fatality. However, cats were occasionally skinned for their fur during the Medieval period.

The only bird bone recovered by hand from the site was a proximal phalanx from a domestic goose. It is likely that both goose and chicken would have supplemented the diet of the inhabitants during this period.

A small quantity of fish bone and small mammal bone was identified from the environmental samples. The material has not been identified to species.

**Conclusion**
The majority of the material from the site came from the Castle Ditch identified in trench 3. Whilst it is clear that all the main domestic species were eaten, the small number of bone recovered limits the interpretation of the site.

It is probable that both the majority of cattle and sheep would have been older animals taken from the wool and dairy farming with few young individuals other than those surplus to the industries, whilst pigs would have been bred primarily for their meat and may have been farmed in small numbers within the city.

Further excavation in this area is likely to provide good information regarding the use of the site and improve our knowledge of the diet and status of the inhabitants, in addition to our understanding of the farming practices in and around Oxford. Evidence from environmental samples indicates that bird, fish and small mammal bone is present on the site. It would be of value to sample during any further excavations to recover these smaller bones which can provide greater information regarding the economy of the site.

## APPENDIX 4 ENVIRONMENTAL DATA

by Elizabeth Huckerby

**Introduction**
Three samples, 1, 2, and 3, from contexts 308, 313, and 310, were taken from the fills of the moat of Oxford Castle or medieval dumps over a possible ford/weir between the castle moat and the castle mill stream. The fills were thought to date from between 1075 and 1350 AD. They were assessed for charred plant remains. The assessment was undertaken in order to establish whether plant material was present, the state of its preservation and the relative abundance of the remains.

**Methodology**
The three bulk samples for charred plant remains were processed with a modified Siraf machine; the flots were collected on a 250µ mesh and air-dried. A representative sample from each flot was scanned with a Leitz/Wild microscope and plant material was recorded and provisionally identified. The data are shown in Table 3.

**Results - charred plant remains**
Charred plant remains were recorded in all samples. The flots from samples 2 and 3, contexts 313 and 310, were small and contained only low numbers of charred grain, which were poorly preserved and tarry in appearance suggesting the material had been subjected to high temperatures. Bread wheat and either emmer or spelt wheat were identified. The flot from sample 1, context 308, was large and contained a very high concentration of charred grain mainly from bread wheat but also from emmer/spelt wheat, oats and barley. The surfaces of the grains were pitted possibly as a result of insect infestation, and some of the grains were tarry in appearance as in samples 2 and 3. Some chaff, including culm nodes and straw was

recorded in the scanned representative sample. Other food crops identified include cultivated legumes and hazel nut fragments. Weed seeds were fairly abundant in this sample and arable weeds including cornflower (*Centaurea cyanus*), corn marigold (*Chrysanthemum segetum*) and stinking chamomile (*Anthemis cotula*) were recorded.

Charcoal, from oak, was noted in the three samples and was generally well preserved, although the fragments in samples 2 and 3 were small. The charcoal in sample 1 was larger and included some round wood. Bone was identified in most samples and included fish, small mammal, and fragments of mammal bone. Molluscs remains were noted in sample 3 and coal in sample 2.

**Discussion**

As in the earlier assessments from Oxford Castle by Ruth Pelling (1999) and OA (2002) charred remains were recorded at this site. There were very high concentrations of grain in sample 1, context 308, but samples 2 and 3, contexts 313 and 310, yielded only low amounts of grain. The absence of chaff suggests that cereals were not processed on the site. Any further excavation should include a programme of environmental sampling.

*Table 3: Assessment of charred plant remains*

| Sample no | | 1 | 2 | 3 |
|---|---|---|---|---|
| Context no | | 308 | 313 | 310 |
| Vol of flot | ml | 400 | <20 | <20 |
| Charcoal | | 4* (large +small oak) | 4 | 4 |
| Grain | | 4+++, | 1-2 | 2 |
| Triticum sp | Bread | + | + | + |
| Triticum dicoccum/spelta | Emmer/ spelt | + | + | |
| Avena | Oats | + | + | |
| Hordeum | Barley | + | + | |
| Secale | Rye | | | |
| Indeterminate | | + | + | + |
| Chaff | | + | | |
| Cultivated legume | | + | | |
| Weeds | | 3-4 (arable weeds) | 1 | |
| Hazel frags | | + | | |
| Molluscs | | | 2 | 4 |
| Non charred | Seeds | | + | + |
| Contamination | | | | |
| Coal/cinder | | | + | |
| Fish bone | | + | | |
| Mammal bone | Small | + | | |
| Mammal bone | Frags | + | | + |

*Scored on scale of 1-4 where 1=present (up to 5 items), 2=frequent (5-25), 3=common (25-100) and 4=abundant (>100). 4+++ represents exceptionally high values, +=present but no score.

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## APPENDIX 6 SUMMARY OF SITE DETAILS

**Site name:** Paradise Street, Oxford
**Site code:** OXPSBC02
**Grid reference:** SP 5095 0608
**Type of evaluation:** Three trenches, two measuring 5 m by 2.5 m and one measuring 4 m by 2.5 m
**Date and duration of project:** 25.11.02-3.12.02
**Area of site:** 0.33 ha
**Summary of results:** A possible medieval weir in the Castle ditch, a ?16th-century channel from the Castle Sluice house and a possible robbed revetment wall.
**Location of archive:** The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Oxfordshire County Museums Service in due course, under the following accession number: 2002.223


Scale 1:12,500



Figure 1: Site location

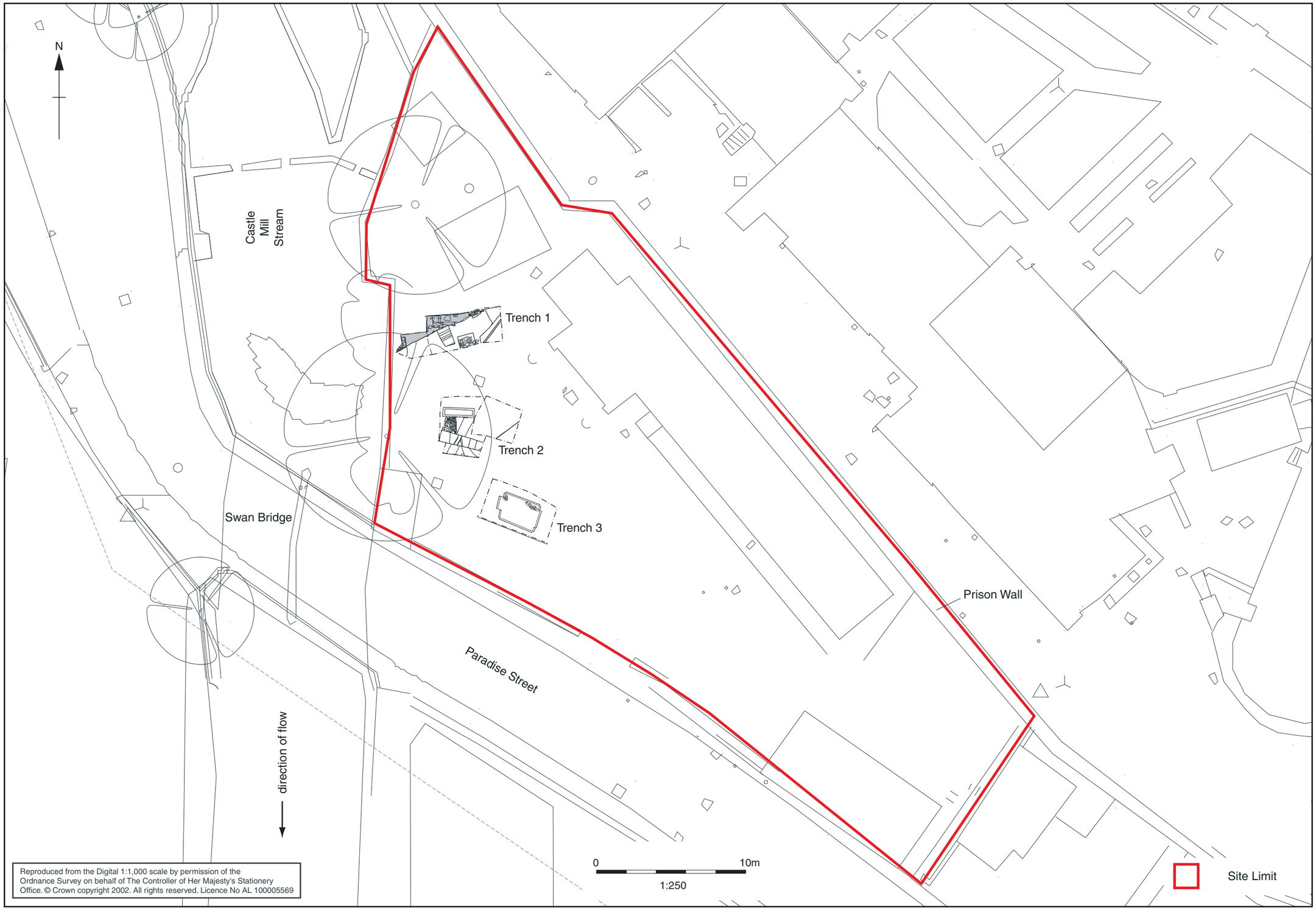
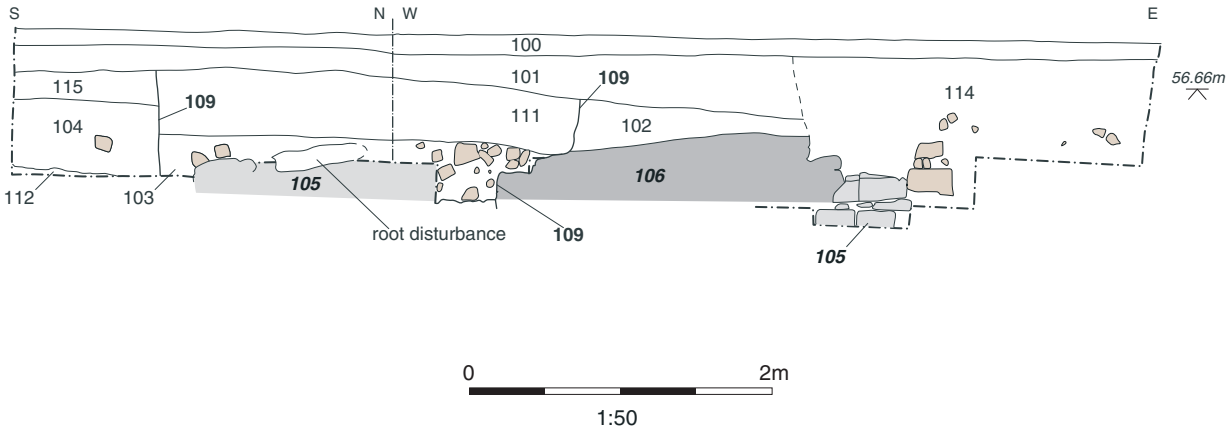



Figure 2: Trench location


Figure 3: Trench 1

Trench 1
Section 100







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Trench 1
Section 101

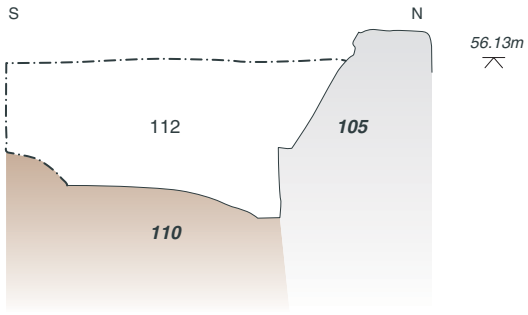



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Figure 4: Sections 100 and 101

Trench 2

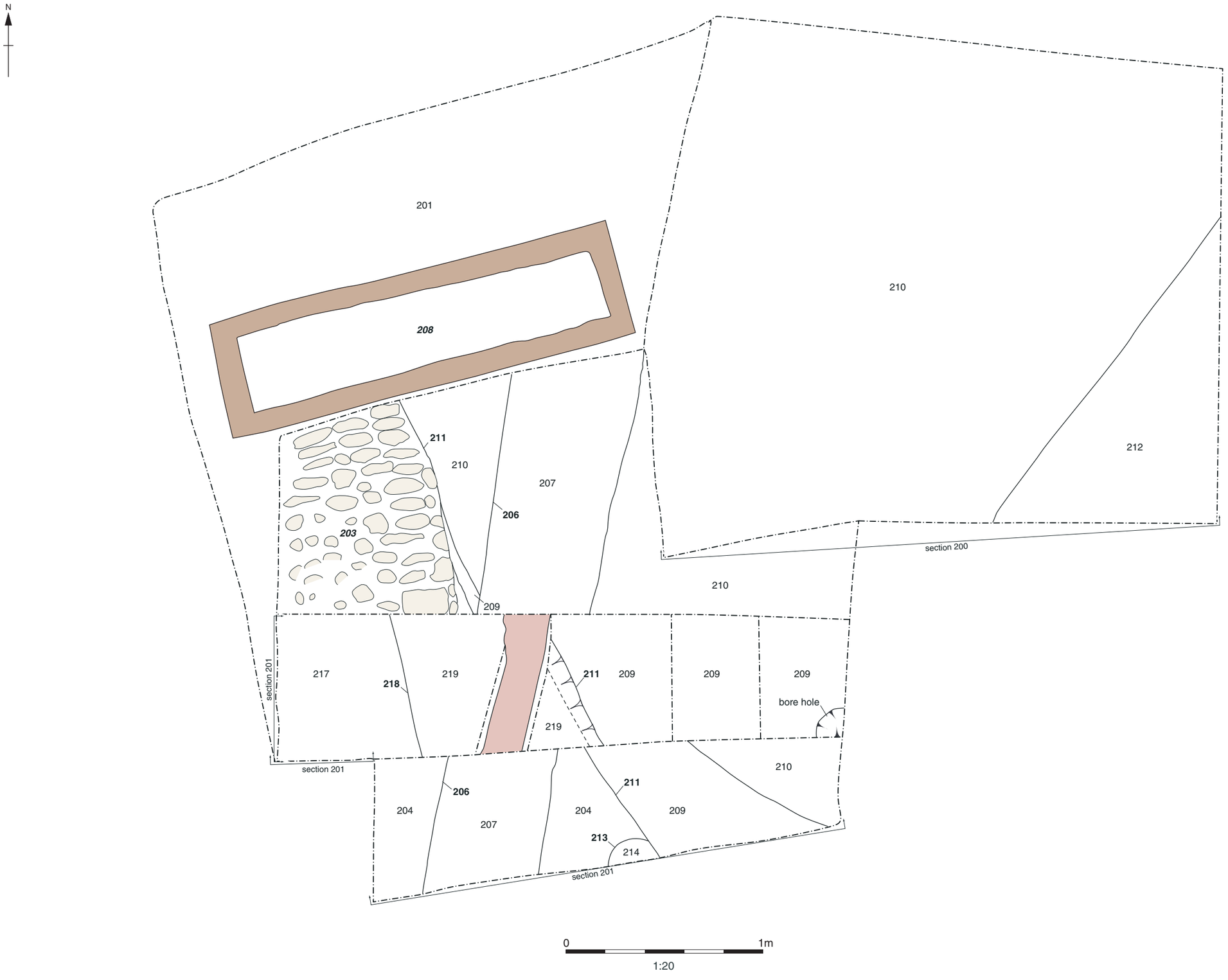
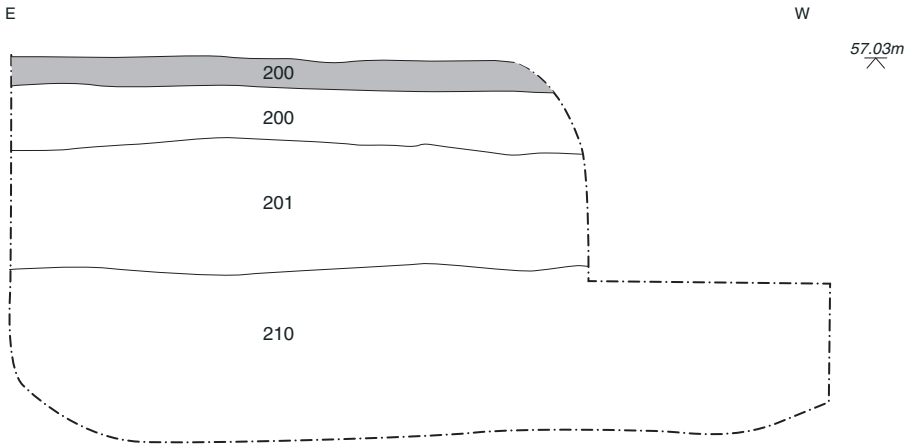



Figure 5: Trench 2

Trench 2
Section 200




Trench 2
Section 201

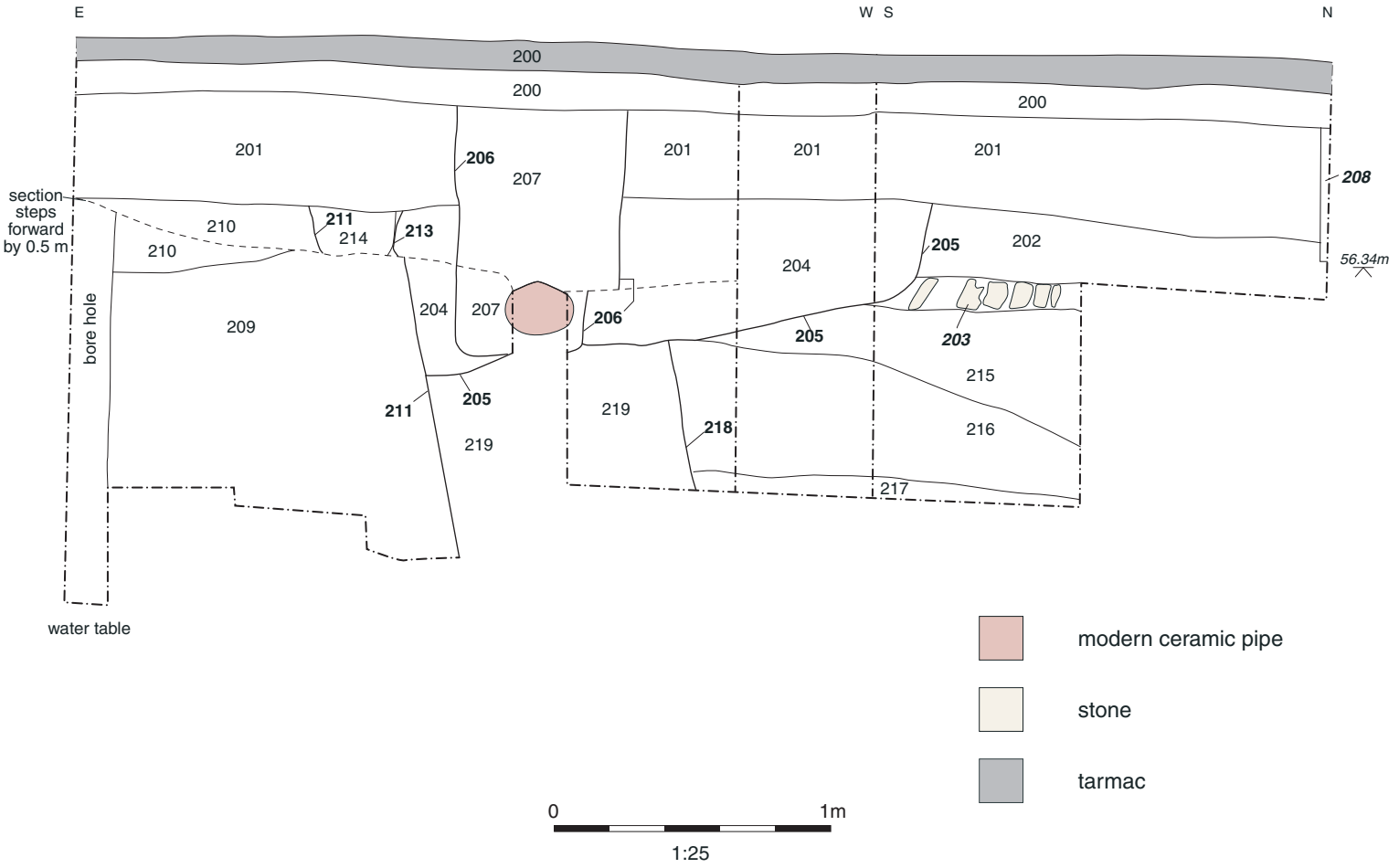



Figure 6: Sections 200 and 201

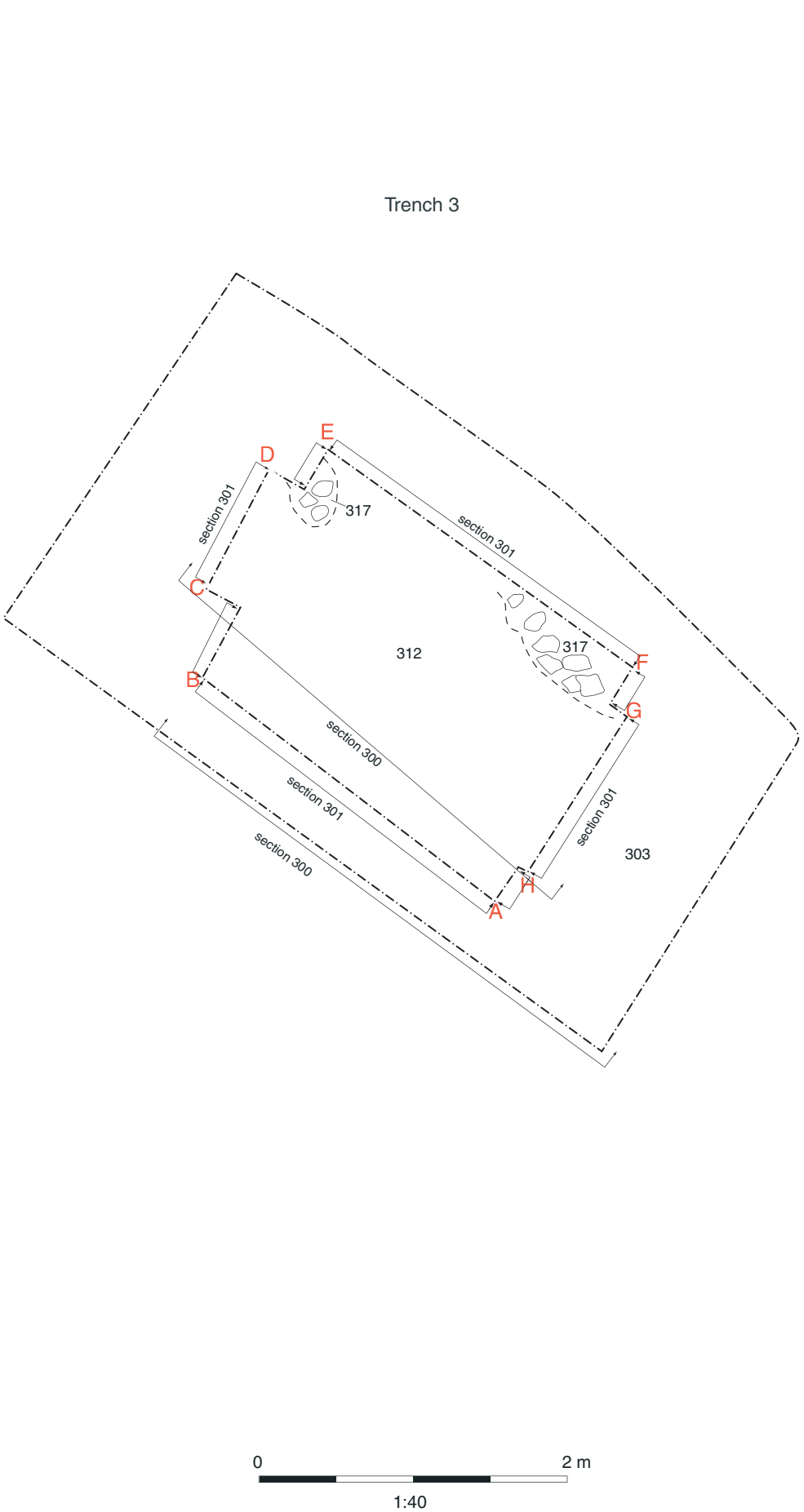
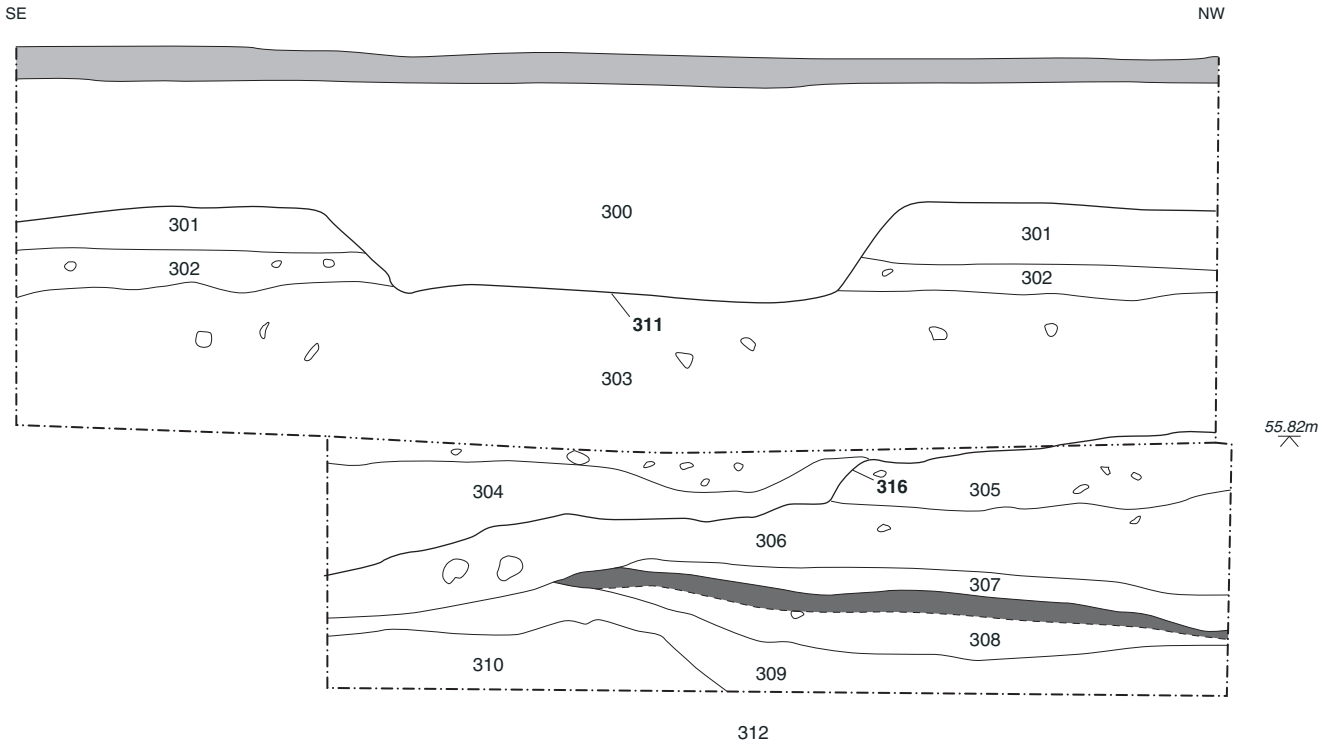
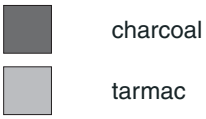


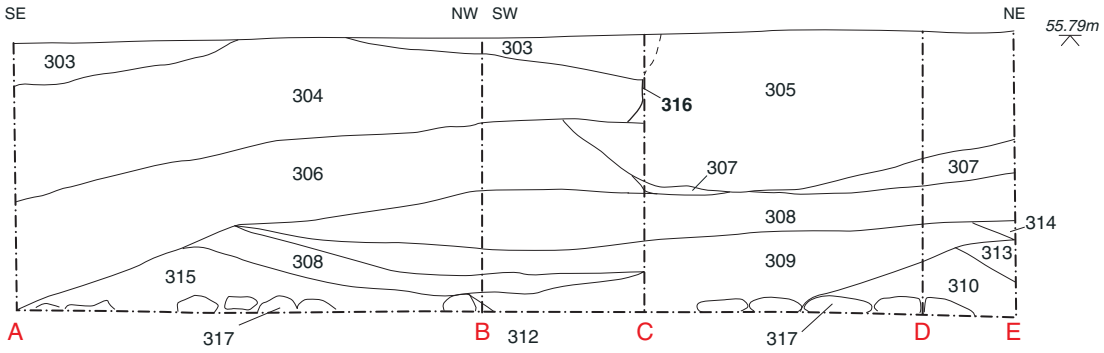

Figure 7: Trench 3

Trench 3
Section 300




Trench 3
Section 301



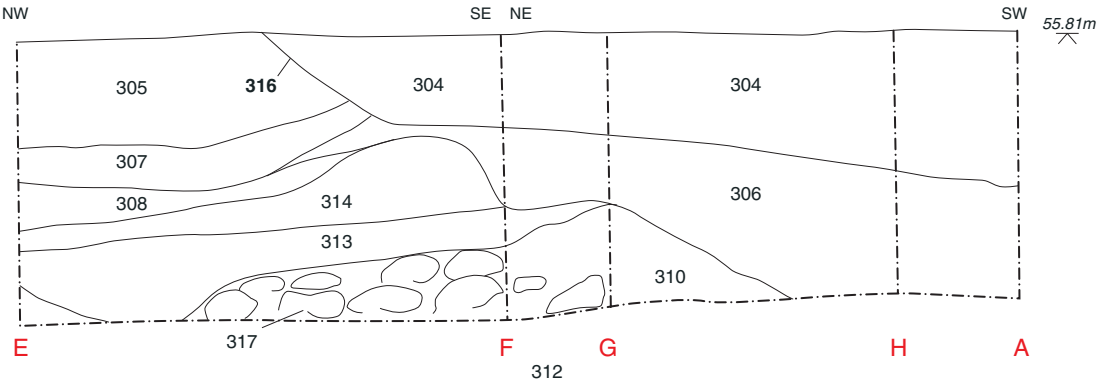




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Figure 8: Sections 300 and 301


Figure 9: Detail from Christ Church plan of Oxford Castle *c*. 1615

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