

# Excavations on the Line of the City Defences at New College, Oxford, 1993

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## SUMMARY

*Small-scale excavation against the line of the city wall within New College revealed an earthwork rampart on the south side of the wall and predating it. This may have been a late Saxon eastern extension of the 10th-century burghal defences of Oxford, on a line subsequently followed by the 13th-century city wall. Some details of the wall construction were noted. The 13th-century ditch and the later outer city wall were not seen owing to the limited extent of excavation. There was some evidence for a structure built against the external wall face adjacent to bastion 12 (the kitchen yard gate). This may have been of late medieval date, but most other features excavated on the north side of the wall were post-medieval and modern in date.*

## INTRODUCTION

In the long vacation of 1993 extensive trenching was undertaken in New College for ducts to accommodate alarm and communication cables and for low voltage mains cables. The majority of this work was confined to the northern part of the College, between the New Buildings in Holywell Street to the N and the extant city wall to the S. It was necessary, however, to cross the line of the city wall at three points, which it was anticipated would be achieved by drilling directly through the fabric of the wall below ground level. Since the wall is a Scheduled Ancient Monument, provision for archaeological excavation and monitoring at these points was deemed a necessary condition of the granting of Scheduled Monument Consent. The work was carried out by the Oxford Archaeological Unit in August 1993, and observation of related earthmoving operations continued into the first half of September. The work was commissioned by Peter Lawson-Smith Associates Limited on behalf of New College. The groundworks contractor was Ashlar Construction Ltd and the main (electrical) contractors were Darke and Taylor. The cooperation of representatives of all these organizations is acknowledged, as is the help given by the Clerk of Works to the College, David Rolfe and his deputy, and Graham Weeks of Rodney Melville and Partners, architects for the College. The finds and the project archive are deposited at the Ashmolean Museum. The illustrations are the work of Karen Nichols.

## ARCHAEOLOGICAL BACKGROUND AND OBJECTIVES

The line of the wall around the NE corner of the City of Oxford has received archaeological attention on a number of occasions since the 1920s. Successive excavations have shown that the surviving city wall was probably to be equated with that known from documentary

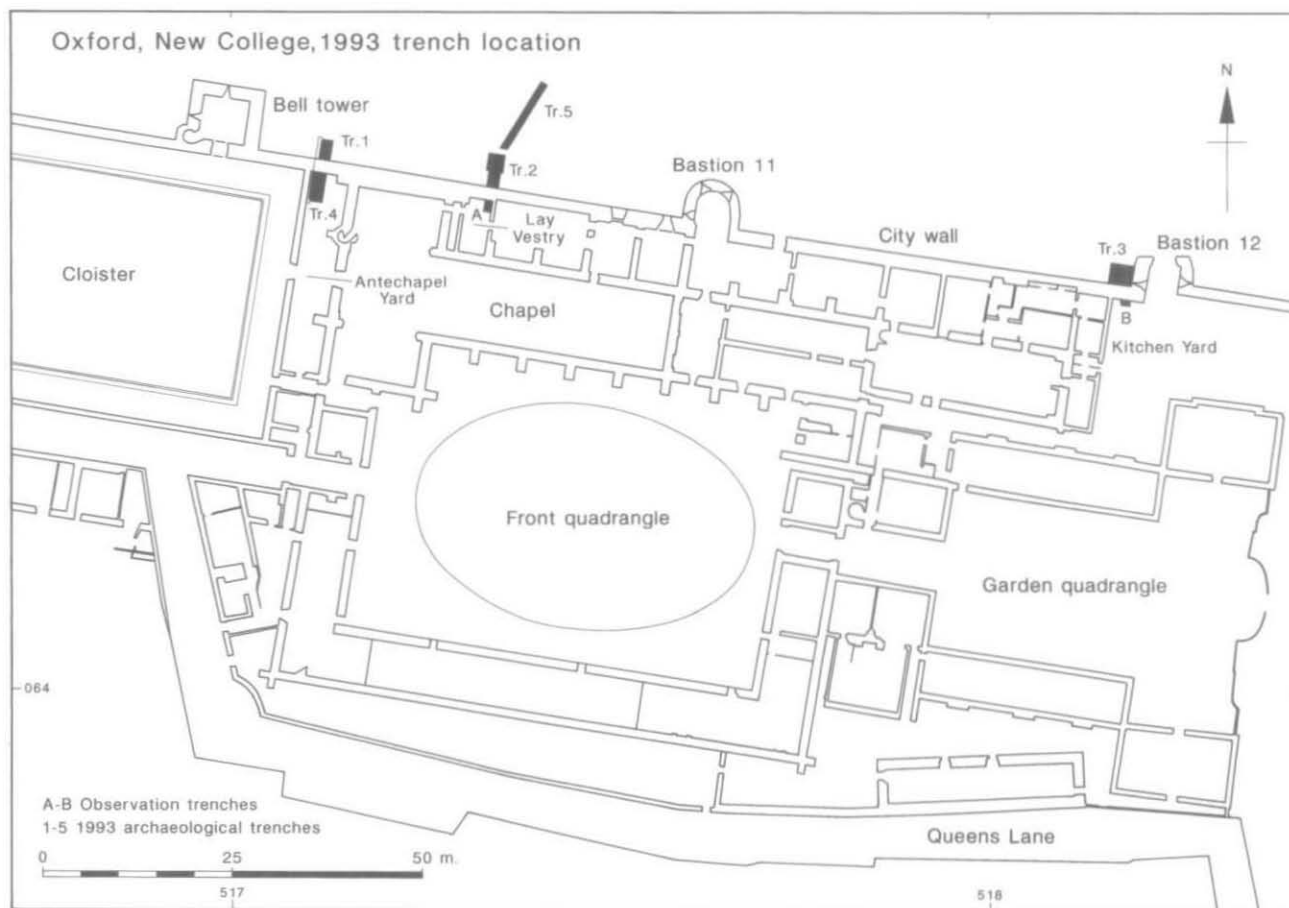


Fig. 1. New College, trench location plan. Scale 1:1000.

sources to have been under construction from 1226<sup>1</sup> and that there was an outer wall, perhaps of late 13th-century date, which mirrored the line of the inner one.<sup>2</sup> The existence of bastions on the outer wall was confirmed in the early 1980s and at the same time the overall sequence of the city's defences was reviewed.<sup>3</sup> The historical development of the defences has been discussed most fully by Hassall.<sup>4</sup>

The object of the recent work was to examine and record in advance of their destruction the character of any archaeological deposits and their relationship to the city wall, and to see if these shed any new light on the sequence and chronology of the defences of the city. In particular, evidence for the postulated eastward extension of the late Saxon defences of Oxford was to be sought.<sup>5</sup> While most of this work concentrated in the immediate vicinity of the inner city wall, one of the contractor's trenches to the N was to be archaeologically excavated to permit examination of the line of the outer wall.

#### THE EXCAVATION (Fig. 1)

Four small trenches were excavated against the inner city wall in positions corresponding to the proposed location of access points for examination and servicing of the ducts, which required deeper excavation than the remainder of the trenches. Trenches 1 and 2 were on the N side of the wall between the Bell Tower and bastion 11 (the numbering of the bastions follows that established by the Royal Commission<sup>6</sup>), Trench 3 on the N side in the angle of the city wall and the W wall of bastion 12, and Trench 4 on the S side of the wall in the antechapel yard in line with Trench 1. Trench 5, to the NE of Trench 2, was sited over the likely line of the outer city wall. In all cases except Trench 1 the uppermost deposits were removed by the contractors under archaeological supervision, using a small machine in Trenches 3 and 5. The natural subsoil, encountered in all trenches except 5, consisted of horizontally bedded layers of sandy gravel and sand. The trenches and other observations are described in sequence from W to E, those on the N side of the wall being treated first. The description given here is only in outline. Full context details can be found in the project archive.

#### Trench 1 (Fig. 2)

Trench 1, aligned N-S, was 3.0 × 1.5 m. with a maximum depth of 2.4 m. The area of the trench was badly disturbed by post-medieval and modern features and no medieval features apart from the wall itself were identified.

*The City Wall:* The base of the wall rested on the top of the gravel subsoil at about 61.60 m. above O.D. The outer face of the wall foundation projected about 0.16–0.22 m. in front of the face of the wall proper. It was roughly vertical from its base up to a height of about 0.90 m., which corresponded to the modern ground level. From this point there was an irregular batter about 0.30 m. in height before the main vertical wall face was reached. The construction of the wall below the batter employed irregularly shaped Corallian limestone blocks, ranging from 0.10 × 0.10 m. to 0.25 × 0.10 m. in size. These were unfaced and roughly coursed, being bonded with a yellow sandy mortar containing some small gravel. This mortar was only observed at the very base of the wall. From c. 0.40 m. above the base of the wall and upwards the face of the wall was largely concealed by a thick mortar which had weathered to a dark grey. This perhaps belonged to a relatively recent phase of repair or repointing of the wall.

<sup>1</sup> A.G. Hunter and E.M. Jope, 'Excavations on the City Defences in New College, Oxford, 1949', *Oxoniensia*, xvi (1951), 28.

<sup>2</sup> N. Palmer, 'Excavations on the Outer City Wall of Oxford in St. Helen's Passage and Hertford College', *Oxoniensia*, xli (1976), 148–60.

<sup>3</sup> B. Durham, C. Halpin and N. Palmer, 'Oxford's Northern Defences: Archaeological Studies 1971–1982', *Oxoniensia*, xlviii (1983), 13–40.

<sup>4</sup> T.G. Hassall, 'City Walls, Gates and Posterns', *Victoria History of the County of Oxford*, iv, 300–4.

<sup>5</sup> Cf. T. Hassall, 'Archaeology of Oxford City', in G. Briggs, J. Cook and T. Rowley (eds.), *The Archaeology of the Oxford Region* (1986), 122.

<sup>6</sup> R.C.H.M., *An Inventory of the Historical Monuments in the City of Oxford* (1939), 159–61.

## Trench 1: Section 1

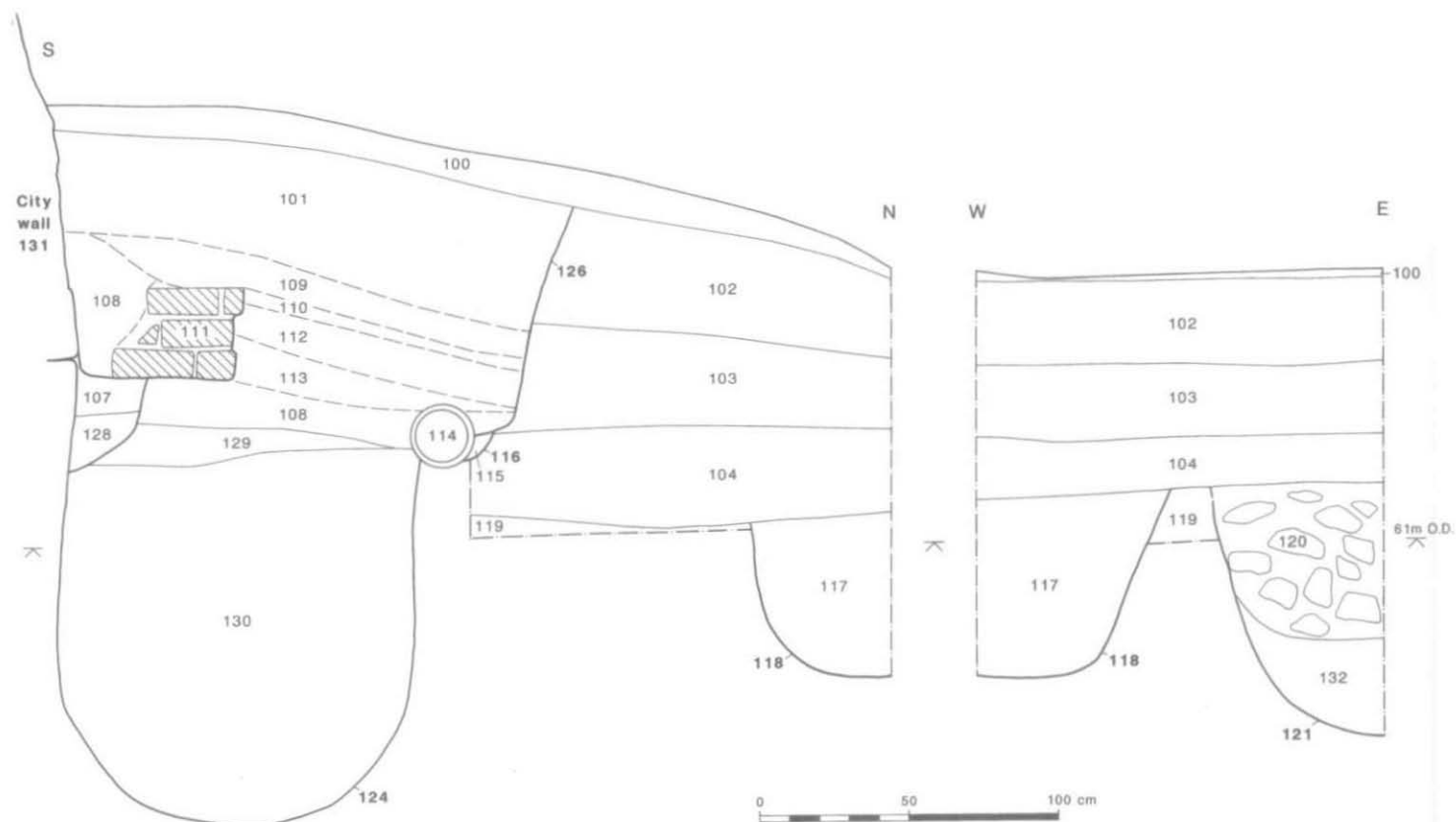


Fig. 2. Trench 1, east- and south-facing sections. Scale 1:25.

*Other features:* The earliest feature beyond the line of the wall was a sloping-sided pit up to 0.50 m. deep (cut 134) lying in the centre of the E side of the trench. Its fills (133 and 119) produced pottery with a *terminus post quem* of the mid 18th century. They were cut in the NE corner of the trench by a steep-sided pit 121 and marginally in the NW corner by a further pit 118. Both these features were probably of 19th-century date. All these features were sealed by a rubble layer 104 which was truncated by a sequence of modern drains and pits. The largest of the latter, 124, was dug right against the outer face of the city wall and below its base to a depth of c. 1.50 m. The drains were mainly concerned with the removal of surface water from the adjacent antechapel yard through the body of the wall.

### *Trench 2 (Fig. 3)*

Trench 2, aligned N-S, was 3.65 m. long. It was 1.60 m. wide against the wall face and the northern half was 2.20 m. wide. The maximum excavated depth was 2.20 m. As in Trench 1 there was extensive post-medieval disturbance. Against the base of the wall, however, a layer (204) of red sandy silt with a little gravel survived to a maximum depth of c. 0.54 m. at a point where it appeared to fill a natural hollow in the underlying gravel subsoil 217. 204 decreased rapidly in thickness to the N, and barely survived c. 0.50 m. N of the wall where it was truncated by a modern feature.

*The City Wall:* As in Trench 1 the base of the wall rested directly on the gravel subsoil (217) at about 61.22 m. above O.D. The wall must have been set in a construction trench cut through layer 204 but with the stones of the foundation butted right up to the side of the trench so that the cut itself was not visible. The outer face of the base of the wall was approximately vertical, and as in Trench 1 was constructed of roughly coursed irregular rubble set in a sandy mortar. About 0.80–0.85 m. above the base of the wall there was a crude offset ranging from c. 0.10–0.22 m. in depth, the top of which was some 0.40 m. below the modern ground surface. Above the offset was an irregular batter with a total depth of c. 0.15–0.20 m. and a height of c. 1.17–1.22 m. The outer face of the batter was nearly vertical and its top had almost the appearance of another step or offset with a roughly chamfered top some 0.10–0.15 m. deep. The masonry of the batter above ground level was almost invisible owing to the presence of moss and pollution products on the mortar and stone. Above the batter the wall face consisted of relatively large and reasonably coursed squared blocks.

Examination of a core drilled through the base of the wall shed more light on the character of its construction. The core of the wall at this point was composed of irregular limestone rubble, with blocks up to a maximum of c. 0.45 m. in length but characteristically using much smaller fragments typically c. 0.08–0.10 m. long. This material was bonded with a concrete-like mixture of very pale sandy mortar (Munsell c. 5Y 8/1.5 (dry) or 2.5Y 7/3 (damp)) incorporating frequent rounded pebbles and also angular limestone chips. These inclusions were generally in a 5–25 mm. size range. There was no discernible variation in stone type and mortar composition through the length of the core, and therefore no evidence for more than one phase of construction in the thickness of the wall.

*Other features:* The only significant feature in this trench was a very large vertical-sided cut (213), the S edge of which lay 1.60–1.70 m. N of the base of the wall. The edge was aligned E-W, parallel to the line of the wall and extended beyond the confines of the trench in each direction. It is therefore unclear if this was a linear feature or a very large pit. The appearance of the edge (cut in the sand and gravel subsoil) was relatively unweathered and it is most unlikely that the feature was open for any length of time. The feature was not excavated below a depth of 1.30 m. from its top, principally because its fills produced only 18th- and 19th-century material. These fills (216, 215, 214 and 206) were laid relatively horizontally against the S edge of the feature, which suggests that tipping into it took place principally from the N side. A layer (205) which filled the hollow formed on top of this feature after the settlement of its fills was overlain by a deposit (203) which also sealed the fill of an E-W drainpipe trench (212). All the subsequent deposits, in total up to c. 0.90 m. deep, must therefore have been of recent date.

### *Trench 5 (Fig. 4)*

The archaeologically-recorded part of the cable trench designated Trench 5 extended 10 m. NE from a point just N of Trench 2, straddling the existing retaining wall on the N side of the Slupe, thought to reflect the line of the outer city wall. N of this wall the trench was 0.90 m. wide and 1.0 m. deep; to the S it was c. 1.10 m. wide and reached a maximum depth of 1.60 m. Most of the trench was excavated by the contractors; only the lowest deposits immediately S of the Slupe wall were excavated archaeologically.

The earliest deposits encountered were located just S of the Slupe wall. They consisted of layers of yellowish-brown sandy gravel (527), brown sandy silt (525 and 526, the latter containing limestone fragments up to 0.10 m.

Trench 2: Section 2

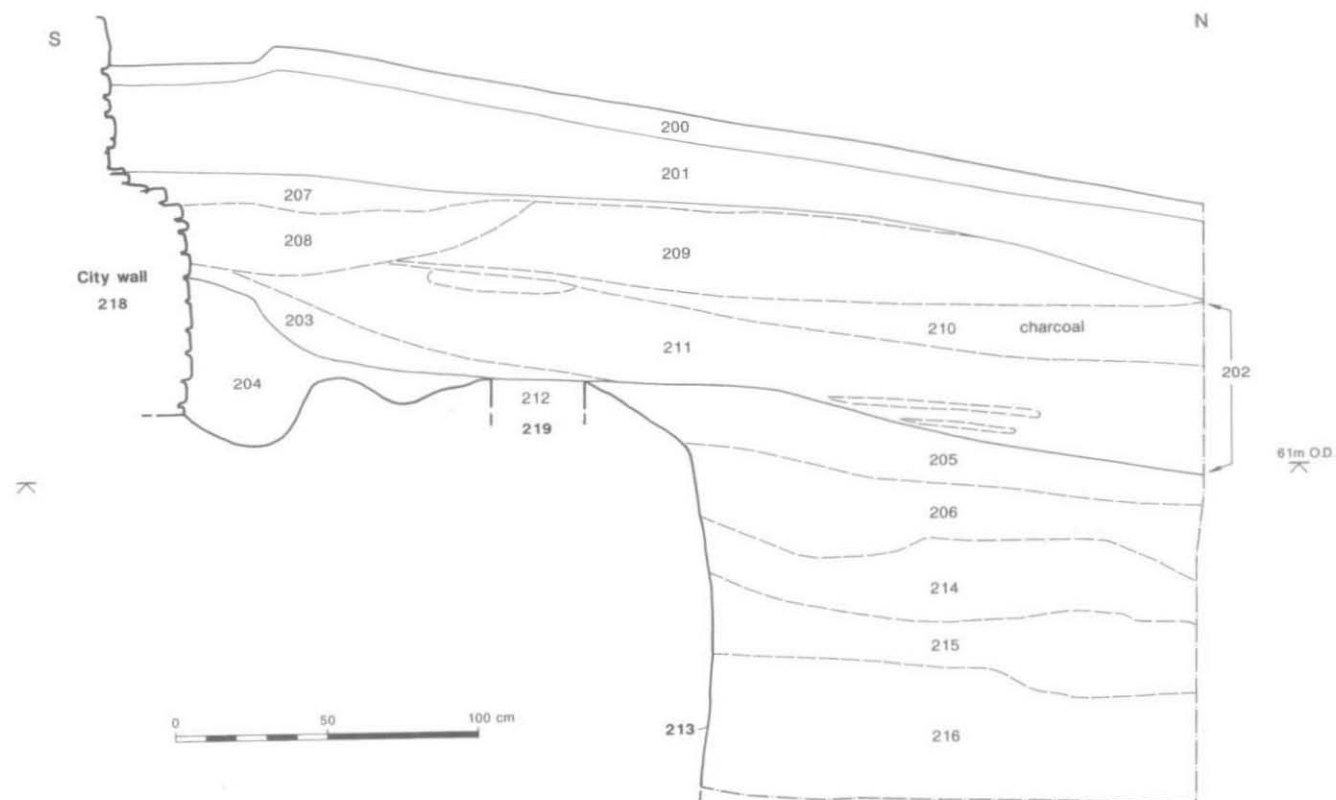


Fig. 3. Trench 2, east-facing section. Scale 1:25.

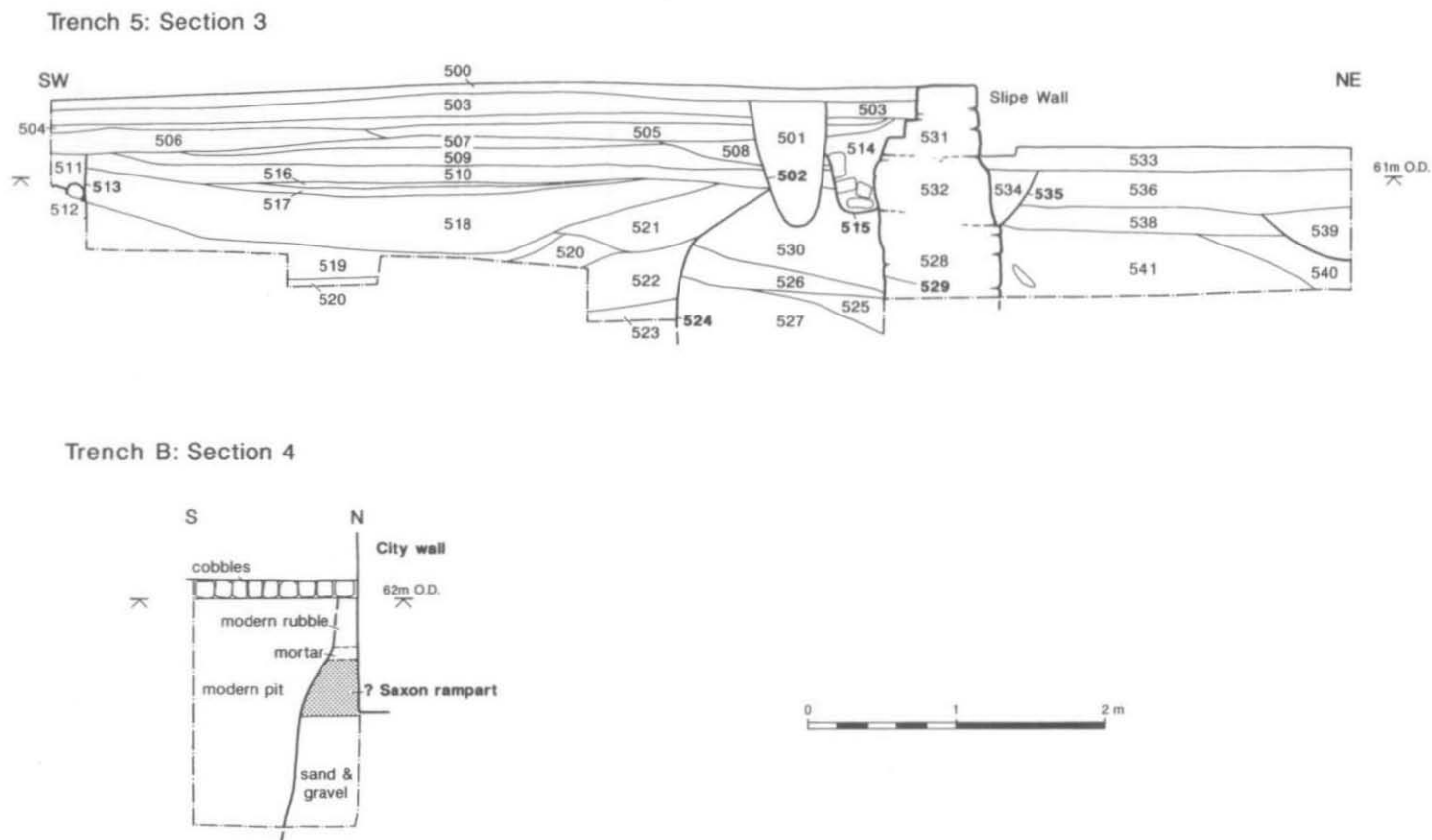


Fig. 4. Trench 5, east-facing section; Trench B, east-facing section. Scale 1:50.

long), and a gravelly sand also containing limestone (530), with a combined depth (above 527, which was not excavated) of c. 0.90 m. Layer 525 was significant in producing a small group of medieval pottery, with a date range of 13th–15th centuries. These deposits were truncated to the N by 529, a vertical sided cut c. 0.60 m. deep for an E–W wall 528. 528 was c. 0.65 m. thick and survived to a height of 0.55 m. It was faced on the N side with three courses of large, roughly squared but apparently unmortared limestone blocks, probably of Headington stone. The largest of these (in the bottom course) was  $0.41 \times 0.23$  m. The S side of the wall consisted of loose limestone rubble with occasional brick fragments, material which can never have been freestanding and which therefore confirms that the wall was set in a cut through 530 rather than having 530 piled up against it once it was in position. The lowest of the three courses of masonry appeared to form the base of the wall, which overlay layer 525.

Some 1.30 m. S of the wall was the N edge of a large cut (524). This edge was aligned roughly E–W and cut vertically through layers 526 and 527 (see above). A sloping-sided cut through the overlying layer 530 may have been part of the original cut 524 or may have represented a recut of this feature. If the latter interpretation is correct it is uncertain whether the original version of 524 was also cut from and through layer 530, though this is likely. The minimum N–S dimension of the feature was 4.00 m., and it is quite possible that cut 524 was the N edge of the deep vertical sided cut (213) in Trench 2, in which case the total width of the feature (N–S) would have been c. 7.50 m. The fills of 524 were not investigated in detail. The lowest detected fill was 523, a brown sandy silt with charcoal flecks, which was overlain by 522, a dump of sandy mortar up to 0.34 m. thick incorporating limestone fragments. These and subsequent deposits produced 18th- and 19th-century pottery. 521, the principal fill of the possible recut on the N side of the feature, a brown sand with a little gravel, was overlain by 518, a layer of silty sand up to c. 0.39 m. thick which appears to have formed in the hollow formed by the settlement of the underlying fill deposits. Further, similar, thin layers (517 and 516, the latter containing more gravel) completed the sequence of fills of 514. They were overlain by a dark brown silty sand (510) which sealed all the deposits in the trench S of wall 528.

A series of mixed layers (541–536) accumulated or was dumped against the N face of wall 528, to a depth of 0.84 m. from the bottom of the trench. All these layers contained mortar, limestone fragments and 18th–19th century finds. The uppermost, 536, was cut by 535, a steep-sided trench (seen only in section) which was cut down to the surviving top of wall 528, presumably as a construction trench for a second wall (532) above 528. 532, like the S side of wall 528, consisted of rough limestone lumps, characteristically up to 0.10 m. in length, with occasional brick fragments, set irregularly in a hard white mortar. This deposit, 0.48 m. high and up to c. 0.67 m. thick, formed the foundation of the present retaining wall on the N side of the Slupe. Any possible counterpart on the S side of this wall to the construction cut 535 on the N side would have been completely removed by a cut (515) for a drain (514) which ran along the S side of the wall. Compact sand and gravel surfaces (505, 504 and 503) which sealed the fill of the drain trench were in turn cut by a modern drain pipe trench (502) which lay directly beneath the recent tarmac surface of the Slupe. N of the modern retaining wall 531 the fill of the construction trench for its foundation was overlaid by modern topsoil and turf.

### *Trench 3 (Figs. 5–7)*

Trench 3, c. 3.00 m. E–W  $\times$  2.60 m. N–S and excavated to a maximum depth of c. 1.60 m., contained much more complex deposits than Trenches 1 and 2. As in Trench 2, fragments of a layer predating the construction of the city wall were found. This layer (312), of fine reddish brown (7.5YR 3/4) silt with some small pebbles, was analogous to 204 in Trench 2. It contained a single small sherd of samian ware. In Trench 3, however, it was indistinguishable from the fill of a number of small features which may represent cuts in the gravel subsoil 316 rather than natural hollows in it. It is uncertain, therefore, if these features (cuts 379, 377, 375, 373, 381 and perhaps also 350) were cut through 312 and filled with the same material or whether their fills were overlain by 312. If the features were postholes (as their diameters might suggest, all being c. 0.25–0.30 m. across except for 373 which was c. 0.50 m.) they did not form any particularly coherent pattern, but other contemporary features could have been removed by later activity. Features 377 and 379 were partly overlain by the city wall. 377, along with 375, was also partly beneath the W. wall of bastion 12, which also sealed part of layer 312. The city wall, in contrast, was cut through 312 as in Trench 2. A further small feature, c. 0.12 m. across and 0.16 m. deep, was seen beneath the S face of the city wall adjacent to the kitchen building in one of the contractor's holes.

*The City Wall:* The city wall (313) here, as elsewhere, was set directly on the gravel subsoil (316), at about 61.14–61.16 m. above O.D. The lower part of the wall had been rebuilt from about 1.50 m. W of the bastion (384, see below). The unaltered wall face adjacent to the bastion had a continuous slight batter from its base to a height of about 2.80 m. The bottom metre of this part of the wall face was obscured by mortar so the exact character of the stonework was difficult to determine. As elsewhere, the stones varied considerably in size, from c.  $0.12 \times 0.05$  m. up to  $0.54 \times 0.12$  m. From about 1.00 m. above the base of the wall the masonry became more consistent in stone size and more regular in its coursing. The W wall of bastion 12 appeared to butt against the city wall. This feature is described in greater detail below.



*Other features:* The earliest features post-dating the wall appeared to be three pits. In the SW corner of the trench was a rounded pit (362) up to c. 0.52 m. deep and 0.75 m. across, cut close to the face of the city wall. Its fill contained two sherds with a date range of late 12th–15th centuries. Two further pits (346 and 348), both about 0.45 m. deep, lay in the NW corner of the trench. These must have intercut, but their fills (349, 369 and 347) were indistinguishable (and were in any case largely removed by later features) so the exact relationship was uncertain. 347, however, contained a single sherd of Brill post-medieval type (16th-century or later) which, if not intrusive, might suggest that 346 was later than 348, which produced only a single 13th–14th century sherd. The fills 369 and 347 were cut by the construction trench (331) for a N–S wall 314, 0.60 m. wide (see Fig. 6), which was cut deeper (up to 0.48 m. down to the base of the pit fills) at the N end than elsewhere. Only the basal course of this wall survived, constructed of irregular Corallian rocks bonded with a very hard mortar. The N end of wall 314 had been truncated c. 0.60 m. short of the line of the city wall by 330, a shallow rectilinear cut which ran westwards along the face of the city wall. It is possible that this cut was a robber trench which had removed a westerly return of wall 314, though it is not clear why such a wall should have been necessary when the city wall itself could have been used.

The possible robber trench cut 330 had truncated pit 362 (see above), and probably also truncated (or perhaps included) a deposit 386 which lay against the city wall face and almost certainly represented the fill of a cut made up against the wall at the time of its partial reconstruction (see Fig. 7). This reconstruction (384) comprised the replacement of the facing stones at the base of the wall from a point starting between 1.50 and 1.80 m. W of the face of the W wall of bastion 12, up to a maximum height of 0.80–0.90 m. The westerly extent of the rebuild is unknown since it lay beyond the limits of the trench. The easterly extent of the rebuild aligned with wall 314 and it is therefore likely that wall 314 and the reconstruction 384 were broadly contemporary.

Wall 314 was cut by two probable postholes (360 and 389), which may possibly represent a timber successor to the original structure carried on the wall. A number of other postholes were encountered within the trench, but their exact stratigraphic position is less clear. These features (336, 340, 342, 344, 352, 359, perhaps 364, and a small pit 334) all cut the pre-city wall layer 312 or the gravel subsoil 316. 364 was truncated by the possible robber trench 330 and the rest were cut by a late medieval or later feature 326, except for 352 which was overlain by a layer roughly contemporary with the fill of 326. Most of the postholes therefore can be assigned to any phase from before the construction of the city wall to the 17th century, though it is likely that most were roughly contemporary with the phase of activity which post-dated wall 314. They ranged in diameter from c. 0.32–0.58 m., and in depth from 0.18–0.42 m. Most had silty sand fills which in 344, 352 and 359 additionally contained crushed mortar. These three postholes also had evidence for postpipes (the fill of 353, the postpipe in 352, produced a fragment of clay tobacco pipe). These similarities of character suggest that 344, 352 and 359 should be seen as a group. The only other posthole with evidence for a postpipe was 360, which cut wall 314. It does fall in a line with the other three postholes, but the orientation of this line, c. NW–SE, is so at variance with other features in the site that it is very difficult to interpret.

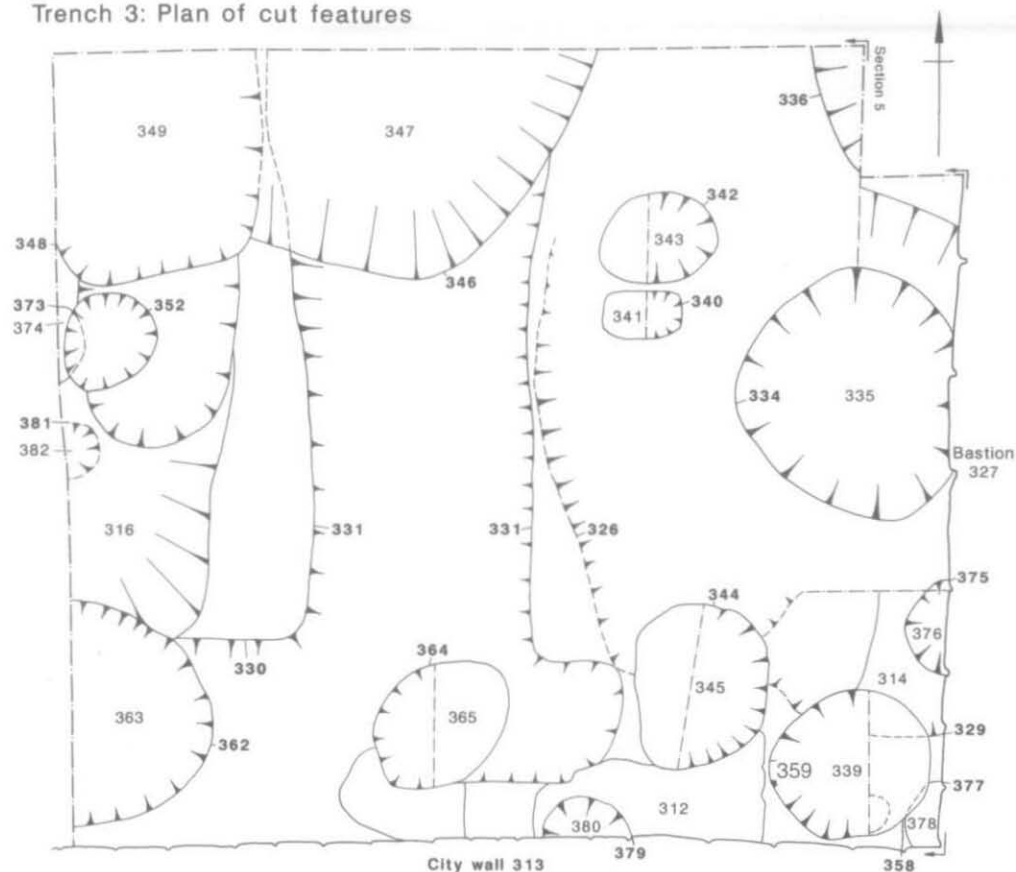
Many of the postholes and the small pit 334 were truncated by a further wide shallow pit (326) which lay within the eastern part of the trench. This feature may have been up to c. 1.90 m. N–S and extended 1.30 m. W of the W wall of bastion 12. It was up to c. 0.30 m. deep and was filled with a mixed deposit of sand and gravel with limestone fragments and mortar (318). 318 was overlain by a deposit of brown gravelly sand (319) which formed part of a general sealing layer from c. 0.10–0.28 m. thick deposited across the whole trench (also numbered 307 and 372). This deposit, and the underlying pit fill 318, were seen to lie beneath the W wall of bastion 12 (327) and their contents (a single fragment of post-medieval glass from both 318 and 319 and clay pipe from 318) provide an approximate *terminus post quem* for the construction of that wall in its present form.

The bastion wall (see Fig. 5) was constructed of fairly regular squared blocks laid in well-defined courses. The base of the wall was at c. 61.44 m. above O.D. where it butted the face of the city wall (at which point it was 0.26 m. above the base of the city wall), but sloped down slightly to the N (by 0.05 m. in 2.20 m.). There was no distinction between foundation and superstructure, but the bottom course was very slightly offset (by a maximum of c. 0.05 m.). The masonry of the bastion wall contained not only Corallian rock but a number of pieces of different materials including Blue Lias, Purbeck Marble and sandstone probably from the Forest of Dean.<sup>7</sup> A layer of mortar (320) up to 0.09 m. thick survived against the face of the bastion wall at its southern end. This deposit was presumably derived from construction or repointing work.

320 was cut on its SW side by 354 (see Fig. 6), a rectilinear cut aligned along the face of the city wall, into which were set limestone cobbles laid on edge (355). This feature was presumably continuous (and about 0.30 m. wide) along the face of the wall, since it occurred again in the SW corner of the trench (cobbles 309 in cut 333). The intervening gap was caused by the cutting of a later feature (328) against the face of the city wall. The cobbled

<sup>7</sup> I am grateful to Mr. Philip Powell of the University Museum for assistance with the identification of building stone types.

## Trench 3: Plan of cut features



## Section 5

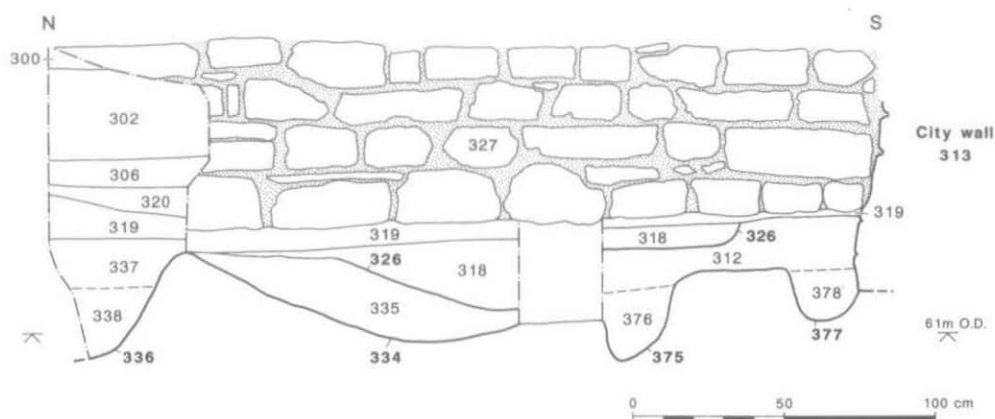
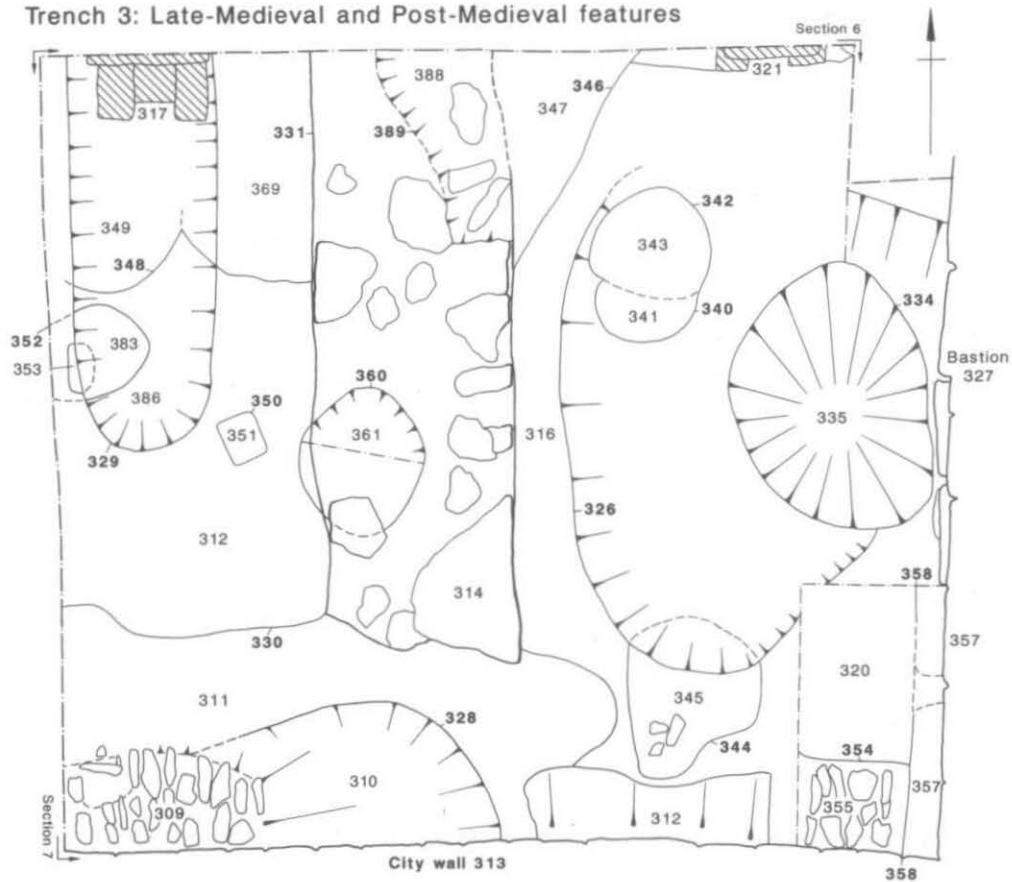


Fig. 5. Trench 3, plan of features cutting subsoil; west-facing section/elevation of lower part of west wall of bastion 12. Scale 1:25.

## Trench 3: Late-Medieval and Post-Medieval features



## Section 6

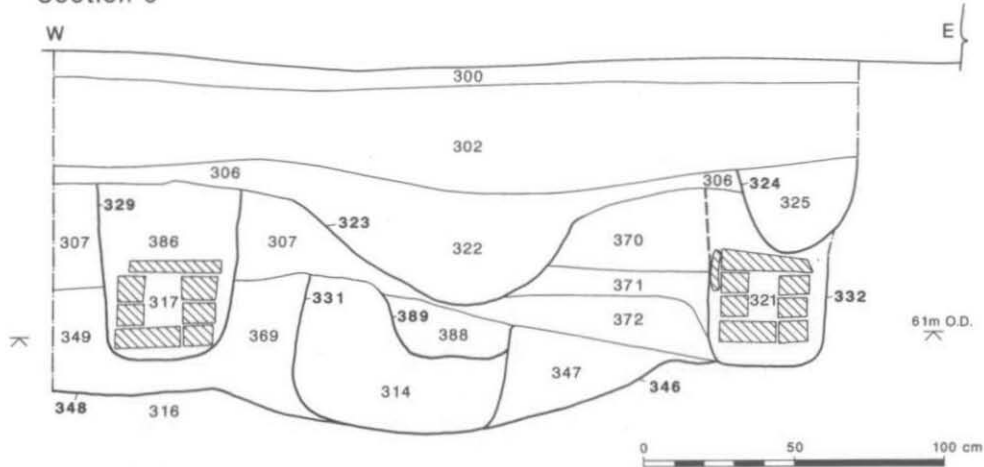


Fig. 6. Trench 3, plan of late- and post-medieval features; south-facing section. Scale 1:25.

## Trench 3: Section 7

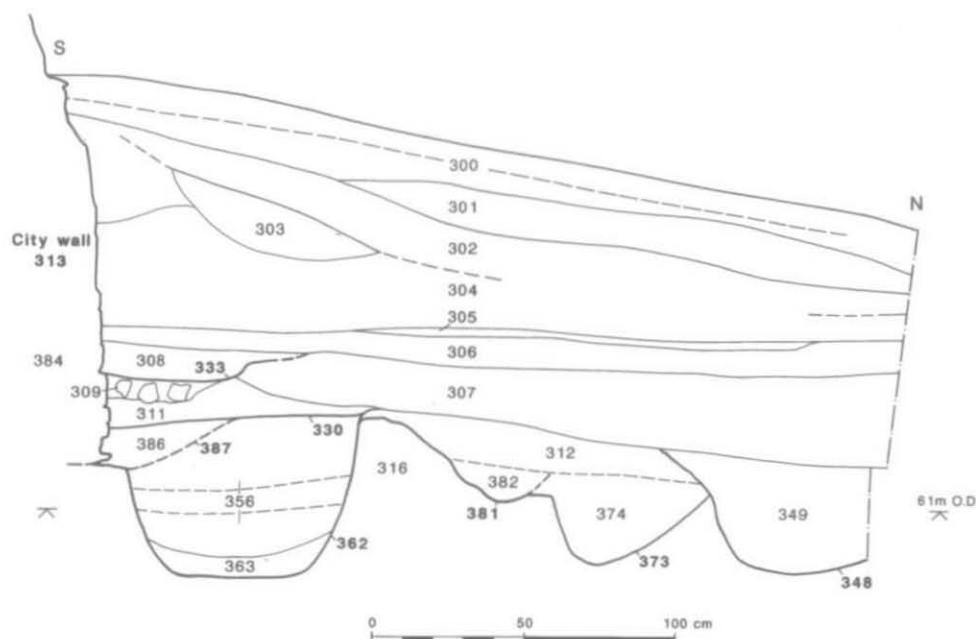


Fig. 7. Trench 3, east-facing section. Scale 1:25.

surface, which is hardly wide enough to have been a path, was perhaps intended to assist the run-off of rainwater away from the base of the wall. Roughly contemporary with this feature was the construction of two parallel N-S aligned brick drains with stone cappings (317 in cut 329 and 321 in cut 332), the southern ends of which lay 1.40 m. N of the face of the city wall. These drains fell slightly to the N. They cut the general sealing layer 307/319/372 and were in turn overlain by a further widespread deposit (306), of sandy mortar with occasional small limestone fragments, which was up to 0.15 m. thick. Above this layer recent deposits (300-305), mainly connected with landscaping, were up to a further 0.80 m. in depth against the city wall, decreasing to c. 0.35 m. adjacent to the existing paved surface of the Slupe.

## Trench 4 (Fig. 8)

Trench 4 was situated against the S face of the city wall in the narrow yard between the antechapel to the E and the rear of the cloister to the W. It was c. 3.80 x 1.80 m., aligned N-S, and reached a maximum depth of c. 1.80 m. The principal feature was an earthen bank (for which a late Saxon date is suggested, see below). This was not completely excavated, but slots were cut through it against both E and W long sections of the trench. Much of the earlier part of the archaeological sequence was thus observed principally in section.

The gravel subsoil was overlaid by a mixed brown clayey sand with some gravel (470), up to c. 0.20 m. thick, which is likely to have been a ploughsoil. It lay beneath a thin (c. 45-50 mm.) layer of pebble-free reddish-brown silty sand representing a worm-sorted soil horizon (441, see below). This layer was directly overlain by a substantial E-W aligned earth bank (assigned a general context number 438, but composed of several separately numbered elements). This extended the length of the trench (and at least 1 m. further S, see below) and survived to a maximum height of c. 0.80 m. At the base of the bank sequence was a thin and probably intermittent lens of clean sandy gravel (440, 452) up to 0.06 m. thick. This was confined to the northern half of the trench. It was overlain by layers of brown or red-

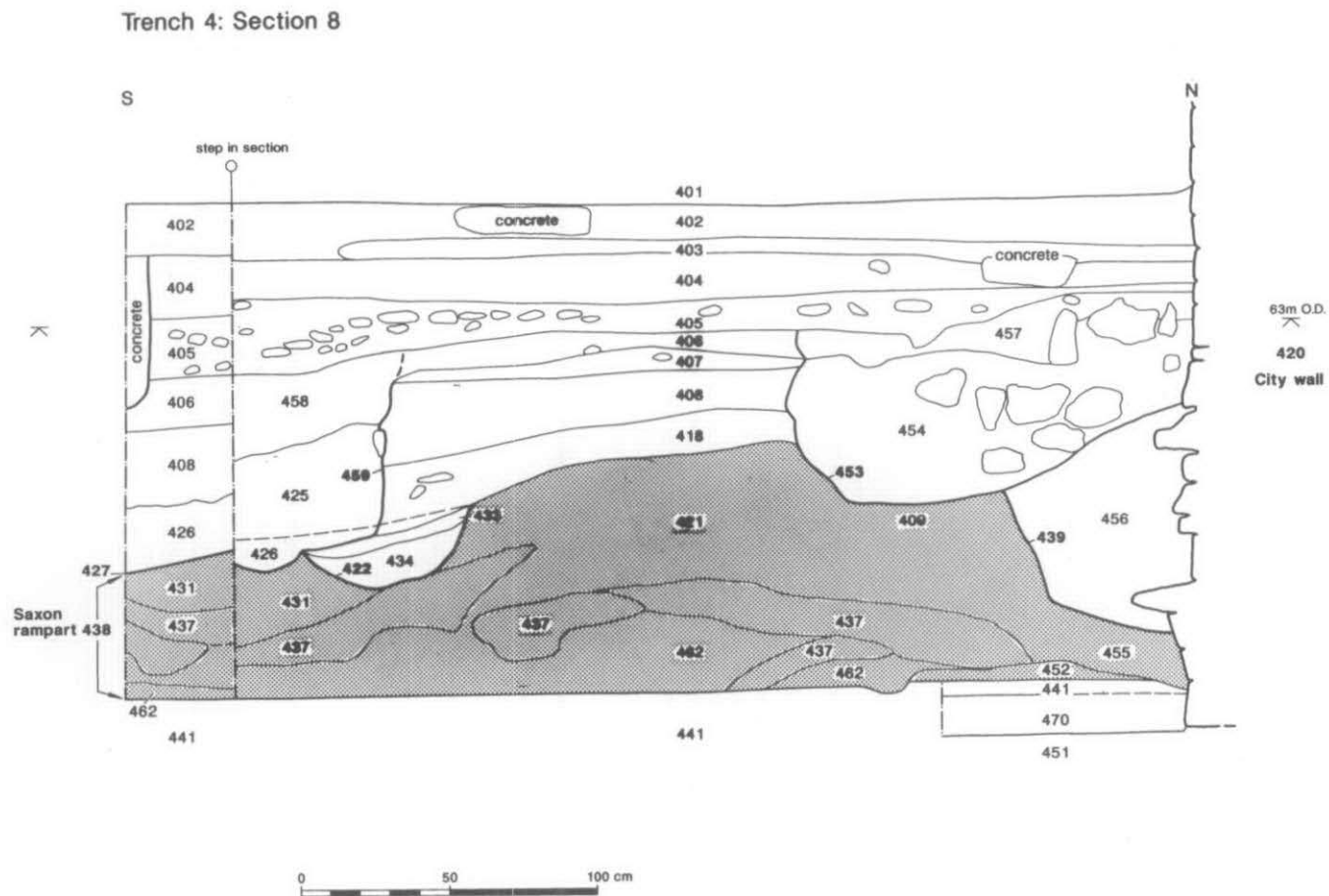


Fig. 8. Trench 4, east-facing section. Scale 1:25.

brown clayey sand/sandy clay interleaved with irregular bands of dark grey or greyish-brown sandy clay. The grey colouration may represent the decay in anaerobic conditions of organic material such as turf, or may simply indicate the use of soil with a higher than average organic content (e.g. from wet ground) alternately with other material. The only dating material from the bank consisted of three sherds of Roman pottery dating to the 3rd–4th centuries.

*The City Wall:* The base of the city wall was at about 61.64 m. above O.D., some 0.04 m. above the corresponding level on the N side in Trench 1. Here as elsewhere the construction trench for the wall had been cut down exactly to the top of the gravel subsoil. It cut the pre-bank layers 470 and 441 and had a vertical junction with part (455) of the bank (438) which in the W section of the trench survived below the base of a later cut 439 (see below). While it is possible that the bank was piled up against the wall this would have meant that the wall was set in a construction trench only c. 0.18 m. deep at this point. It is much more likely that the bank was already in position and that, as has been suggested for Trenches 1–3 (above), it was cut by the construction trench for the wall, the lower part of which was built against the face of the trench leaving no intervening gap and thus no distinguishable edge of a construction cut. The inner (S) face of the wall was irregularly constructed to a height of c. 1.15 m. above its base, and it seems very likely that this represents the height of the bank (i.e. some 0.90 m. above the level from which it was originally built) at the time of the construction of the wall.

The wall itself (420) was constructed of roughly squared and fairly regularly coursed Corallian rocks, bonded in a hard sandy mortar similar to that seen elsewhere (e.g. in Trenches 1 and 2). The stones of the lowest part of the wall were neither squared nor faced. Variations in the character of the masonry above the modern ground surface were noticeable towards the antechapel (see below).

*Other features:* The upper surface of the bank was cut by an irregular gully (422), aligned roughly ESE–WNW, the E end of which lay within the trench. This feature was significant in producing the largest individual group of medieval pottery from the site, with a likely date in the 14th century. In the SE corner of the trench the fills of 422 were cut by a further possible gully (427), aligned c. NNW–SSE. Both of these features and the top of the bank were sealed by a layer of red brown sandy clay (418), very similar to the material forming the bank, and ranging from 0.05–0.18 m. in thickness. This layer extended across the whole of the trench except where truncated by later features. The most significant of these was 439, a roughly vertical sided and flat bottomed linear E–W cut against the S face of the city wall. It had a maximum depth of c. 1 m. in the E baulk of the trench, where it was cut down almost to the base of the wall. To the W it sloped up, leaving part of the early bank material surviving beneath its base. The main fills of 439 (445, 446, 448 and 456) consisted of clayey sands with varying gravel content. Above 448 (in the E section) a further sand and gravel layer (449) may have been the uppermost fill, or a layer piled up over the top of the infilled feature.

Two postholes (460 and 464) with their centres c. 1.25 m. apart were observed adjacent to the S face of the city wall. Both were at least c. 0.50 m. deep. 460 (to the W) was c. 0.22 m. across, but 464 was c. 0.70 m. (E–W) × c. 0.56 m. (N–S). Both had gravelly fills, in addition to which 460 contained fragments of limestone (probably packing stones for a post) and 464 had carbonised fragments of a post some 0.20 m. across still in position. Unfortunately both features were only observed in plan (464 only appeared while the contractors were operating within the trench) and it is therefore uncertain where they were cut from. It is most likely (though unprovable) that they were cut from the base of 439 after its initial excavation.

Most of the fills of 439 had been removed by a later cut (414, not on section 6, Fig. 6), also placed against the S face of the city wall, and coincidentally not only of almost exactly the same length as the width of Trench 4 (and in the same position), but also of much the same width (c. 0.70–0.80 m. at the top) as the cut 439. The fill of 414 (419) was a loamy sand containing much charcoal, glass, burnt stone and other modern debris, the stone including a number of architectural fragments probably derived from the fill (454) of a pit (453) situated in the angle of the city wall and the cloister E wall, which must have been cut by 414. A further pit (459), in the SW corner of the trench and also containing some limestone blocks in its fill (425), must have been roughly contemporary with 453. The fills of both features were sealed by a layer (405) cut by 414 and also cut in the SE corner of the trench by a stone filled soakaway pit (416).

A later cut (423), less deep than 414, was comparable to it in that it had removed deposits across the whole area of the trench (down to the level of layer 418), but being also in the same position as the trench the layers through which it was cut survived in the sides of the trench, where they could be examined in section. Apart from the pits (453, 459 and 416) mentioned above, the deposits affected by this truncation consisted of layers 404–408, 406–408 being cut by pits 453 and 459. All of these are likely to have been of post-medieval date, though in most cases no finds were recovered. The gravel fill (424) of 423 was overlain by recent layers of concrete and modern glass.

### *Additional observations*

*The antechapel yard:* A N–S trench was excavated by the contractors the length of the antechapel yard from the S side of Trench 4. For the most part its depth (1 m.) was insufficient to reveal deposits of discernible significance. At the N end, however, where the trench was a little deeper than elsewhere, material analogous to that comprising the

earthen bank was seen at a depth of c. 1.35 m. below modern ground level (i.e. roughly 62.05 m. above O.D.). Here the bank was severely truncated and was immediately overlain by a grey charcoal-rich layer containing a Brill-Boarstall (?14th-century) sherd. At a point c. 1 m. S of the S edge of Trench 4 the bank material was cut by an E-W aligned stone-filled soakaway of recent date. The base of the trench sloped up from this point and it was not possible to establish the presence or absence of bank material beyond the soakaway. A minimum N-S dimension of c. 4.80–4.90 m. is thus established for the bank.

*The lay vestry:* The lay vestry is a small brick-built room attached to the NE side of the antechapel and to the city wall. A small hole (Trench A) was excavated in the NE corner of this room to receive the ducts laid through the city wall from Trench 2 to the N. The hole, c. 1.10 m. N-S  $\times$  0.85 m. E-W, was 1 m. deep below the level of the concrete subfloor of the room. Visibility in this dark corner was poor, but material exactly comparable to that of the bank in Trench 4 appeared to exist below the foundation of the brick E wall of the room (from about 0.40 m. below the level of the concrete floor). This material appeared to meet the rough S face of the city wall in the same way as in Trench 4. No finds were recovered from this hole.

*The kitchen yard* (Fig. 4): A N-S trench (Trench B) was dug from the S side of the city wall just W of bastion 12 across the kitchen yard to carry ducts and cables round to the kitchen main entrance. Most of this trench was badly disturbed by relatively recent features, but a fragment of earlier stratigraphy survived against the S face of the city wall. The top of the gravel subsoil, coincident with the base of the city wall, was at c. 61.22 m. above O.D. (about 0.06 m. above the corresponding level on the N side of the wall in Trench 3). Above this was a layer of red brown sandy clay with some pebbles, some 0.47 m. thick. This was overlain by a spread of mortar 0.08 m. thick, beneath modern rubbish which directly underlay the present cobbled yard surface. All these deposits were truncated c. 0.13–0.40 m. S of the wall face by a deep, steep-sided modern cut. The red brown sandy clay layer was again similar to the bank material seen in Trench 4 and had the same relationship to the city wall. The mortar layer above it was at almost the same absolute level (roughly 61.50 m.) as the similar deposit 320 in Trench 3. The two deposits might therefore reflect the same event.

## THE FINDS

The principal finds were pottery, animal bone and ceramic and stone building materials. Material found in smaller quantities included iron objects and nails, copper alloy, lead and bone small finds, glass, slag, coal, charcoal, shell, plaster/mortar and clay pipes. Very few finds were securely stratified in contexts of medieval date, and most of these are referred to in the descriptive text (above). The majority of finds of all classes were probably of 18th–19th century date and there were no objects of particular intrinsic interest. The majority of stone building material consisted of undiagnostic squared oolitic limestone fragments from late features in Trench 4. Only the pottery is discussed (briefly) here.

## Pottery (incorporating comments by Catherine Underwood-Keevill)

Some 748 sherds weighing 23.698 kg. were recovered. Of these five (122 g.) were of Roman date and 74 (700 g.) were medieval. The remainder of the material, constituting 89.4% of the sherd count, but 96.5% by weight, was of post-medieval date, ranging from the 16th–20th centuries.

The Roman sherds were a fragment of samian ware from layer 312 in Trench 3, and two greyware and two white mortarium sherds, all of local origin, from the rampart in Trench 4 and from the fill of a feature cut into the rampart. A mortarium rim of Young (1977) type M22, dated AD 240–400, provides a *terminus post quem* for the construction of the rampart.

No late Saxon pottery was found in any part of the site. The earliest post-Roman sherd was a single piece of Oxford Early Medieval Ware (fabric OXAC) dated mid 11th–late 12th century, from a late medieval context in Trench 5. This context and a few in Trench 3 were the only ceramically-dated medieval deposits encountered north of the city wall. The majority of the medieval pottery (52 sherds, 453 g.) came from Trench 4, from contexts post-dating the rampart. These assemblages were dominated by Brill/Boarstall products of 13th–14th century date. These included fragments of a double shelled lamp of early 14th-century date and of highly decorated jugs with rouletting and slip panels, datable to the 13th century.

The majority of the post-medieval pottery was dated to the mid-late 18th century and later. A few fragments of tin-glazed earthenware were assignable to the 17th century, and small quantities of Surrey White and Midlands Yellow wares also indicate 16th–17th century activity.

*The Buried Soil beneath the Saxon Rampart* by Mark Robinson

Two samples were taken from the soil sealed beneath the Saxon rampart in Trench 4. One kg. of each sample was sieved through a stack of sieves down to 0.5 mm., the residues dried and then sorted for molluscs. The minimum number of shells represented by the fragments is given in Table 1.

*The Buried Soil*

0 – c. 0.160 m.

Slightly reddish-brown gravelly sandy loam. Above the Pleistocene gravel of the second terrace. Shells badly preserved. Layer 470.

0.160 – 0.205/0.210 m.

Slightly reddish-brown sandy loam. Above layer 470. Shells badly preserved. Layer 441.

The gravel in layer 470, the lower part of the buried soil profile, suggests that it had been cultivated and that ploughing had resulted in the incorporation of gravel from the terrace. Mollusc shells were not well preserved but the remains that survived, *Vallonia excentrica*, *Helicella itala* and slugs would all be appropriate in a Saxon ploughsoil. The top 45–50 mm. of the buried soils, Layer 441, was, however, stone free, which would suggest that it had undergone earthworm sorting. Unfortunately there were insufficient surviving snail shells to confirm grassland conditions. Earthworm casting causes stone-free soil to accumulate on the surface of grassland at a rate of about 5 mm. per annum.<sup>8</sup> The thickness of this layer, at 45–50 mm., suggests that cultivation ceased around 9–10 years prior to the construction of the rampart.

Interestingly, a rather similar soil sequence was recorded beneath the Saxon rampart at 24a St. Michael's Street, but in that case cultivation apparently ceased about seven years before the soil was sealed.<sup>9</sup>

TABLE 1. NEW COLLEGE MOLLUSCS

Layer	470	441
<i>Vallonia excentrica</i> Ster.	1	–
<i>Arion</i> sp.	+	+
<i>Limax</i> or <i>Deroceras</i> sp.	1	–
<i>Helicella itala</i> (L.)	2	1
Helicidae indet.	–	1
TOTAL	4	2

## DISCUSSION (Fig. 9)

Roman sherds from Trenches 3 and 4 suggest activity of this date in the vicinity of the site, but its character is unknown. No features could be assigned to the Roman period with certainty. Two rather different deposits lay at the bottom of the archaeological sequence on the site. In Trenches 2 and 3 north of the city wall were fine red-brown sandy silts, probably residual patches of soils which initially developed in irregularities in the top of the gravel subsoil. In Trench 4, in contrast, a mixed clayey sand with gravel was certainly a ploughsoil, overlain by a worm-sorted horizon which, if not truncated, indicated a period of some 9–10 years of fallow, followed directly by the construction of the earthwork bank seen in Trench 4 and other small trenches. The most likely context for the construction of the bank is to be found in the late Saxon period, at which time an easterly extension of the early 10th-century burh defences has been postulated.<sup>10</sup>

<sup>8</sup> C. Darwin, *The Formation of Vegetable Mould through the Action of Worms with Observations on their Habits* (London, 1881), chapter 3.

<sup>9</sup> B. Durham et al. *Oxford before the University*, Oxford Archaeol. Unit Monograph (forthcoming).

<sup>10</sup> Cf. Hassall, *op. cit.* note 4.



Oxford, New College,  
1993 simplified composite section of town defences

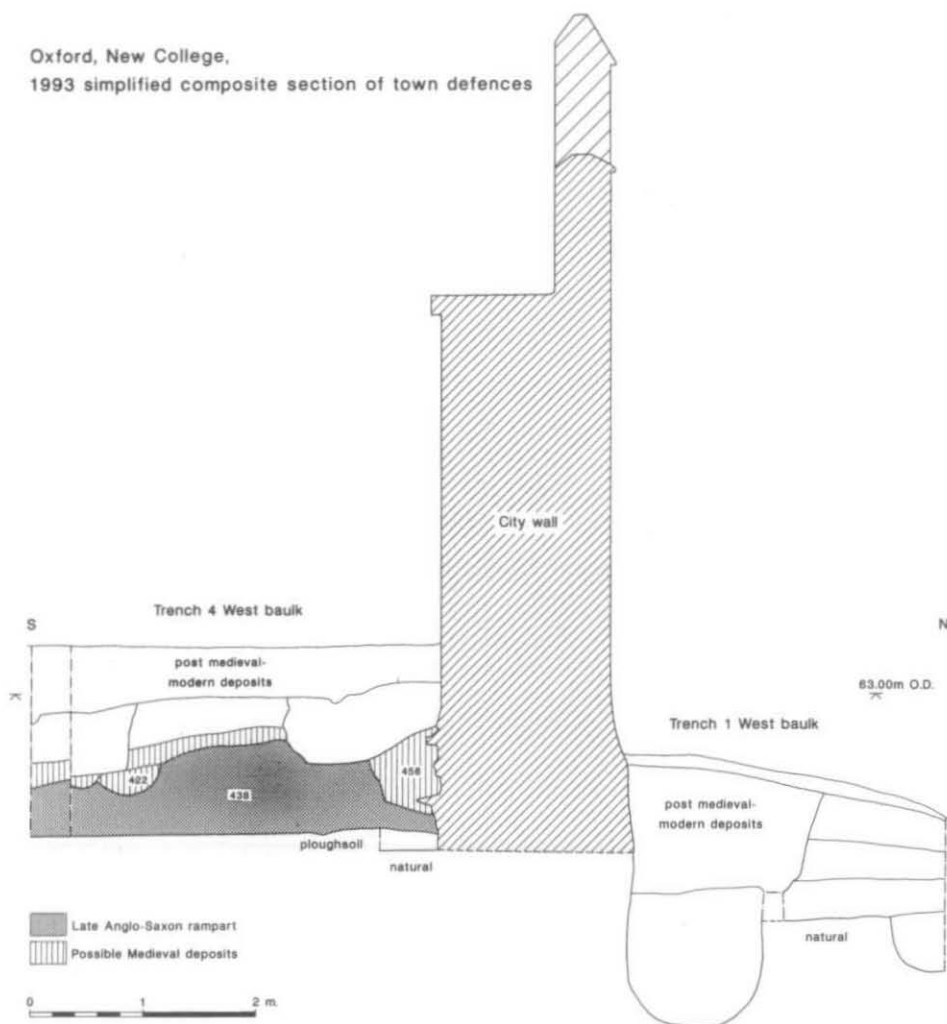


Fig. 9. Simplified composite section through late Saxon rampart and city wall. Scale 1:75.

The bank was a substantial feature, at least 4.90 m. wide and 0.80 m. high. Irregularities in the stonework on the inner (S) face of the city wall suggest that the bank, which presumably concealed these irregularities, was standing to a height of at least 0.90 m. when the wall was built. It is strictly possible that the bank postdated the construction of the city wall, being piled up against it, but there seems to be no good reason why this should have been the case, and had this been the sequence of events a little medieval material might have been expected from the body of the bank. As it is, the only dating material present was sherds of Roman pottery, giving a *terminus post quem* of the late 3rd–4th centuries A.D.

The position of the bank was probably marked out before its construction. This is the most likely interpretation for the narrow band of light-coloured gravel seen towards the north end of the sections in Trench 4. This material could have been readily obtained by

digging a shallow trench along the proposed bank line. It is unclear if turf was stripped from the line of the bank before it was thrown up. There was no sign of a buried turf line, but this would not necessarily have survived. The bank itself seems to have been a fairly straightforward dump, possibly incorporating turves. Occasional discontinuities in the section suggest that material such as turf might have been used locally to create vertical edges against which contrasting material was piled. There was no trace of the use of timber, either horizontally or vertically, with the possible exception of the two postholes just south of the city wall in Trench 4, but these are almost certain to have been associated with a later structural phase.

The original dimensions and profile of the bank are unknown, but can be roughly estimated. If it is assumed that the bank was truncated by the city wall the latter is likely to have been positioned towards the front of the bank, in which case the whole of its northern edge could have been removed. No traces of the bank survived to the north of the city wall. On this analysis a maximum of c. 1.50–2.00 m. (the thickness of the city wall) can be added to the width of the bank (which is likely to have been close to the original) known from the antechapel yard. The probable bank height at the time of the city wall construction was only a little more than that seen in the excavation. While an unrevetted bank of some 6.50 m. width could easily have been c. 1.50 m. high (assuming a fairly conservative angle of rest of roughly 30° for the bank material) there is little to suggest that the bank was of this size. The character of the rear face of the city wall indicates that any reduction in the height of the bank must have taken place before the early 13th century. The (partial) survival of the bank here contrasts with the situation obtaining on the original Saxon defences, which may have been completely removed prior to the construction of the city wall.<sup>11</sup>

There is no clear evidence for the character of the front of the bank, but assuming relatively little truncation it is notable that it reaches its greatest height adjacent to the city wall, probably towards its northern (?outer) face. This might suggest that the outer face was revetted, but there was no clear evidence of this. Tunnelling by hand immediately beneath the wall from Trenches 1 and 3 produced no traces of material other than natural sand and gravel, and the cores drilled through the wall base from Trench 2 indicated a uniform structure throughout. Any timber revetment must therefore have been based on widely-spaced posts which were not seen in the tunnelling (which is possible) and any revetment wall must have been very shallow-founded and have been completely removed prior to the construction of the city wall. The existence of a revetment wall as at St. Michael at the Northgate<sup>12</sup> and as assumed by Hassall for the eastern extension of the late Saxon defences<sup>13</sup> therefore seems unlikely, but this does raise the question of the significance of the late 12th-century town seal (which predates the construction of the extant city wall) which shows the town surrounded by a stone-built wall.<sup>14</sup>

There was no trace of a ditch to accompany the bank. Had such a feature lain to the north of the bank there must have been a berm of at least 3 m., beyond which any such feature could have been unobserved in the recent work or removed by later features. The presence of a ditch would be assumed on *a priori* grounds, both to augment the defences and as a source for the material for the rampart. It has been suggested that a feature located beneath the city wall immediately west of the north-east corner bastion (14) in 1949 by

<sup>11</sup> Durham, Halpin and Palmer, *op. cit.* note 3, p. 36.

<sup>12</sup> *Ibid.*, 15–18.

<sup>13</sup> Hassall, *op. cit.* note 4, 301.

<sup>14</sup> *Ibid.*

Hunter and Jope<sup>15</sup> may have been the expected late Saxon ditch,<sup>16</sup> but the evidence is not conclusive.

One of the most striking features of the bank was its apparently consistent occurrence along a roughly 110 m. length of the back of the city wall. It is evident that the bank was deliberately followed by the line of the later city wall. The association of the wall with a possible earthwork feature, claimed as a potential Saxon rampart, was also noted on the E side of the circuit in Merton Street in 1963.<sup>17</sup> This supports the view that the line of the eastern part of the 13th century city wall may have followed a pre-existing earthwork for its entire length. There was, however, no evidence for a bank associated with the north-east-south-west aligned stretch of wall examined in 1899 which ran between the Clarendon Building from the original north-east corner of the defences towards the former site of Smith Gate.<sup>18</sup>

The city wall was a simple construction, set into the front of the extant earthwork. It had no elaborate foundations. Only the inner wall was examined; the contemporary ditch and the later outer wall falling beneath the limit of excavation in Trench 5, with the possible exception of sandy silts found immediately south of the Slupe wall. These deposits may have belonged to the sequence of fills in the medieval ditch, perhaps associated with the backfilling of the inner part of this ditch contemporary with the construction of the outer city wall.<sup>19</sup> The presence of the ditch immediately north of the Bell Tower was demonstrated in a very small excavation carried out by the Oxford Archaeological Unit in 1991, in which the inner (south) lip of the ditch was identified some 10 m. north of the line of the wall.<sup>20</sup> Elsewhere the berm has been recorded as varying in width from about 4 m. to 7-8 m.<sup>21</sup> Clearly the width of the berm was irregular, but it is uncertain if this reflected haphazard ditch digging or specific local features which conditioned its size.

Activity of medieval date on the berm was identified in the vicinity of bastion 12, but unfortunately the sequence here is not closely dated. Pit digging seems to have been the primary activity here. A number of possible postholes were also present but many of these could not be precisely phased, nor did they form coherent structural elements. The first identifiable structure, based on a north-south wall which ran up to the face of the city wall, may be post-medieval in date, since one of the pit fills through which it cut contained a 16th-century sherd. This building may have been succeeded by a timber structure.

Loggan's 1675 representation of Oxford shows a small building against the city wall on the east side of bastion 12, but nothing to the west. Agas shows small houses against the wall further west, in the vicinity of Smith Gate, but nothing on the wall adjacent to New College. This evidence does not resolve the interpretation of the structure west of bastion 12, though it does demonstrate the principle that building against the wall did occur at least in the post-medieval period.

Local reworking of the south face of the city wall took place in association with the construction of the buildings of New College from the late 14th century onwards. It is most

<sup>15</sup> Hunter and Jope, *op. cit.* note 1, 34.

<sup>16</sup> Durham, Halpin and Palmer, *op. cit.* note 3, 36.

<sup>17</sup> *Oxoniensis*, xxviii (1963), 91.

<sup>18</sup> J. Munby, 'Excavations on the line of the City Wall in the Clarendon Quadrangle 1899', in Durham et al., *op. cit.* note 9.

<sup>19</sup> Cf. Durham, Halpin and Palmer, *op. cit.* note 3, 37.

<sup>20</sup> Oxford Archaeological Unit, 'Oxford, New College: the Bell Tower exploratory excavation' (unpubl. report, 1991).

<sup>21</sup> Durham, Halpin and Palmer, *op. cit.* note 3, 36.

likely that the trench (439) cut through the late Saxon rampart against the wall face in Trench 4 was connected with the building of the antechapel. The base of this feature sloped up as it extended westwards from the antechapel, which suggests that it was a localized feature rather than relating to the construction of the city wall. More importantly, it cut a layer (418) with a *terminus post quem* of the 14th century (on the evidence of pottery sealed beneath the layer), so it cannot have been associated with the original wall construction. Two postholes apparently cut from the base of this feature probably supported scaffolding against the city wall. Parts of the wall face immediately adjacent to the north-west buttress of the antechapel were refaced in ashlar, presumably (though not demonstrably) at the same time as its construction rather than during a later restoration.

No systematic attempt seems to have been made to reduce the height of the earthwork bank during the construction of the college buildings. The bank was presumably truncated by the foundations of the antechapel, but its presence can still be detected to the west in the east wall of the cloister, which seems to show a very slight change in the coursing of the stonework above the body of the rampart. This is most noticeable on the inner (west) face of this wall.

Post-medieval reworking of the city defences is seen most clearly in relation to bastion 12. Here the front of the medieval bastion was cut away to provide a gateway into the kitchen yard to compensate for loss of access to the kitchen area caused by the construction of the Garden Quadrangle in the late 17th and early 18th centuries.<sup>22</sup> The design of the gateway was under discussion in 1700,<sup>23</sup> but whether construction took place immediately is less clear.

The evidence from Trench 3 indicates that the insertion of the new gateway involved the complete reconstruction of the bastion right back to the line of the city wall (at least on its west side) rather than a simple remodelling of its northern face. The rebuilt wall overlay pit fills (318 and 319) which produced glass and clay pipe fragments. These objects are not closely dated, but need not contradict an early 18th-century construction date for the wall. The bastion wall itself incorporated a variety of stone types (see above) not seen in any other part of the city wall in the New College area and very unlikely to have been readily available to the 13th-century builders.

Subsequent activity on the north side of the city wall requires little comment. Many features related to drainage. The most substantial feature was a very large probable pit located in Trenches 2 and 5, the original function of which is unknown. It would have occupied most of the space between the inner and outer city wall lines, though by the time it was dug (probably in the early 19th century) the significance of the latter was probably long forgotten.

<sup>22</sup> A.H. Smith, *New College Oxford and its Buildings* (1952), 106–7.

<sup>23</sup> F.W. Steer, *The Archives of New College, Oxford* (1974), 57, no. 1138.