exeter city Defences: Fabric recordings Southgate - Watergate 1992.

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EXETER CITY DEFENCES: FABRIC RECORDING BETWEEN SOUTHGATE AND WATERGATE 1992

by

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Exeter Museums Archaeological Field Unit

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1992

Introduction

This report presents the results of observations made on the City Wall between Southgate and in 1992 by Exeter Archaeological Field Unit (EMAFU). During the construction of a footbridge over Western Way, a programme of repair and consolidation was embarked upon, which also provided an opportunity for archaeological recording. The preparation of this report was funded by Exeter City Council (Development Committee) and English Heritage. Some additional material for this report was also gleaned from survey and excavation work carried out in 1989/90 in advance of the construction of the Cathedral and Quay car park, the archaeological work in this case also being funded by Exeter City Council (Development Committee). The full excavation report for the Lower Coombe Street excavations is already published elsewhere (EMAFU Report No. 91.09).

The site

The length of wall under discussion comprises three separate sections covering an overall distance of 187m on the south-eastern corner of the city wall circuit, running between breaks at what is now No. 44 Quay Hill (SX 9210 9228) and the junction of South Street and Western Way (SX 9197 9217). This stretch of wall is referred to as sections 20-22 in Blaylock's 1993 Gazetteer (93.55, 93.56), where the various builds have been discussed in some detail already.

Synthesis of results

For this report, the wall builds have been divided into four groups, discussed in detail on pages 000 3-7 below. These groups discuss the Roman, medieval, post-medieval and modern sections of the wall, which has been extensively repaired and occasionally rebuilt throughout its history. The wall was first constructed in the early 3rd century AD.

Immediately to the south of the breach in the wall made for Western Way in 1961, there is a 17.5m section of some of the best-preserved Roman exterior facework on the entire circuit. Composed of well-coursed blocks of vesicular volcanic trap, the facework survives from the level of the wall top down to an offset plinth. The plinth is approximately 1.5m above ground level; and the facework below represents a later (medieval) underpinning operation. Reasons for the identification of this stretch as Roman are given in

detail in Blaylock 0000, and can be briefly summarised as concerning the uniformity of the stone and mortar types, which can be cross-referred to definite primary wall exposures, the plinth form and the absence of putlog holes. The exterior facework can, at the top of the wall, be directly associated with contemporary corework, and this can in turn be tied to up to seven courses of interior facework, providing an almost complete section through a relatively undisturbed area of the original wall. Below the interior facework the wall has been extensively patched down to ground level, with builds apparently re-using quantities of the original stonework. It does not appear that there are any other areas of exterior Roman facework preserved between the site of the Watergate and Western Way, although a small section of Roman plinth (which has probably been recut) and some blockwork may remain at the southern end of the small stretch of wall between Western Way and South Street.

The back of the wall contains many exposures of Roman corework, and excavation has provided evidence of footings and foundations as well, sealed by rampart material and therefore primary. Above ground level the exposures of material have been repointed and consolidated to avoid further erosion.

Medieval rebuilding of the wall here has been extensive. Dating medieval builds is complicated by the re-use of stone in later builds, making it difficult to identify primary medieval work. Most of the work on the sections discussed here, however, involves the refacing of the wall and the replacement of only some of the corework, in many cases leaving substantial amounts of Roman corework in situ. The foundations of the Roman wall have largely been retained as well, as was revealed in the section exposed on the north of the collapsed section at the lower end of Quay Lane. Between Western Way and this collapse there are three substantial sections of medieval exterior facework surviving, all containing the indicative Triassic sandstone, as well as re-used Roman volcanic blocks and occasional chert blocks. The most northerly stretch butts the Roman facework, and is decoratively banded with courses of Triassic sandstone. It has been underpinned along with the Roman facework by a later medieval operation employing breccia and chert blocks. Both of the other two medieval builds contain putlog holes. Build 567, to the north, has three distinct tiers of putlog holes, and at its base appears to have a scar of exposed corework where the offset plinth has been removed to make the face of the wall vertical

This particular piece of the wall has been heavily truncated to the rear by the building of an organ factory (1876 OS map) which cut into it, reducing its width to 0.8m. The southernmost stretch of medieval facework before the 1927 collapse site has two tiers of putlog holes within it and contains a mix of volcanic stone, Triassic sandstone and chert, with the frequency of chert increasing towards the top of the wall. Later underpinning has probably removed the plinth, which would itself have been a reflection of the Roman plinth level. To the south of the 1927 collapse there is a small area of surviving medieval facework that has been underpinned at a later date. This has two tiers of putlogs and is again composed of volcanic stone (of both the veined and vesicular varieties) and Triassic sandstone. This entire section of wall, including the later builds either side of and below the medieval facework, has been extensively patched and rebuilt.

Post-medieval work on the wall, both patching and rebuilding, accounts for almost 50% of the external facework between Southgate and the Watergate site. Apart from the small exposure of Roman facework at the base above the plinth on the exterior and a large exposure of Roman corework on the interior, the wall remaining between South Street and Western Way is almost entirely postmedieval, consisting of poorly-coursed facework of volcanic stone, breccia, occasional chert and Triassic sandstone blocks. This is almost certainly for the most part re-used stone, and within the facework there are many blocked sockets for joists, indicating buildings backing onto the wall beside Southgate. An oven had been built into the back of the wall in this area as well, which would have been within another building on the other side of the wall.

Between Western Way and the 1927 collapse there are three major areas of post-medieval All contain joist-sockets and some putlogs. Neither of the two more northerly of these builds has any sign of a plinth, although the lowest (build 574) does have one, with a downward step in it to keep the plinth at the same height relative to the ground level. Build 571 has a shear crack running through the facework, indicating subsidence at some time. The lower build 574 has a vertical line of large breccia quoins where the wall turns The wall between the 1927 inward slightly. collapse and No. 44 Quay Hill contains a substantial amount of post-medieval rebuilding, and is composed of breccia blocks with brick used occasionally to level up the courses. It has two changes of angle in it to form a corner, and also has the scars of buildings which would have butted

against it, including rooflines and chimney scars as well as joist-sockets.

Modern alterations to the wall have been extensive. The 19th-century organ factory on the inside of the wall had reduced its width in one place to only 0.8m, and large amounts of brickwork constitute the rear face at this point. Two major breaches in the wall circuit were made when the Water Gate was removed in 1815, and the South Gate in 1819, the two gaps that define the section under discussion. As well as this there is the breach caused by undermining for the cellars of the Custom House Inn in 1927. The breach for Western Way in 1961 also removed a large quantity of the wall in an area adjacent to the best surviving stretch of Roman exterior facework. The wall itself has at various times been consolidated including concrete capping and repointing. The 1979 replacement of facework with brick is a noticeably unsympathetic repair. Work was also carried out in 1992 to further repair the wall, in advance of a footbridge over Western Way and the construction of the Cathedral and Quay car park.

ACKNOWLEDGEMENTS

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BIBLIOGRAPHY

Bidwell, P.T. 1980 Roman Exeter: Fortress and Town.

Blaylock, S.R. 1991 A Fabric Survey of the City Wall, EMAFU Report No. 91.56.

----- 1993 Exeter City Defences, a Fabric Survey of the City Wall, part II Interior, EMAFU Report No. 93.65.

----- 1993 Exeter City Defences, a Fabric Survey of the City Wall, Part I Exterior, EMAFU Report No. 93.66

Simpson, S.J. 1993 Exeter City Wall: Westgate to Southgate, survey and excavation in the West Quarter, EMAFU Report No. 93.73.

Stead, P.M. & Hall, M.E.P. 1991 Lower Coombe Street, Exeter: Report of Excavations 1989-90, EMAFU Report No. 91.09.

SECTION 2

Group discussions

Group 1

1.1 This sub-group concerns the material that was in place on the site of the wall before its construction, and through which it was cut. Natural bedrock, in this area, red Permian sandstone, was overlain by a layer of soil development associated with Roman military abandonment of the site, previously an extramural compound to the south of the fortress. After the compound fell into disuse, the primary rampart was constructed. This was formed by a series of dumps of material which would have been fronted by a wooden revetment. The lowest layer of the rampart was a thick deposit containing degraded turf that would have formed the surface of the ground from which the rampart material was excavated, forming a ditch outside it. The bulk of the primary rampart material itself consisted of redeposited naturally-derived material, predominantly reddish clays. This rampart was observed to a maximum height of 2.0m, at which point it was truncated by the construction cut for the wall.

Contains contexts: 8-11, 535-542.

1.2 The wall was constructed within a trench that cut through the primary rampart material (1.1). In this trench the foundation materials were laid. Where exposed, these were found to consist of irregular medium and large stones bonded with brown/red dirty clay. This clay was probably derived from the removed rampart material. The stones were both volcanic stone and chert and the whole formed a pad onto which the footings could be placed. The foundations, indeed the whole wall, was shown to have been built in a series of stages, each stretch going in next to another, from the Watergate up towards Southgate. This is demonstrated on internal elevation B, where a layer of stone chippings derived from the dressing of blocks overlies the foundations to the south-west and is under the foundations to the north-east. because blocks were dressed after the lower stretch of foundations had been laid and before the next one, and the waste material spread in the base of the trench as construction progressed. The footings that

were built over the foundations were observed in several places along the stretch of wall. They varied in character from place to place, as parts of the wall were constructed at different times. In some areas they were set in herringbone fashion, in others simply pitched. The stone used was principally chert, with occasional volcanic and Triassic sandstone blocks as well. The blocks were irregular and had not been dressed at all. They were bonded with a hard off-white mortar containing coarse aggregate, which is essentially the same mix as used throughout for bonding both core and facework. The top of the footings also reflect the contemporary ground level at the back of the wall, which would have been the top of the secondary rampart material banked up behind the wall after its construction. The footings also show how the back of the wall was stepped, in steps approximately 1m wide, narrowing towards The number of steps was not the top. consistent, some stretches of wall having only one, others two. The footings were under or inside internal facework 528 (1.4) and could not be detected at the front of the wall facework.

Contains contexts: 7, 301, 527, 533, 534

The core of the wall was composed of roughly-dressed angular volcanic and chert stones. The mortar used to bond these stones varied over the stretches examined, from a light brown/off-white, pebbly mortar to a coarse white pebbly mortar, the result of periodic remixing of mortar for construction. The construction method of the core itself varied over different stretches, ranging from a crudely-laid and roughly-coursed build (525) to a definite herringbone (304), with stretches between that appeared to be pitched, yet without a proper herringbone setting. This variance in build also probably results from the construction of the wall in stages, or by different working gangs. The ratio between volcanic stone and chert varied from area to area; the chert was definitely associated with primary build. A small patch of the core material (583) appeared to have tumbled or collapsed, the mortar having degraded and no longer bonding the stones. The core was built above the footings and foundations discussed above (1.2) and between the internal and

external facework. The wall was built up in lifts or rises, a few feet at a time, but defining the lifts themselves was not possible. Contains contexts: 6, 302, 304, 525, 583.

1.4 The facework of the Roman wall has only survived in a few areas. The largest area of external facework extends along the wall from the cut for Western Way for 17.5m to the south-west. It does not extend down to ground level, as it has been underpinned at a later date (603, G2.2). The stones used for the external facework were variable in size, ranging from 15cm cubes to 0.9 x 0.25m. A course of larger stones runs 3.5m from ground level, with smaller ones above and below. The stones immediately beneath this course were generally the smallest on the surviving stretch of facework. The stones were locallyquarried volcanic stone and were well dressed, larger stones towards the base of the wall and the others fining up in size until the larger string-course is reached. Associated with the external facework was an offset plinth (635) which survived along with the rest of the facework during the underpinning operation. This plinth was composed of chamfered volcanic stone averaging 1.2m above ground level, and stepped out from the face of the wall by approximately 0.15m. It survived for a maximum length of 13.5m, and was present on both sides of the cut in the wall for Western Way. The internal facework was found over several stretches of wall between the Southgate and Watergate. Like the external facework, it consisted of rectangular dressed blocks, though it also contained occasional chert blocks. The largest surviving area stretches 13m south of the cut for Western Way. The back of the wall had a step in it approximately 0.3m wide. The top of the facework could not be determined. Both internal and external facework were bonded with a hard off-white mortar with coarse pebbly aggregate. Although the faces were probably built in lifts at the same time as the corework the height of each lift could not be ascertained.

Contains contexts: 528, 531, 635.

Group 2

2.1 This sub-group concerns the stretches of the wall between Southgate and Watergate which are of medieval date, replacing the previous Roman work. There were four substantial medieval builds in this area. That nearest to the Southgate is visible in facework 523. The wall was constructed in much the same fashion as before, with the facework butting that of previous builds. The core of this part of the wall, 653, may also have originally been behind the removed Roman plinth underpinned by breccia build 603 (2.2). The external facework was decorated with banded courses of chert and volcanic stone, with occasional sandstone blocks, all bonded with a coarse off-white mortar. The internal face had been truncated and butted by later build 513 to the north-east, though a short stretch of it survived where it overlay the Roman build 528 (1.4). To the south-east, there was another roughly-faced internal build, stepped back 0.7m from the other medieval facework, and principally constructed of roughly-hewn chert blocks with occasional volcanic blocks, bonded with coarse cream mortar. This build cut the Roman footings 527 (1.2).

The next substantial build of medieval wall was 567. The core of it was made from volcanic stones bonded with very gravelly offwhite mortar and many pebbles. The width of the entire wall had been reduced considerably at this point by the construction of 19thcentury buildings which butted up against the internal face (represented on the 1876 OS map). This truncation was so severe that in places the wall was only 0.80m thick. The wall has been consolidated with modern bricks, which almost completely obscure the internal aspect. The wall itself was of volcanic stone and chert with occasional sandstone blocks bonded with a coarse, stony, grey/white mortar, and was coursed.

The last substantial medieval build before the breach created by collapse in 1927 is 573. This was a refacing of the external wall face, and butted the Roman corework 525 (1.3) to the rear. It consisted of roughly-coursed small and medium volcanic stones and chert, bonded with a creamy brown coarse lime mortar. The core of this build was visible at the bottom of the external face, perhaps as it may once have been behind a plinth which has been subsequently removed to provide a vertical face.

The medieval build to the south of the collapse, nearest to the Watergate (section 20 in Blaylock 1991) consisted of coursed (vesicular) volcanic stone facework,

containing occasional Triassic sandstone blocks. The bottom 4-5 courses were more neatly cut and appear to be less weathered than those above. Associated with this build was a volcanic stone plinth, 2.2m above the present ground level.

Contains contexts: 303, 305, 316, 340, 344, 523, 548, 549, 567, 573, 624, 653.

2.2 This sub-group concerns two areas of medieval underpinning and one episode of rebuilding of a small part of the wall. The Roman facework and plinth south-west of Western Way were underpinned from just below plinth level with large breccia blocks, occasionally accompanied by volcanic stone, chert and sandstone, bonded with a coarse white pebbly mortar. This underpinning also extended to the south-west along the wall beyond the Roman build, supporting facework 523 and the core 653 as well. Another stretch of underpinning was noted some distance to the south, under 567. It was also composed of breccia blocks, though these were on the whole much smaller than those comprising 603. This stretch also underpinned a section of wall further south which had later been replaced (571). It seems likely that the top of this underpinning reflects the line of the original Roman plinth. The patch of rebuilt wall lay under the Roman corework 525 on the front face in the same place that the medieval corework 316 (2.1) lay over it. It protruded 0.27m from the line of the modern refacing 318, and was composed of both breccia and volcanic stone bonded with a crumbly reddish mortar.

Contains contexts: 319, 603, 625.

2.3 This sub-group concerns features in the facework of the medieval wall, consisting principally of putlogs associated with its construction. They would have been put in position as the wall rose and were used to support the timber scaffolding employed during construction. The other features of note in this sub-group are three dressed stones within build 573, which are all at the same level (326, 358, 359). All three have vertical cuts into them, which vary from 0.04-0.07m in depth. The three are unevenly spaced and may represent joist-sockets for a building constructed on the outside of the wall.

Contains contexts: 321, 322, 326-328, 346,

347, 358, 359, 572, 611-620.

Group 3

Post-medieval rebuilding of sections of the wall account for almost 50% of the external facework between South Street and Ouavgate. Much of the work of this period consisted of refacing the wall rather than complete rebuilds, although these do occur (546, 544, 571, 574). In other areas, as at the northern end of the Quay Lane stretch, it was predominantly the internal facework that was replaced, with flights of steps being added to this particular area. The stone used to construct these stretches of wall varied from area to area, presumably to some extent reusing collapsed stonework. There is therefore a mixture of breccia, both veined and vesicular volcanic stones and chert, with occasional blocks of Triassic sandstone. Slate and brick or tile fragments are also used as blocking between stones. The mortars used for various builds were broadly similar, being hard off-white lime mortars with frequent waterworn pebbles and occasional angular fragments of stone. The wall formed the rear structural element to all the houses on the western side of Ouav Lane which ran up the The surviving evidence for these is discussed below (3.2). It is for this reason that so much of the post-medieval alteration is to facework only, as the corework was left in situ, there being no reason to remove it, but simply improve the appearance or integrity of the part adjoining the building in front of it. This substantial stretch of the city wall was not revealed until the 1950s, when the Quay lane buildings were pulled down to show the wall behind. There is a large breach in a heavily-altered section of the wall towards the bottom of the lane caused by undermining of the wall to the rear of the Custom House Inn which stood on the site, and collapsed with a large (10m) stretch of the wall in 1927. The flights of steps mentioned above (504, 511) were associated with houses backing onto the other (western) side of the wall. At a point 32m from Western Way down the hill, the wall has been cut into by a considerable degree, narrowing at its thinnest point to only 0.8m wide. This cut and rebuilding is due to one wall of an organ factory shown to cut into the city wall on the 1876 OS map. In the external face, some 10m north of the 1927

collapse, there is a vertical build of large breccia blocks or quoins within 574, running the entire height of the wall. The purpose of this would seem to be provision of extra support at a point where the wall turns slightly inwards as it runs down the slope. Other features which are actually cut into the post-medieval builds are discussed below (3.2).

Contains contexts: 333, 334, 337, 342, 355, 356, 500-505, 510-513, 529, 543, 544, 546, 550, 568, 571, 574, 582.

3.2 This sub-group concerns the varying pieces of evidence for the uses of the wall and various repairs to it. When it was constructed, build 574 (3.1), which is the longest part of post-medieval work south of Western Way, had a chamfered breccia plinth (320) with a step of some 0.25m built into it. This was at the same approximate height above ground level as its Roman predecessor and may reflect the original position of the Roman plinth.

There are a large number of features in the faces of the wall, which have varying causes. Some are putlogs (329, 332, 345, 604-610, 628, 630, 642-643, 654-659, 701) used to support timber scaffolding as the facework was replaced. Due to this, rather than being cut into the wall (in some places they go right through the wall and when not blocked are approximately 0.7m deep) they were inserted as the building progressed. They are quite separate from the many other marks in postmedieval facework that indicate the presence of the buildings of Quay Lane butting the These consist principally of joistsockets, which were cut into the wall and were to support the floor-beams of houses. These sockets were grouped together, as would be expected, showing floor levels and also indicate possible rebuilding of some houses. The sockets were contexts 352, 353, 552, 553, 631-634, 636-641, 644-646, 648-650, 700, 703. Associated with these sockets, at least by inference, were scars showing the positions of some walls which had butted up against the city wall (349, 350a,b, 354, 357, 551, 622, 623, 626, 629, 647, 702). Some of these (349) may also represent rooflines. At the northern end of the Western Way-Southgate stretch of wall there was also what appeared to be the stub of a brick arch respond (629). On the other side of the wall to this, an oven had been cut into it, which

was semi-circular in plan, although truncated. It would originally have been circular and vaulted, with a volcanic flagstone floor which was bedded on red sand. The slabs were curved where they butted the oven walls. The vaulted roof had been mostly removed. There was packing evident behind the remaining portions of the roof, which butted build 558 (3.1) and was possibly to prevent collapse of the roof into the oven itself.

Several episodes of repair are evident on post-medieval stretches of wall. An episode of underpinning immediately adjacent to the area of collapse is almost certainly a repair effected to prevent the further loss of the wall. Other repairs evident on the relevant facework are mostly very rough, with random blocks employed to fill gaps, which were by and large uncoursed. Context 336 may represent patching after the removal of a chimney which would have butted builds 334 and 337 (3.1).

The internal face of the wall was cut, predominantly to the south-west, by a series of fairly large pits (575-580) which have been associated with 19th-century gardening activity as their fill (581) was a contemporary garden soil. They appear to be randomly placed and the larger ones cut build 574, the two smaller cutting the medieval build 573 (2.1). Along the whole of the stretches of post-medieval wall building two large shear cracks (335, 584) were evident, probably resulting from the shifting of the wall facework after the removal of the housing frontages. Given the slope of the land southwards towards Quaygate, movement of the wall is almost inevitable, and these shear cracks occur not between separate builds but within large sections of contemporary build. 335 occurs on the line of a wall scar near the Quaygate. There were also the remnants of iron stanchions on the top of the wall, as well as the holes where they had once been. These have also been associated with the houses to the west of the wall, though their precise purpose has not been determined.

Contains contexts: 320, 329-332, 335, 336, 339, 345, 349-354, 357, 530, 551-553, 558, 565, 575-581, 584, 602, 604-610, 622, 623, 626, 628-634, 636-650, 654-659, 700-703.

Group 4

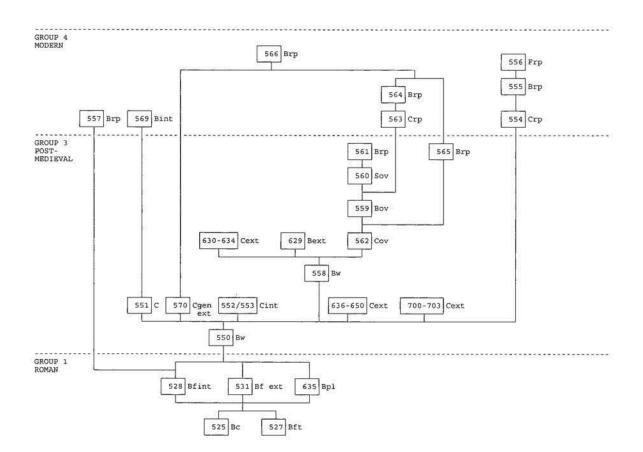
This group concerns modern alterations to the

wall. Not the least of these was the cutting of Western Way through the wall, removing some 27m of it completely. Other major works include an 11m stretch of brickwork (312) between builds 571 (3.1) and 573 (2.1), which is constructed directly over Roman corework. At the southernmost end of the wall section being discussed there is another stretch of modern wall (343) which is butting up against 340 and 342, and continuing on a different alignment. The rear face of the Southgate-Western Way stretch of the wall has also been heavily repaired, work which also includes both ends of this piece of wall. Much of this repair work has included

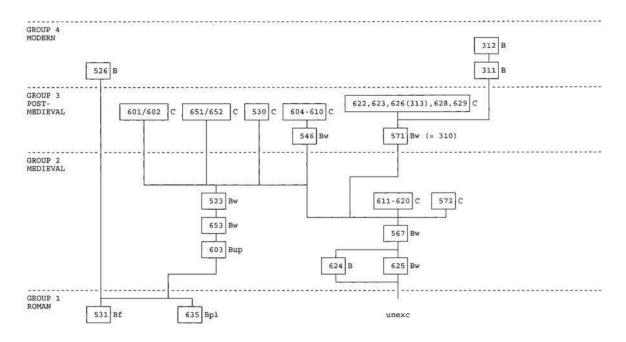
cementing of loose stonework and the preventing of further degeneration. On the stretch between Western Way and Quay Gate there has been considerable concrete capping of the wall, and in some places the infilling of any holes dug into the top. There is also evidence of modern underpinning (318) and patching (325) on the external face of the wall. Further work has been carried out on the repair and upkeep of the wall since this fabric survey was carried out, which may be detailed elsewhere.

Contains contexts: 311, 312, 317, 318, 335, 341, 343, 351, 515, 518, 526, 530, 554-557, 563, 564, 566, 568, 569.

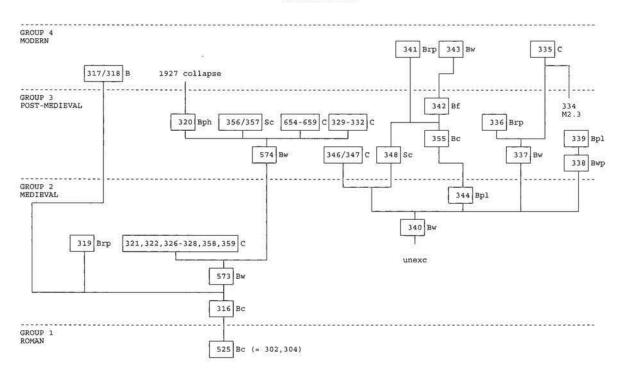
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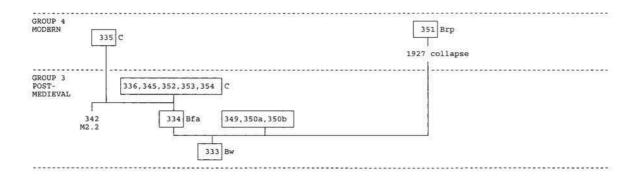
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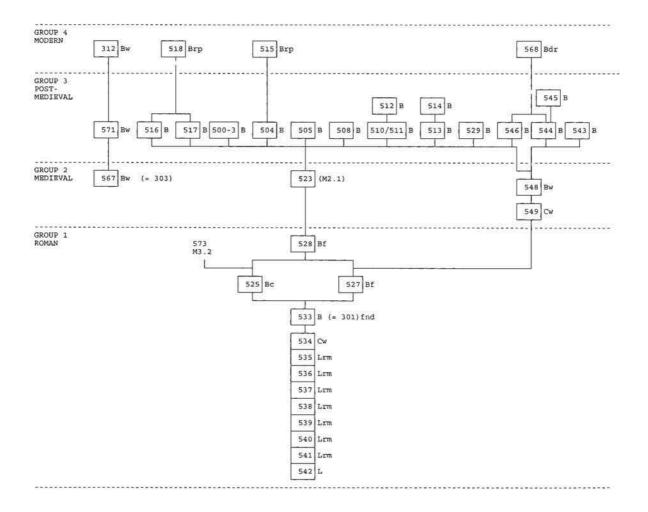
MATRIX 2.2



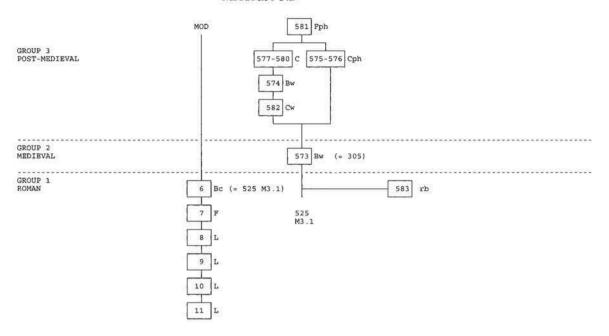
MATRIX 2.3



MATRIX 3.1



MATRIX 3.2



GROUP MATRIX INDEX

Context	Group	Matrix	Context	Group	Matrix
301	1	3.1	337	3	2.2
302	1 1	2.2	338	3	2.2
303	2	3.1	339	3	2.2
304	1	2.2	340	2	2.2
305	2	3.2	341	2 3	2.2
310	2 3 4	2.1	342	3 4	2.2
311		2.1	343	4	2.2
312	4	2.1,3.1	344	2	2.2
313	3	2.1	345	3	2.3
316	2 2 2 2 2 2 2 2 2 2 3 2 2	2.2	346	2	2.2
317	2	2.2	347	2	2.2
318	2	2.2	348	2 3 3	2.2
319	2	2.2	349	3	2.3
320	2	2.2	350	3	2.3
321	2	2.2	351	3	2.3
322	2	2.2	352	3	2.3
324	2	2.2	353	2	2.3
325	3		354	3 2 3 3	2.3
326	2	2.2	355	3	2.2
327	2	2.2	356	3	2.2
328	2	2.2	357	3	2.2
329	2	2.2	358	2	2.2
330	3	2.2	359	2	2.2
331	2 2 3 3 3 3	2.2	500	2 3 3	3.1
332	3	2.2	501	3	3.1
333	3	2.3	502	3	3.1
334		2.3	503	3	3.1
335	3 3 3	2.2,2.3	504	3	3.1
336	3	2.2,3.3	505	3	3.1

Context	Group	Matrix	Context	Group	Matrix
506	3		567	2	2.1,3.1
508	3	3.1	568	2	3.1
510	3	3.1	569	4	1
511	3	3.1	570	3	1
512	3	3.1	571	3	2.1,3.1
513		3.1	572	3	2.1
514	3 3 3	3.1	573		2.2,3.2
515	3	3.1	574	2 3	2.2,3.2
516	3	3.1	575	3	3.2
517	3	3.1	576	3	3.2
518	4	3.1	577	3	3.2
523	2	2.1,3.1	578	3	3.2
525	1	1,2.2,3.1	579	3	3.2
526	4	2.1	580	3	3.2
527	1	1,3.1	581	3	3.2
528	1	1,3.1	582	3	3.2
529	3	3.1	583	1	3.2
530	4	2.1	584	3	
531	1	1, 2.1	585	3	
532	3	700 C 700 S/F	586	3	
533	1	3.1	587	1	
534	1	3.1	588	1	
535	1	3.1	589	1	
536	1	3.1	590	1	
537	1	3.1	591	1	
538	1	3.1	592	1	
539	1	3.1	593	1	
540	1	3.1	594	1	
541	1	3.1	595	1	
542	1	3.1	596		
543		3.1	597	3 3 3	
544	3	3.1	598	3	
545	3	3.1	599	3	
546	3	2.1,3.1	600	3	
548	2	3.1	601	3	2.1
549	3	3.1	602		2.1
550	2	ì	603	3	2.1
551	3 2 3 3	1	604	3	2.1
552	3	Ī	605	3	2.1
553	3	1	606	3	2.1
554	3	1	607	3	2.1
555	4	1	608	3 3 3 3	2.1
556	4	1	609	3	2.1
557	4	1	610	3	2.1
558	3	1	611	3	2.1
559		1	612	3	2.1
560	3	1	613	3	2.1
561	3 3 3	ĭ	614	3 3	2.1
562	3	I	615	3	2.1
563	3	1	616	3	2.1
564	4	1	617	3	2.1
565	3	1	618	3	2.1
566	4	1	619	3	2.1

Context	Group	Matrix	Context	Group	Matrix
620	3	2.1	643	3 3 3	1
622	3 3 3	2.1	644	3	1
623	3	2.1	645	3	1
624	3	2.1	646	3	1
625	2	2.1	647	3	1
626	2 3 3 3	2.1	648	3 3 3 3	1
627	3		649	3	1
628	3	2.1	650	3	1
629	3	1,2.1	651	3	2.1
630	3	1	652	3	2.1
631	3 3 3 3	1	653	3 2 3 3 3	2.1
632	3	1	654	3	2.2
633	3	1	655	3	2.2
634	3	1	656	3	2.2
635	1	1,2.1	657	3	2.2
636	3	1	658	3	2.2
637	3 3 3 3	1	659	3	2.2
638	3	1	700	3	1
639	3	1	701	3 3 3 3	1
640	3	1	702	3	1
641	3	1	703	2	1
642	3	1			

Context descriptions

Western Way-Quaygate, external face 1979, 1988

- 301 Foundations of primary Roman wall (same as 533 1992). Volcanic stones set in a considerable quantity of dull red clay mixed with small angular and ww stones.
- 302 Core of primary Roman wall (same as 525 1992). Mainly large and small volcanic stone with some chert set in a rough herringbone style within a light brown off-white mortar containing small pebbles.
- 303 Corework, possibly med? Possibly core of build 567 992? Volcanic stones bonded with very gravelly mortar, pale off-white with many small pebbles.
- 304 Probable core for primary Roman wall, same as 302? Mostly chert stone with some volcanic set in herringbone fashion and bonded with a pale mortar containing tiny pebbles.
- 305 Same as 573 1992.
- 310 Same as 571 1992.

- 311 Modern rebuild of 571 (310) associated with modern brickwork 312. Volcanic and Triassic sandstone, roughly laid, uncoursed.
- 312 Modern brick wall built in 1979 in front of Roman corework, see 301-304.
- 313 Same as 626 1992 (see 626).
- 314 Same as 573 1992 (see 573).
- 315 Putlog within build 573 (314). D = 0.90m.
- 316 Core of build 573 (314) or of a plinth. Visible on external face at ground level possibly originally behind a plinth, now cut back vertical to the face of 573 (314). Volcanic and chert stones with some ww stones; same mortar as 573 (314).
- 317 Modern brick patching or remnants of brick build butting 316. Cement-bonded.
- 318 Modern refacing over build 316 on external face. Mixture of Heavitree, volcanic, Triassic sandstone and chert with some brick bonded with modern cement.

- 319 Small area of rebuild butting 316; protrudes out 0.27m beyond line of 318; Heavitree and volcanic stone bonded with crumbly reddish mortar.
- 320 Heavitree stone plinth at base of build 574. Steps down to the SW with the slope of the hill. Max height from present ground level 0.50m; Le = 7.50m. Bonded with white mortar with a high lime content containing freq small stones.
- 321 Putlog within build 573 (314). Only partially blocked. D = 1.50m (max).
- 322 Putlog within build 573 (314). D = 1.33m (max).
- 323 Same as 574 1992 (see 574).
- 325 Modern brick patching over builds 573, 574. Possible blocking in putlogs? Brick modern with modern lime/cement.
- 326 Volcanic stone with groove cut into its face approx. 0.05m deep. Within build 573.
- 327 Very degraded putlog within build 573. D = 0.59m (max).
- 328 Putlog within build 573. D = 0.61m (max).
- Possible putlog within build 574. D = 0.28m (max).
- 330 Putlog within build 574.
- 331 Putlog within build 574.
- 332 Putlog on same level and SW of 331 within build 574.
- 333 Build of external facework SW of 574 on other side of collapse in wall (Custom House Inn 1927). Mostly coursed Heavitree stone with occ volcanic and Triassic sandstone blocks. Some bricks used in places to level stones. Bonded with light pink mortar containing some small pebbles, slightly more orange in places where repointed.
- 334 Preserved facework of build 333. Probably protected from weather by a building butting up against it. Contains joist holes 352, 353, horizontal scar 354, and putlog 345.

- 335 Shear crack in build 334 infilled with modern cement. Occurs at a change in the wall alignment as it curves to the W.
- 336 Heavitree stone patching, possibly after the removal of a chimney which butted build 334, 337. Repointed? with cement. H = 2.20m; Wth = 0.40m.
- 337 Predominantly roughly-coursed Heavitree facework with some Triassic sandstone, brick and vesicular volcanic stone, bonded with coarse off-white lime mortar containing many stones. Repointed in places.
- 338 Randomly-coursed mixed-sized blocked Heavitree facework west of 337, bonded with creamy white lime mortar containing small black stones. H = 0.90m (max); Le = 2.00m.
- 339 Simple chamfered plinth on top of build 338.
- 340 Coursed vesicular volcanic stone facework west of 337; plinth 339 separates it from build 338 which is directly below it. Also contains occ Triassic sandstone blocks with occ brick patching and blocking. Lower 4-5 courses are semi-ashlar and neatly cut and appear less weathered than those to the west beyond patching 348.
- 341 Modern mainly brick patching associated with the insertion of a water-pipe into the wall.
- 342 Mainly veined volcanic stone with occ Heavitree stone facework under plinth 344 and west po patching 341. Bonded with grey/yellow stony mortar containing some small granite frags. Possibly associated with corework 355. H = 2.00m; Le = 2.80m.
- 343 Modern wall butting up against westernmost end of this particular stretch of wall and continuing on a different alignment.
- 344 Vesicular volcanic stone plinth at base of facework 340 and probably of same build. Broken by construction of build 341. Le = 5.30m (max). Height from present ground level 2.20m.
- 345 Blocked putlog within build 334.
- 346 Blocked putlog within build 340.

- 347 Blocked putlog within build 340 on same line as 346.
- Patching of facework 340 from the level of plinth 344 to top of wall; possible drain associated with build 341. Wth = 0.40m.
- 349 Horizontal groove cut into build 333 to a depth of approx. 0.02m and partially filled with modern plaster. Possibly represents a roof or floor line and associated with 350a,b.
- 350 Two timber slots cut into the Heavitree
- a,b facework 333, one directly above the other, the higher of the two measuring 0.12 x 0.16m and 0.10m deep, the lower slot, although of the same dimensions, less regular in shape. Possibly associated with 349.
- 351 Underpinning of build 333. East of slots 350 at breach of wall. Probably constructed after collapse of wall through undermining to the rear of the Custom House Inn in 1927.
- 352 Blocked joist-hole cutting into facework 334; blocked with same mortar as within 336 and 335, therefore probably blocked on removal of building. Associated with 353.
- 353 Blocked joist-hole cutting into facework 334; associated with 352 and blocked with same material.
- 354 Horizontal scar over facework 334 probably representing a floor level associated with the same building as 352, 353. Le = 3.80m.
- 355 Corework possibly associated with 342. Mostly vesicular volcanic stone with some Triassic sandstone, freq brick patching. Bonded with creamy white mortar containing small pebbles.
- 356 A vertical build of large Heavitree blocks or quoins within build 574 from ground level to the top. Occurs where the wall undergoes a slight change of alignment providing extra strength as the wall turns slightly inward. H = 5.50m; Wth = 1.00m.
- 357 Two vertical dark scars over build 574, approx 3m apart, running from ground level but fading out before reaching the top of the wall. Width of each scar approx. 0.40m.

- 358 Cut vesicular volcanic stone within build 573. Stone dimensions = 0.22 x 0.18m; half of stone cut back by approx. 0.04m. Associated with 359.
- 359 Cut vesicular volcanic stone within build 573, 0.40m NE of 358 on same line and level. Stone dimensions = 0.16m x 0.16m, half of stone cut back by 0.07m.

Western Way - Quaygate except * which occur on full length of wall

- Build on internal face of wall, NE end near Western Way. Mainly Heavitree blocks with some quartz, sandstone, Triassic sandstone, volcanic and possible black granite? Roughly-coursed and bonded with lime mortar and coarse aggregate which was heavily repointed with orange mortar. Offset and battered on top from Roman facework 528 above. Le = 5.20m; H = 3.30m (max).
- 501 Brick patch on internal face of wall, badly repointed. H = 1.60m (max); Le = 0.95.
- 502 Brick underpinning of base of wall on internal face. Also contains plinth and stub of brick wall. H = 1.40m (max); Le = 2.60m.
- 503 Brick underpinning in same vicinity as 501, 502. Contains wall scar or stub of wall. H = 1.70m (max); Le = 2.70m.
- 504 Build of wall underpinned by 502, 503. Mainly quartz and Heavitree stone with some volcanic, roughly-coursed. Includes build of steps from roughly halfway up the overall height of the wall to the top. H = 2.40m; Le = 3.0m.
- 505 Facework on internal face of wall underpinning Roman facework 528 at the NE end of wall near Western Way. Patch in facework reveals Roman corework 525. Mainly roughly-hewn quartz but with some Heavitree and volcanic stone. Some attempt at coursing. H = 2.00m; Le = 4.50m.
- 506 Modern refacing in crazy-paving effect over patch in wall which revealed Roman foundations and rampart material previously recorded in 1985. Subsequently covered with garden soil.

- 508 Roughly-rendered patch of modern orange mortar over small area just above 506.
- 510 Build towards base of internal face of wall, possibly the same as 511. Mainly Heavitree blocks, but with some volcanic, Triassic sandstone and sandstone bonded with off-white mortar containing very coarse aggregate. Generally poorly-coursed with some levelling stones. H = 1.20m; Le = 5.70m.
- 511 Build butting internal facework 513; possibly the same as 510? and directly above it. Mainly roughly-squared volcanic blocks with some Heavitree, volcanic, sandstone and quartz bonded with off-white mortar containing coarse aggregate. Poorly-coursed with levelling stones. Includes steps of Heavitree blocks to top of wall from top of main build. Height of steps = 1.20m. Overall height of build = 3.10m; Le = 6.00m.
- 512 Wall scar and rebuild of SW corner of build 511. Mainly brick with two Heavitree blocks bonded with whitish mortar containing very coarse aggregate. Tied well into 511. H = 1.60m; Le = 0.40m.
- 513 Substantial rebuild of internal facework butted by 511 and butting build 523; widens wall by 0.80m. Mainly roughly-squared chert and volcanic stone with some Heavitree and sandstone and a little brick. Poorly-coursed and bonded with pink lime mortar with very coarse aggregate, some frags up to 0.10m diam. H = 4.80m; Le = 10.50m.
- 514 Roof scar on facework 513. Very hard Portland cement. Le = 1.00m.
- 515 Modern capping/batter over ledge in build 500 at base of steps 504.
- 516 Patch of build, possible repair to 517?

 Mainly large Heavitree stone frags, with apparent heavy limescale over it.
- 517 Refacing of internal face of wall, NE end near Western Way. Mainly volcanic stone with some quartz and possible black granite? H = 2.00m; Le = 2.20m.
- 518 Modern build butting north-easternmost end of this stretch of wall, where cut through for

- construction of Western Way.
- 523 Substantial rebuild of wall over Roman builds. Faced in decorative fashion on external face with banded courses of chert and volcanic stone and occ intermittent sandstone. Internal face truncated and butted by later build 513 to NE; short stretch of facework intact to SW where it is stepped over top of Roman facework 528. Chert and volcanic stone with occ sandstone bonded with coarse off-white mortar. H = external facework 3.80m, internal facework 1.00m; Le = 18.30m.
- 525* Roman corework evident on several stretches along the entire length of wall Southgate/Quaygate. Roughly-hewn angular volcanic and chert crudely laid with some attempt at coursing; bonded with substantial amount of white coarse pebbly mortar. Associated with internal facework 528, external facework 531, footings 527, foundations 533. Same as 302 (1979 external face).
- 526 Partial refacing of top five course of external Roman facework 531 NE end of wall. Reused volcanic stone and Triassic sandstone. H = 1.10m; Le = 3.00m.
- 527* Roman footings evident on various stretches of the internal face under Roman facework 528 along the length of wall between Southgate/Quaygate. Irregular blocks of mainly chert with occ Triassic sandstone and volcanic, pitched, sometimes in herringbone fashion and bonded with hard off-white mortar containing coarse aggregate (same as bonding material for core and facework). Top of footings represents contemporary ground level, i.e. top of rampart. Footings step from vertical face, in varying number of steps, approx 1.00m.
- 528* Roman internal facework evident on several stretches along the length of wall between Southgate/Quaygate. Mainly rectangular volcanic blocks with occ chert, bonded with hard off-white mortar containing coarse pebbly aggregate (same as bonding material for core and footings). Step of approx 0.30m on Southgate-Western Way stretch of wall. Top of facework not ascertained; max height recorded = 1.00m. Longest unbroken stretch

- of facework recorded from where cut for Western Way 13m to the SW.
- 529 Refacing of Roman facework 528. Butts build 523 and butted by build 513. Volcanic and Heavitree stone blocks bonded with offwhite coarse mortar. H = 1.00m; Le = 2.20m.
- 530 Infilling of hole made for iron stanchion on top of wall through build 523 visible in plan and on external face. Re-used volcanic stone with some brick roughly-bonded with grey/white mortar/cement?
- 532 Infilling of hole made for iron stanchion on top of wall through Roman builds visible in internal face as well as plan. Brick bonded with cement.
- 533 Roman foundations under footings 527. Within cut 534. Irregular medium and large volcanic and chert stones bonded with abundant brown/red dirty clay. (Same as 301, 1979 external face).
- 534 Cut for foundation trench for construction of primary city wall. Cuts through primary rampart material. Terraces into slope of valley to the south. (For full profile, descriptions, see LCS90 contexts 357, 814).
- 535 Layer of volcanic stone chippings and mortar evident under both footings 527 and foundations 533. This is due to the construction of the wall being built in progressive stages,; the chippings derived from the cutting of stone prior to the construction of the relevant stage.
- 536 Uppermost layer of primary rampart material cut by foundation cut 534. Brown/red; clay; compact; occ very small angular stones, occ chert. D = 0.26m.
- 537 Layer of primary rampart material. Red/brown; clay; compact; fairly clean. occ small angular and ww stones. D = 0.30m.
- 538 Layer of primary rampart material. red, dirty clay; compact. D = 0.22m.
- 539 Layer of primary rampart material. Red/brown; clay; compact; fairly clean. D = 0.18m.

- 540 Layer of primary rampart material. Red; clay; compact; very occ flecks of charcoal otherwise clean. D = 0.42m.
- 541 Substantial layer of primary rampart material with grey 'turf' lines throughout. 50% red, 50% grey/yellow; clay; compact; very occ flecks of charcoal, occ small angular and ww stones. D = 1.06m.
- 542 Layer of pre-rampart soil, signifying disuse of Roman compound (see LCS90 contexts 753, 202, 3028, 3096). Mid brown; loam; fairly compact; freq charcoal, occ small angular and ww stones. D = not fully excavated.
- 543 Refacing of wall with re-used irregular volcanic and chert stones bonded with mid brown loam clay. Two isolated patches recorded, revealed when substantial stretch of modern concrete removed.
- 544 C19 property wall butting rear of city wall on slightly different alignment. Mixed geology of brick, Heavitree blocks, re-used volcanic and chert and some shaped Beer and Bath stone. H = 3.10m; Le = 11.50m.
- 545 Packing/infill behind wall 544 filling in gap between property wall and city wall. Dark brown, loam/ash, loose, general demolition material.
- 546 Refacing of external face of wall creates faced parapet 0.60m wide, where built exceeds height of inner face by 1.00m. Large Heavitree blocks with some rectangular volcanic and chert stones bonded with coarse grey/white mortar containing pebbly and angular stone aggregate. Contains putlog holes 604-610 on outer face. Le = 7.50m.
- from internal face by 0.70m (approx). Similar to build 523. Butted by clay-bonded build 543 and under build 546. Mainly roughly-hewn chert with some volcanic stone bonded with coarse off-white/cream mortar. H = 1.20m (max); Le = 4.00m (max).
- 549 Construction cut for build 548; cuts Roman footings 527.

- 567 Substantial rebuild of wall. Width reduced by construction of C19 buildings butting internal face. Wall at its narrowest at this point at only 0.60m wide. To the SW, wall butted by modern brick wall because of its vulnerability. Build contains putlog holes 572 and 611-620 inc. Constructed with coursed poor-quality volcanic and chert stone with occ Triassic sandstone bonded with coarse grey/white mortar containing small angular and ww stones. H = 5.70m; Le = 8.50m (approx).
- 568 Concrete gully/drain between builds 546 and 544.
- 571 Rebuild of wall butted by modern brick build on internal face. Width truncated to 1.20m. Contains putlog 628 on lower reaches of outer face. Large vertical shear crack recorded across top of wall and down external face. Medium and large irregular volcanic and chert stones with occ Triassic sandstone bonded with coarse off-white mortar containing freq small angular and ww stones. H = 4.00m (approx); Le = 6.50m (associated with putlogs 611-620).
- 572 Putlog hole within build 567. Approx 0.10m wide. D = 0.70m.
- 573 Substantial build of wall refacing external face of wall and butting Roman corework 525 to the rear. Irregular small and medium volcanic and chert stones roughly-coursed and bonded with creamy-brown/off-white coarse lime mortar containing high quantity of sand and freq small angular and ww stones. Heavily mortared corework with less than freq stones. Wth = 2.00m; Le = 10.00m.
- 574 Substantial build of wall refacing external face to approx ground level and internal face which includes a plinth (representing contemporary ground level) to a height of approx 1.00m. SW of build 573. Within cut 582 which truncates Roman corework 525. Plinth protrudes approx 0.25m. Inner face truncated at top by C19 garden activity, see contexts 577-580 inc. Contains a Heavitree stone plinth 320 towards base of external face. Whole of build lost to the SW where breached through undermining of wall to the rear of Custom House Inn. Freq med-large

- Heavitree blocks and medium volcanic blocks, occ medium irregular chert stones. Bonded with off-white hard and coarse lime mortar containing freq angular stones and ww pebbles protruding in coursework, with occ very small slate frags. Wth = 2.00m; Le = 19.00m.
- 575 Cut for small pit or post-hole in rear of build 573 probably associated with C19 garden activity. Wth = 0.40m; D = 0.80m.
- 576 Cut for pit or post-hole in rear of build 573 probably associated with C19 garden activity. Irregular.
- 577 Post-hole cut into rear of build 574, probably associated with C19 garden activity. Wth = 0.30m; D = 0.50m.
- 578 Cut for pit or post-hole in rear of build 574. Fairly large and irregular, probably associated with C19 garden activity. D = 1.30m.
- 579 Cut for pit or post-hole in rear of build 574. Similar to 578 and immediately SW of it. D = 0.80m.
- 580 Cut for pit or post-hole in rear of build 574. Similar to 579 and immediately SW of it. D = 0.80m
- 581 Garden soil evident and removed from rear of wall infilling post-holes/pits 575-580. Dark brown; loam; friable; freq slate and small-medium angular and ww stones, occ brick and slate frags.
- 582 Construction cut for build 574; cuts through Roman corework 525.
- 583 Possible tumble/collapse of Roman corework 525. Medium irregular volcanic stones, mixed, not bonded, with loose off-white pebbly mortar.
- 584 Substantial shear crack related to the breach in the city wall due to undermining when terracing in behind Custom House Inn.
- 585 Layer poor-quality garden soil to rear of wall, undermined by 584. Mid brown; loam clay; fairly compact; occ small angular and ww stones, occ brick, tile and slate frags, freq clay pipe.

- 586 Substantial slumped, collapsed material within shear crack 584. Mid dark brown; clay loam; fairly loose; abundant general demolition material, very mixed with some redeposited Roman rampart material.
- 587 Secondary rampart material as recorded within piling trench for footpath through breach in city wall. Khaki; sandy clay; compact; occ small angular and ww stones, patches clean red clay. D = 0.20m.
- 588 Secondary rampart material under 587. Grey brown; clay; compact; occ small ww stones, otherwise clean. D = 0.12m.
- 589 Secondary rampart material under 588. Red brown; sandy clay; compact; very occ small ww stones otherwise clean. D = 0.44m.
- 590 Secondary rampart material under 589. Might brown/red; slightly silty clay; compact; occ small angular and ww stones, occ charcoal flecks. D = 0.08m.
- 591 Secondary rampart material under 590 and also infilling construction cut 534 for city wall. Truncated by collapse of wall, see context 584. Light brown; sandy clay; compact; occ small angular and ww stones, occ charcoal and tile frags. D = 1.20m (max).
- 592 Primary rampart material cut by construction cut for city wall 534 within piling trench for modern footpath through breach in city wall. Yellow/red; sandy clay; compact; occ medium ww stones and freq small ww stones (pea-grit). D = 0.72m.
- 593 Primary rampart over 592. Red; sand; friable (compact); occ small ww stones, otherwise clean. D = 0.30m.
- 594 Primary rampart material over 593. Purple/red; slightly clay-sand; compact; occ small and medium ww stones. D = 0.24m.
- 595 Layer of buried soil sealed by primary rampart. Equivalent to context 542 and LCS90 753, 202, 3028, 3096. Mid brown; clay loam; compact; occ medium ww stones, freq small ww stones and angular stones, fairly freq charcoal flecks. D = 0.26m (max).

- 596 Fill within terrace cut 597. Mid dark brown; loam; friable/loose; general demolition material. D = 0.48m.
- 597 Vertical terrace cut through natural running parallel with outside face of city wall. Recorded in section of construction cut for modern footpath. Contains context 596. D = 0.34m.
- 598 Vertical cut recorded in section of construction cut for modern footpath, near Quay Lane footpath. Probably associated with C19 buildings along Quay Lane. Contains context 599. D = 0.34m (max).
- 599 Dumped rubble etc infilling cut 598. Mid brown; clay loam; compact; general demolition material including brick etc. D = 0.75m (max).
- 600 Terrace cut in front of city wall. Associated with Custom House Inn and subsequent collapse of city wall. Lines up with NE end of breach in wall.

Southgate - Western Way

- 550 Substantial build of wall refacing external face. Cut by NE side of Western Way. Also cut by slots 570, associated with construction of PM buildings which butted the outside of the wall. Also cut by cut 551 associated with PM buildings butting internal face of wall, SW end. Refaced on internal face at SW end of build, see contexts 554, 555, 556. At NE end butts Roman corework 525. Heavitree, volcanic and chert blocks bonded with coarse white mortar containing small pebbles, angular stones, small frags slate and brick/tile. H = 4.50m; Le = 13.50m; Wth = 1.70m.
- 551 Nearly vertical cut SE-NW turning 90° NE-SW, cutting build 550 at SW end of wall. Associated with PM building butting inner face of wall. Le = 4.75m; D = 1.20m.
- 552 Cut for timber slot through build 550 within area cut out by 551. Associated with 551. Dimensions: 0.40 x 0.30m; D = 0.20m.
- 553 Cut for timber slot through build 550 associated with 552. Dimensions: 0.20 x 0.20m; D = 0.10m.

- 554 Cut for refacing of SW end of internal face. Re-using Roman volcanic stone facework. Cuts through build 550. Contains contexts 555, 556.
- 555 Refacing of internal wall face, SW end, within cut 554. Re-used Roman volcanic facing stones bonded with coarse yellow mortar. H = 0.50m (five courses); Le = 4.00m.
- 556 Rubble infill/packing of cut 554 butting build 555, containing modern concrete, air bricks etc.
- 557 Modern resetting of three stones between internal facework 528 and 550. Bonded with cement.
- S58 Rebuild of NE end of wall butting build 550. Roughly-built in mainly volcanic and chert stone with occ sandstone, bonded with a friable light-brown loamy mortar. Le = 6.00m; Wth = 1.20m; H = 3.50m.
- 559 Truncated vaulted brick bread-oven within cut 562. Set in internal face NE end of wall. Semi-circular 50% truncation; oven roof also missing. Brick very burnt containing slate levelling within coursework, bonded with pinkish mortar, which appeared grey when burnt. For base see context 560. Dims: 2.50m NE-SW; intact total diameter.
- 560 Volcanic flagstone floor for oven 559 bedded on red sand. Slabs curved where they butt oven walls. Largest slab dims: 0.50 x 0.50m.
- 561 Roughly-bonded packing within cut 562 over vault of oven 559. Butts build 558; possibly built to prevent it from collapsing in onto oven. Pale/mid brown; grey pink; 50% mortar, 50% rubble, freq small and medium volcanic, brick, chert and slate.
- 562 Construction cut for bread-oven 559. Cuts build 558.
- 563 Modern cut through oven 559 for rebuilding of internal face. Contains build 564.
- 564 Refacing of internal face within cut 563 in front of oven 559. Re-used volcanic and chert stone bonded with cement/concrete. H = 0.60m; Le = 3.50m.

- 565 Patch of rebuild on NE end of wall butting oven 559. Roughly-laid re-used volcanic stone bonded with off-white coarse mortar.
- Modern rebuild. Refacing of internal face on various stretches of the wall from present ground level to approx halfway up face of wall. Re-used volcanic and chert stone bonded with cement. Max height 2.00m.
- 569 Modern render over build 550 where cut by 551. Cement with occ re-used chert and small volcanic stones.
- 570 Generic context given to ten timber slots associated with construction of PM buildings which butted external face of wall. D = approx. 0.10m; Wth = 0.14m.

Western Way - Quaygate; external face

- 531 Roman external facework. Recorded on stretch of wall from Western Way 16.5m to the SW. Ashlared medium-large rectangular volcanic stone blocks bonded with off-white hard mortar containing coarse pebbly aggregate (same as all other mortars associated with Roman builds on this stretch of wall). Does not extend to ground level, underpinned by build 603. H = 2.60m; Le = 16.5m.
- 601 Brick infill of hole made by insertion of iron stanchion through top of build 523. Also contains one small block of chert.
- 602 Small patch of render over face of build 523 above underpinning 603.
- 603 Underpinning of build 523 and Roman build 531. Mainly Heavitree blocks with occ small irregular volcanic, chert and sandstone, bonded with off-white coarse pebbly mortar.
- 604 Putlog recorded within the lower reaches of the NE end of build 546. Associated with putlogs 605-610 inc. Dims: 0.20 x 0.24m.
- 605 Putlog recorded within build 546 SW and at same height as 604. Dims: 0.14 x 0.18m. Associated with putlogs 604-610 inc.
- 606 Putlog within build 546 just below and 0.50m SW of 605. Dims: 0.15 x 0.12m.

- 607 Possible putlog within build 546 where 546 butts build 567.
- 608 Putlog within build 546. Associated with putlogs 604-610 inc. 2.50m from top of wall and 0.60m from where 546 butts 567. Dims: 0.15 x 0.13m.
- 609 Putlog within build 546 approx 3m NE and at roughly same height as 608. Associated with putlogs 604-610. Dims: 0.18 x 0.20m.
- 610 Putlog within build 546. Recorded 3.70m NE and at roughly same height as 609. Associated with putlogs 604-609. Dims: 0.20 x 0.20m.
- 611 Putlog within build 567, at NE end of the lowest of three rows within this build. Associated with putlogs 572, 612-620. Dims: 0.12 x 0.15m.
- Putlog within build 567, 1.25m above 611 at NE end of middle row of three within this build. Associated with putlogs 572, 611-620. Dims: 0.10 x 0.12m.
- 613 Putlog within build 567, 1.25m above 612 at NE end of upper row of three within this build. Associated with putlogs 572, 611-620. Dims: 0.10 x 0.10m.
- 614 Putlog within build 567, 2.85m SW of 611 in bottom row of three recorded within this build. Associated with putlogs 572, 611-620. Dims: 0.12 x 0.18m.
- Putlog within build 567 1.20m above 614 in middle row of three recorded within this build. Associated with putlogs 572, 611-620. Dims: 0.20 x 0.18m.
- 616 Putlog within build 567 1.20m above 615 in top row of three recorded within this build. Associated with putlogs 572, 611-620. Dims: 0.20 x 0.15m.
- 617 Putlog within build 567 2.70m SW of 614 in bottom row of three recorded within this build. Associated with putlogs 572, 611-620. Dims: 0.15 x 0.15m.
- 618 Putlog within build 567 1.30m above 617 in middle row of three recorded within this build. Associated with putlogs 572, 611-620.

- Dims: 0.15 x 0.20m.
- 619 Putlog within build 567 1.20m above 618 in top row of three recorded within this build. Associated with putlogs 572, 611-620. Dims: 0.20 x 0.18m.
- 620 Putlog within build 567 2.70m SW of 617 in bottom of row of three recorded within this build. Associated with putlogs 572, 611-619. Dims: 0.12 x 0.18m.
- 622 Concrete and brick patching over face of build 571. Possibly associated with PM buildings on Quay Lane and further patching 623, 626, 627.
- 623 Concrete and brick patching over face of build 571. Possibly associated with PM buildings on Quay Lane and further patching 622, 626, 627.
- 624 Rubble build at ground level under build 567. Possible footings?
- 625 Possible underpinning of build 567. Heavitree blocks.
- 626 Concrete patching over face of build 571. Includes horizontal scar of roofline. Associated with PM buildings butting external face along Quay Lane possibly associated with patching 622, 623, 627.
- 627 Concrete patching over face of build 571. Possibly associated with PM buildings along Quay Lane and further patching 622, 623, 626.
- 628 Putlog within build 571 towards ground level. Dims: 0.12 x 0.20m.
- Mainly brick with occ volcanic and sandstone infilling of hole in top of build 523.
- Mainly brick with occ volcanic and chert stone infilling of hole in top of build 523.
 - Southgate Western Way; external face
- 629 Brick arch respond? associated with buildings butting external facework 558.
- 630 Possible blocked putlog within build 558.

- 631 Concrete recess or timber slot set in build 558.
- 632 Joist-hole NE end of build 558.
- 633 Three very small joist-holes? or timber recesses within build 558.
- 634 Blocked joist-hole cut into build 558.
- 635 Remains of Roman plinth. Base of SW end of build 550. Simple volcanic stone chamfered plinth approx 1.20m from present ground level, steps out from vertical face of wall by approx 0.15m. Le = 13.5m (max).
- 636 Several blocked joist-holes cut into external face of 550. Associated with building butting wall. Above 639.
- 637 Blocked joist-holes cut into external face of 550. Associated with building butting wall SW of 636 directly above 640.
- 638 Blocked joist-holes cut into external face of 550. Associated with building butting wall SW of 637 directly above 641.
- 639 Blocked joist-holes cut into external face of 550. Associated with building butting wall. Below 636.
- 640 Blocked joist-hole cut into external face of 550, associated with building butting wall directly below 637.
- 641 Blocked joist-hole cut into external face of 550, associated with building butting wall. Directly below 638.
- Possible blocked putlog within build 550 on same line as 643, one stone NE of it.
- Possible blocked putlog within build 550 on same line as 642, one stone SW of it.
- 644 Horizontal row of eight small joist-holes cutting face of build 550 directly below 642/643. Another hole appears to be blocked by a brick cutting the sill of putlog 642 which could represent the ninth hole of this series.
- 645 Blocked joist-hole cutting build 550, possibly associated with 646.

- 646 Row of five joist-holes on same line as 645 cutting face of build 550.
- 647 Blocked recess within build 550. Blocked with a mixture of Heavitree and volcanic stone and brick. Dims: 0.50 x 0.35m.
- 648 Two blocked joist-holes on same line and similar to 649. Cutting face of build 550.
- 649 Two blocked joist-holes on same line and similar to 648, cutting face of build 550.
- Row of five small joist-holes cutting face of build 550 on same line as 634, 636, 637, 646, 645.
- 651 Patching within facework of build 523.
- 652 Patching within top of facework of build 523.
- 653 Exposed core of build 523, probably originally behind removed plinth underpinned by Heavitree build 603.
- 654 Putlog within build 574, associated with putlogs 331, 332, 654-659.
- 655 Putlog within build 574, associated with putlogs 331, 332, 654-659.
- 656 Putlog within build 574, associated with putlogs 331, 332, 654-659.
- 657 Putlog within build 574, associated with putlogs 331, 332, 654-659.
- 658 Putlog within build 574, associated with putlogs 331, 332, 654-659.
- 659 Putlog within build 574, associated with putlogs 331, 332, 654-659.
- 700 Small joist-hole cutting face of build 550, slightly below line of 650.
- 701 Putlog within build 550.
- 702 Large stone with two chopped-in holes (for timber) within build 550.
- 703 Small recess cut into face of build 550, possibly joist-hole.

CONTEXT INDEX

Contant	Davia d	1400	Tuna	Figure No.
Context 301	Period ROM	Area 2	Type B	Figure No.
302	ROM		В	
303	MED	2	В	
304	ROM	2	В	
		2 2 2 2	В	
305	MED			
310	PM	2	В	146
311	MOD	2 2 2 2 2	В	1
312	MOD	2	В	1,5
313	PM	2	C	.2
316	MED	2	C	1
317	MED		В	1
318	MED	2	В	
319	MED	2 2 2 2	В	1
320	PM	2	В	1
321	MED	2	C	1
322	MED	2	С	1
323			В	<u>.</u>
325	PM	2	В	1
326	MED	2	В	
327	MED	2	C C C C	1
328	MED	2	C	1
329	PM	2	C	1
330	PM	2	C	1
331	PM	2	C	1
332	PM	2		1
333	PM	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	В	1
334	PM	2	В	1
335	PM	2	C	1
336	PM	2	В	1
337	PM	2	В	1
338	PM	2	В	1
339	PM	2	В	1
340	MED	2	В	1
341	PM	2	В	1
342	PM	2	В	1
343	MOD	2	В	1
344	MED	2	В	1
345	PM	2 2 2 2	В	1
346	MED	2	В	1
347	MED	2	В	1
348	MED	2	C	1
349	PM	2	C C	I
350	PM	2	C	1
351	PM	2	В	1
352	PM	2	C	1
353	PM	2	C	1
354	PM	2	C	1
355	PM	2 2 2 2 2 2 2 2 2 2 2 2	В	1
356	PM	2	C	1
357	PM	2	C C	1
358	MED	2	С	1
359	MED	2 2	C	1
	20	100	-	

Context	Period	Area	Туре	Figure No.
500	PM	2	В	3
501	PM	2	В	3
502	PM	2	В	3
503	PM	2	В	3
504	PM	2	В	3
505	PM	2	В	3
506	PM	2	В	
508	PM		В	
510	PM	2 2 2	В	3
511	PM	2	В	3
512	PM	2	В	3
513	PM	2	В	3,4
514	PM	2	C	3
515	LIVI	2 2 2 2	В	3
516	PM	2	В	3
517	PM	2	В	3
517	MOD	2	Б	3
523	MED		מ	
525		2,3	В	1,3,4,11
	ROM	2,3	В	1-7,9,13
526	MOD	3	В	1,3,10
527	ROM	2	В	3,4,7,8,13
528	ROM	2	В	2,3,4,7
529	PM	2	В	4
530	MOD	3	В	1,3,11
531	ROM	3	В	1,3,10,11
532	PM	2	В	3
533	ROM	2	В	3,4,6,8,9,13
534	ROM	2	С	3,4,8,9,13
535	ROM	2	L	4,8
536	ROM	2	L	4,8
537	ROM	2	L	4,8
538	ROM	2	L	4,8
539	ROM	2	L	4,8
540	ROM	2	L	4,8
541	ROM	2	L	4,8
542	ROM	2	L	4
543	PM	2 2 2	В	4,8
544	PM	2	В	4,13
545	PM	2	F	13
546	PM	2	В	1,4
548	MED	2	В	4
549	PM	2	С	
550	MED	1	В	1,2,7
551	PM	1	C	2,7
552	PM	1	C	2
553	PM	1	C	2
554	PM	1	C	2 2 2 2 2 2 2
555	MOD	1	В	2
556	MOD	1	F	2
557	MOD	1	В	
558	PM	1	В	1,2
559	PM	1	В	2,7
560	PM	1	S	2

Context	Period	Area	Туре	Figure No.
561	PM	1	F	2
562	PM	1	C	2
563	PM	1	C C	2
564	MOD	ĺ	В	2 2 2 2 2 2
565	PM	1	B	2
566	MOD	1	В	2
567	MED	2	В	1,4,5
568	PM	2	В	4
569	MOD	1	В	7.5
570	PM	1	c	2
571	PM	2	В	1,5,9
572	PM		C	
573	MED	2	В	1,5,8
574	PM	2 2 2 2	В	1,5,6 1,6,9,13
		2	C	
575	PM	2	C	6
576	PM	2	С	6
577	PM	2	C	6
578	PM	2 2 2 2 2 2 2	C C C F	6
579	PM	2	C	6
580	PM	2	Č	6
581	PM	2	F	
582	PM	2	C	6
583	ROM	2	B C	6
584	PM	2	C	13
585	PM	2 2 2 2 2	L	13
586	PM	2	F	13
587	ROM	2	L	13
588	ROM	2 2 2 2 2	L	13
589	ROM	2	L	13
590	ROM	2	L	13
591	ROM	2	L	13
592	ROM		L	13
593	ROM	2	L	13
594	ROM	2	L	13
595	ROM	2	L	9
596	PM	2	L F C	9
597	PM	2 2 2 2	C	
598	PM	2	C	
599	PM	2	F	
600	PM	3	С	
601	PM	3	В	1,4,11
602	PM	3	В	1
603	PM	3	В	1,10,11
604	PM	3	В	1
605	PM	3	В	1
606	PM	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	В	1
607	PM	3	В	1
608	PM	3	В	1
609	PM	3	В	1
610	PM	3	В	1
611	PM	3	В	1
612	PM	3	В	1
613	PM	3	В	1

Context	Period	Area	Туре	Figure No.
614	PM	. 3	В	I
615	PM	3	В	1
616	PM	3 3 3	В	1
617	PM	3	В	1
618	PM	3	В	1
619	PM	3	В	1
620	PM	3 3 3 3 3 3 3 3 3	В	1
622	PM	3	В	î
623	PM	3	В	1
624		3	В	•
625	MED	3	В	1
626	PM	3	В	î
627	PM	3	В	1
628	PM	3	В	1
629	PM	1b	В	1
630	PM	1b	В	1
631	PM	1b	В	1
632	PM	1b	В	1
633	PM	1b	C	1
634	PM	1b	В	1
635	ROM	lb	В	
636	PM			1,10,11
		1b	B B	1
637 638	PM PM	lb		1
	PM	1b	В	1
639	PM	1b	В	1
640	PM	1b	В	1
641	PM	1b	В	1
642	PM	1b	В	1
643	PM	1b	В	1
644	PM	1b	С	1
645	PM	1b	В	1
646	PM	1b	C	1
647	PM	1b	В	1
648	PM	lb	В	1
649	PM	1b	D C	1
650	PM	1b	B C B	
651	PM	3		1,11
652	PM	3	В	1,11
653	MED	3 3 3 3 3	В	11
654	PM	3	C	1
655	PM	3	C	1
656	PM	3	C	1
657	PM	3	C	1
658	PM	3	C	1
659	PM	3	C	1
700	PM	1b	C	1
701	PM	1b	C	ī
702	PM	1b	C C C C C C C C C C	1
703	PM	1b	C	1

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	502	1992/14,15		4,15

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508			5
			3.
509		120 d	39
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512	1992/16,20	386	35,58
513	1992/6,15,16,20,21; 1999/23-28	385-388	5,6,7,31,32,33,37-47,49-
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614	1992/21	387	7
514	1992/21	367	<i>y</i>
515	4	(4.44)	2.55
516	1992/9	383	1,14
517	1992/9	383	1,14
518	1992/9	383	1,14
519			
520			
521			
522	1000/7 0 1000/1 5 2006/2 2 26 21 244/6	170 173 180 181 183 185 100	28 50 51 58 50 60 62 65
523	1980/7-9; 1999/1-5; 3006/2,3,26-31; 244/6;	170,172,180,181-183,185,190-	28,50,51,58,59,60,62,65
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527	1992/4-6,15; 1998/4-36; 1999/19-22,32,33;	5,54,130-153,158-160,163-169,171-	29,30,46,65,66,70,71,95
	3001/18,19,29-31; 3006/19-23; 3030/11-	174,176-178,184,191,192,198-	-97,99,100,103-111
	14,17,18; 3032/30-37	200,203-207,226-228,395-396	50 050 15
528	1992/4,5,9,10; 1980/1-27; 3006/2-14,24-31;	1-3,5,36,54,55,99-114,117,118,128-	1-3,13-15,17,18,20-
520	3019/14-16,22,23,26-33; 3030/4-18;	133,136-139,163-168,176,178,181-	30,32,46,65,68,69,72-
	3032/30; 244/4	183,184,185,187,190,191,192,198-	75,92,95-100,110
		200,203-207,226-228,230-	
		235,383,384,385	
529	1999/19-22		30-33,46,47,66,71
530			
531	1980/7-9; 3051/36; 244/5,6; 252/11,12;	73-77,116-118,128,129,357,358,381	
	1121/1-4; 1122/1,2,3,4		
532	1980/16	108	22,23,24
533	1998/4-11,18; 1999/19-22,31-33; 3001/32-	83-88,140-162,270,271,291,297,306-	70
333	그리 얼마는 ^^^ 보다면서 가면에게 가게 하면 하면 되었습니다. ^^ 에 그리면서 이번 경기에게 가게 하면 되었습니다. 그리다면서 하는 사람들이 되었습니다. ^^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^		70
	36; 3048/35-37; 3049/2,7-10,28-36;	308,358-362,295,396	
	640/2,3,6		
534	1998/4-6,9-11; 3049/31-36; 3051/8-	311,312,316-318,321-325	
	15,24,25		
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540	1998/2-6,9-11		
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540 541 542	1998/2-6,9-11 1998/2-6,9-11	169,178,211,212 79-82,136-139,178-180,197-202,216-	10,11,12,67,72-75
540 541 542 543	1998/2-6,9-11 1998/2-6,9-11 3006/19,20 1998/14-17,33-36; 1999/31; 3001/17-28;	79-82,136-139,178-180,197-202,216-	10,11,12,67,72-75
540 541 542 543	1998/2-6,9-11 1998/2-6,9-11 3006/19,20	마다의 교육하다 그렇게 하지 않아 들어서 그리는 그리는 사람들이 살아 있다면 하는데 살아 있다.	10,11,12,67,72-75

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546	3006/15,16; 1121/7,9; 1122/7-9	169,170,178,179,193-197,208- 212,216,217,222-228,356,377- 379,392	11,61,72-75
547	2006/15 20	193,197	
548 549	3006/15-20	197,218,222-229	
550	3019/1-7,9,24-36; 3030/1-8,25,26	1,2	80-82,86,87
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571	3037/8-9; 244/7; 252/5-6,9,10; 1122/10	243-246,261,262,361,376,377	
572 573	3037/1-3,14-16,19-32; 252/10; 1122/11,12	266,267,377 241/249,251-254,255-	
313	3037/1-3,14-10,19-32, 232/10, 1122/11,12	258,268,296,332,361,371-373,374	
574	3037/33,34; 3048/2-29; 3049/3,4,9,10,21-	243-245,268-271,273-297,370-	
	36; 3051/28,29; 1122/11,1,2,13,14,15	372,374	
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582	3037/33,34; 3048/12-15		
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603	3051/36; 252/11,12; 1121/1-6; 1122/1-6	357,358,381	
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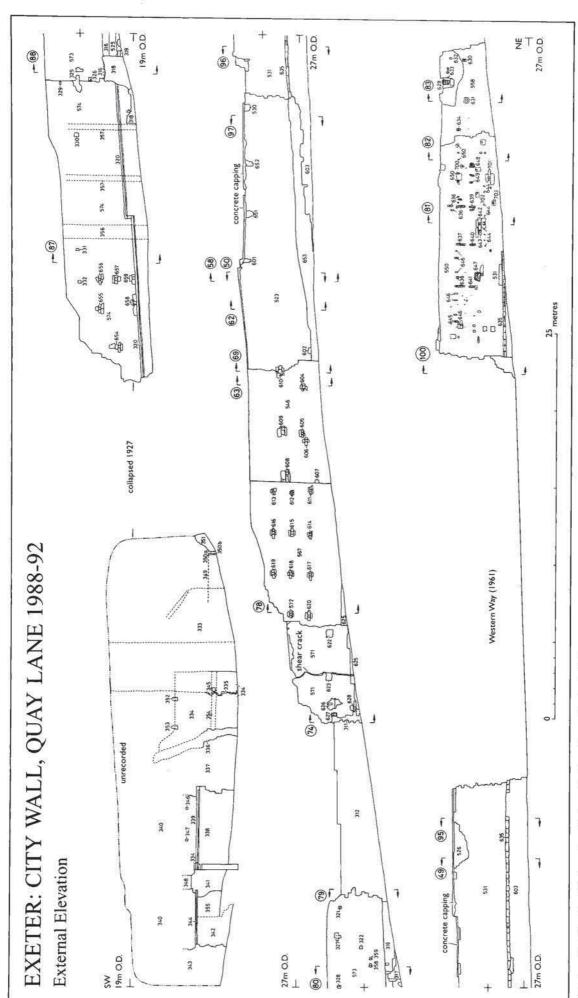


Fig. 1 Southgate-Watergate, External elevation. Scale 1:250.

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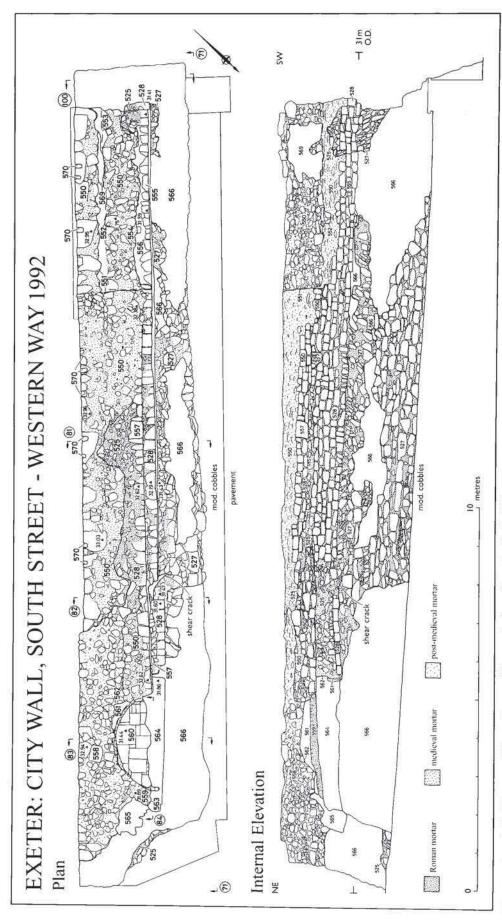


Fig. 2 South St-Western Way, plan and internal elevation. Scale 1:100.

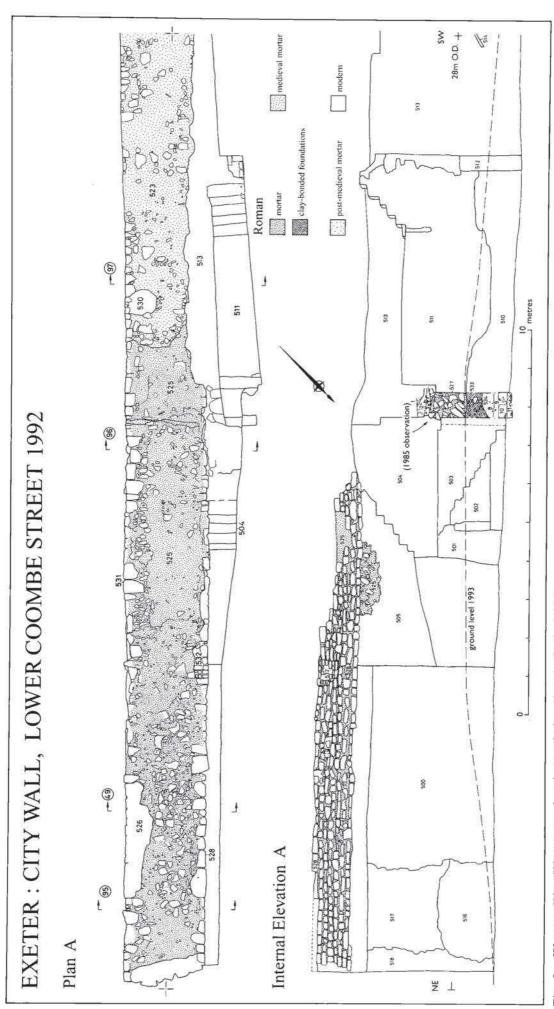


Fig. 3 Western Way-Watergate plan, internal elevation A. Scale 1:100.

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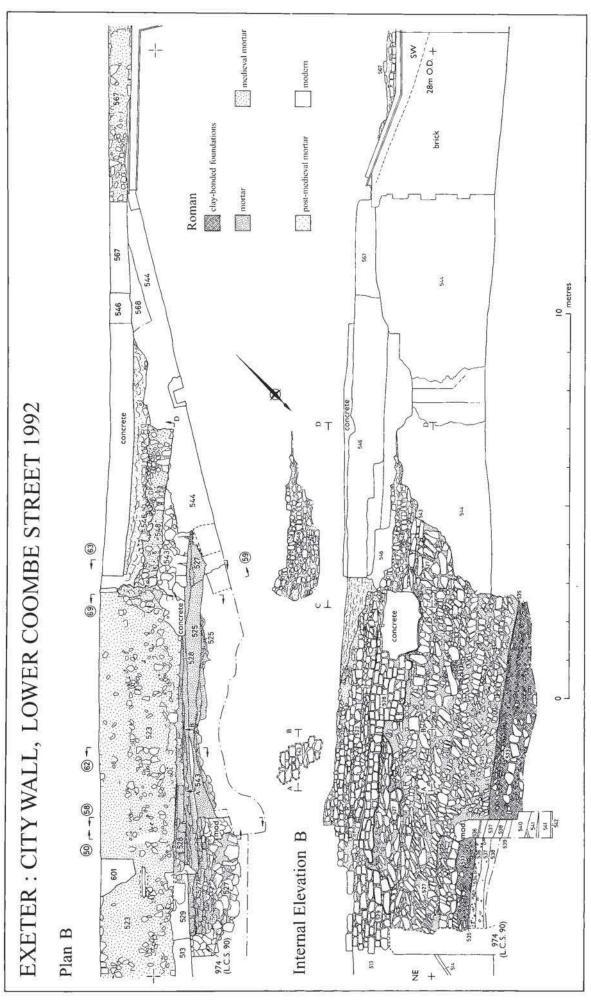


Fig. 4 Western Way-Watergate plan, internal elevation B. Scale 1:100.

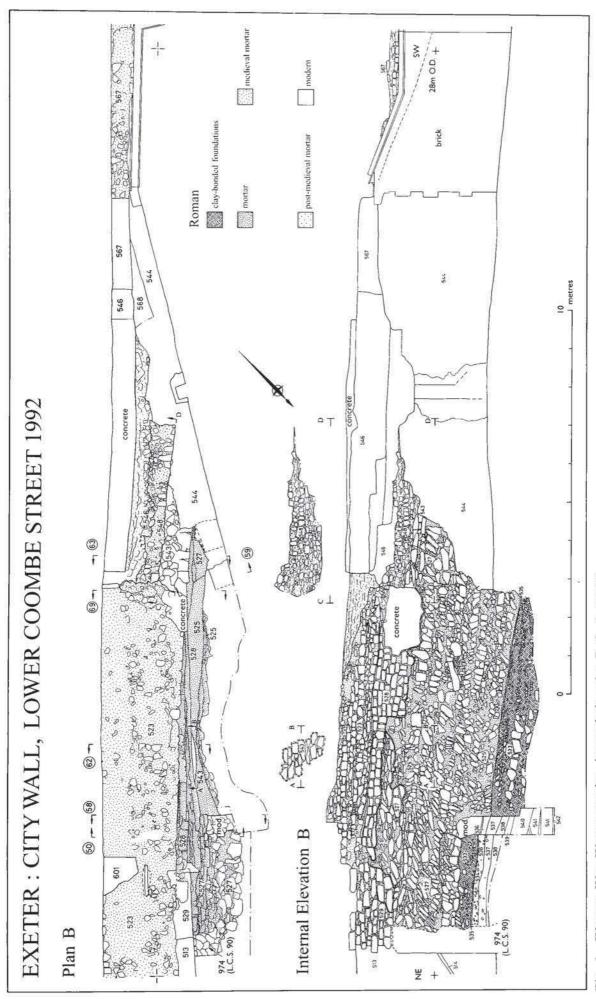


Fig. 4 Western Way-Watergate plan, internal elevation B. Scale 1:100.

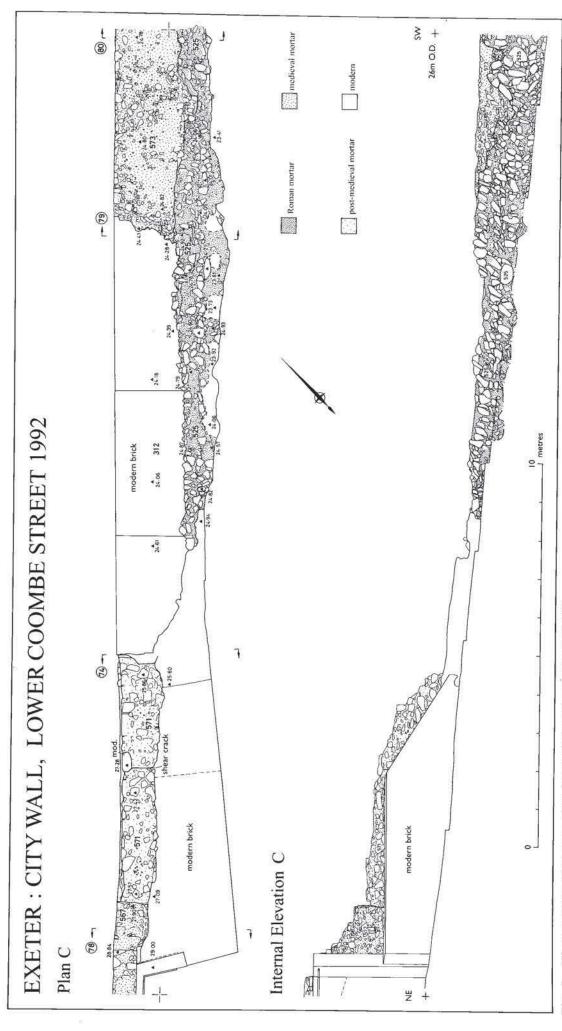


Fig. 5 Western Way-Watergate plan, internal elevation C. Scale 1:100.

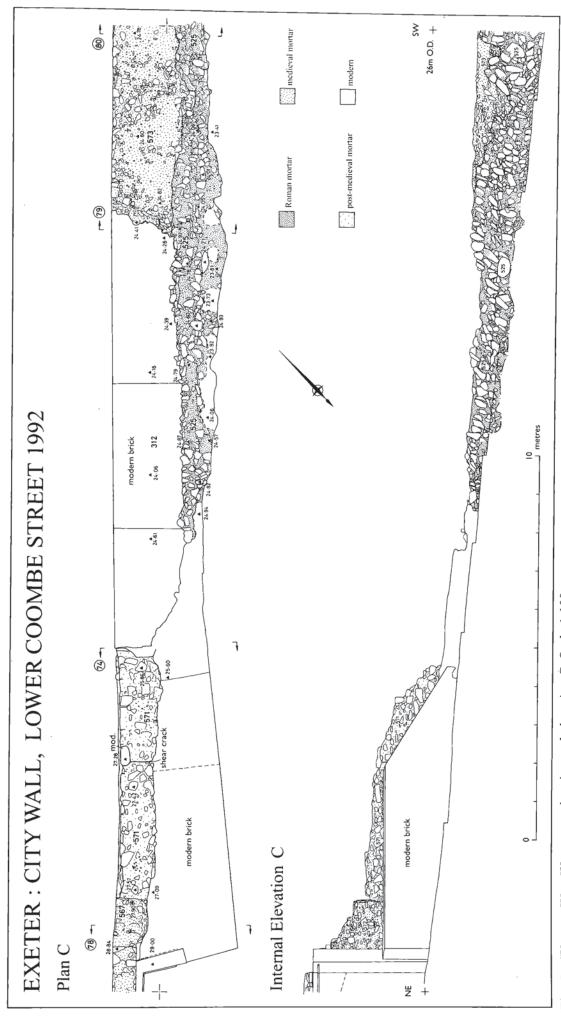


Fig. 5 Western Way-Watergate plan, internal elevation C. Scale 1:100.

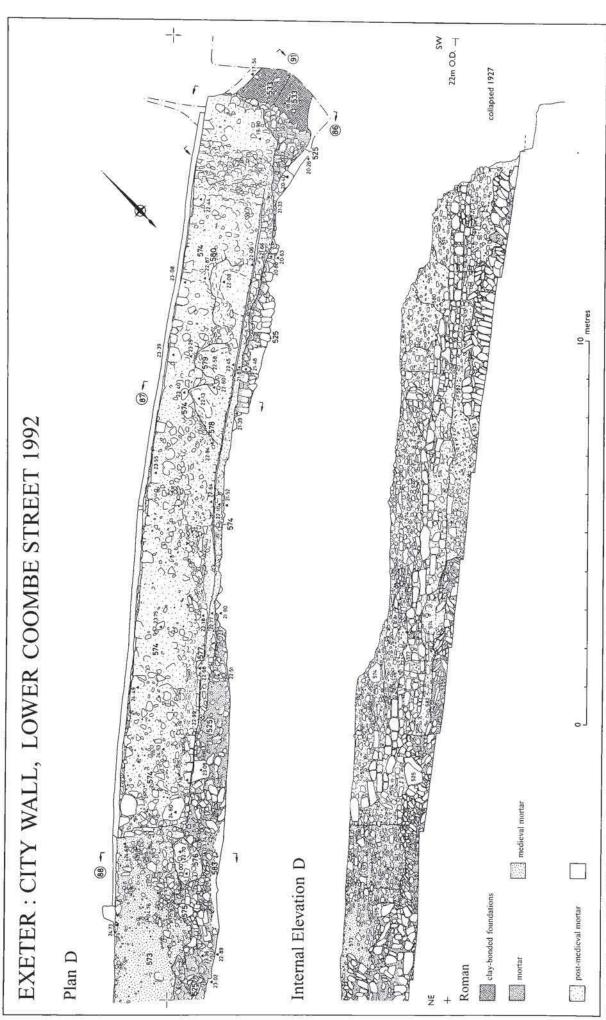


Fig. 6 Western Way-Watergate plan, internal elevation D. Scale 1:100.

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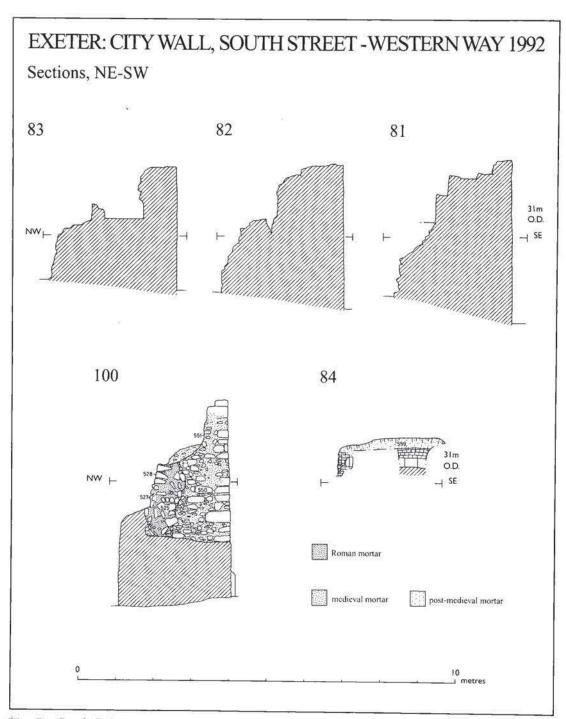


Fig. 7 South St-Western Way sections. Scale 1:100.

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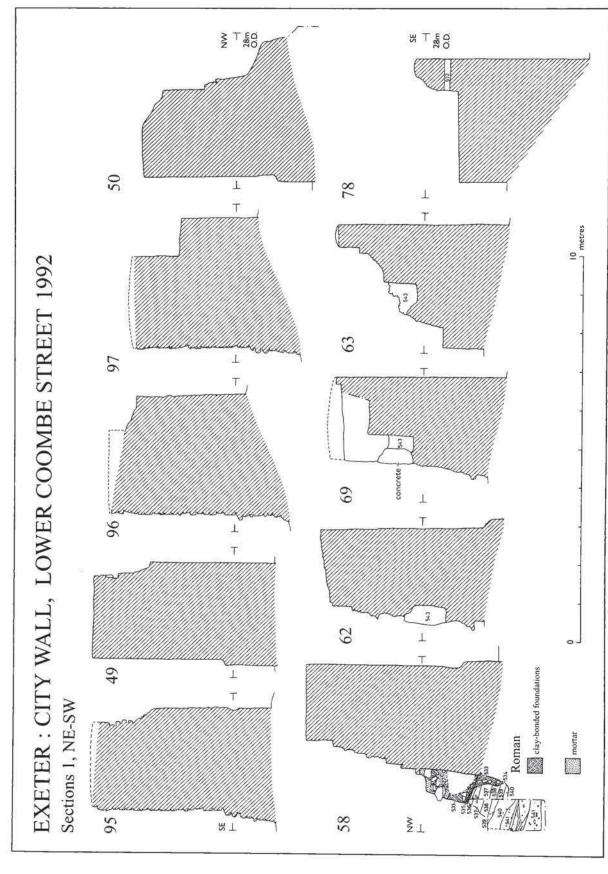


Fig. 8 Western Way-Watergate sections 1. Scale 1:100.

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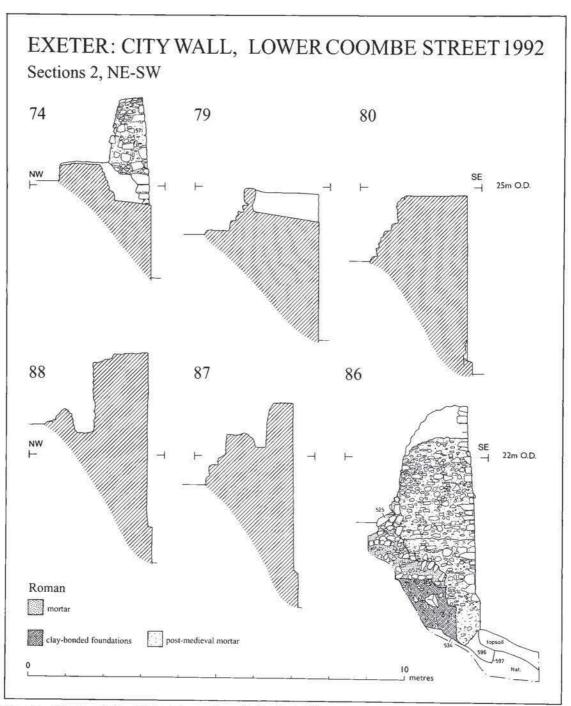


Fig. 9 Western Way-Watergate sections 2. Scale 1:100.



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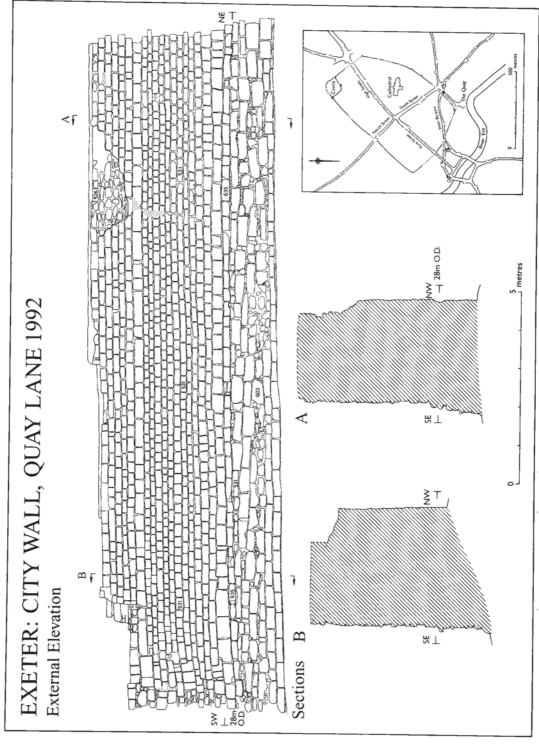


Fig. 10 Western Way-Watergate external elevation, sections. Scale 1:100.

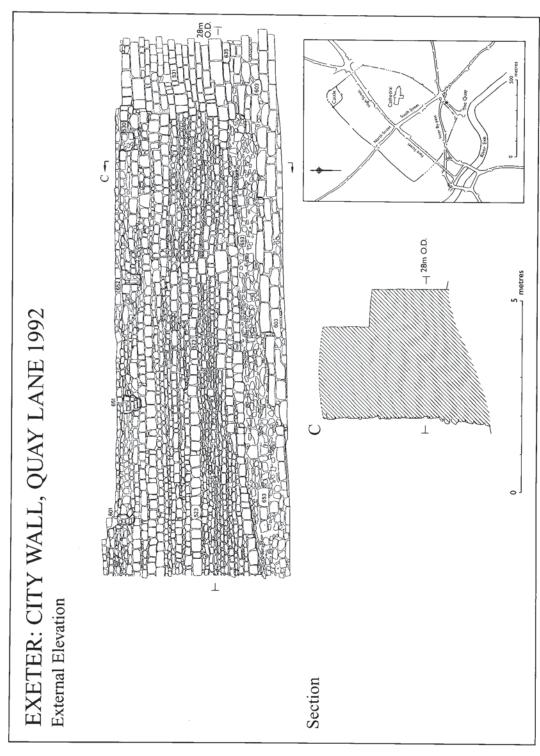


Fig. 11 Western Way-Watergate external elevation, section. Scale 1:100.

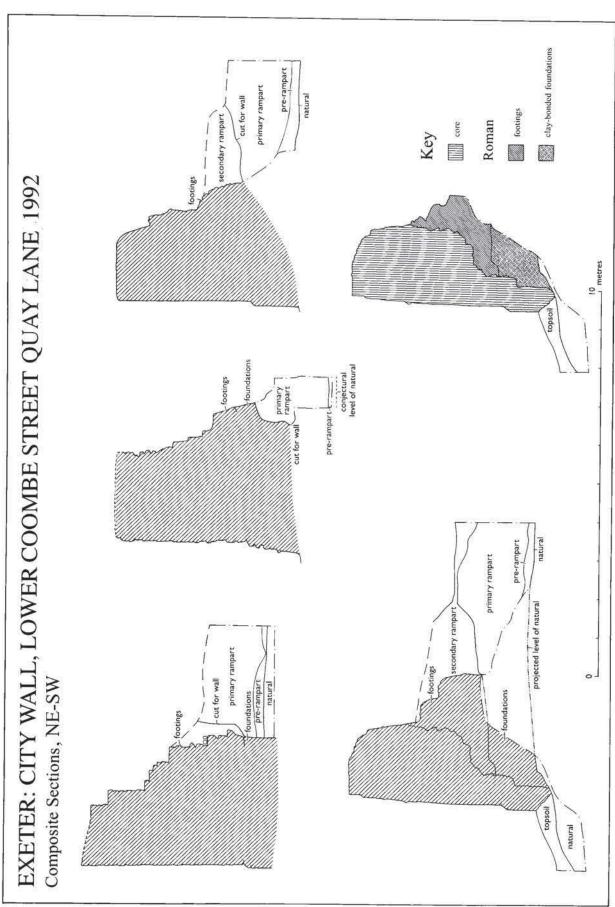


Fig. 12 Western Way-Watergate composite sections. Scale 1:100.

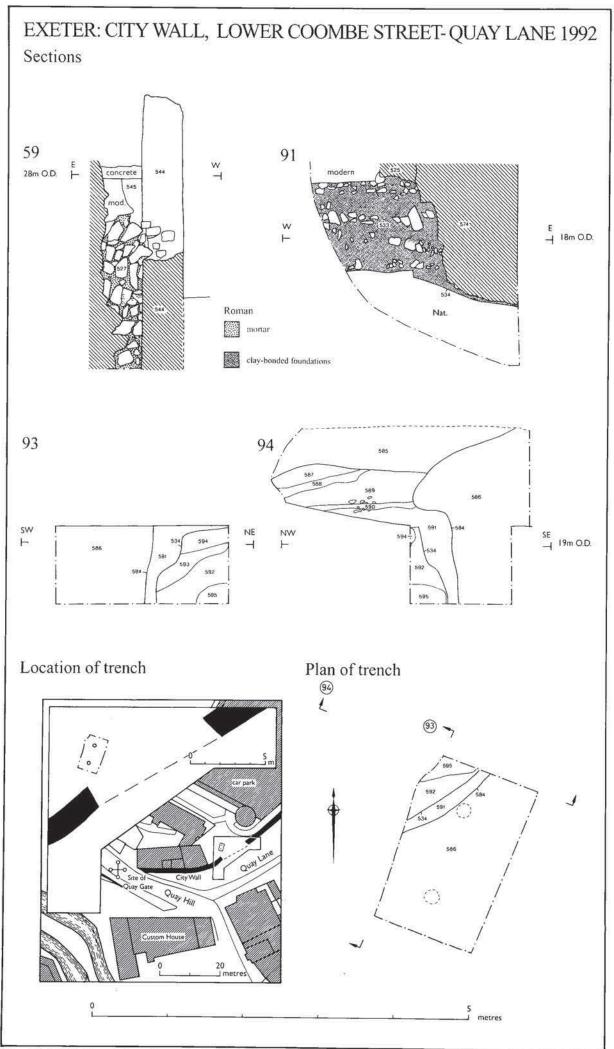


Fig. 13 1992 observation, Quay lane. Scale 1:50.