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Excav. City Walls (Westgate - Southgate)
Survey + exc in west quarter

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**EXETER CITY WALLS:
WESTGATE TO SOUTHGATE,
SURVEY AND EXCAVATION
IN THE WEST QUARTER**

by

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INTRODUCTION

This report collates information gained on the development of the city wall from several phases of work by Exeter Museums Archaeological Field Unit in the old West Quarter of the city, between the sites of the West Gate and the South Gate. Both of these gates were removed in 1819 to improve access to the city centre. The construction of the inner bypass in 1961 breached this stretch of the wall in two places and effectively cut it off from the rest of the city centre. However, that which remains includes some of the best preserved sections of the wall, which survives in length for 291m and up to a maximum height of 7.5m.

Since 1974, members of Exeter Museums Archaeological Field Unit have had the opportunity to examine the fabric of the wall in Cricklepit Street and Quay Lane and to excavate small areas in advance of work on the wall itself, or in its vicinity. The information obtained from these projects has provided much new evidence for the construction and history of the wall in this area, which will be considered in this report. The structural history of the wall is discussed in chronological order, with a build-by-build description of the structure as an appendix.

The projects undertaken by EMAFU have been wide ranging in nature. In 1974 a section of the wall in Cricklepit Street collapsed. Following this engineers' trenches, excavated behind the remaining wall to test the stability of the structure, were examined by members of EMAFU; a small amount of hand excavation was possible and provided additional material with which to date the deposits. Roman wall core, bank and rampart were discovered, together with evidence to show that one phase of building was completely medieval in date (Bidwell 1980, 64).

In 1979 a section of Roman wall was examined in Quay Lane in advance of the replacement of collapsed facework with modern brick. In more recent years plans to pave Cricklepit Street and repair and repoint the City Wall as part of the general enhancement of the Quay area and its environs have been preceded by excavations on Cricklepit Street and at the site of the Watergate. Tenements, dwellings and workshops are known to have existed from the 18th century along Cricklepit Street. A survey of the fabric of the outside face of the City Wall in Cricklepit Street was undertaken in 1985 and a partial survey of the Wall between the section recorded in 1979 in Quay Lane and the Watergate was made in 1988.

The text of this report was largely complete in 1988, since when work on the fabric of the wall and excavation in Cricklepit Street on the exterior (1988-89) and Lower Coombe Street (1989-90) inside the wall have enlarged the scope of knowledge of the wall and its environs. Certain aspects of this report have become obsolete as a result, but since the descriptive and interpretative aspects retain their validity the text has been kept intact. The main aspect requiring revision is the structural sequence on Cricklepit Street, where excavations in 1988 and 1989 revealed the original course of the Roman wall and led to further understanding of the reasons for the complete rebuilding of the wall; a section has been added to the text to cover the discoveries here in outline (below p. 7). Progress has also been made on the recording and interpretation of the wall in Quay Lane, which was dealt with only in summary form here due to the lack of survey drawings. For more detailed description and discussion of this work the reader is referred to recent fabric surveys (Blaylock 1993(a) and (b)) and to the archive report on the fabric recording of the wall undertaken in advance of the construction of the pedestrian bridge above Western Way and the associated consolidation work on the wall (Hall and Bedford forthcoming).

THE BUILDING STONES OF THE CITY WALL (by S.R. Blaylock)

In the main the stone types employed in the wall are all of local origin. Some occasional exotics from outside the immediate area of Exeter appear in late repairs (e.g. Bath stone, granite, South Devon limestone etc.), but these are readily distinguishable and occur very rarely. In the medieval period the range of stone types is restricted in comparison with that available at the time and employed on other buildings. Beer stone and Salcombe Regis stone appear occasionally as accidentals but were not utilised in any quantity. Materials adequate for the purposes of the wall-builders were available in the local stones without resorting to the higher quality (and therefore more expensive) freestones that were necessary for finer architectural work. For another recent examination of the subject, illustrated by a map of local quarry sites, the reader is referred to Allan (1991).

Volcanic Trap

Stones of the so-called 'Exeter Traps' (Ussher 1902, 55; 109) are the principal original building material of the Roman Wall, used as squared blocks for facework and broken rubble spalls for core work. Likewise in the principal medieval builds these stones predominate. As with all occurrences of trap a wide variety of colours, textures and densities of stone is seen, from light grey to dark purple vesicular texture, through semi-dense stones with mineral inclusions to fine-grained stones ranging from purplish grey to brown in colour and sometimes riddled with quartz or calcite veins. In all facework that is demonstrably Roman in date the vesicular stone predominates. The following sections can be interpreted as Roman survivals with some confidence: on the rear face at Post Office Street, to the south-west of South Gate, in the car park at Lower Coombe Street, at Bradninch Place, and in several sections excavated at Paul Street (principally trenches 7 and 15; Blaylock 1988, 14-15). The facework exposed in trench 7 is now open to view behind the Paul Street shopping development. For the front face only one section can be termed Roman with any certainty: that of the first build to the south-west of the breach of the Inner Bypass, near the South Gate. This section is constructed of squared blocks of a distinctive dark purple vesicular stone in regular courses with an offset at the base (see below, p. 7). The same dark purple stone is characteristic of the sections of rear facework listed above. At Paul Street the stone tended to a lighter colour, but is of the same texture.

The Roman core is more widely preserved, indeed much of the circuit affected by repairs, maintenance and refacing in later periods retains original corework although the faces are just refacing of original core. Trap is also the major material of the Roman core, generally laid in loose courses of irregularly-shaped blocks levelled with smaller stone fragments. The footings are generally bonded in clay, the superstructure in coarse pebbly lime mortar. The core courses are frequently set in pitched, herringbone pattern which may be seen at various points on the circuit where the core is exposed: the north-east boundary of Rougemont Gardens provides the best example. River cobbles are occasionally found in the footings of the wall, providing the only variant from the trap rubble.

The sources of the volcanic trap are various. It is assumed that the principal source in the Roman period was the nearest, namely the outcrop of Rougemont/Northernhay, a lava flow extending from the south-west boundary of Bradninch Precinct at c. SX 9198 9290, north-eastwards across the Longbrook valley approximately as far as the southern limit of the Higher Barracks at c. SX 9210 9330. Rougemont Hill itself was probably the first source of the stone although precise quarry sites remain obscure due to the superimposed earthworks and structures of the castle enclosures. This stone was employed throughout the medieval period and was still being quarried in the late 16th century when large quantities of 'Northernhay' stone were employed in the reconstruction of the front block of the Guildhall (Blaylock and Westcott 1987, 7).

Two further sources of trap to the west of Exeter were Barley (SX 898 922) and Pocombe (SX 897 913). Barley quarry was certainly worked in the late 13th and 14th centuries for many purchases of this stone are recorded for the rebuilding work at Exeter Cathedral (Erskine 1983, xiv). The Exeter Receivers' Accounts testify that Barley stone was occasionally employed in the walls (Staniforth and Juddery 1988). By the later medieval period its use had declined, probably due to the competition from the Permian breccias of Peamore and Heavitree the exploitation of which grew widespread in the 15th century (below). Pocombe, a quarry in a separate lava flow to the south of Barley, was extensively quarried in the 19th century and where new stone was employed in repairs to the wall it is very likely to be from this source. Much Pocombe stone is characterised by dense texture and prominent quartz veins, to be seen, for example, in late 19th-century repairs to the Castle Gatehouse (Blaylock 1987, 3).

Many other volcanic intrusions to the north and west of Exeter were quarried in the medieval and later periods and may appear in the fabric of the City Wall (summarised in Burrow 1977, Fig. 2). In fact it is probable that all of the lava outcrops (Geological Survey ... 1898) were quarried for building stone at one time or another, many on no more than a local scale. With plentiful supplies available from the local sources and certain larger quarries elsewhere (several south and south-east of Silvertown; Raddon; and Posbury) it is unlikely that stone from such sites was transported to Exeter in quantity. The identification of trap rocks from individual quarries poses many problems and confident attributions must await closer comparison of specimens from known sites. Given the universal use of vesicular types of trap in known Roman work it may be asserted that this is distinctive of the Rougemont/Northernhay stone although observation of exposures at quarry sites shows that a

wide variety of colour and texture is found in any given deposit.

Sandstones

Of the sandstone deposits in the vicinity of Exeter the New Red Sandstones forming the river cliffs of the Exe valley are too soft to have been used for building stone. The sandstones of the Greensand in the vicinity of Salcombe Regis, although used extensively in the Cathedral in the Norman and Decorated constructions, were not utilised on a large scale elsewhere and almost never appear in the defences. Triassic sandstone, on the other hand, appears frequently in certain builds of the City Wall, notably in sections at Cricklepit Street and Quay Lane; near the western corner of the walls, around Snayle Tower; and near the eastern angle tower towards the northern end of Southernhay. The stone also appears elsewhere as an accidental and sometimes more extensively. Indeed, in builds earlier than the late medieval period, Triassic sandstone forms the second principal building stone. Most of the stone used is white or greyish in colour but occasionally appears in a pinkish red form. Occasional blocks show half white-half pink colouring demonstrating the same origin for stone of the two colours.

The precise sources of this stone are unknown. It occurs in sea cliffs in the region of Exmouth, and in the Otter valley further east, but no quarry sites are known. It is possible that the supplies were obtained by quarrying into sea cliffs, an explanation which is recommended by the consequent ease of transport of the quarried stone. As far as is known at present there are no documentary references to the procurement of sandstone as a building material, yet it is sufficiently common in certain builds to demonstrate sources of a fairly large scale. The dating of the builds in which sandstone is used is not secure and is further complicated by the suspicion that in some cases where it appears the blocks have been re-used from elsewhere or retrieved from collapsed walling under repair. Certain observations narrow the possible date-range: at the Norman gatehouse of Exeter Castle (probably built in the 1070s) Triassic sandstone was used for fine architectural detail such as capitals, window-head mouldings, quoins and voussoirs of arches (Blaylock 1987, 3). The stone appears in a build which is likely to be earlier than the eastern angle tower in Southernhay, a structure dateable in very general terms to the 13th century on architectural grounds. At Cricklepit Street the earliest surviving facework contains a high proportion of Triassic sandstone. Again the dating of this facework is uncertain (build 8 below, p. 15) but it is certainly earlier than the adjacent build (build 10) which is certainly later than 1300, and probably to be dated c. 1400-1450 (below, p. 9). Thus in all the instances where a relative dating is possible an early date is indicated for the use of this stone. The absence of documentary reference in the Receivers' Accounts which begin in 1339 supports the impression of an early date. Whilst it is not possible to attribute specific dates to sections where Triassic sandstone is commonly employed at present, evidence so far obtained points towards a period before routine documentary accounts are available and a date range of the 12th and 13th centuries for this stone may not be too far from the truth.

It should be mentioned in this context that in previous accounts of the fabric of the wall the appearance of Beer stone has been described (e.g. Burrow 1977, 18). The present examination has shown that Beer stone occurs only as an accidental and previous identifications have mistaken Triassic sandstone for Beer stone.

Chert

Several sections of the wall contain high proportions of chert, e.g. sections at Quay Lane (below, p. 9). This material, hard and intractable, appears in rubble facework and sometimes in the core: a small section of Roman core exposed at the rear of the wall at Lower Combe Street contains chert nodules. No specific source is known for this, but it is widespread in the gravels of Haldon whence it must have been brought for low quality work. No further opinion can be offered on the dating of the use of chert at present.

Breccias

There were two principal sources of breccia, generally referred to as 'Heavitree stone', as building stone in Exeter: quarries at Heavitree east of the city and Peamore some 2½ miles to the south. Of these the Heavitree quarries are much the more important. Breccia, a cementation of angular chips of stone in a red sandstone matrix, is not especially durable but was quarried in large blocks and was widely used from the late medieval period until the late-19th century. The stone was variously known as Wonford or Whipton stone in the accounts

of the Cathedral and the City. The first appearance of Whipton stone at the Cathedral is in the account for 1340-41 (Erskine 1983, 263), an entry which contains the earliest reference to breccia. In the course of the late 14th and 15th centuries the Heavitree breccias supplanted the other stones of immediately local origin to Exeter as the basic local building stone. The use of breccia in the city walls was extensive from this period onwards, its presence forming a useful indicator of approximate dating, i.e. the presence of Heavitree stone establishes a date later than c. 1350 for any work in which it appears.

The references to stone in the City accounts relating to the walls in the 14th and 15th centuries are frequently non-specific, naming no source. The earliest reference to Wonford stone is in 1451 with sporadic appearances thereafter and that to Peamore in 1480. There is a single reference to a quarry at Shillingford (1 mile west of Peamore) in 1539 which may have been a source for breccia, since that village lies in a large area of breccia deposits on the west side of the Exe. From this time on breccia is a constant element in the range of building stones in Exeter until the late 19th century and appears singly and in combination with other stones in numerous post-medieval builds of the wall. It may be seen, for example, in the section to the east of the Quay gate which is thought to have been reconstructed in the mid-16th century at the time of the construction of the gate and the development of the quay (below p. 17). In the refortification of Exeter during the Civil War very large amounts of the stone were employed; in the accounts of this work the purchases are actually termed 'Heavitree stone'.

Brick

A discussion of the building materials of the City Wall should be rounded off with a mention of brick, which appears in some quantities in late builds and repairs; although no sections are entirely of this material other than some areas consolidated very recently (Quay Lane, 1979; modern buttresses at Cricklepit Street, 1983). The first wholly brick buildings in Exeter were houses at Nos. 44-46 Magdalen Street, built in 1659 (demolished 1976). Brick was introduced as a generally acceptable building material in the course of the 20 years 1660-1680, appearing for instance in the reconstruction of the Bishop's Palace, probably undertaken by Bishop Seth Ward, 1662-67, and in the various buildings on the Quay of 1680-81. Before c. 1660 occurrences of brick are very rare although its use is attested at Exeter from as early as the 1470s (Allan 1984, 228). Bricks have been found in archaeological contexts of the early 16th century and onwards. Some of these may have been locally made but many were of the small size and distinctive colour of imported Flemish bricks (*idem*, 232). These bricks were occasionally seen in isolation in the City Wall. Most sections containing brick in quantity belong to the 18th and 19th centuries, appearing in repairs, in blocking of gaps and small features and as remnants of buildings constructed against or within the fabric of the wall.

CHRONOLOGICAL STUDY FROM EXCAVATION AND SURVEY OF THE STANDING STRUCTURE

Topography

The Roman town at Exeter grew out of the Roman legionary fortress strategically positioned on high ground on the east bank of the river Exe with a steep valley on the north-west (the Longbrook) and a shallower valley to the south-east (the Shutebrook). These physical features dictated the form and position of the later town. On the south-western side there was a sharp drop to an area of marsh bordering the river. Here the city wall was built on the limit of the high ground (modern Cricklepit Street). It is likely that the wall was terraced into a sloping hill face (Bidwell 1980, 63). At the bend in the river, just before the position of the present quay, the cliff diminished in height where a stream valley (the Coombe) met the Exe. Provision for this small stream running into the Exe at this point was presumably made through or under the wall. The road up Quay Hill crosses the wall east of the combe at the southern corner of the city. Beyond this road the wall turns away from the river and climbs up a steep hill (along present Quay Lane).

Limited excavation behind the wall at Cricklepit Street in 1974 (Fig. 1) provided evidence of the original ground level of the western slope of the valley into the combe. A progressive decline in the level of the natural subsoil is evident, from 16.20m in trench 2 (this may be slightly lower than the original height) to 16m-15.50m OD in trench 1, 17.5m to the east. It decreases further to approximately 14.10-14.20m OD in trench 3, a further 11m eastwards. No excavation has taken place east of trench 4 of the 1974 excavations, consequently the form

of the bottom of the Coombe valley and its north-east slope are unknown. On the site of the Lower Coombe Street excavations of 1989-90 the natural slope was cut by a small stream bed to c. 14.5m before rising eastwards to c. 24m at the north-east limit of the site.

The Roman wall

Early Roman activity before the construction of the wall

Evidence of Roman occupation in the area before the construction of the wall was recovered from trenches 1 and 3 in Cricklepit Street 1974 (Figs. 1 and 2). In trench 1 the pre-Roman soil horizon (119, Fig. 1, section 1) was covered by a deposit of light grey-brown clay (118) with a trampled surface formed above of chippings of volcanic trap, charcoal, oyster shell, burnt clay and gravel (117).

In trench 3 the earliest deposits were a series of pits, gullies and ?post-holes cutting into the natural subsoil (Fig. 1, section 4). This was followed by at least two separate episodes of deposition which raised the ground level considerably. Layers 317-314 represent the first phase of deposition. The top of layer 314 was compacted into a hard trampled surface indicating that some time had elapsed before the second phase commenced (layers 313-311). The area examined was very small (just over two square metres) and a full interpretation of these deposits is not possible. It is not known whether this early deposition represents the intentional infilling of a slight dip within the general slope of the hill or a partial infilling of the Coombe valley itself, or purely the disposal of unwanted material. The result is a levelling of the ground level between trenches 1 and 3 producing a decline in level of only 1m maximum.

The evidence of pottery suggests that there is a gradual accumulation of material with a clear chronological sequence following the stratified sequence, e.g. layer 319 contained material of the late first century and layer 311, immediately below the first bank, material probably of the Hadrianic or Antonine periods (Holbrook and Bidwell 1991, 10).

The first Roman bank

As with other areas where the rampart behind the wall has been examined (Bidwell 1980, 60), two separate phases of Roman bank construction were identified behind the wall at Cricklepit Street. The first bank pre-dates the construction of the wall and was partially cut through during the construction of the wall. Once the wall was built the bank was heightened to form a rampart behind the wall.

In trench 1 (Cricklepit 1974, Fig. 1, Section 1), two layers (115,116) overlying a trampled surface (117), formed a low bank standing to a maximum height of 0.60m. The natural subsoil in the area is described as being a brown-buff silt-clay. It is probable that 116 represents natural subsoil mixed with domestic refuse, but 115 may be a layer of redeposited natural subsoil. It was suggested at the time of excavation that 115 could be subsoil upcast from preliminary clearance in front of the bank.

A similar pattern was seen in trench 3 (Fig. 1, section 4); two layers were suggested as being a primary bank at the time of excavation, surviving to a height of 0.60m: 310 is a brown-yellow silt-silty clay, similar to the natural subsoil. Layer 309 contained charcoal flecks and pebbles and appears to be equivalent to layer 116 in trench 1.

In trench 1 several layers overlay 115 and 116 (Fig. 1, section 1). These layers (107-114) were thought at the time of excavation to be part of the first bank. However, it is stratigraphically possible that they were deposited after or during the construction of the city wall and were part of the later heightening of the bank or rampart. These layers were mixtures of natural subsoil and occupation debris. There were also occasional layers of volcanic trap chippings which may have been debris associated with the construction of the wall; alternatively they could represent waste from the construction of a stone building in the locality. Intermediate surfaces composed of grit and trap chippings were recorded within the heightening of the rampart in trench 7 at Paul Street in 1983 (cf. Paul Street sections 55/108 and 112, 1763, 1778; Blaylock 1988, 10).

The purpose of the first bank has been fully discussed elsewhere (Bidwell 1980, 60; Blaylock 1988, 6-8). Excavation at the rear of the City wall at Paul Street and North gate has demonstrated that the first bank was cut by the foundation trench for the Roman wall and is therefore earlier than the construction of the wall. At Cricklepit Street 1974, trenches 1 and 3 showed that the wall in this area had been completely rebuilt in the medieval period and no relationship survived between the rampart and the Roman wall. However, a circumstantial relationship was provided by the presence of mortar mixing pits (see below) cut into the rear of the first bank and sealed by the deposits of the later bank in trenches 1 and 3 (Fig. 1, section, 106; Plan 3, 357, 358). The mixing of mortar in quantity was presumably related to the construction of the wall and thus the same sequence can be confirmed in the Cricklepit Street trenches as was recovered from sections of the defences at Paul Street and North Gate.

The construction of the Roman Wall

There is little visible masonry that can be securely dated as Roman along this section of the wall. However, excavations and observations have provided considerable information about the position and construction of the Roman wall.

The presence of Roman corework (often refaced in later periods) demonstrates that the present wall follows approximately the same line as the Roman wall. Roman corework was located in trench 2 of the 1974 excavations (Fig. 1, section 3, Plan 208) and on both the front face of the wall at Quay Lane, where later refacing had fallen away, and in the rear face of the wall at Lower Coombe Street car park (associated with some rear facework). The position of the rampart in Cricklepit Street in trenches 1 and 3 would suggest the wall (rebuilt in the medieval period) followed a similar line to its Roman predecessor, but see also below, p. 7.

The topographical position of the wall influenced the construction technique used. The wall acts as a revetment wall for much of its length along Cricklepit Street and the lowest part of Quay Hill. In this area the wall was built in a terrace cut into the sloping cliff face thereby providing a solid base for the foundations of the wall. In Trench 2 of the 1974 excavations the foundation trench was cut 2.5m into the natural subsoil (Fig. 1, section 3). At Quay Lane the wall turns away from the river and climbs a steep hill; nothing is known of the foundations of the Roman wall or the rampart in this area. Much of the rampart was removed in previous centuries to allow buildings to be constructed directly behind the wall. The base of the wall core was visible in a section recorded in 1979 (Fig. 5, 30), resting on natural subsoil, some way above present ground level. In this position at least, modern ground level is below that of the level at which the wall was constructed. A further section was recorded on the north-east side of the breach in the wall in 1992 (Hall and Bedford, forthcoming, section 86).

Three shallow rectilinear pits with rounded corners (0.20-0.30m deep) were discovered cut into the rear slope of the first bank at Cricklepit Street (Fig. 1, Plan 1, 106; Plan 3, 357, 358). None was fully excavated as the pits extended beyond the limits of the trenches, the full width of 357 however was 2.20m and its shape suggests that the pit was roughly square. Pit 106 retained an inner skin of a yellow mortar containing waterworn pebbles (greater than 0.01m in diameter), and pits 357 and 358 contained traces of the same. These were interpreted as mixing pits for the mortar of the wall, the yellow pebbly mortar being entirely characteristic of the bonding agent seen in all sections of Roman wall core.

Pit 106 in trench 1 was filled with red clay (105) and sealed by a trampled surface of grit, stone chippings and silt (104) which extended across the first bank. In trench 3 the mortar pits were filled and covered by a brown silty soil with chert pebbles and yellow sandy clay inclusions to a maximum height of 0.70m. No surface was formed above this. A narrow gully (359) 0.45-0.50m wide and approximately 0.40m deep cut through these fills in trench 3, suggesting that some time elapsed before the construction of the rampart.

In 1979 an area of facework in Quay Lane (probably a refacing) collapsed revealing a pattern of construction since recognised elsewhere along the wall (Paul Street, Northernhay Gardens). The corework (Fig. 5, detail) stood to over 3m in height and was exposed for a length of 8m. The footings of the wall (301) were formed of mainly volcanic stones set in dull red clay (probably a redeposited subsoil) mixed with small stones and waterworn pebbles. These were probably set into a foundation trench and were exposed as the ground level in front of the wall had been reduced. Mortar-bonded core lay above the clay-bonded footings. Two types of mortar were detected, the first light brown in colour and sandy in texture with small pebble inclusions. This

bonded volcanic stone rubble arranged in a herringbone style (302). There was a clear horizontal break between this and the build above; volcanic trap and chert, similarly set in herringbone fashion (303,304) is bonded with the second mortar type: pale/off-white with gravel and pebble inclusions. The corework seen in the 1974 Cricklepit excavations (above) was not pitched in this characteristic manner.

One distinctive area of facework at the top of Quay Lane has features unlike those recognised elsewhere along the wall and represents a piece of surviving Roman exterior facework. It is coursed and built entirely of large blocks of uniform vesicular volcanic trap (underpinned by later work of Heavitree stone). It contains no putlog holes, which are common features of medieval work. The mortar is very similar that recognised in the Roman core work containing large pebbles as an aggregate. The plinth of this build takes a different form to that of other parts of the wall where a chamfer is visible; here it can only have had a very shallow chamfer if it had one at all, as some of the blocks are almost flat. This is better seen as an horizontal offset than as a chamfered plinth, the shallow angle being the product of weathering rather than the remnant of a chamfer. Is it possible that later rebuilds of the wall incorporated a chamfered plinth to match the weathered Roman plinth?

Some Roman facework survives on the rear face of this section of wall, visible from Lower Coombe Street car park. This is of coursed faced blocks of vesicular volcanic trap, and is characteristically stepped, so the wall narrows as it becomes higher. This same feature has been noted elsewhere on the wall in Post Office Street, Northernhay Gardens (rear face in Bradninch Place), Paul Street, and on the other side of Western Way just south of the South Gate (Fox 1968, 12). The steps or offsets were originally covered by the rampart.

No evidence has yet emerged to suggest that the area presently occupied by the Quay was so used in the Roman period and thus it is unlikely that there was a Roman gate at the southern corner of the wall. At the very least there must have been an outlet to carry the water of the Coombe valley through the wall and into the Exe.

The original course of the wall, the evidence of the Cricklepit Street excavations of 1988-89

It has already been mentioned that the wall, in its approach to the southern corner of the city, followed a line at or towards the top of a steep bluff. Such a position was deemed to require more substantial digging-in of the foundations than was the case elsewhere (above p. 6), and even these precautions proved too little to prevent a collapse of the wall in this area.

Further excavation in 1988 and 1989 in a trench at the foot of build 94 (rebuilt in the medieval period, see below) revealed a footing of Roman masonry, some 3-3.5m outside the present line of the wall, and on a similar alignment. A length of c. 9m of wall face was exposed, standing to a height of almost 2m at a point where the depth of the structure was explored (Fig. 9, 895). The interpretation of this structure is in some doubt: the masonry may represent the footing of the Roman wall as originally built, which collapsed and was rebuilt, according to archaeological evidence, perhaps c. 1400 (see below); or, alternatively, may represent buttressing or reinforcement of a medieval area at the foot of the wall at a time after its construction. Whichever interpretation is correct it is clear that the line on which the wall was originally built at this point lay further out from the present line, and proved unsatisfactory as a choice of position.

The area excavated in 1988-89 did not reveal enough of the line of the Roman footing to demonstrate how it related to the standing wall. The only section where there is known to be Roman core within the wall is the build here numbered 8 (Fig. 3) to the north-west. Comparison with the general plan of the wall in this sector of the city will show that the line of the wall bends inwards slightly from the beginning of build 10 (the second buttress). This inward kink could well be explained in the context of a medieval collapse and rebuild. If the inward-bowing section indicates rebuilding, the likely south-eastern limit of the collapse, and therefore of the rebuilding too, must lie in the section which collapsed in 1974; the OS depiction of the wall here, indeed, shows an abrupt change of alignment within this section (dashed line on Fig. 7). Thus all the wall from the junction of builds 8 and 10 to the 1974 collapse could follow the sequence suggested here.

The causes of the collapse should be sought in the steepness of the slopes in this area, and perhaps also in the likely flow of water to the rear of the wall; a factor which was judged to have constituted to the most recent collapse, that of 1974. We know of precautions taken in the medieval fabric to channel away the water of the Coombe stream and discharge it through the wall by means of an arch; possibly there was no equivalent

arrangement in the Roman wall; or if there was it proved inadequate to prevent the flow of water from undermining the foundations of the wall.

The medieval wall

For the discussion of the medieval work the wall will be treated in two sections: Cricklepit Street and Quay Lane. The two are now divided by the breach at the site of the Watergate. The excavations in 1974 behind the wall at Cricklepit Street provided some dating evidence for the rebuilding of the collapsed section of wall. It is extremely difficult to date different builds precisely without excavation, however, the approximate date of a particular build can be ascertained by the geology of the building materials used (above, pp. 2-4) and the style of the build. The relationship of one build to those adjacent often enables a sequence to be constructed.

Cricklepit Street; medieval builds

A survey examining the standing structure of the city wall on Cricklepit Street was undertaken in spring 1985. Together with information from the excavations behind the wall in 1974 it is possible to establish a chronological sequence of builds and suggest dates for these periods of construction.

The earliest facework on Cricklepit Street is build 8 (Fig. 3) which is abutted by 6 to the north-west and cut by the insertion of the second buttress (140), a part of build 10. This was shown by excavation to be a medieval refacing on Roman corework (Fig. 1, Cricklepit Street 1974; trenches 1 & 2). Build 8 survives for a length of 18m, extending from approximately 0.50m east of the first buttress (123) up to the second buttress (140). The build is of graded courses with a chamfered plinth at c. 14.50m OD. Part of the wall face integral to build 8 survives below the plinth at the north-western end of the build, suggesting that the plinth lay above contemporary ground level. This build is distinctive as it contains a comparatively high proportion of Triassic sandstone (30-40%) the remainder of the wall being largely of vesicular volcanic trap with an increased use of a denser veined trap in the top 5-6 courses. The build contains two levels of putlog holes. No precise date can be given to this build but it is earlier than build 10 (see below), and the presence of large quantities of Triassic sandstone may be taken as an indication of a relatively early date (above p. 3).

The builds to the east of 8 (Fig. 3, 10, 94, 99) are very similar to each other in geological composition and style of construction. Build 10 abuts (and is therefore later than) 94 at the scar of the fourth buttress (141). Further to the east a section of wall, 31.5m in length, has collapsed, leaving no direct relationship between builds 94 and 99. Nevertheless the following evidence suggests that builds 10, 94 and 99 may be of the same phase of construction:

- (i) The coincidence of the levels of the putlog holes in builds 10 and 94 suggest that those at the north-western end of build 94 may have been used for the construction of build 10.
- (ii) The mix of stone types in each build is very similar: the lower courses are largely of vesicular volcanic trap and the uppermost courses largely of a dark denser veined volcanic trap.
- (iii) The style of construction is very similar; of well cut and faced blocks.
- (iv) Builds 10 and 94 have a plinth at the same height.

Notwithstanding these similarities the evidence for the contemporaneity of the three builds may extend no further than the facework: as has been mentioned above in discussion of the collapse of the Roman wall, 94 is probably part of the collapse and complete rebuild of the wall, whereas 99 is probably refacing on standing Roman core.

Some dating evidence was retrieved for wall build 10 (Cricklepit Street 1974; trenches 1, 3 & 5). Trench 5 was excavated specifically to provide additional datable material for this section of wall. This trench produced a fragment of human jaw, some floor tiles (34 fragments) and some fragments of glass. The nature of the artefacts has led to the suggestion that the fill may have been derived from an ecclesiastical building (Griffiths 1974, 169). The most closely datable material is the floor tiles. Many are plain green glazed but three designs are recognised (Allan 1984, 234; designs 20, 28 and ?68). These suggest the tile fragments were from a complicated pavement which must have been laid in the early 14th century. It is difficult to assess at what time the pavement would have been removed and deposited as fill in the foundation trench of the city wall. However it must have been after 1400, as the tiles were worn and may have been in use until 1450 or later (J.P. Allan, pers. comm.).

To the north-west of build 8 there is a stretch of wall also probably of medieval date (Fig. 3, 6). This contains a plinth matching that of build 8, and putlog holes and is integral with the first buttress (123). Build 6 was keyed into build 8 demonstrating its later date, and is largely of well-coursed vesicular volcanic trap blocks although it does contain two blocks of breccia. The breccia was not widely used until the late 14th century (above p. 4) and its appearance is usually taken to indicate a date of post-1350, although in this case with only two blocks, its use cannot be guaranteed as an indicator of date. From excavation (Fig. 1, trench 2, Plan 2, section 3, 208) it is known that build 6 is a refacing on Roman core. The chronological relationship between build 6 and builds 10, 94 and 99 is unknown.

Quay Lane medieval builds

A full survey of the fabric of the City Wall from the site of the Watergate to Western Way had not been undertaken at the time of writing of this report. An outline drawing showing putlog holes, scars blockings and other features of the stretch of wall south of the modern brick repair (Fig. 5, 312) was undertaken in 1988. It was only possible at that time to record parts accessible without scaffolding. From the modern repair (Fig. 5, 312) eastwards to Western Way the wall has been re-examined visually with additional notes being made to the 1978 Exeter Wall Survey (Appendix p. 18-19).

The wall at Quay Lane is more varied in styles of construction and in materials used than that at Cricklepit Street.

A distinctive coursed build of uniformly vesicular volcanic trap (ECWS 1978; 22.8) at the top of Quay Lane, cut through by Western Way, has already been described (above p. 7). Work at Lower Coombe Street in 1991-2 has now demonstrated that this section is of Roman date (Hall and Bedford forthcoming).

Two other well-constructed coursed builds occur in the Quay Lane section. The first build (Fig. 5, 340) at Quay Hill (immediately adjacent to the site of the Watergate) is very similar to builds 10, 94 and 99 on Cricklepit Street (above p. 9). It is built of well-coursed volcanic trap, largely vesicular in the lowest surviving courses with an increased use of veined volcanic trap in the upper courses. It contains putlog holes and a chamfered plinth, below which is later underpinning. The similarity in materials and style with above-mentioned sections on Cricklepit Street suggests that build 340 may be of the same date as 10, 94 and 99 (Fig. 3).

The second coursed build, east of the brick rebuild (312), of 9.4m in length is of well-coursed and faced vesicular volcanic blocks, with some of Triassic sandstone (not numbered or illustrated at present; ECWS 1978; 22.5). There is no plinth but it does contain putlog holes. This style of construction would suggest an early medieval date.

Two rebuilt sections of the wall at Quay Lane contain numerous blocks of chert in the facework. The first of these progressing up Quay Lane (Fig. 5, 314) is coursed (although somewhat uneven in places) and is composed mainly of chert and volcanic trap, with some Triassic sandstone. The build contains putlog holes but no plinth. The second build contains more chert and Triassic sandstone (ECWS 1978 22.7) characteristically set in bands. The courses of the lower part of this build have an undulating appearance where the wall was probably constructed on an earlier build and an attempt was made gradually to level the courses during construction rather than level the top of the earlier build. No putlog holes have been detected in this build. It may therefore be of post-medieval date. It is clear from many observations of corework that chert was frequently used in the core of the Roman wall and it is likely that the chert in the facework of these two builds is re-used from collapsed or dismantled wall core.

The Watergate

Archaeological evidence and documentary research of recent years suggest that it is unlikely that there was an entrance to the City at its southern corner prior to the construction of the Watergate in 1565 (Henderson 1987, 4). It is clear from documentary sources that this area was referred to as the 'watergate' before this time. As the Coombe valley meets the Exe at this point the stream must have had an outlet here, and it is probable that the name 'Watergate' refers to this outlet rather than a 'gate' for entry into the City.

In build 99 in Cricklepit Street (Fig. 3) part of a blocked archway of vesicular volcanic trap (145) can be seen, this is now blocked and partly obscured by a late archway. Excavations against the wall in this position in 1987 showed that this early archway was an outlet for the stream flowing in the Coombe valley (Cricklepit Street 1987). Immediately adjacent to the arch, to the west, is a scar revealing the profile of the side of a buttress (Fig. 3, 143), which was c. 1.20m wide at the top, but widened in a battered base beneath the level of the arch (145) and perhaps ran eastwards beneath the arch itself as a plinth. No contemporary fabric survives to the east, which was rebuilt in the mid 16th century and then was partially masked by 19th-century structures (108 etc.). Assuming the arch was symmetrical a reconstruction can be devised consisting of matching buttresses either side of the arch connected by a plinth, either rectangular or semi-circular in plan, over which the water flowed from the outlet above. Hogenburg's map may suggest that it was semi-circular. Such a reconstruction is not dissimilar to the mid 16th-century structure when a sloping plinth was positioned beneath the outlet of the Coombe (cf. Figs 7 & 8). This 16th-century structure, of Heavitree breccia, provided support for the new Watergate which was inserted into the wall above at the same time (in 1565). Below the plinth an area was paved with large Heavitree slabs. This pavement was flanked by cobbled surfaces, thus providing a solid course for directing the water of the Coombe towards the Higher Leat and a fordable crossing point.

Post-medieval period

Quay Lane; post-medieval builds

There are three builds of the Wall at Quay Lane that are probably of a late medieval or early post-medieval date. This is suggested by the type of construction, random or roughly coursed, probably re-using stone, and the types of building stone employed: volcanic trap, Triassic sandstone and Heavitree breccia. No brick is evident, suggesting a post-medieval but pre-modern date. It is possible that some of these builds are of the Civil War period, or immediately post-Civil War, as there is much documentary evidence for heavy bombardment of the area in the vicinity of the Watergate, from positions on the opposite side of the river. Such damage was often hurriedly repaired with cob infill and rebuilt in stone as time and resources permitted. It is possible that the sections of very irregular, random rubble construction might represent urgent repairs of the sort hinted at in the sources (M.J. Stoye, pers. comm.). An example of such a section is 313 in Quay Lane (Fig. 5).

The other two areas of wall that are probably of post-medieval date are 323 (Fig. 5) and ECWS 1978; 22.6. Wall build 323 is of 19.5m in length and is roughly coursed of mixed stone types; Heavitree breccia, volcanic trap and Triassic sandstone. It contains occasional putlog holes on four levels and an integral plinth probably originally chamfered but now very weathered. The plinth steps up part way along this section where there is a slight change in the alignment of the wall. Large Heavitree blocks acting as quoins give additional strength to the wall at this point. The second build (ECWS 1978; 22.6) is very roughly coursed and is similar in appearance to 323; this build has occasional putlog holes but no plinth is visible above present ground level.

The inclusion of brick in build 333 (Fig. 5) dates this build to the late 17th century at the earliest. The Custom House of 1680 was one of the first buildings in Exeter to be built of brick; it is possible that this re-build which is directly behind the Custom House is of a similar date. It is constructed of large Heavitree blocks, coursed but not entirely even, with bricks to fill up small gaps and for levelling purposes. It is known from documentary sources that this area of the wall was heavily damaged in the Civil War, so a rebuild at this time is not unlikely.

Buildings against the wall

From the late 17th century, a succession of buildings were constructed against the exterior face of the City Wall. In 1681, the 'Jolly Sailor' public house was built against the City Wall and a revetment wall to Quay Hill behind the Custom House. From this time onward the Coombe valley stream was channelled into a culvert and ran underground. The culvert was partially excavated at the Cricklepit Street site in 1987. The construction of the culvert occurs at the same time as the raising of ground levels on the Quay, associated with the construction of new buildings and extension of quays (Henderson 1987, 15-18). Domestic buildings and small industries flourished in this area and by the time of the Chamber Map Book survey in the 1750s there were buildings lining both the front and the rear face of the wall for much of its length (ECA 58, ff.4 and 10). The buildings on the inside face were gradually removed in the course of the 19th century by the Improvement Commissioners as the various leases expired. Those buildings outside the wall were removed in 1873 (A.G. Collings, pers. comm.; see also Collings forthcoming).

Examination of scars left in the wall face indicate the former positions of buildings. At the east end of Cricklepit Street where the street widens out there are many phases of building scars (Fig. 3). Up to the eastern extent of build 10 there is evidence for a two-storey structure (163-157, 165-170); two rows of joist-holes, now mainly blocked by brick and mortar, were cut into the wall face, these indicate that the building was approximately 4m long. Both rows of joist-holes stop at the fourth buttress, suggesting that the buttress formed the limit of the building and was still standing when the building was constructed.

Build 94 is the most heavily disturbed by later building activity (Fig. 3). An attempt to match up the size and position of timber sockets and areas of patching revealed two clear methods of construction. The first method uses small regularly spaced joist holes like those seen in build 10, apparently for floor joists. The second method is of larger beam slots, probably only two being used to support each floor. The first type is only clearly represented twice in build 94, by a row of five joist-holes east of the fourth buttress (Fig. 3, 33, 176-7, 188-9) and a row slightly further to the east and at a higher level (45, 49, 182, 183). There are two groups of regularly spaced areas of patching (47, 178, 181, 186, and 51, 173, 194-5) representing the second method. Within each group the patched areas are set at just over 2.00m intervals, vertically and horizontally, the two groups are 3.00m apart. It is likely that these patches represent two two-storey structures each supported by 4 beams: two for the first floor and two for the roof. At the top of the wall there are five areas of blocking which are at least partially above present ground level on the inside of the wall. These represent the blocking of doors and/or windows. None is directly relatable to other structural evidence in the wall, presumably because they relate to structures built against the inner face of the wall. There are many other patches and blockings which cannot be explained but which are likely to represent the remains of building activity.

At the bottom of Quay Lane, adjacent to Quay Hill, there are scars of at least two buildings against the wall (Fig. 5, build 333). Pitched roof lines can be detected and there is an area where remnants of plaster were noted adhering to the walls (Fig. 5, 334). This plastered area was associated with two beam slots (352 and 353, now blocked). Further up Quay Lane, against build 323, there are two vertical dark stains (357), these may preserve the lines of property boundaries.

19th and 20th-century rebuilds

There is a large section of wall probably of 19th-century date (Fig. 3, 5) at the west end of the surviving section of Cricklepit Street. This is of random construction using a very mixed selection of stone including granite, chert and south Devon limestone. At the north-western extremity of the standing wall is work in limestone of the early 1960s, associated with the revetment of the Inner Bypass. Behind the Custom House is the large brick arch and associated work forming a causeway for Quay Hill. This post-dates the removal of the Watergate itself (1819). Parts of the work are much later, and have been the subject of recent maintenance on a considerable scale.

Further 20th-century work is related to consolidation of the wall as a monument. Aside from repointing, and superficial maintenance work, the major items in this category are the two large brick buttresses (of 1983) at either end of the section which collapsed in 1974 (Fig. 3). These are associated with a modern revetment wall of Heavitree stone at the base of the scarp of collapsed earth and masonry. In Quay Lane the area of core work

recorded in 1979 (above p. 6) was refaced in red brick in the same year (Fig. 5, 312).

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This report draws on the work of many people over a period of twenty years. The excavations of 1974 were carried out by Paul Bidwell; the recording of Roman corework in Quay Lane was done by John Pamment Salvatore and Barbara Jupp in 1979; the fabric survey of the wall in Cricklepit Street in 1985 was done by Shirley Simpson and Paul Patch, and continued in Quay Lane in 1988 by Richard Brunning and David Wayne; some additional outline recording and photographic work on the wall in Quay Lane had been done by Keith Westcott in 1985. Excavations in Cricklepit Street were supervised by Paul Patch (1985); Peter Stead and Richard Mortimer (1987) and Shirley Simpson and Mark Hall (1988-89). Contributions to the study of the documentary history of the area have been made by Jannine Juddery, Anthony Collings, Andrew Pye and the late Stanley Harper. Survey work to tie together the disparate elements was done by Jon Dunkley, Piran Bishop and Jane Brayne in 1988.

The drawings in this report were compiled by Caroline Earwood, Richard Brunning, Mike Dobson, Edward Lewis and others. Final additions and alterations were by Richard Parker in 1993-4.

Mark Stoye, Anthony Collings, Stuart Blaylock and Chris Henderson have contributed discussion of aspects of the wall's history and structure deriving from the survey.

The draft of this report was completed in 1988; it has been reviewed (see above, p. 1) and edited in 1993-4 by S.R. Blaylock as a part of a project on Exeter City Wall sponsored by English Heritage and Exeter City Council.

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APPENDIX: DESCRIPTION OF THE STANDING STRUCTURE

Introduction and explanation of conventions

The following notes form a sequential build-by-build description of the standing wall around the southern part of the city, from the point at which the wall is breached by Western Way, along Cricklepit Street, around the southern corner of the city at Quay Hill, and up Quay Lane to the point where the wall is cut again by Western Way. As far as possible the information given for each build is standardised for purposes of comparison, although there are necessarily many exceptions to this principle due to variations in the level of recording and/or accessibility. The one area where standardisation has not been possible is unfortunately in the most basic and necessary one of identification by numbers and some explanation of the systems of numerical references is required by way of introduction.

The drawings on which the recording is based form the illustrations to this report. Whilst it is intended, for final publication, to evolve a uniform system of numbering for the identification of individual sections of the wall anywhere on the circuit, this has not been possible for this interim stage. To have done so would have required wholesale redrawing of illustrations. The original archive drawings therefore are used here and these are subject to the number sequences employed on the various individual programmes of work by which the wall has been recorded. Some minor pieces of work have been conflated already so that in the list that follows four categories of numbering are used:

- (i) The Cricklepit Street excavations of 1974 (Figs. 1 and 2) retain reference numbers allocated at the time of post-excavation work (referred to in the main text, but only in passing in the appendix below).
- (ii) The Cricklepit Street Wall Survey: all numbers relate to the records of the survey of 1985 (Fig. 3). Not all numbers are individually described below since many refer to features, and small patching of secondary importance; only those relating to the structural sequence of the wall itself appear here.
- (iii) The Quay Lane Survey of 1988, incorporating the area of Roman core recorded in 1979, likewise only the numbers relating to major structural divisions are included.
- (iv) For the area towards the top of Quay Lane where no detailed survey (based on drawn records) has yet taken place, a summary version is given, based on the record and numbering of the 1978 survey. These sections are prefaced by ECWS 22 ... The descriptions include some notes additional to ECWS 1978 based on recent observations.

In the time between the drafting of this report in 1988 and its production (above, p. 1), the study of the wall fabric has moved on a stage with the production of a detailed fabric survey of the wall (Blaylock 1993(a) and (b)), effectively replacing the account here referred to as ECWS 1978. Rather than submit the present text to wholesale alteration this work is cross-referenced at the end of each entry, so as to link the two accounts.

The descriptions follow the course of the Wall as though progressing from west to east on Cricklepit Street, and from south to north on Quay Lane, i.e. in an anti-clockwise direction.

1. Parapet capping and railings
Approx. 57.5m in length and a max. of 0.75 in height.
The capping is built directly above the wall except for a stretch from 4m W. of the crack (13) in wall build 8, up to the E side of the second buttress (123). It is built in a series of small steps following the slope of the hill. A late addition probably of the 19th/20th centuries. Blaylock 1993(b), 19.1.
2. Wall rebuild: irregular and uncoursed
Max. height 2.45m, width 1.35m
Mixed stone types: vesicular and veined volcanic trap, Heavitree stone and a cream/light brown chert bonded with a reddish coloured mortar. Small stones have been inserted for levelling and filling gaps.
Later than builds 6 and 4.
Probably late 20th-century, associated with the bypass of the early 1960s.

Ref: ECWS 1978, 19.1; Blaylock 1993(a), 19.1.

5. Random irregular build of mixed geology
 Max. length c. 7.75m, height c. 2.5m
 Stone types consist of vesicular and veined volcanic trap, Heavitree, Triassic Sandstone, modern sized bricks, tile, slate, granite, chert and ?limestone.
 The volcanic trap and Heavitree stone may be re-used.
 This build incorporates a chamfered plinth to match that of 6.
 The mortar is soft and pinky/white in colour with river gravels as inclusions.
 L. 18th C. or 19th C.
 Later than 6, underpinned by 4, earlier than 1
 Ref: ECWS 1978, 19.3. Blaylock 1993(a), rebuild within 19.2.

6. Coursed build with buttress and putlog holes, in two parts.
 1st section max. length 1.50m, height 1.65m
 2nd section max. length 4.50m, height 2.70m
 Combining the two builds provides a length of c.13.5m, this length does not represent the original length of the wall as it has been replaced at the West end by 2. This build survives in two sections separated by build 5. It is constructed from well-squared and faced vesicular volcanic trap with some Triassic sandstone and very occasional blocks of breccia (2 blocks were noted towards the first buttress [123]).
 The mortar is off-white and very hard containing inclusions of river gravels.
 This build contains an integral buttress (123), the front face of which is missing, probably deliberately removed. Mortar horizons with levelling shown by the a line of small stones occur approx. every 0.40m indicating the stages by which the wall was built. A chamfered plinth survives at approx. 1m above present ground level. The wall face continues below this showing that the plinth was intended to be above contemporary ground level. Putlog holes 113,114,115 and 207 are part of this build.
 Build 6 is earlier than 1, 3, 4, 5 and 122 and later than 8.
 ?late medieval.
 Ref: ECWS 1978, 19.2, 19.4; Blaylock 1993(a), 19.2.

8. Build of coursed blocks with plinth and putlog holes. Survives to a length of c.18m and to a max. height of 2.90m. This build is of graded courses of well faced and laid blocks, with a chamfered plinth 0.75m above present ground level. Part of the build runs below the plinth suggesting that it was set above contemporary ground level. Build 8 has a distinctive appearance as the lower courses of the build contain as much as 30-40% Triassic sandstone, the remainder being vesicular volcanic trap. In the upper parts of the build there is an increasing use of a dark, dense, veined volcanic trap which is very heavily used in the top 4-5 courses near the first buttress (123) and the top 6 courses near the second buttress (140). The build contains two rows of putlog holes set 2.0-2.5m apart horizontally and 1.00m vertically (93, 116-120, 127-130, 205). 121 and 126 may be additional putlog holes or perhaps beam slots for a later structural purpose, however the blockings of the holes look fairly early; 121 is filled with a corroded sandstone and piece of vesicular volcanic trap, 126 with a rotted Triassic sandstone block partially replaced by a vesicular volcanic block. There is a large vertical crack (131) at approx. 12.5m from the western limit of this build. This has been partially infilled with brick and repointed with a soft pinkish mortar. A niche (124) has been cut into the plinth and partially into the underpinning (9) and must therefore be of a fairly late date. It is presumably intended to take a horizontal beam, but there is no other structural scar in the wall in this area and the street is too narrow for a large building, e.g. a house in this position. Build 8 is earlier than 1, 6, 9 and 10 and may be the earliest part of the wall on Cricklepit Street, west of the collapsed portion. Excavation in 1974 showed this to be a medieval refacing on a Roman core (see CP74 (48) Trench 1)
 Ref: ECWS 1978, 19.5; Blaylock 1993(a), 19.3.

9. Underpinning below plinth level.
 18m in length, max. height of 0.70m build of Heavitree stone, volcanic trap, Triassic sandstone and occasional blocks of chert with slate and small pieces of stone used for filling larger gaps and levelling. Contains two repairs (152 & 153) in modern brick and some repointing of the same date.
 Probably post-medieval in origin with late (C19th) repairs (brick).

10. Coursed build of well squared blocks, plinth (below ground) putlogs and two buttresses (one only a scar). 34m in length and a max. of 5m in height this build is the largest surviving phase of construction along Cricklepit Street. It is built of well-cut, faced and graded volcanic stone. The lowest part of the build is largely of vesicular volcanic trap with occasional use of Triassic sandstone. There are two broad courses of dark veined volcanic trap particularly prominent today as this type of stone has not weathered as severely as the surrounding vesicular volcanic stone. The upper 5-6 courses of this build are predominantly veined volcanic trap.

Some large blocks 2 courses deep have been used, noticeably the buttress quoins and blocks adjacent to putlog holes (14-18 & 139). Occasionally a large block has been used for no apparent reason (e.g. there is one a few courses below putlog 17). Two L-shaped blocks, formerly buttress quoins, adjoin putlogs 136 and 137.

There are two buttresses integral to build 10; the second buttress (140) and the scar of the third (11). Build 8 has been cut to take the quoins of the second buttress (140) demonstrating that 10 is later than 8. The front face of the buttress has been lost (probably deliberately removed). The scar of the third buttress (11) is continuous with wall build 10, the buttress has been completely removed to reveal the rubble core flush with the face of build 10. The width of the buttress can be determined from the trimmed quoins (marked as a dotted line on the outline elevation, Fig. 3). In both buttresses the core is clearly visible and as in buttress 1 the technique of levelling at approximately every 0.40m can be detected by changes in the mortar colour and the use of small stones for levelling.

The mortar throughout is hard and white containing frequent inclusions of river gravels.

There are three levels of putlog holes (14-18, 19-24, 29, 30, 38-41, 132-9, ?42, ?171, ?172). These are set at 2.50-3.0m apart horizontally and approximately 1.0m vertically, the putlogs are not directly above one another vertically.

Build 10 abuts and is keyed into build 94 on the west side of the scar of the fourth buttress (141). It is therefore later than 94 but may be only slightly later or indeed of the same building phase as the putlog holes are parallel either side of the buttress, the plinths of the two builds are on the same level and the masonry styles are similar. Later activity in front of the wall is demonstrated by two rows of joist slots cut into the face of the wall (155-163 and 37, 165-170, 164, 171, 172 may also be scars left by structural activity). These two rows of joist holes now mainly infilled with modern brick and mortar indicate the former existence of a 2 storey structure of approximately 4m in width. The joist holes stop at the fourth buttress suggesting that the buttress was still standing at the time of the construction of this building.

Build 10 is later than 8 and 94 and continuous with buttresses 11 and 141. This part of the wall was completely rebuilt in the medieval period as shown by the 1974 excavations behind the wall; trenches 1, 3.)

Ref: ECWS 1978, 19.6; Blaylock 1993(a), 19.4.

94. Coursed build, well squared and faced blocks, plinth, two integral buttresses surviving as scars only, putlog holes. Considerable evidence for more than one phase of structures being built against the face of the wall. The build survives to 26m in length, continuing beyond the modern buttress (202) by a maximum of 1.30m from where the wall collapsed in 1974 (31.4m collapsed).

The stone used is largely vesicular volcanic trap with an increased use of dark coloured veined volcanic trap in the upper courses (cf. builds 8 and 10). There are three rows of putlog holes running parallel with those in build 10 (see notes for 10 above).

This build begins with a scar of a fourth buttress. There is a change in the alignment of the wall at this point. A second integral buttress (151) is also only visible as a scar. A chamfered plinth survives for much of the length of the wall (17.5m). It has been cut away flush with the wall near the fourth buttress (141) (see cuts 25, 27) and near the modern buttress (202), presumably to enable buildings to be constructed directly against the wall.

Original work (83) survives below the plinth to a depth of approximately 0.80m-0.90m, the face has presumably been removed. It is composed of chert vesicular volcanic trap, occasional river pebbles and Triassic sandstone. Beneath 83 further underpinning (84) of large heavily veined volcanic blocks, Heavitree stone, York stone, and bricks bonded with a soft dark grey mortar has been added probably in the late 19th century on the removal of buildings against the wall. This underpinning reaches a total height of just under 2m, a result of the terracing of the ground level for buildings (with cellars?) constructed against the face of the city wall in the 18th and 19th centuries.

There is evidence in the form of scars and blockings for structures being built against the wall face. An attempt has been made to match up by size and position any holes or areas of patching to see what patterns emerged. The results of this suggest two methods of construction. One of regularly positioned joist holes carved out of the face of the wall (as in wall build 10). The second of regularly placed but fewer larger scars. The first type is only clearly represented twice in wall build 94, by a row of 5 joist holes (33,176-7,188-9) east of the fourth buttress (141) and a second group of 4 joist holes (45,49,182,183) higher up and further to the east.

There are two groups of four regularly-spaced areas of patching (47,178,181,186 and 51,173,194-5). Within each group the patches are set at just over two metres apart both vertically and horizontally. There is a gap of 3m between the two groups.

There are five large areas of blocking which are at least partially above the present ground level on the north side of the wall. These are window or door openings, and are not associated with any of the other structural scars, since they relate to buildings inside the wall.

Ref: ECWS 1978, 19.7; Blaylock 1993(a), 19.5.

...Portion of wall collapsed in 1974, 31.5m in length... (Blaylock 1993(a), 19.6)

- 99 Coursed build, well faced blocks, no plinth visible, contains an integral archway (now blocked and only part visible) and an associated buttress scar, 3 levels of putlog holes.
Length 12.20m, maximum height 3.80m, collapsed at west end and supported by modern buttress, obscured by 19th C. archway and rebuilt at east end.
Contains putlog holes 98,100,101,109.
Ref: ECWS 1978, 20.2-20.5; Blaylock 1993(a), 19.7.
- 104 Large well-coursed blocks of Heavitree breccia forming the wall face beneath the site of the Watergate and a projecting broad plinth (or low buttress), with a sloping upper surface to the north-west beneath the blocked arch in build 99. Probably coeval with the construction of the Watergate in 1564-5 and the paved ford, or watercourse, leading from the base of the wall to carry the water into the leat (above, p. 10). The work above and to the east of this build, namely 105, 106 etc, and the brick arch 107/108, is later and is associated with the improvement of the causeway after the Watergate was taken down in 1815. Ref: Blaylock 1993(a), 19.8-19.9.
- 340 Coursed build, well-faced blocks, plinth, putlog holes.
Length approx. 10m.
Broken at west end by either the removal of the 'Watergate' in 1815, or the widening of Quay Hill. Abutted by 337 at the east end. Underpinned by 338, 341, 342 and 355. Scarred by the insertion of a drain pipe (348). This build is very similar to 10, 94 and 99 on Cricklepit Street in that the lowest courses are of mostly vesicular volcanic and the uppermost courses are predominantly veined volcanic trap, there are occasional sandstone blocks. It is therefore probably of a similar date (? c.1400) to these builds.
Ref: ECWS 1978, 21.1; Blaylock 1993(a), 20.1.
- 337 Roughly coursed build.
Length approx. 3.50m
Stone type used mainly Heavitree breccia, some Triassic sandstone, brick and occasional vesicular volcanic trap.
Post-medieval date.
Ref: ECWS 1978, 21.2 (part of); Blaylock 1993(a), 20.2.
- 333 Roughly coursed build.
Length approx. 14m max.
Roughly coursed build of large blocks of Heavitree breccia with the use of bricks for infilling of gaps and levelling the courses. Two roof lines are visible associated with an area where plaster has been removed (334) and two joist holes (352 and 353) together outlining a building.
There are two changes in alignment along this build to form a slightly angled curve (shown as vertical

dotted lines on Fig. 5).

This build is of late 17th century or later date as brick was not in common use until this time in Exeter.
Ref: ECWS 1978, 21.2 (part of); Blaylock 1993(a), 20.3.

..Wall collapsed for approx 10.55m...(Blaylock 1993(a), 20.4)

323 Uncoursed build, plinth, occasional putlog holes.

Length approx. 19.80m.

This uncoursed build contains a mixture of stone types; Heavitree breccia, Triassic sandstone, vesicular volcanic trap, water rounded pebbles, chert and brick.

It contains an integral plinth of Heavitree breccia, probably once chamfered but now heavily weathered, the plinth steps up at 10.80m along its length, build 323 continues beneath the plinth, suggesting it was built above contemporary ground level.

The mortar is off-white/pink-buff and has small gravel inclusions.

Post-medieval.

Ref: ECWS 1978, 22.1; Blaylock 1993(a), 21.1.

314 Coursed build, putlog holes.

Length approx. 9m

Coursed build of vesicular volcanic trap, veined volcanic trap, Triassic sandstone and chert. The lowest courses are largely of well cut and laid vesicular volcanic blocks. The inclusion of chert suggests that many of the blocks could be re-used.

This build contains several putlog holes (315,321,322,327).

Probably of medieval date.

Ref: ECWS 1978, 22.2; Blaylock 1993(a), 21.2.

312 Brick repair of 1979.

Length approx. 11.5m.

Behind this re-facing Roman corework survives and was examined in 1979 before the wall was re-faced (Fig. 5). This revealed 3 stages; foundations of trap chippings mixed with clay; followed by two builds bonded with mortar both set in a 'herringbone' style. The first mortar type was a loose light brown sandy matrix containing waterworn pebbles. The second uppermost build had a pale soft mortar with water worn pebble inclusions. A similar style of staged construction has been recognised elsewhere on the wall (Paul St. Northernhay Gardens - rear face; Blaylock 1988, 8-12).

Ref: ECWS 1978, 22.3; Blaylock 1993(a), 21.3.

The following section of Quay Lane has not been surveyed in detail; some additional notes have been made to the 1978 Exeter City Wall Survey.

313 Irregular build.

Length approx. 6.5m.

Irregular build, probably re-using stone, mainly vesicular volcanic trap, some Triassic sandstone, lower course of Heavitree breccia.

Probably 16th or 17th century.

Ref: ECWS 1978, 22.4; Blaylock 1993(a), 21.4.

ECWS 22.5 Coursed build, putlog holes.

Length approx. 9.4m

Well-coursed build of faced blocks largely vesicular volcanic trap, some Triassic sandstone, occasional fragments of tile. Three courses of putlog holes, no plinth surviving but as part of the rubble core is visible at the base of the wall this may suggest that the plinth has been cut back flush with the face of the wall.
? 13th or 14th century. Blaylock 1993(a), 21.5.

ECWS 22.6 Roughly-coursed Mixed Rubble

Length 7.5m. Post-medieval. Blaylock 1993(a), 21.6.

ECWS 22.7 Coursed build but uneven at base

Length approx. 17.3m

Coursed blocks of vesicular volcanic trap, Triassic sandstone and chert mainly set in bands. Some tile. Later underpinning of breccia and chert.

The use of chert suggests that the Roman wall core was being re-used as a source for stone.

Post-medieval. Blaylock 1993(a), 21.7.

ECWS 22.8 Coursed build

Length approx. 17.5m

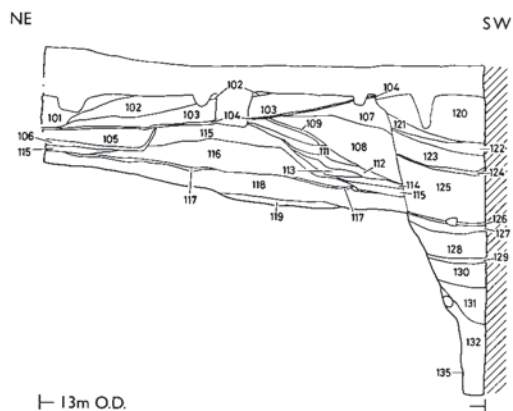
Uniform build of homogenous grey vesicular volcanic trap. Horizontal building break visible at 2m above plinth, stone changes in colour at this point. Possibly a building break or rebuild. Integral plinth not chamfered.

Mortar contains frequent waterworn pebbles (similar to the mortar of the Roman wall core).

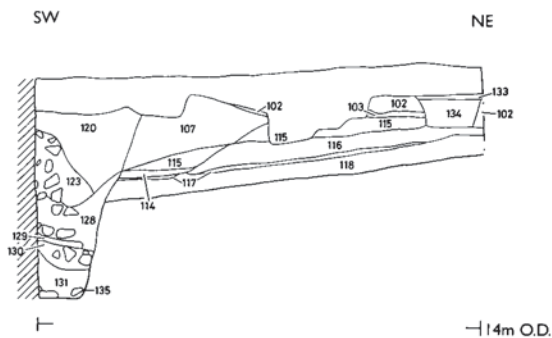
Later underpinning of Heavitree breccia.

Roman. Blaylock 1993(a), 21.8.

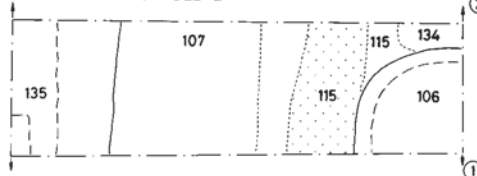
Section 1 Trench 1



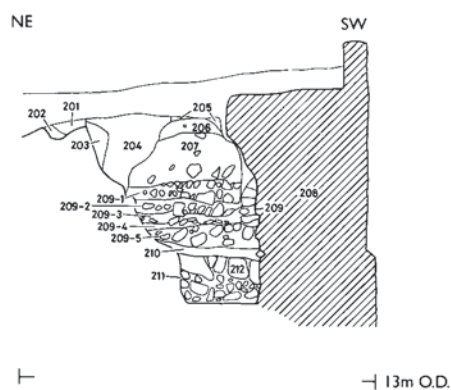
Section 2 Trench 1



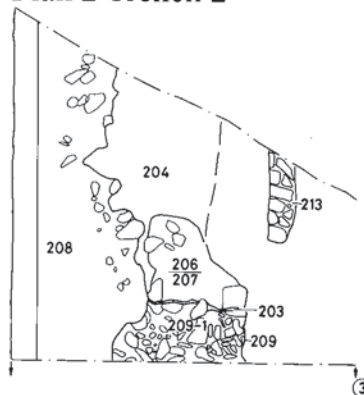
Plan 1 Trench 1



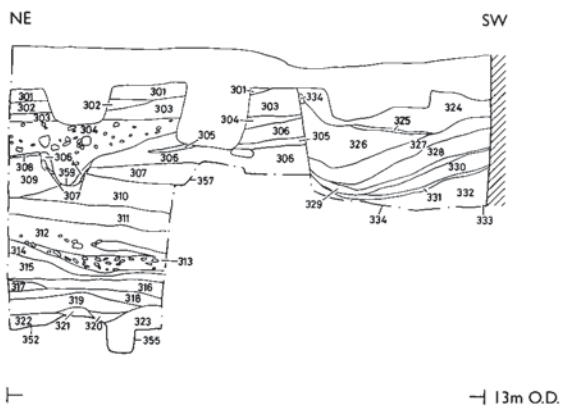
Section 3 Trench 2



Plan 2 Trench 2



Section 4 Trench 3



Plan 3 Trench 3

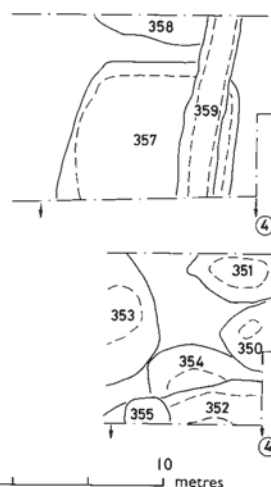


Fig. 1 Cricklepit Street 1974, plans and sections of trenches 1-3.

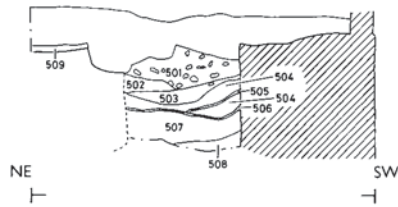
(48) 1

81

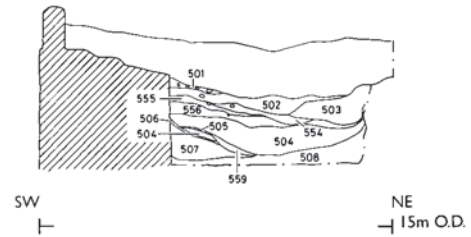
Sections

Trench 5

5

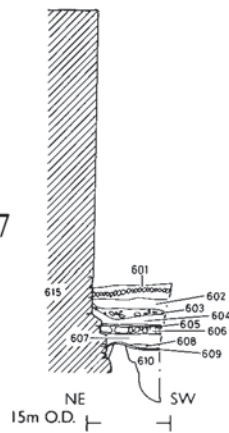


6

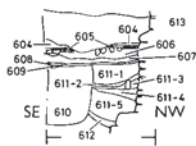


Trench 6

7



8



9



10



0 10 metres

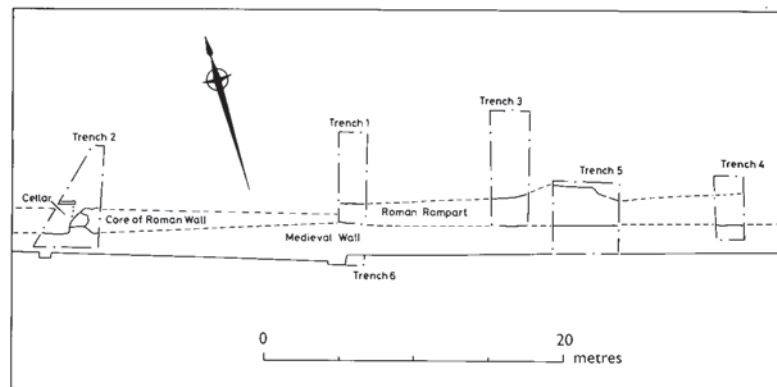


Fig. 2 Cricklepit Street 1974, sections and trenches 4-6, and location plan of trenches.

(48) 2

1/4 2

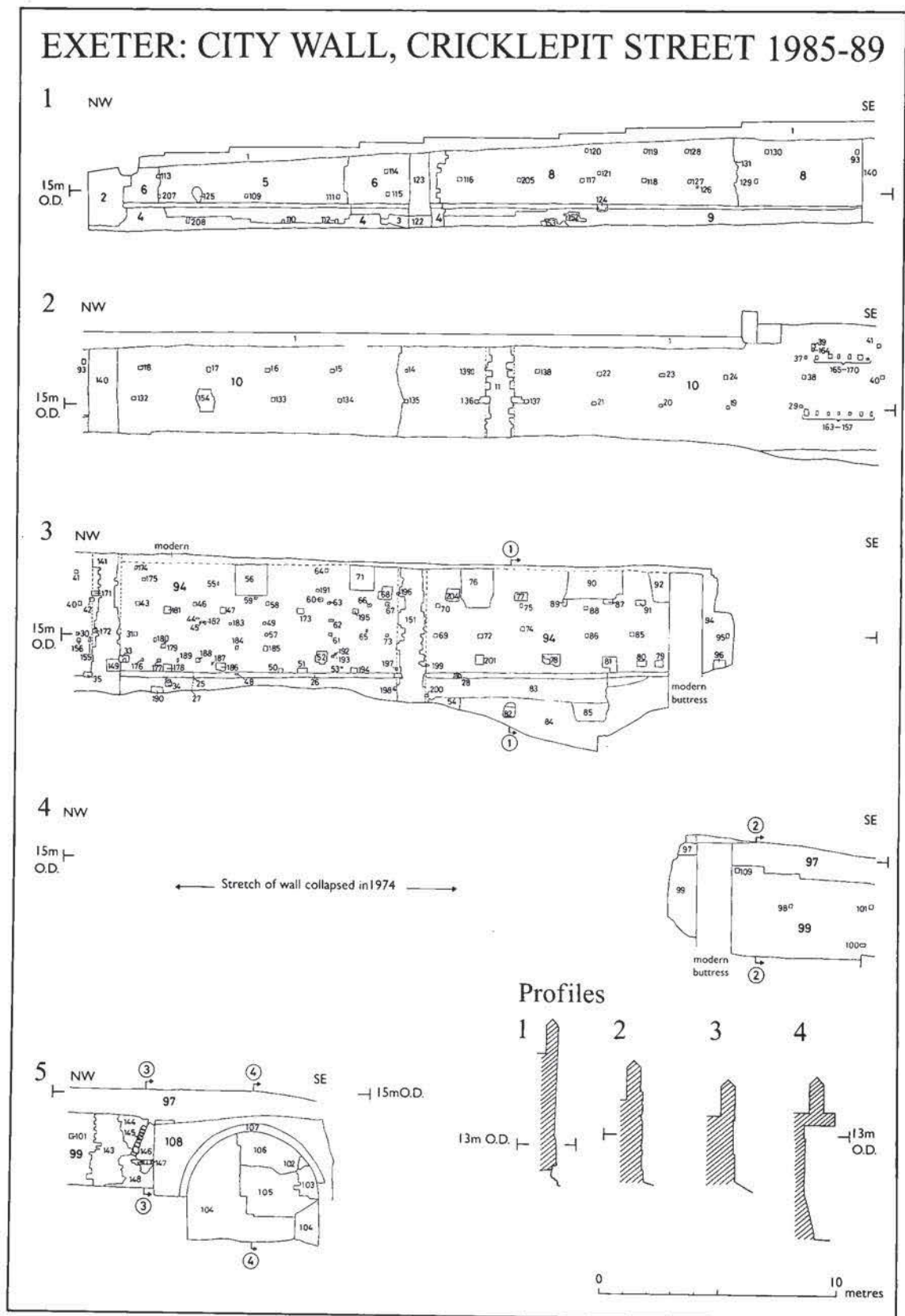


Fig. 3 Cricklepit Street 1985, outline elevation of the city wall.

(212) 1

Fig 3

EXETER: CITY WALL. CRICKLEPIT ST. 1985

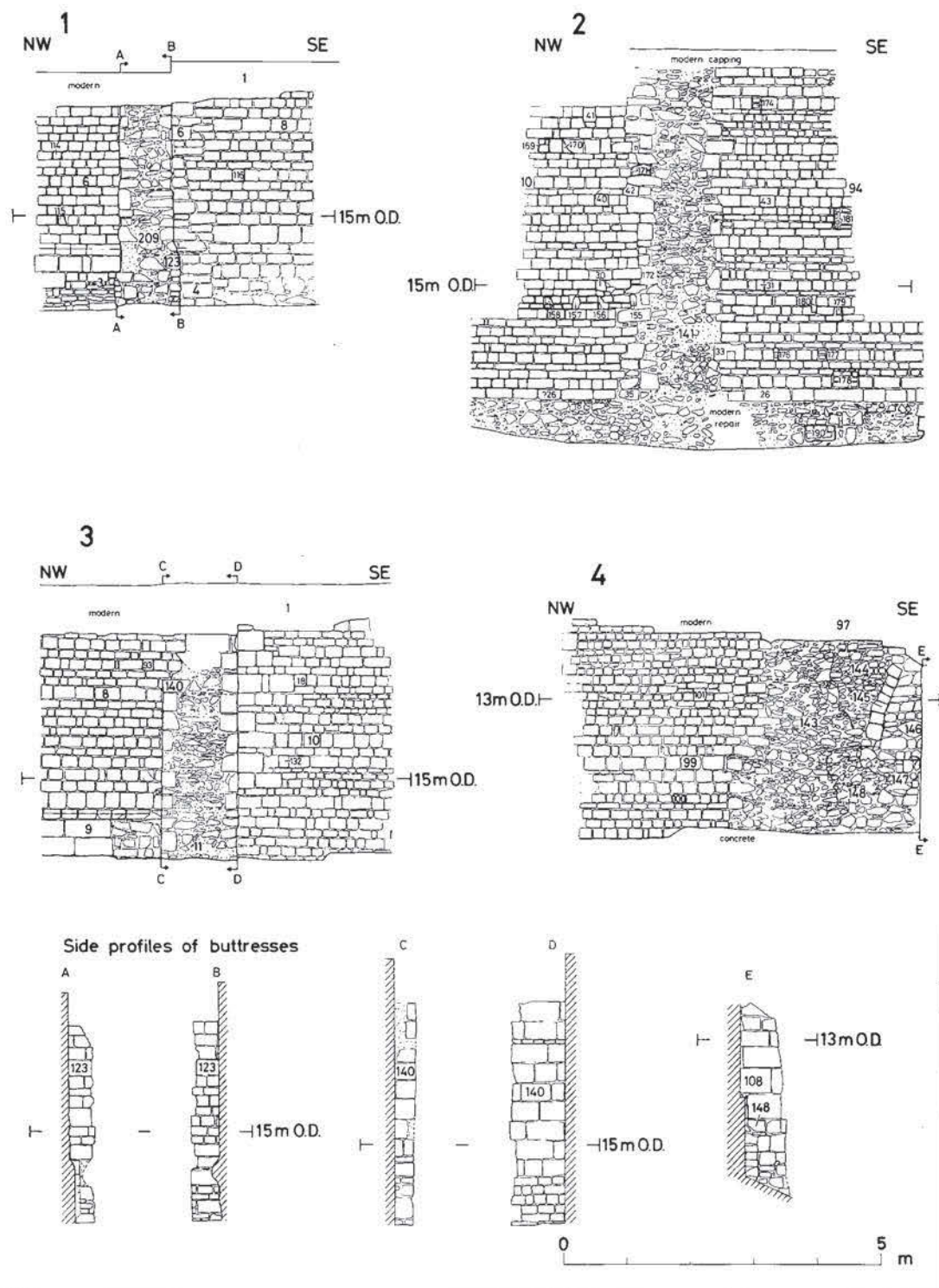


Fig. 4 Cricklepit Street 1985, details of key areas of the elevations.

$$\frac{2}{2}$$

Fig. 4.

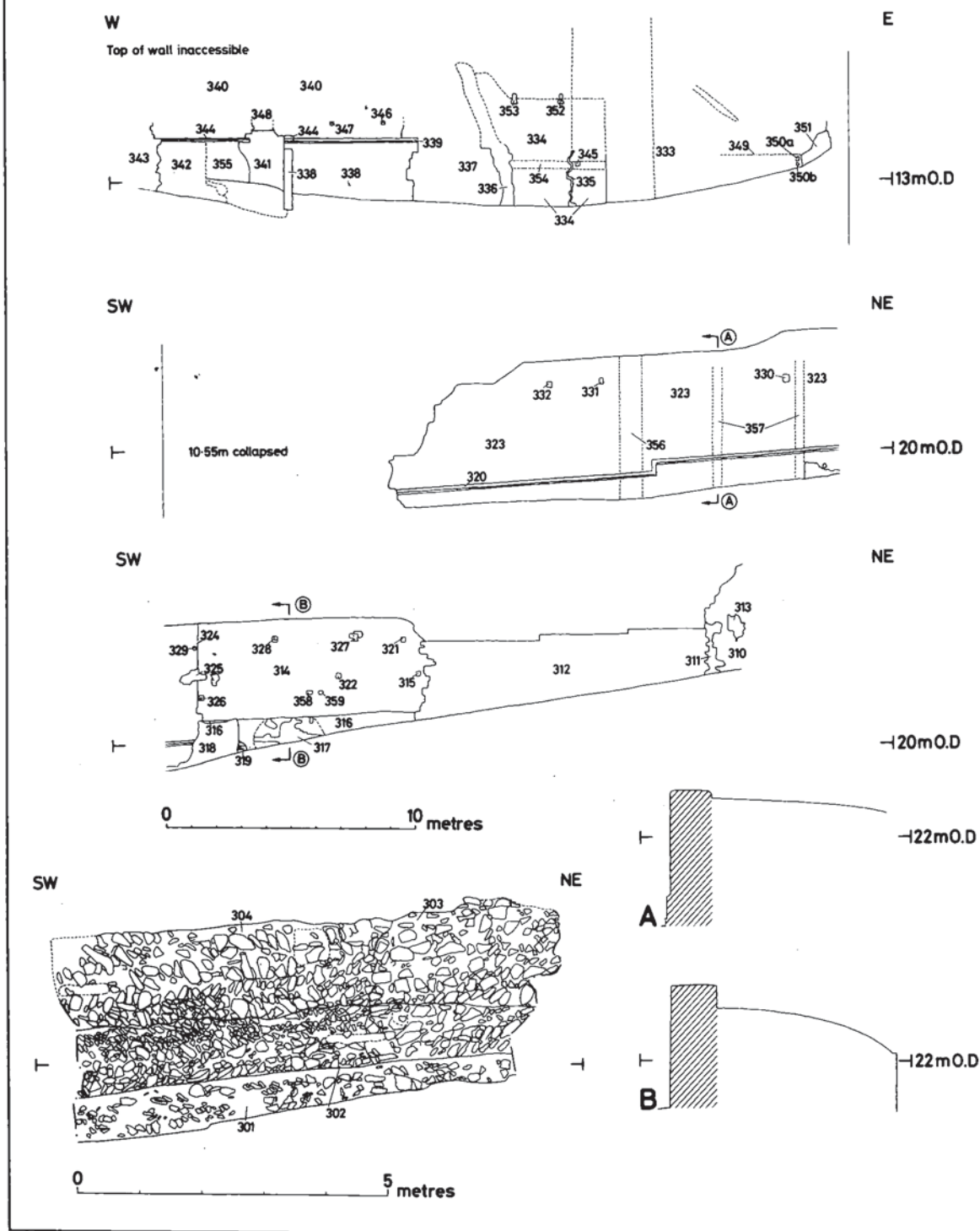


Fig. 5 Quay Lane 1988, outline elevation and detail of wall core recorded in 1979.

(212) . 4
SxRED

Fig. 5.

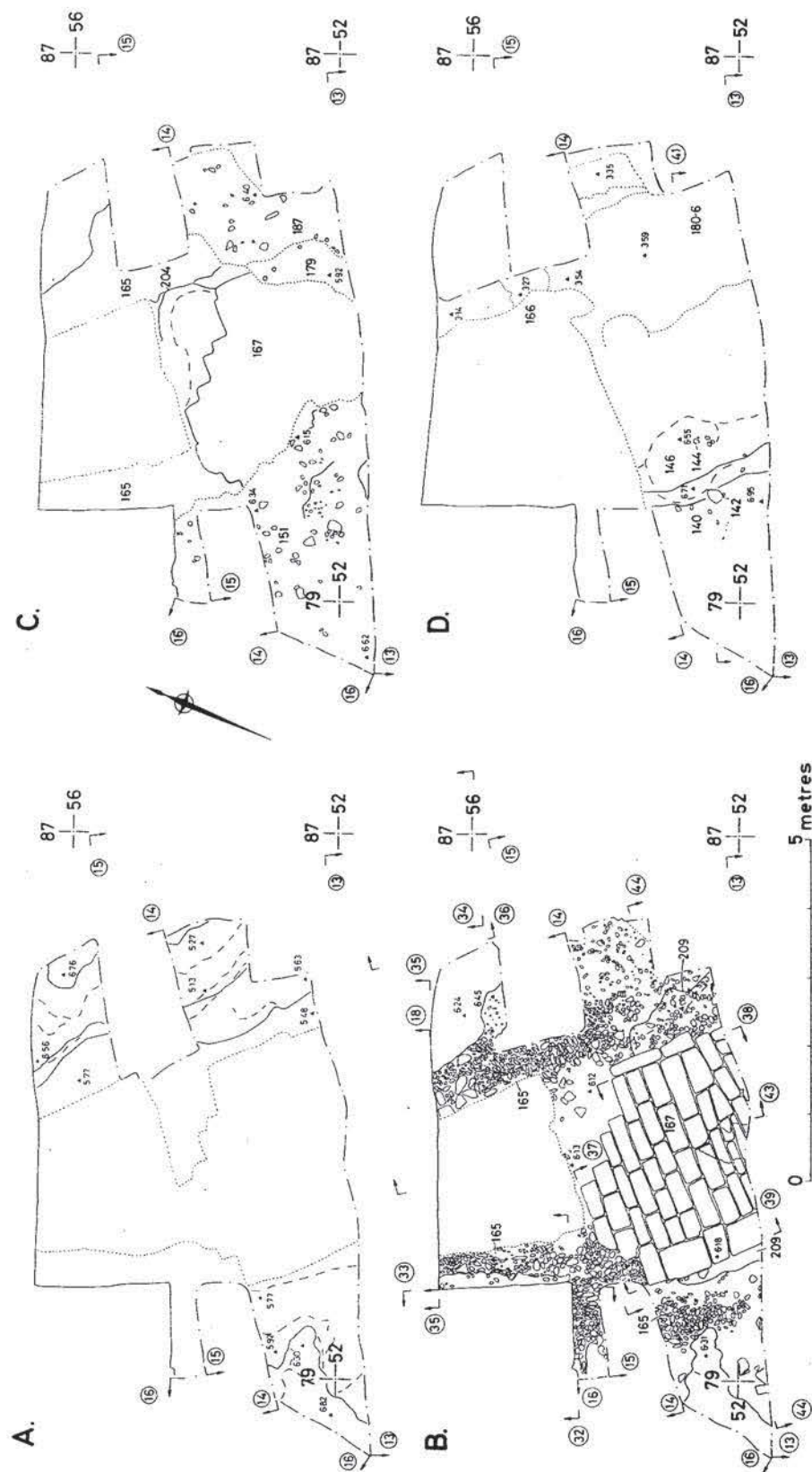


Fig. 6 Cricklepit Street 1987, plan of the elevations.

EXETER: CITY WALL AT WATERGATE 1987-88

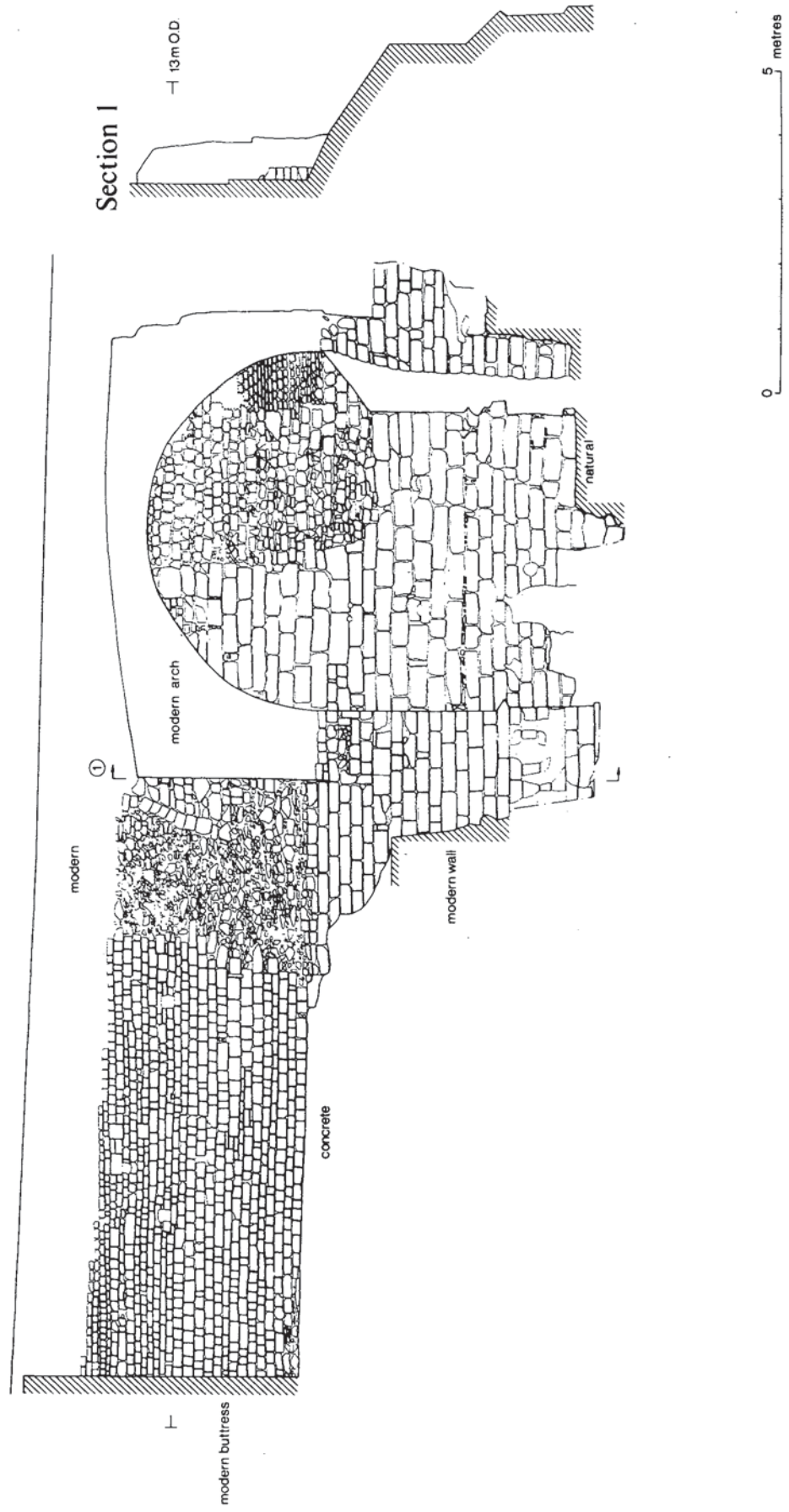


Fig. 7 Cricklepit Street 1987, elevation of the wall below the Watergate.

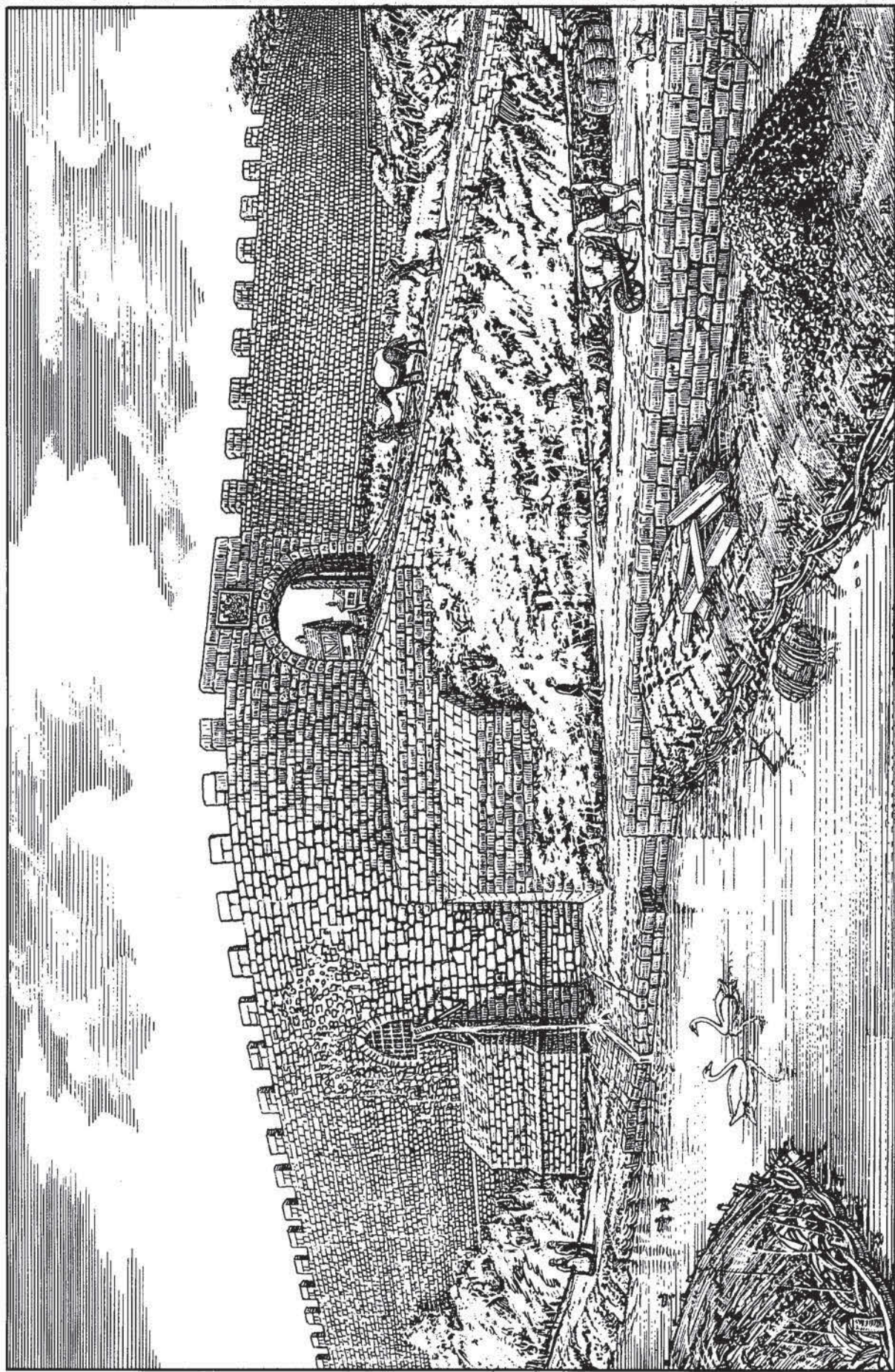


Fig. 8 Cricklepit Street/Watergate: conjectural reconstruction c. 1570. (Piran Bishop).

Plans



EXETER: CITY WALL, CRICKLEPIT STREET 1985-89

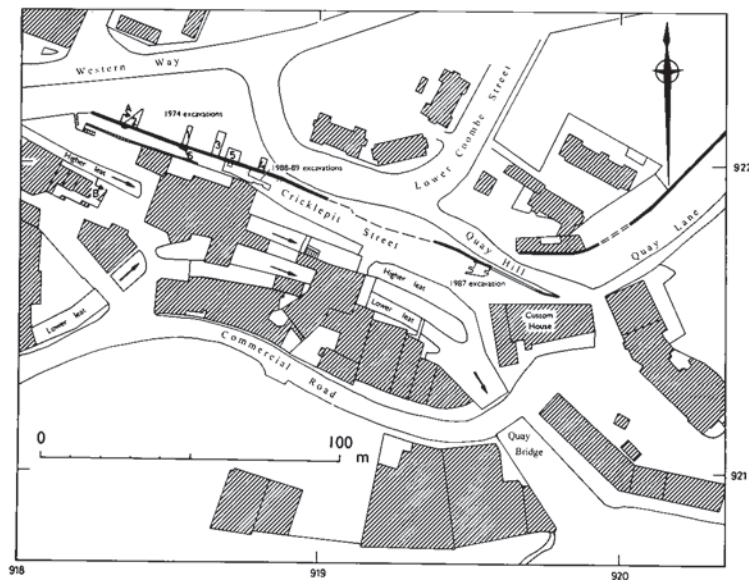
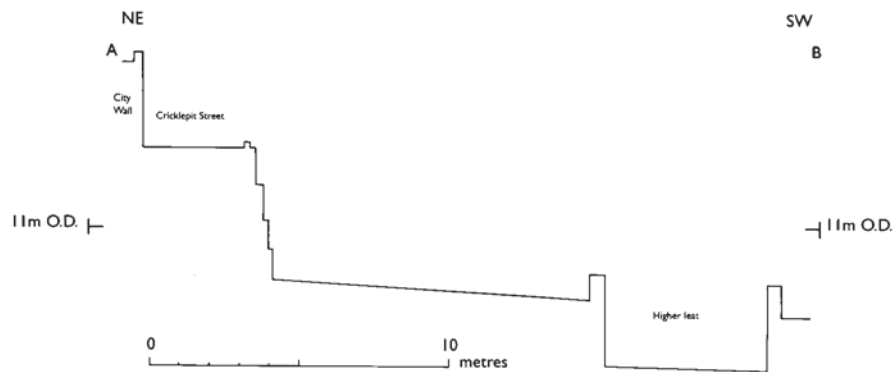


Fig. 10 Cricklepit Street 1985-89; general location plan of excavations.

(212) 3

4 17