EXETER CITY COUNCIL

ARCHAEOLOGICAL ADVISORY COMMITTEE

Report to Committee, 9 October 1992

1. FIELD RECORDING PROJECTS

1.1 South Gate area excavations and watching briefs

Introduction

Early this year some important archaeological observations were made at the site of the Roman South Gate during a watching brief on the construction of the Western Way footbridge. A foundation pit for the bridge provided a section through the early Roman ditch discovered by Lady Fox in 1964-5 which is now believed to have formed the NE boundary of the Roman military compound found in 1989-90 at Lower Coombe Street (see Fig. 1). Plotting of the ditch section in relation to the surviving portion of the Roman City Wall and other modern features has enabled relatively precise correlations to be made between the deposits and structures revealed in the 1989 South Gate excavation and those recorded in 1964-5. The foundations of a tower flanking the SW side of the Roman south gate were discovered by Lady Fox in 1964-5 in South Street. The wall lines of the tower were subsequently marked out in the pavement and across an adjoining flower bed. The opportunity for further exploration of the gate arose early in 1989 with the widening of South Street and the introduction of a new bus lay-by.

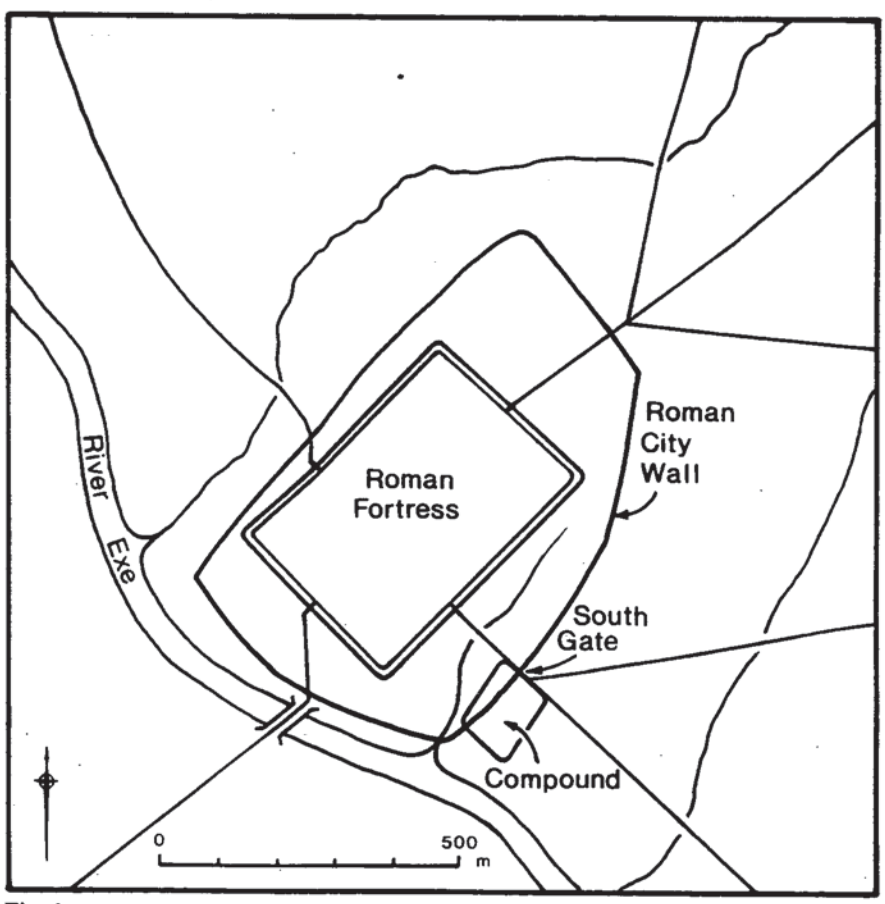

Fig 1.

Excavations were carried out in advance of construction works with sponsorship from Devon County Council. The NE half of the Roman tower foundation was re-exposed and it proved possible to examine small new areas on three sides of the tower. By combining the results from the South Gate excavations with information obtained from the investigation of other sites in the area since 1973 (at Trinity Green, Acorn Roundabout and Lower Coombe Street), augmented by extensive use of medieval and later documentary sources, it is now possible to piece together a reasonably complete picture of the history and appearance of the south-eastern city defences, the South Gate and its environs from early Roman times to the present day.

Early Roman period (Figs 1, 2)

The South Gate lay to the SE of the fortress of the Second Augustan Legion founded about AD 55-60 on a sloping spur between the Longbrook and Coombe valleys. The 1964-5 excavations located for the first time the early Roman road leading to the port

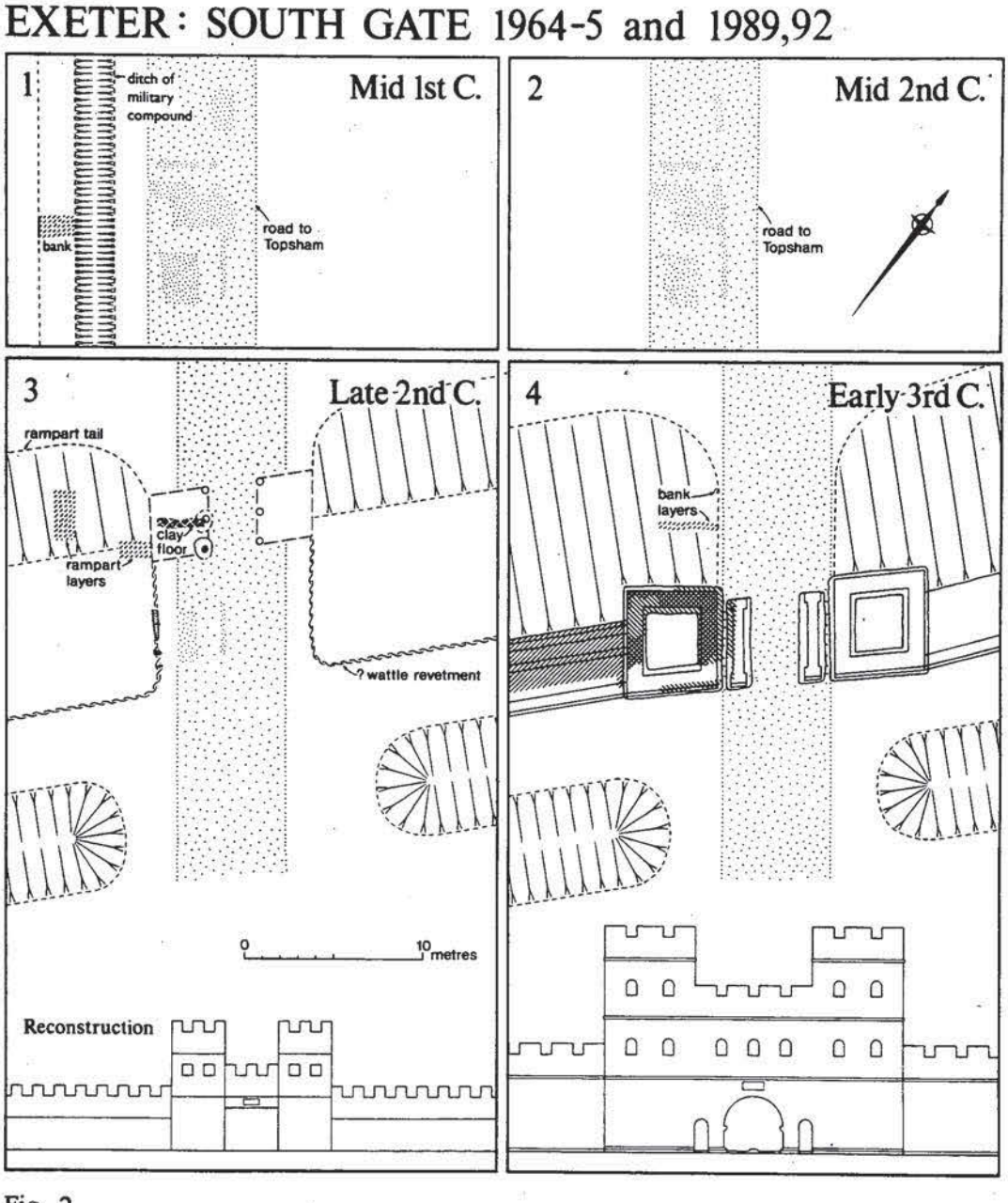

Fig. 2.

at Topsham. On the SW side of the road a substantial ditch was discovered that is now known to have enclosed a military compound about 4 acres in extent containing timber buildings used possibly as workshops or for the storage of supplies. The NE side of the compound lay next to the Topsham road (modern South Street and Holloway Street) which in the early Roman period was relatively thinly metalled and about 6 m wide with a slight camber. The road was resurfaced with gravel on at least three occasions before the late 2nd century, reaching a thickness at the crown of 0.45 m.

Late second-century earth and timber defences (Figs 1, 2)
The earthen defences of the former legionary fortress, which had been retained to define the limits of the town *Isca Dumnoniorum*, founded about AD 80, were slighted and levelled around 160-180; it was probably around this time that the first defences were erected on the line of the City Wall. An earthen rampart about 1.6 m high was furnished with a vertical front revetment of timber or, more probably, stout wattlework. Two V-shaped ditches, 6 m wide and 3 m deep, lay about 4.5 m and 25.5 m distant from the rampart. The spoil dug from the ditches was disposed of by heaping it up to form a level mound 12-14 m wide behind the wattle rampart revetment, making the rampart much broader than was necessary for purely defensive purposes. The rampart was sectioned at the South Gate in 1964-5. In 1989 part of a timber gate was discovered whose SW gate-post was set in a foundation pit dug to a depth of 1.1 m through the earlier road levels. The gate stood at the rear of a recessed forecourt, set back about 7.5 m from the front of the rampart. To the SW of the gate passage, and overlying the earlier road surface, there survived between later intrusions a narrow strip of clay floor which is thought to have been situated within a room flanking the gate passage, presumably occupying the hollow base of a timber tower like those familiar from the gates of early Roman forts.

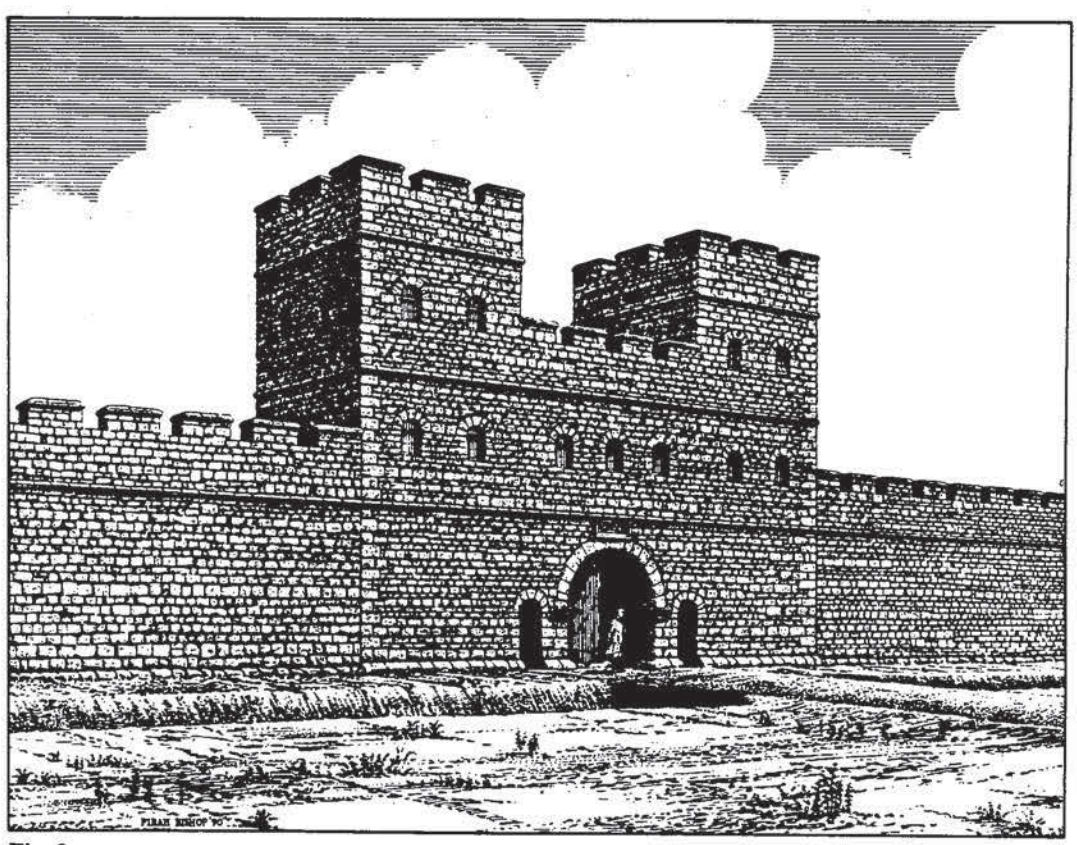

Fig 3.

Early third-century stone city wall and gate (Figs 1-3)
The earth and timber defences erected in the mid to late 2nd century, perhaps as a rapid response to a brief period of disorder, would have started to decay fairly quickly. Towards the end of the 2nd century, or early in the 3rd, a major programme of upgrading was initiated which saw the construction of a 3 m thick stone wall standing about 5 m high at walkway level. The front of the primary rampart was cut back to accommodate the new wall and the material thus derived was piled up to form a correspondingly higher bank and walkway at the rear. Stone gates were erected at this time, probably on all four of the main approach roads to the city. It is now possible to reconstruct the form of the Roman south gate with some confidence. In 1989, part of a foundation was discovered under South Street that must have supported a spine wall separating a narrow foot-passage from the main carriageway through the gate. The position of the footings of the City Wall as noted in a watching brief by Lady Fox on the NE side of South Street in 1965 suggests that the overall width of the Roman gate cannot have exceeded 17 m. Assuming the gate to have been planned symmetrically in accordance with the usual rules of proportion exhibited in the planning of many comparable Roman structures, the intended dimensions of the gate in standard Roman feet (0.296 m) may be reconstructed. The overall design dimensions appear to have been 16.58 x 5.53 m (56 x 18.66 Roman ft), proportons of 1:3. The height of the flanking towers is less certain, but 12.43 m (42 Roman ft) would be a reasonable assumption, giving a height to width ration of 3:4.

Anglo-Saxon and Norman modifications (Fig. 4)
The decayed defences of the Roman city had probably been refurbished by the mid 9th century, if not before, to permit the largely deserted area within the walls to be used as a place of refuge in times of trouble. In the mid 880s Alfred the Great founded a fortified town or *burh* at Exeter. It was probably at this time that the medieval street system was laid out, incorporating an access way or patrol track about 5 m wide which ran along the top of the earthen bank inside the city wall. The front arch of the Roman gateway was still standing at this period, although we cannot be sure that the flanking towers survived. Excavations at Magdalen Street showed that the late Saxon defensive scheme included two large ditches outside the wall. The original Roman ditch in front of the wall had by now been widened to perhaps 11 m across, whilst a new V-shaped ditch about 9 m wide and 3.6 m deep was introduced at a distance of about 33 m from the wall. In front of the Roman gate the ground level was reduced by about 1 m, necessitating underpinning of the structure in the late Saxon or early Norman period, at which time the SW footpassage was probably blocked.

Thirteenth-century additions (Fig. 4)
In the early to mid 13th century the outer defensive ditch was filled in and projecting towers, generally D-shaped in plan, were added to the wall on the vulnerable NE and SE sides of the city, which overlooked relatively level ground. The excavations at the South Gate in 1989 produced evidence to suggest that a small external tower, probably of half-round form, was constructed on the SW side of the gate, flanking the main gateway and obscuring the already blocked SW footpassage. A matching tower was presumably provided to the NE, though this would have flanked the NE footpassage, which is known from documentary evidence to have remained in use until at least 1342.

Late medieval gatehouse (Fig. 4)
A large barbican gatehouse was erected in the late 14th or early 15th century which in effect entirely superseded its predecessor, so that the front carriageway arch of the original Roman gate now became the rear arch of the late medieval structure. This arch was identified as a Roman survival by William Stukeley on his visit to Exeter in the early 18th century, and it was drawn by John Gendall shortly before the demolition of the South Gate in 1815. A small part of the later medieval gate was exposed in the 1989 excavation; its plan and elevation are depicted in the mid 18th-century Map Book of the Exeter Chamber.

Civil War fortifications (Fig. 5)
Excavations in 1987-9 on sites at Trinity Lane, Magdalen Street and Holloway Street traced three phases of Civil War defensive ditches which link with others excavated in 1973-4 on the SW side of Holloway Street; a length of over 250 m of the defences outside the South Gate has now been explored.

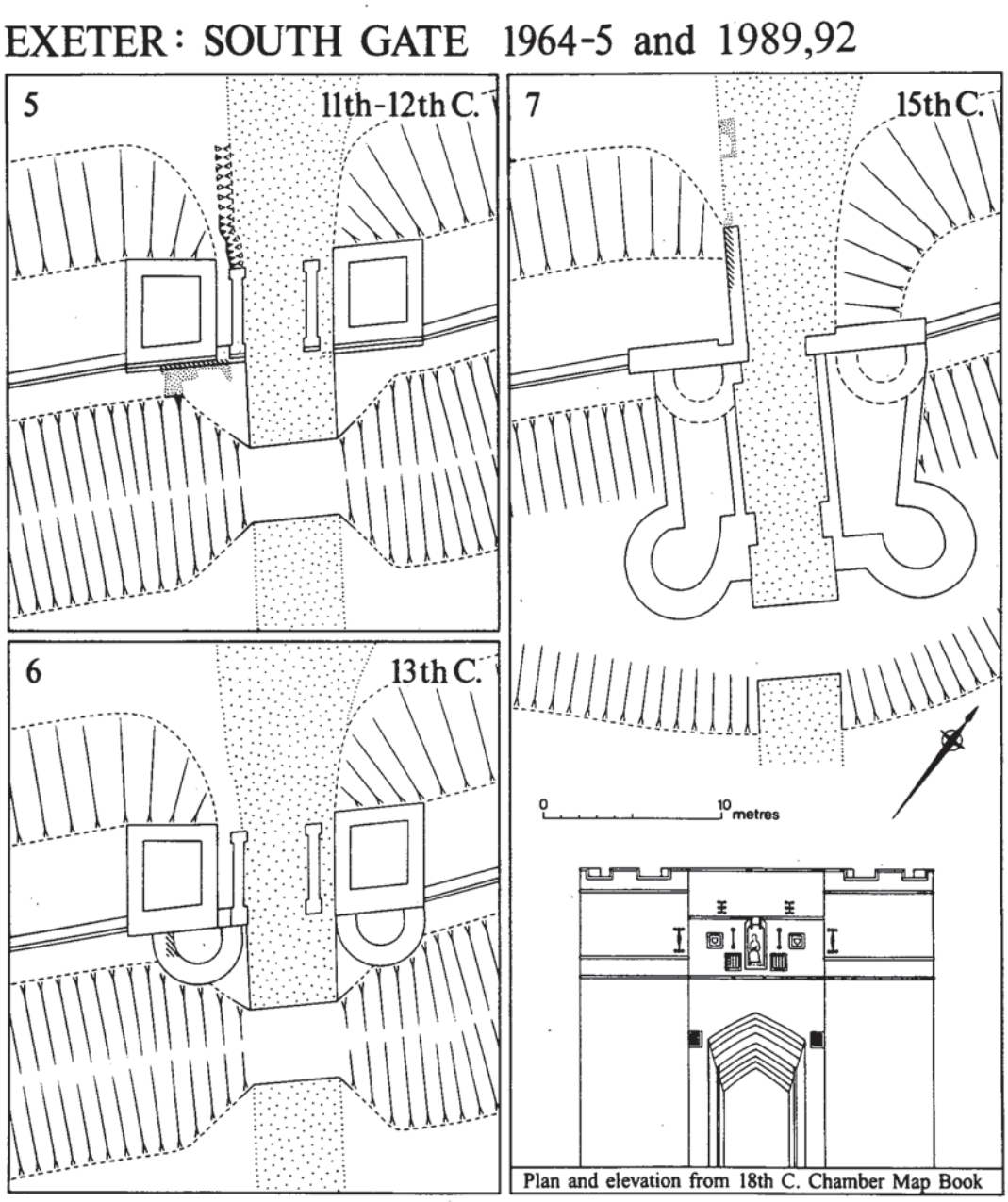

Fig. 4.

Period A (1642-3): an extra-mural lane (forerunner of Trinity Lane) which ran from South Gate to East Gate, 23-25 m out from the town wall and 6-8 m from the ditch, bounded a block of tenements fronting on the north side of Magdalen Street. A short length of curved, V-shaped ditch 3 m wide and 2 m deep which cut across Trinity Lane 70 m to the NE of the South Gate probably indicates the position of a battery sited to block access into Southernhay and cover the approach to the gate. This may date from late in 1642, when a Royalist attack on the city was anticipated, or possibly it represents one of the 'flankers' whose construction to protect the gates was ordered on 23 January 1643, when instructions were also issued to deepen the town ditch, remove houses and walls, and make 'galleries' outside the walls (amongst other measures). At this time the roof of the South Gate was strengthened to permit the mounting of ordnance.

The Exeter Siege Accounts detail expenditure on the fortifications between late December 1642 and 31 August 1643 (the city fell to the Royalists on 5 September after an attack near the South Gate). Throughout this period large sums were laid out on labourers' wages and the carriage of turf, and it is clear from the entries that lines of entrenchments and other outworks were being constructed outside the walls in the area between the Castle and the Quay, a sector which includes East Gate and South Gate. The excavated ditch in front of the wall, beyond a berm 2.5 m wide, was 16 m wide and 2 m deep, with a flattish bottom 7.5 m wide. In excavations outside the East Gate in 1987 a ditch 5 m wide was found which followed the line of an extra-mural lane leading

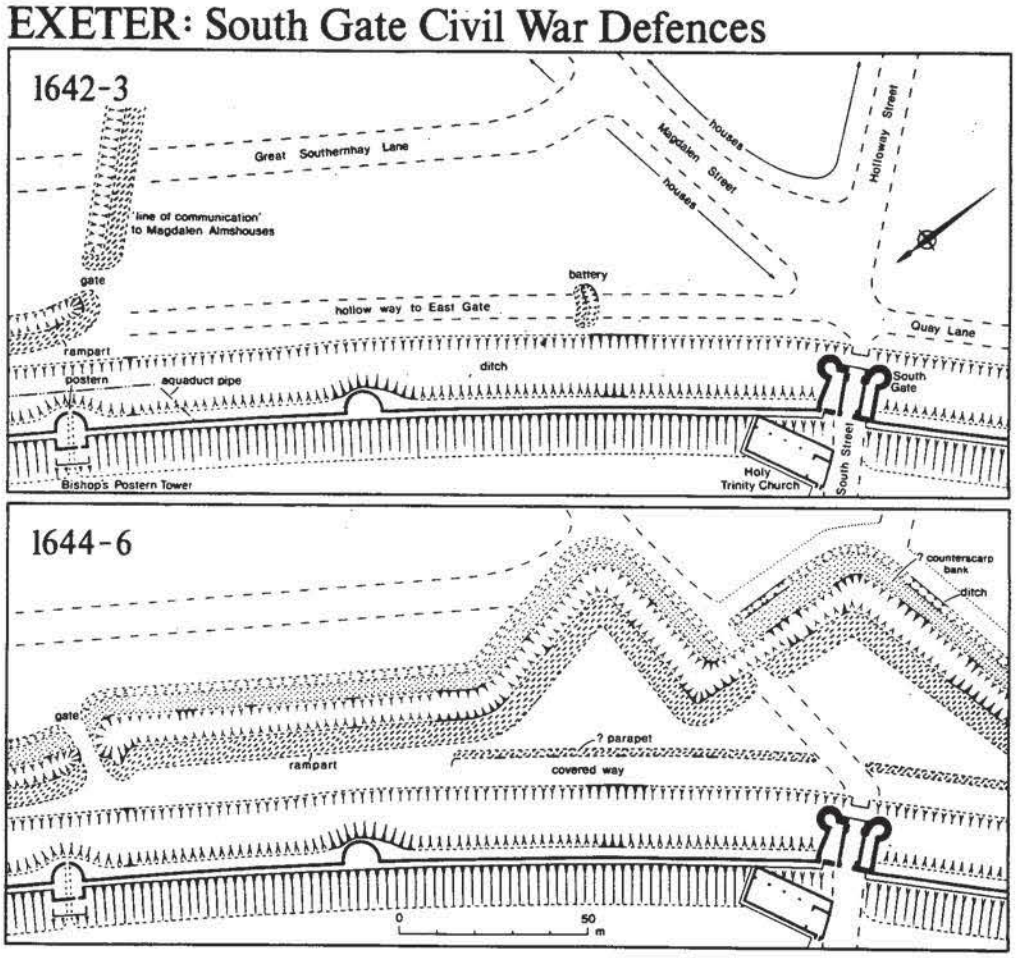

Fig. 5.

into Northernhay (see below). A short length and butt end of what is assumed to be a corresponding ditch, dug along the lane running from East Gate to South Gate, was seen in a watching brief in front of the Bishop's Postern Tower in 1989; the trench was apparently interrupted by an entrance causeway at this point whence it turned away from the wall to head towards Wynard's Almshouses 150 m to the SE. This interpretation is based on the Royalist Colonel Joseph Bamfield's account of the attack he led in this area on 3 September 1643. He describes a lightly manned 'line of communication' (a term also used by William Lithgow to describe the outer earthwork defences of London in 1643) leading from a sallyport (identifiable as the Bishop's Postern) to two outguards/outworks containing 3-400 men lying at the distance of a musket shot from the South Gate. One of the outguards is likely to have been Wynard's Almshouses, fortified at this period, which lay 210 m from the South Gate on the north side of Magdalen Street; the other may have been a redoubt or sconce sited on the south side of the street. It is likely that the defensive line continued SW from Magdalen Street to connect with further strong-points on Holloway Street and thence across the Friars area towards the river, thereby enclosing the core of the southern suburb which contained much property owned by the City Council and its leading members. The provision of a fortified line around the southern suburb contrast with the treatment given to the large eastern suburb of St Sidwell's which was apparently not included within a continuous circuit of entrenchments, perhaps because most of the property there belonged to the Cathedral Dean and Chapter, who had Royalist sympathies.

Period B (1644-6): documentary evidence suggests that some houses on the Magdalen Steet/Great Southernhay Lane frontage remained standing during the siege of 1643. By the time the Parliamentarians besieged Exeter late in 1645, much of the southern suburb had been abandoned and a new defensive line existed immediately outside the South Gate. A spread of demolition material 0.75-1.5 m deep covered the gardens of the Magdalen Street tenements and sealed the infilled ditch of the earlier battery. A scarp up to 1.5 m deep which was cut through the demolition layer along a line about 25 m from the wall is interpreted as marking the front of a covered way screened by a turf parapet (which has left no trace). The covered way terminated about 100 m from the gate at a point where the scarp turned sharply inwards towards the wall. Further out from the wall, a zig-zag line of trenches cut off the two main roads leading to the South Gate. A ditch up to 9 m wide and 2.3 m deep is assumed to have had a rampart on its inner side and a glacis or counterscarp bank externally. A smaller, V-shaped ditch, up to 2 m wide and lying 4-6 m forward of the main ditch has been observed on both sides of Holloway Street and was perhaps dug to provide material to form a glacis; it is not known whether this element was also present north of Magdalen Street and Great Southernhay Lane. The purpose of this defensive system was to divert approaching forces along the front of the fortifications, which were laid out to expose attackers to enfilading fire from batteries sited on the South Gate, on the tower to the NE of the gate, and on the wall about 110 m to the SW of the gate.

1.2 Excavation and survey around the East Gate

East Gate and the Underground Passages (Fig. 6)

A programme of fabric survey and limited excavation in the Underground Passages (medieval and later aqueduct tunnels) beneath the East Gate has been pursued

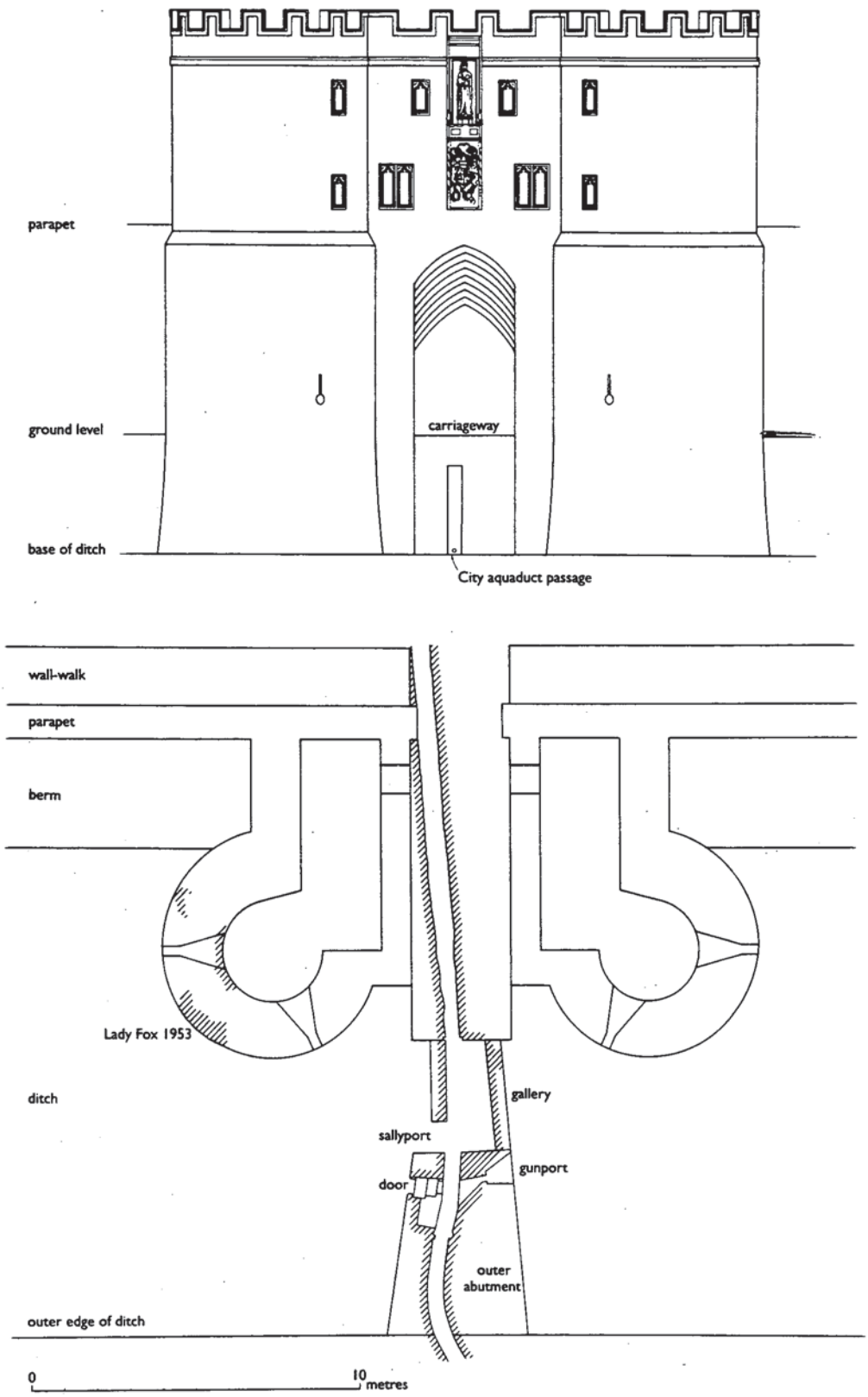
parapet
ground level
carriageway
base of ditch
City aquaduct passage
wall-walk
parapet
berm
Lady Fox 1953
ditch
gallery
sallyport
gunport
door
outer abutment
outer edge of ditch
0
10 metres

Fig. 6.

intermittently by Mark Knight since 1987, the year the ABC Cinema was demolished and its site redeveloped to incorporate the Underground Passages Interpretation Centre. Documentary evidence for the history of the passages is currently being edited by Mark Stoyle for production initially in three EMAFU reports dealing with the history of the City's aqueducts. By combining these sources of evidence with archaeological records of the East Gate foundations made by Lady Fox in 1953, and information derived from early depictions of the gate, notably in the mid 18th-century Chamber Map Book, it is now possible to offer interpretations for various features visible in the passages that have hitherto defied adequate explanation. Our understanding of the history of the passages has developed considerably since the early 80s when a number of summary accounts were published. We now know, for example, that the construction of stone passages to carry the City water pipes was a protracted process that continued by stages over several centuries and was never completed for the full length of the pipeline.

The recent survey work in the passages below East Gate suggests that the medieval ditch in front of the gate was around 14 m wide. From the later 12th century the Cathedral aqueduct pipe ran along the bottom of the ditch in front of the gate, but no culvert was provided at this point until the 18th century when a tunnelled brick vault was constructed to carry the pipe. The form of the early medieval gate is unknown, although the provision of 13th-century projecting round towers like those suggested for the South Gate (see above) may be suspected. The early medieval outer bridge abutment, which stood about 12.5 m from the face of the Roman town wall, is still visible in the passages. Following the accumulation of ditch deposits against the base of the abutment, ?14th-century projecting drum towers were constructed, leaving a gap of 3.4 m between the inner and outer bridge abutments. The form and position of the towers can be reconstructed with reasonable accuracy by combining modern survey results with information derived from the earlier sources noted above. Probably around 1420, a stone-revetted tunnel was cut through the face of the inner abutment of the gate, below the level of the timber bridge, in order to accommodate the lead pipe of the new City aqueduct. This conduit beneath the gate could be entered through a narrow doorway in the inner abutment wall which retains an external rebate for a door of metal grate.

In the mid 1490s, a 70 m length of aqueduct passage was constructed along the road leading up to the gate, the City pipe having previously lain buried in a trench. The new section of passage could be entered (through a surviving stone doorway) from a small chamber inside the outer abutment; access to the chamber was probably gained through an outer door (now lost) in the freestanding side wall of the abutment. Perhaps in the early 16th century, the upper part of the abutment was entirely rebuilt to form a casemate (referred to *c.* 1643 as a 'blockhouse') containing in its SE wall a small doorway and in its NW wall a gunport commanding a section of ditch running up towards the Castle. Finally, probably during the Civil War, a gallery or caponier, with a sallyport in its SE wall, was built beneath the bridge to link the internal and external lengths of aqueduct passage. A rough doorway inserted into the NW foundation of the SE drum tower now permitted direct communication between the passage and the interior of the gate.

A new booklet on the Underground Passages is planned for publication in 1993.

The Civil War Defences Outside the East Gate (Fig. 7)
The results of the excavations carried out on the ABC Cinema site in 1987-8 have recently been re-assessed in the light of documentary research by Mark Stoyle on the Civil War records of Exeter. A revised account of the development of the Civil War defences in the area outside the East Gate may now be given.

The ABC site lies in St Sidwell's suburb outside the East Gate, about 25 m from the City Walls. On the SE it extends into the former London Inn Square (the S end of medieval Longbrook Street) and on the SW it takes in a length of Northernhay Place, an extra-mural lane of medieval origin. Running up Longbrook Street are two sections of the Underground Passages which carried water pipes to the Cathedral Close and the City Carfax. The street is shown built up in late 16th-century maps, but only a single wall fragment, on its E side, survived from the period before the Civil War. Two main phases of Civil War features were identified in the excavations; these have been assigned to documented periods of activity on the defences in 1642-3 and 1644-6. This interpretation takes into account the results of excavations undertaken in 1987-9 on the Civil War defences outside the South Gate (see above) and draws upon documentary sources transcribed and discussed in *Exeter City Defences: Expenditure on the walls and gates recorded in the Receiver's Accounts, 1600-1650* by J.Z. Juddery, M. Stoyle and P. Thomas (EMAFU Report 88.15); *The Civil War Defences of Exeter and the Great Parliamentary Siege of 1645-6* by M. Stoyle (EMAFU Report 90.26); and *Documentary Evidence for the Civil War Defences of Exeter 1642-43* by M. Stoyle (EMAFU Report 92.10).

Period A: a small rectangular redoubt lay in the angle between the extra-mural lane on the SW of the site and Longbrook Street to the SE. The redoubt had been terraced into the hillside, which here slopes away to the N, and measured 6 m SE-NW and 7.5 m SW-NE between the surrounding ditches. No trace of a timber artillery platform or parapet remained except possibly on the NW, where a gully up to 0.9 m wide and 0.4 m deep containing a beam slot lay close to the edge of the ditch, which on this side was up to 5 m wide and at least 2 m deep. On the NE side of the redoubt the ditch reduced to little more than 2 m wide and about 1.5 m deep, and on the SE, next to Longbrook Street, where it lay tight against the Cathedral aqueduct, it narrowed to a width of less than a metre at one point. The extra-mural lane, which took the form of a hollow way, was apparently deepened next to the redoubt to create a broad ditch about 1.5 m deep and up to 6 m wide. This became deeper at its junction with the ditch flanking the NW side of the redoubt and continued up the line of the lane towards the NW, presumably forming part of a fortified line or entrenchment comprising a covered way, bank and ditch. The main purpose of the redoubt was probably to provide flanking fire along the front of this line.

On the E side of Longbrook Street, the butt end of a ditch 5 m wide and about 2 m deep framed the SE side of a 10 m wide entrance through the defences next to the redoubt. This ditch ran S and is presumed to have turned SE along the line of Little Southernhay Lane (the extra-mural lane on the SE side of the East Gate) continuing the fortified line around into Southernhay where a ditch 5 m wide was observed roughly 25 m out from the city wall near the Bishop's Postern Tower (see above).

The front of the redoubt was screened by an outer defensive line joining its E

corner, from whence a narrow ditch ran N down the side of Longbrook Street close against the City aqueduct. This ditch was traced for about 5 m and probably turned NW to link with a possible second redoubt, two sides of which were seen in a watching brief on a service trench. This redoubt, sited about 32 m to the N of the fully excavated one, could have provided flanking fire across the mouth of the entrance through the defences at the top of Longbrook Street.

The period A ditches are likely to belong to the fortifications built prior to September 1643 when the Royalists captured the city. The Exeter Siege Accounts of 1642-3 record considerable expenditure on the construction of trenches in Southernhay and elsewhere between March and August 1643. It is possible that the 1643 defensive line incorporated pre-existing elements built in late 1642 or very early 1643. The small scale of the ditches surrounding all but its NW side suggests that the fully excavated redoubt may have been built earlier than the line of the entrenchment. The city was twice threatened with attack in the last quarter of 1642 and some defensive works may have been erected then.

Period B: There is little documentary evidence relating to work on the defences between late 1643 and April 1646, when the city fell to the Parliamentarians after a

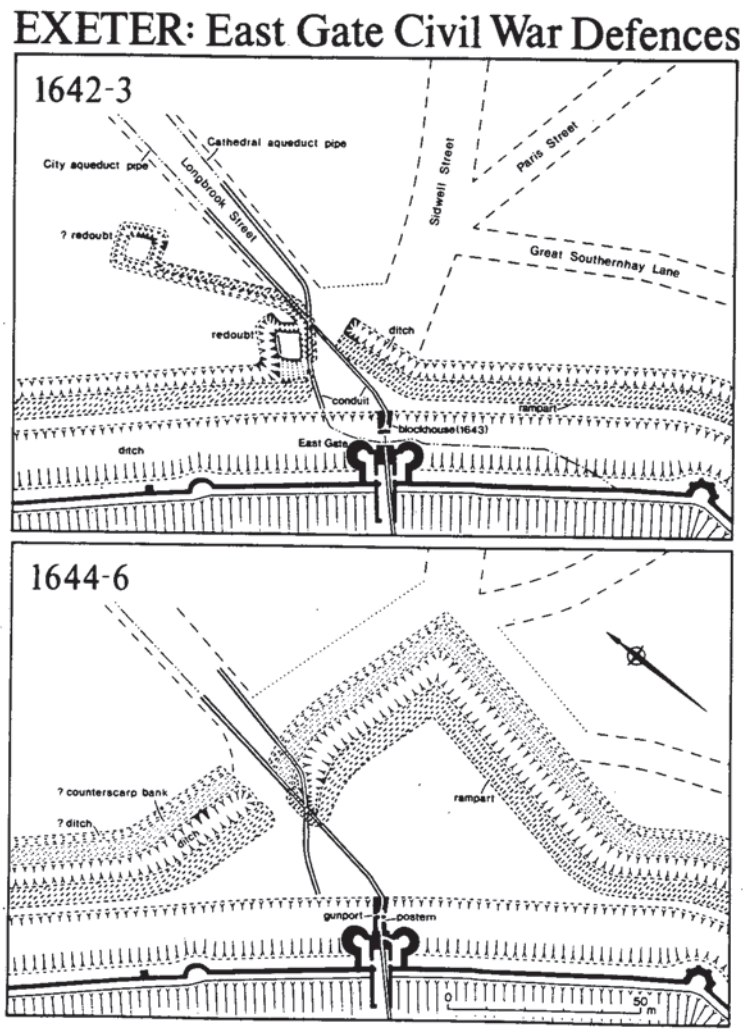

Fig. 7.

lengthy siege. A prominent feature of the zig-zag system of trenches dating from 1645-6, traced outside the South Gate is a triangular salient cutting off the main approach roads outside the gate (see above). Elements of a system of trenches set out on similar principles to this were also found outside the East Gate and these clearly superseded the earthwork fortifications which existed there in September 1643.

The period A ditches were all silt-free, with very clean fills of re-deposited rock and subsoil. A ditch lying E-W across Longbrook Street cut off the approach to the 1643 entrance (leaving a length of the Cathedral aqueduct exposed within it as an upstanding lump of masonry) and abutted the E side of the City aqueduct. A new entrance at least 10m wide now existed on the W side of the street; a further length of ditch on a similar alignment was found about 17 m W of the Longbrook Street frontage. These ditches probably formed the N side of a triangular salient with its apex cutting off both Sidwell Street, the main road approaching the East Gate from the NE, and Paris Street, coming from the E. All traffic was thus compelled to enter through the entrance next to Longbrook Street.

1.3 Recording and watching brief at 15 Cathedral Close

In the summer of 1991 limited excavation, building recording and a watching brief were undertaken during the conversion and partial rebuilding of outbuildings belonging to the Cathedral School.

The front of the Roman legionary fortress rampart (constructed *c.* AD 55-60) was located in two places, enabling the line of the early Roman defences to be precisely plotted in this area for the first time. The Roman military plan (Fig. 8) has been amended to incorporate the new observations, producing a somewhat more regular layout for the SE side of the fortress.

The natural subsoil could be examined only in a small area (1.5 x 1.7 m) contained within the base of a late medieval garderobe pit whose soft fill had to be excavated to preclude subsidence in the new foundations. The foundation pit for a timber corner-post belonging to the second interval tower to the SW of the E corner of the fortress defences lay partly within the base of the garderobe pit. Its position is very close to that of the E corner of the tower postulated on the plan published in the 1989 Roman Frontier Studies Congress Proceedings, and this discovery therefore provides additional support for the hypothetical scheme suggested therein for a layout of the defences employing the standard Roman foot (Fig. 9).

At the front of the rampart were a series of rubbish layers infilling the second fortress ditch. These were similar in appearance to corresponding deposits, dating from the period 160-180, recorded at other sites around the circuit of the defences. At one point these layers could be seen to abut, and therefore to post-date, a short length of stone wall 0.65m wide which was aligned SW-NE along the front of the rampart. The wall appeared to have been built as a revetment to the rampart and was observed to overlie the fill of the first fortress ditch. It was traced for 1.8 m before it turned NW to cut at right angles across the body of the rampart, forming a corner containing within its inner angle the corner post-pit of the interval tower described above. A trench excavated

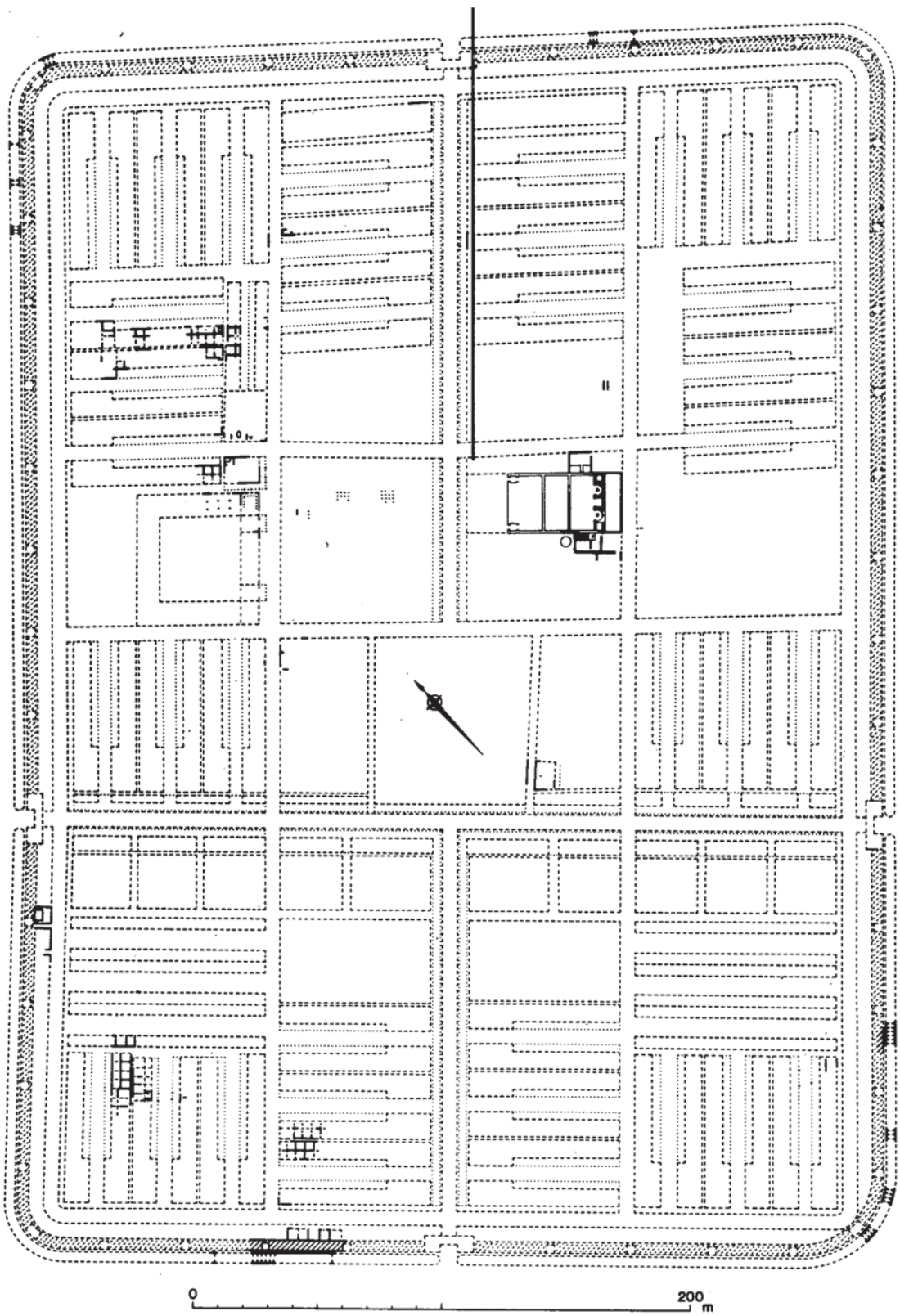

Fig. 8.

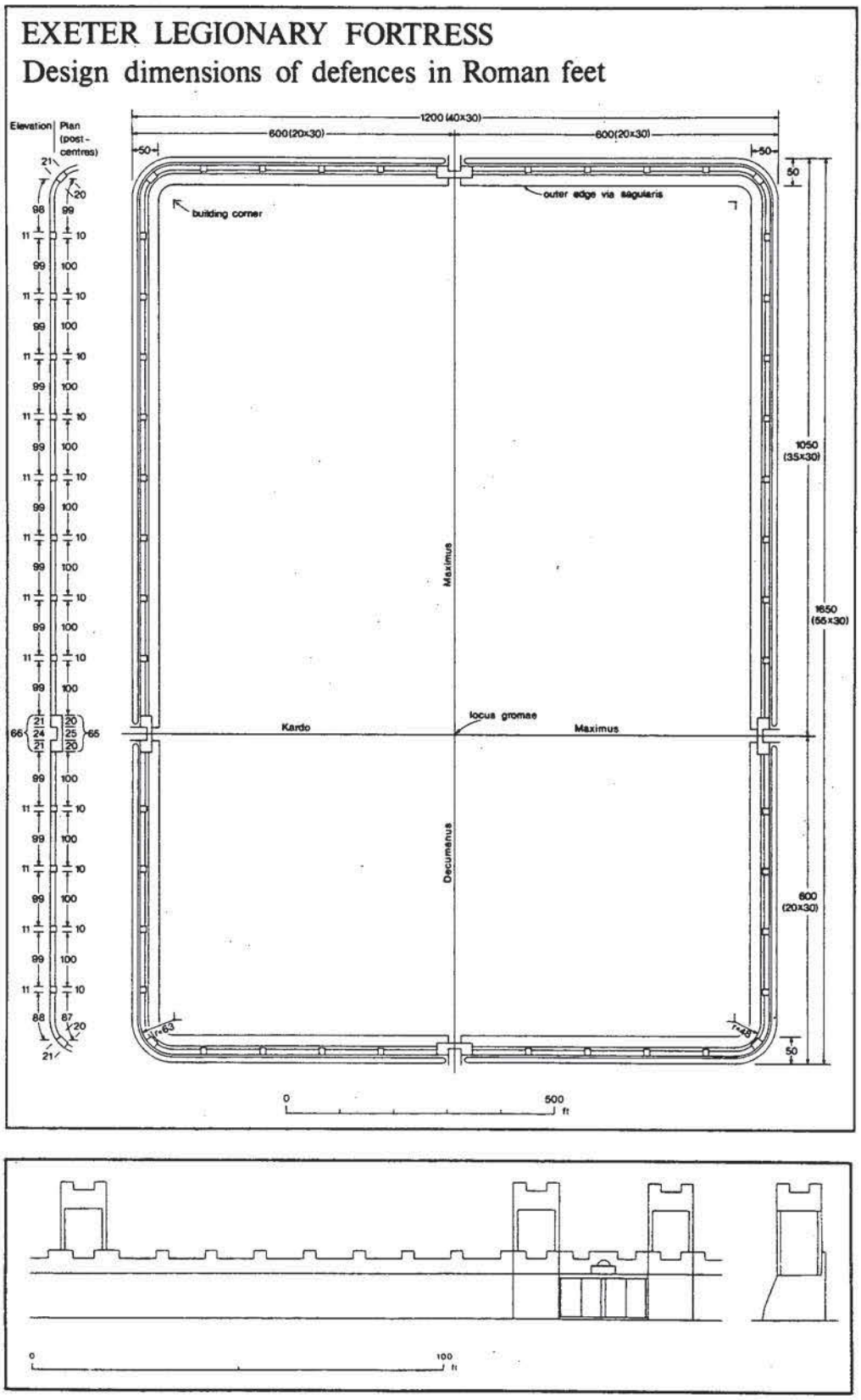
EXETER LEGIONARY FORTRESS
Design dimensions of defences in Roman feet
Elevation
Plan (post-centres)
1200 (40×30)
600 (20×30)
600 (20×30)
50
50
outer edge via sagularis
building corner
1050 (35×30)
1650 (55×30)
Maximus
Kardo
locus gromae
Maximus
Decumanus
600 (20×30)
50
0
500
ft
0
100
ft

Fig. 9.

in 1936 next to the Speke Chapel contained a wall about 0.65 m wide running SW-NE at a distance of about 2.15 m NW of the wall at the front of the rampart. The 1936 wall was evidently of relatively early Roman date since in a published section drawing it is clearly shown to have been sealed by Roman deposits which were themselves cut through by the walls of a late Roman town house. Prior to the third century there were very few stone structures in Exeter, the only known examples being large public buildings such as the forum and the baths. The discovery of a narrow stone structure about 3.4 m wide sited astride the early Roman defences is therefore most intriguing. The obvious conclusion is that the remains represent the walls of a stone tower. However no other masonry elements have been recorded on the fortress defences, although it is possible that a scheme to upgrade the earth and timber defences was started towards the end of the military occupation of the site, or early in the life of the Roman town, and then abandoned. A small-scale excavation involving the re-excavation of the 1936 trench might well clarify the matter.

Remains of later periods were also recorded in the excavation and watching brief. Walls belonging to a late Roman house were traceable over much of the area, and at one point a long narrow flue and stoking pit belonging to some form of late Roman furnace (?corn-drying kiln) was located. An early medieval boundary ditch running on an alignment apparently intermediate between those of the Cathedral and The Close cut through the Roman features and was itself overlain by the late medieval rear range of No. 15, The Close -- once the Cathedral Chancellor's house. Early features were recorded in the rear wall of the main house. The new observations usefully augment the records made of the building during a refurbishment in the later 70s.

1.4 **The Cathedral** (S.R. Blaylock)

The programme of conservation and replacement of masonry on the South Tower, which has been in progress since 1981, was completed in 1992 and the last of the scaffolding was removed from the south face of the tower in June. In the last few months recording was completed on the lowest tiers of the east and south faces of the tower (levels EE, EF and SF) and on the eastern exterior elevations of the chapels of the Holy Ghost (between tower and Chapter House) and St John (cutting the east wall of the tower). Further consideration was given to the structural history of the large window lighting the south transept in the south elevation of the tower (Fig. 10). It was shown that the window was of three post-Norman phases (replacing a number of small round-headed Norman windows). The large window was first opened in the work of 1286-7 which saw the conversion of the tower into the south transept for the new cathedral. At a later stage the head of the window was raised and a new traceried head added. This work was probably done during the completion of the work on the transepts by Thomas of Witney in the period 1318-1322. Finally, some time in the 15th century, the mullions of the window were replaced and a transom inserted to sub-divide the very tall lights.

The completion of the fieldwork has opened the way to finalising the archive of material on the South Tower that has been assembled over the last 11 years. Work is now in progress on the indexing of photographs, drawings, and mortar samples; the duplication of photographic archive material (contact prints, etc) and the production of easily-accessible lists and master drawings. Work is also being done on the collection of

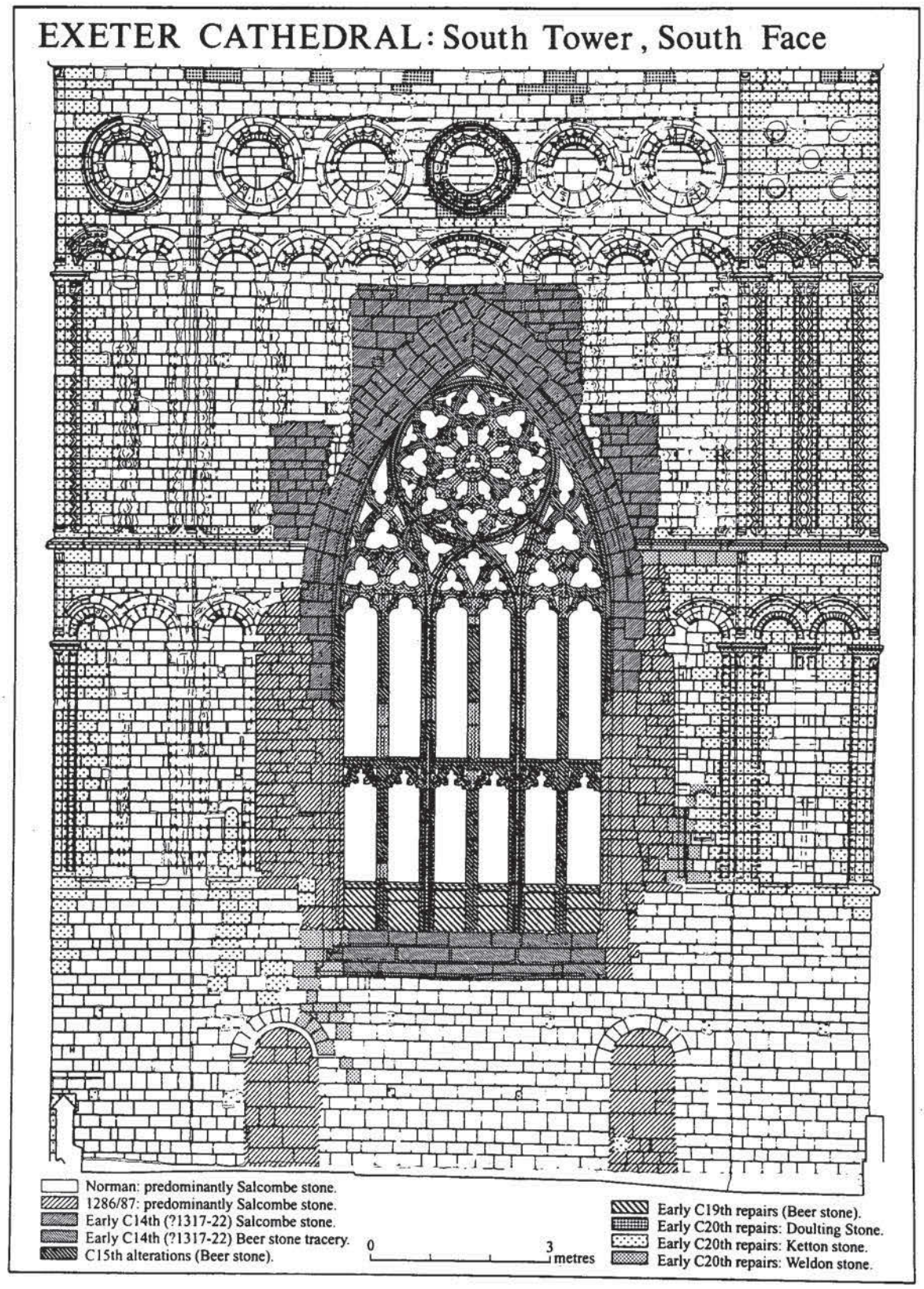
EXETER CATHEDRAL: South Tower, South Face
Norman: predominantly Salcombe stone.
1286/87: predominantly Salcombe stone.
Early C14th (?1317-22) Salcombe stone.
Early C14th (?1317-22) Beer stone tracery.
C15th alterations (Beer stone).
0
3
metres
Early C19th repairs (Beer stone).
Early C20th repairs: Doulting Stone.
Early C20th repairs: Ketton stone.
Early C20th repairs: Weldon stone.

Fig. 10.

fibre-glass and resin casts of well-preserved architectural detail that has been built up. The production of inked elevation drawings of each face of the tower has been done as the work proceeded, but a further stage of making master drawings with recorded information on phasing and stone replacement remains to be done. Further work is also outstanding on the synthesis of recorded information on the decorative repertoire of the tower: capitals, bases, moulding sections etc, which, it is hoped, will yield interesting results.

1.5 The City Wall: Lower Coombe Street (S.R. Blaylock)

The City Council is currently carrying out a major programme of consolidation and repairs on the section of the City Wall running from South Street down towards the Custom House. A new footpath leading from the Western Way footbridge will enable the public to walk a short distance along the top of the wall before dropping down to follow its rear face next to Quay Lane.

The construction of the footbridge over Western Way and the work on the associated wall walk has entailed detailed examination and recording of the fabric of the City Wall in this area with results of great interest. Archaeological investigation of the wall top has illuminated the full complexity of the wall's history in this area. For the first time anywhere on the circuit of the wall it has been possible to identify original Roman volcanic blocks in its external face.

The City Wall was built within a few decades of AD 200. The line of the wall remains now as originally laid out but most of the visible facework has been replaced over the centuries, as the wall was maintained in use as the principal defensive work of the City. Excavation at various places in recent years has shown the character of the Roman wall and on this basis it had been suspected that the length of wall of 17.5m on the downhill side of Western Way (immediately below the bridge abutment) retained Roman facework to its full surviving height.

The cleaning up and detailed examination of the top of the wall next to Quay Lane from May to July confirmed this identification. The full width of the wall top is Roman and some of the rear facework also survives at this point. The wall is 3.45m high above the plinth (later underpinning beneath the plinth occurred when ground level was lowered) and 2.15-2.20m thick at the top. The rear face of the Roman wall was composed of a series of stepped faces. The maximum thickness of the Roman wall, i.e. towards its base at the level of the lowest offset face or rough rear face, has been measured here for the first time as *c.* 3.20m.

Although the positive identification of Roman work in the wall to such a height is a notable 'first', it does not give an absolute height for the Roman wall which could have been considerably higher, especially with the addition of a parapet. Unfortunately there is little hope of a better survival than this section of wall so this information is unlikely ever to emerge elsewhere.

A second notable observation in this area was that a mixture of building stone was employed: rough blocks of chert were used as well as volcanic lava rubble in the core and

in the rougher (i.e. rear) facework. In most other cases where Roman work has been observed the stone has been exclusively volcanic lava (the so-called 'trap', whose source is presumed to have been in Rougemont at the northern corner of the city) which was used as dressed stone for coursed facework and as undressed rubble for the core and rough faces. The origin of the chert is not precisely known: Haldon to the west, or the Blackdowns (or their southern extension to the sea at Sidmouth) are probable sources. Both are distant compared to the source of the volcanic stone, yet in places the chert accounts for as much as 40% of the wall core.

Further down the hill (to the south-west, away from the bridge) some Roman work survived on the rear face but the bulk of the core and the front face of the wall had been rebuilt. The facework here has a striking mixture of volcanic trap blocks, chert and well-cut blocks of white Triassic sandstone. The first two types of stone were presumably re-used from collapsed Roman fabric; the last is an introduction from the time of the rebuild (it was in general use in the early medieval period in Exeter, approximately 11th-13th centuries). Still further down, the wall was refaced on Roman corework or on rebuilt medieval corework.

Aside from the advances in our understanding of the Roman wall, part of the value of this latest recording exercise has lain in the opportunity it has presented to see the interior and exterior faces of the wall together, linked by the plan view obtained by stripping and cleaning up the top of the wall, and thus to test interpretations derived from the elevations of the standing wall against newly-recorded material in plan. The opportunity was doubly beneficial in that it occurred at the point where Roman work was so well preserved.

Most recently, during late August and September, the stretch of wall on the uphill side of Western Way (between the bridge and South Street) has been recorded in advance of repairs and consolidation work. Here much of the rear face is Roman: stepped courses of squared volcanic blocks above, rougher-quality facework below, in a mixture of volcanic trap and chert. Some of the facework is obscured or replaced by repairs of the 1960s. Nearly all the front face is later refacing but a small number of blocks in the plinth and in the lowest courses of facework may survive from the Roman wall.

1.6 **The Custom House** (S.R. Blaylock)

HM Customs and Excise moved out of the Custom House in 1989 after a period of occupation, stretching from the construction of the building in 1680-1, of more than 300 years. The Exeter Custom House is the oldest surviving building of its type in Britain. An ambitious programme of repairs by Exeter City Council has begun, commencing with works on the exterior elevations and the roof during the winter and spring of 1992. Archaeological recording has taken place during repairs and has begun to yield an interesting collection of details of the original building and subsequent history of the Custom House. Work so far has comprised:
(i) records of carpentry and joinery details in the roof, pediment and eaves-assembly -- interesting as the building is one of the first in Exeter to employ pine on a large scale. Oak, the predominant structural timber of earlier times, was still used but here only for

pegs (holding joints together) and for the common rafters of the roof.
(ii) inspection of the footings of the building where they have been exposed for drainage works, which has yielded a number of observations on the foundations and have provided important new information on the early topography of the Quay.
(iii) recording of the pier of masonry at the north-west corner of the Custom House which probably represents one side of the 'Watergate', an arched gateway onto the Quay compound which may have pre-dated the Custom House by several years. The opposite pier of the Watergate may be seen built into the fabric of the warehouse on the other side of Quay Hill.
(iv) re-examination of the documented history of the building in relation to new observations on the fabric. This has enabled a more accurate and closely-defined account of the structural changes to the building to be drawn up.

Work now in progress, or planned for the future, includes the recording of brick patches (new and old) in the exterior elevations, the recording of the interior partitions and floor frames (again characteristic of their period), the establishment of an archive of decorative details in the building (moulding profiles, details of panelling and plasterwork, iron hinges etc) and the re-assessment of the structural history of the building in the light of these new observations.

1.7 **Bowhill, Dunsford Road** (S.R. Blaylock)

Recent work by the EMAFU at this English Heritage property has included an excavation in the eastern courtyard area in March and April 1992; further fabric recording on the south and west ranges of the standing building; and continued study of material recorded in recent years.

The excavation covered an area of some 150m^2 to the east and south-east of the standing building, within a modern boundary wall. It was hoped that this area would contain evidence for the presence and extent of a wing which formerly adjoined the building to the south-east (which is shown on the only surviving 18th-century view of Bowhill, by S. & N. Buck dated 1734, and which had been demolished by the end of the 18th century). This hope was disappointed in one way in that much of the excavated area was covered by late 18th or 19th-century cultivation trenches which had cut away most of the earlier deposits and which belonged to the period when the building, in its decline, had been used as a market garden or nursery. One substantial earlier feature was found however: the rounded terminal of a large ditch, filled in (according to the evidence of pottery and other finds) in the later 17th century, some 11m east of the present limit of the standing building. This feature is doubly interesting: firstly it is likely to have been a part of the fortification of the building during the Civil War: Bowhill was probably used as a fort by parliamentary forces early in 1646 (there is a reference to this in contemporary documents, but physical evidence had not, until now, been forthcoming). Secondly the ditch, or perhaps more properly its associated bank, would have to have been sited in relation to another structure in order to function properly as a defensive feature, and thus the gap of 11m provides some information towards the hoped-for result of the excavation: the extent of the south-eastern wing, now vanished.

EXETER: BOWHILL 1987-89

South Range

Cross Sections

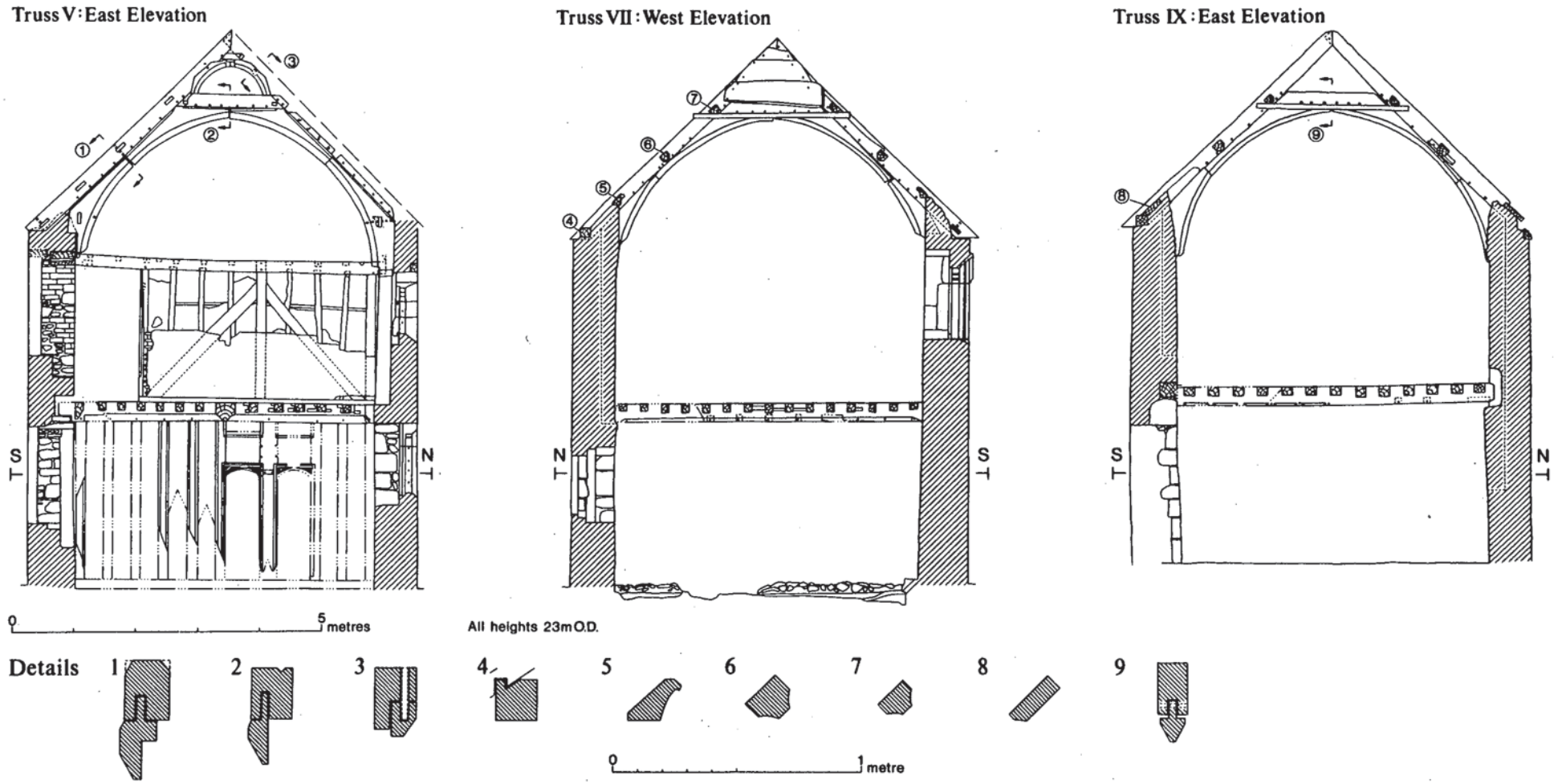

Fig. 11.

Fabric recording in the west range of the standing building has focussed on the form of the roof, yet another variation on the theme of an arch-braced, jointed-cruck roof structure that is so characteristic of Bowhill, and on evidence for a gallery at first-floor level along the east wall of the range. A gallery was necessary to provide circulation from the first-floor rooms of the south range to those in the northern part of the west range (now demolished), bypassing the kitchen in the southern bays of the west range which was open to the roof.

Work on the south range roofs has continued with final drawings of previous work on the western bays being produced (Fig. 11). Two further analytical drawings of the roof timbers have been made by Piran Bishop, to show the variant assemblies of the roof in the central and western rooms of the south range.

2. MISCELLANEOUS MINOR RECORDING PROJECTS

2.1 46-47 High Street

Over the past 15 years or so archaeological recording has been carried our in this pair of mid 16th-century buildings as opportunity has presented. Following further work on site earlier this year a reconstruction drawing (Fig. 12) has been produced by Keith Westcott. This aims to illustrate the primary form of the building, which possessed paired timber-framed back-blocks -- a unique feature in Exeter.

2.2 Quay Hill

Observation of service trenches revealed the 16th-century access road to the Quay and permitted the recording of buried windows in the rear wall of the Custom House, which now has 2 m of make-up against it.

2.3 227 High Street

Recording is currently taking place in the front range of this handsome early 17th-century house which possesses two tiers of galleries facing the street.

2.4 193-4 High Street

During refurbishment of these premises a watching brief was maintained during the excavation of stanchion pits in cellars. No early Roman deposits survived in the area examined, which probably overlies the site of store buildings in the legionary fortress.

2.5 York Road sewer trench

Observation of a sewer line cutting across York Road in an area within the bottom of the Longbrook valley revealed post-medieval deposits over 2 m deep.

EXETER : 46-47 HIGH STREET Isometric Reconstruction

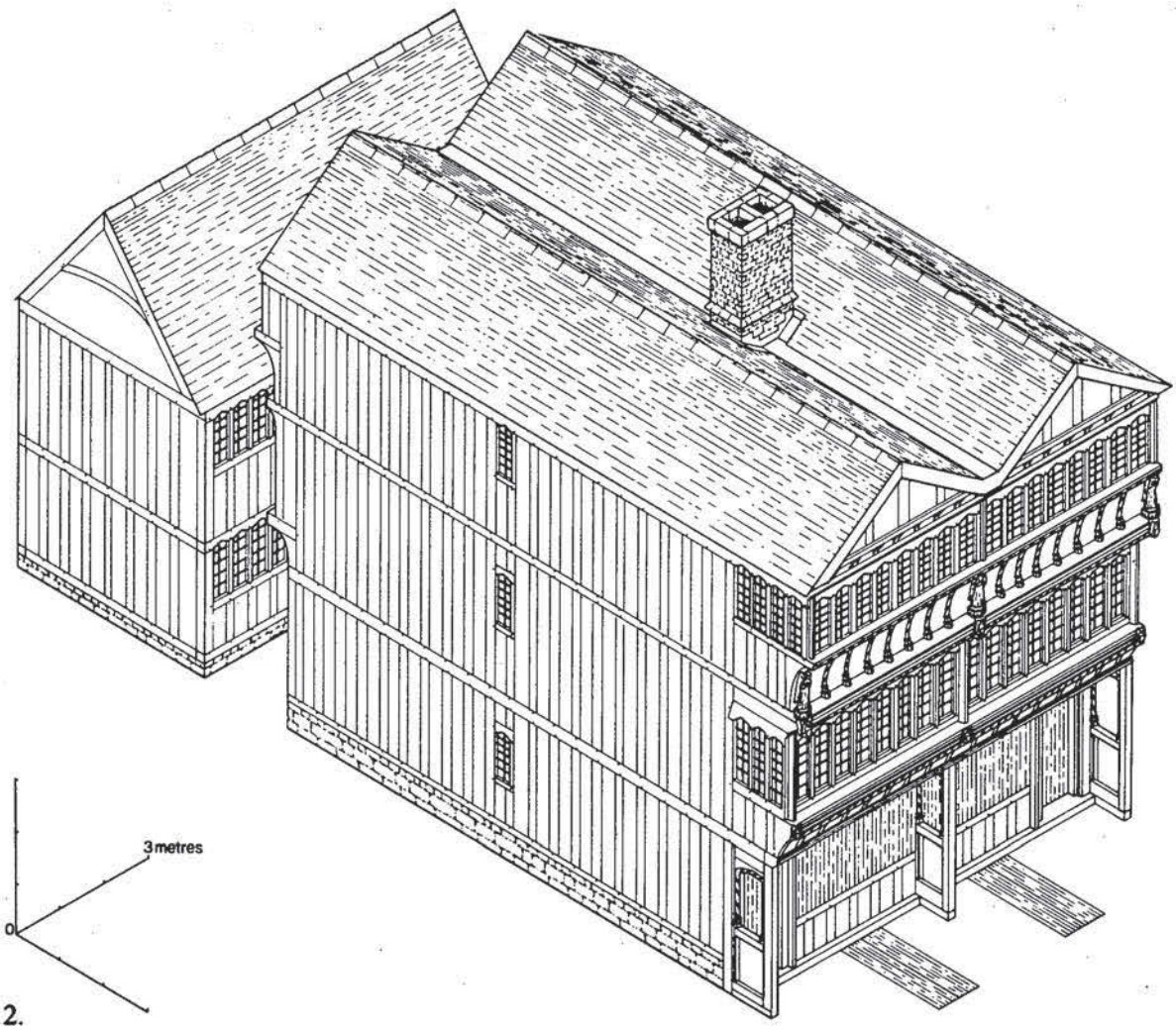

Fig. 12.

2.6 East Gate Parade, Princesshay

A trench 1.8 m square excavated for the foundation of a 'Dot-matrix' display board revealed volcanic trap pitched stonework within the core of the Roman City Wall. This work was cut by a large Heavitree stone foundation which either represents the remains of a buttress against the face of the City Wall or part of the St John's Hospital (Blue Coat) School Headmaster's House.

Beneath the post-War buildings on the corner of Paris Street, High Street and Princesshay there is a large open semi-basement space in which survive various earlier walls, including those of the Headmaster's House and buildings on the 19th-century East Gate Parade. A stretch of the 18th-century brick-vaulted Cathedral aqueduct tunnel may also be observed in this area, which overlies the ditch in front of the City Wall.

2.7 Princesshay Fountain

Excavations for the insertion of water tanks serving the new Princesshay Fountain revealed the front foundation of the Roman City Wall at a level below the plinth. This

is the first time this has ever been seen, so that this observation provides a most useful complement to the records of the wall made recently at Quay Hill/Lower Coombe Street which will enable a comprehensive reconstruction drawing to be made showing its original appearance and method of construction.

2.8 South West Water Pynes to Dunsford Hill pipeline

An initial archaeological assessment of the route of this pipeline was funded by South West Water and followed up with a watching brief on construction. The route crosses a number of early features on the Exe floodplain, including the pre-Conquest Exwick leat, a medieval settlement at Voghays and a possible Roman road in St Thomas. The most important discovery, however, was a previously unknown major medieval channel of the Exe which followed a course to the west of St Thomas and was eventually filled in some time in the early modern period. This discovery represents a significant addition to knowledge of the early topography of the area.

2.9 Danes Castle

A watching brief is being carried out on works by South West Water to construct a replacement for the 19th-century reservoir built on the site of the probable medieval earthwork of Danes Castle, near Exeter Prison.

2.10 Exeter Castle

A small excavation recently took place at Exeter Castle. An area of paving at the front of the main building is to be reduced in level. This is the first time it has been possible to examine an area within the defences of this important monument. The deposits encountered were of the 17th or 18th century, providing a useful benchmark against which to judge the possible impact of any future works in the area.

3. REPORTS AND PUBLICATIONS

3.1 Introduction

The field records and finds accumulated in the course of an archaeological excavation or recording project are analysed to produce a series of structured archives and reports of varying levels of detail. Initially, much work goes into the preparation of detailed project reports, whose production is necessary before reliable conclusions can be formulated for presentation in printed publications or displays. The principal classes of reports and publications produced by the AFU are as follows.

3.2 Primary project reports

These contain the basic information and primary analysis upon which are founded higher level syntheses presented in printed publications. The project reports appear in the EMAFU Reports Series, produced in photostat -- typically in editions of 12-30 copies. Some are distributed free to certain local and national public archives and may be purchased by other organisations or individuals, others necessarily have a more restricted

distribution. For a large site, or a group of adjacent sites, a dozen or more primary project reports may be prepared dealing with such diverse topics as the site stratigraphy; various categories of finds; documentary evidence; scientific analyses: e.g. radiocarbon dating, dendrochronology, pollen and plant remains, soils and sediments, or faunal and human skeletal remains. The reports are prepared in-house or commissioned externally.

3.3 Exeter Archaeological Reports

This A4 monograph series is published jointly by the City Council and the University of Exeter. It provides the principal vehicle for the detailed publication of the synthesized results of the AFU's work in Exeter, and is intended primarily for a specialist archaeological audience. English Heritage makes a 75% grant towards the printing costs for each volume. A high proportion of sales go to specialists, universities, libraries and museums in Britain and abroad.

Volume 4 in the EAR series, *Roman Finds from Exeter* by P.T. Bidwell and N. Holbrook, was published in June last year. Work is currently in progress on Volumes 5 and 6, dealing respectively with the *City defences* and the *Roman legionary fortress*. Also planned are Vol 7 (*Medieval and post-medieval suburbs*), Vol 8 (*The Roman town*), Vol 9 (*Medieval and post-medieval sites within the walls*) and Vol 10 (*Historic buildings*).

3.4 Archaeological journals and thematic monographs

AFU and Museum staff contribute articles on aspects of Exeter's archaeology to a wide range of national and local journals as well as to occasional publications such as conference proceedings.

Articles have appeared recently in the *Journal of the Royal Archaeological Institute* on the Guildhall, the Castle, and the Custom House; *Post-Medieval Archaeology* on the Civil War defences; the Proceedings of the Third International Waterfront Conference on Exeter Quay; the *Proceedings of the 15th International Congress of Roman Frontier Studies* on the Roman fortress; the book *Exeter Cathedral: A Celebration*; the British Archaeological Association Conference Proceedings *Art and Architecture at Exeter Cathedral*; and in the *Proceedings of the Devon Archaeological Society*, on the Guildhall. A chapter on Exeter is being prepared for the *Historical Atlas of South-West England* and a substantial paper on Roman pottery from Exeter excavations 1980-90 will appear in the *Journal of Roman Pottery Studies* **5**.

3.5 Popular publications

A number of booklets and pamphlets have been produced in past years, also the book *Roman Exeter: Fortress and Town*, and contributions have been made to the popular publications *Devon Archaeology, Devon's Past, Archaeology in Britain* etc. Last summer saw the publication of the new A5 booklet *Exeter Guildhall*, and of *Devon Archaeology* **4**, featuring an article on Exeter Quay. For next year it is intended to produce A5 booklets on the *Underground Passages, Exeter City Walls* and *Exeter in the Civil War.*

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