

## VII

# Excavation of the Town Wall in the Milk Market Newcastle Upon Tyne

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### SUMMARY

**C**ONSTRUCTION of a new retaining wall at the east end of the Quayside (fig. 1) necessitated the exposure and recording of a stretch of town wall, to ensure that engineering foundation work did not damage the medieval structure. The development involved the destruction of archaeological deposits adjacent to the south face of the wall.

### INTRODUCTION

It is often assumed that the Sand Gate, the towered gateway into the town from the east, was located at the junction between the Wall-knoll and Quayside stretches of the town wall (e.g. figs 2 and 4). In fact, there was 35–40 m of walling south of the gate before the corner, and the wall continued south of the angle for a further 20 m to the river's edge. That corner, the extension, and 71 m of the riverside wall are the sections of wall discussed in this report. The objects of the archaeological recording exercise were to:-

1. Locate and expose the Town Wall to facilitate the design of the new retaining wall.
2. Record and interpret the surviving sections of the monument, looking for evidence of the construction sequence at the eastern return, for other towers and watergates along this length and traces of later damage and repair of the walling.
3. Describe the character of deposits and structures abutting the wall on the riverward side.

The archaeological objectives reflect the very specific nature of the threat posed by this redevelopment; more general questions con-

cerning the development of the waterfront and its contemporary environment could not be addressed within these parameters. The following report is a digest of the results, emphasizing new information. A full set of elevation drawings and detailed excavation descriptions are contained in the Archive Report, available from the City Archaeology Unit, Jesmond Old Cemetery, Jesmond Road and the Museum of Antiquities, Newcastle.

The Town Wall has been the subject of antiquarian enquiry from the time of the earliest history of Newcastle by William Gray in 1649, but not until the past decade has the wall been the subject of a programme of detailed, systematic recording, principally by the Newcastle City Unit. This report extends that work along a section of wall not seen since 1910.

### HISTORICAL BACKGROUND

There is little documentary material relating directly to the stretch of walling between the Sand Gate and a large water gate known to have stood opposite Broad Chare (fig. 2, No. 15). Nothing can be added to the known history of the fortification (see Harbottle 1968, Nolan et al. 1989, and Fraser 1994, 89–91), which suggests that the main inland circuit was in construction during the fourteenth century and that the river side lengths either side of the bridge were added in the early fifteenth century. Property at Pandon is described as "without the gate" in 1356, suggesting that the towers at least had been erected by then, but properties on the Quayside were described as being bounded by the river in 1392 (Brand 1789, 100), and the eastern part of the Quayside housed coal staithe ("gardino carbones") in 1332 and 1366 (AA 3, 5, 58 & 59 resp.).

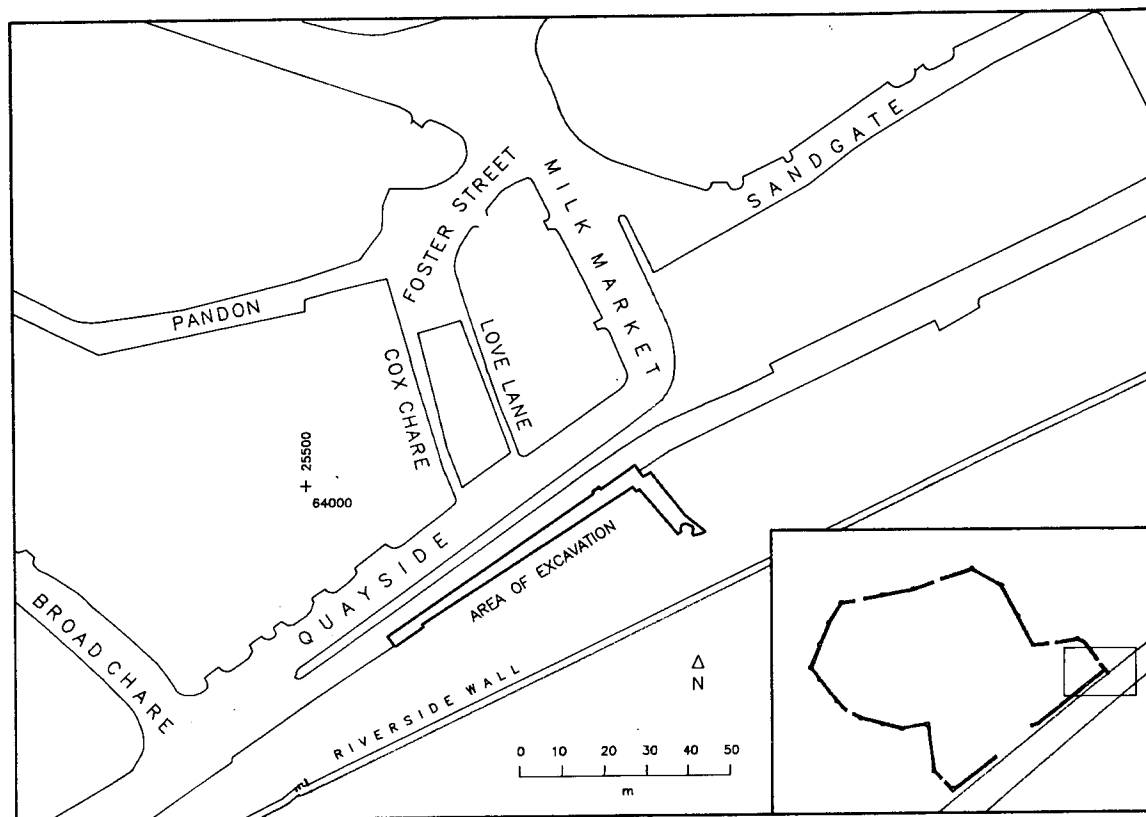


Fig. 1 Newcastle Milk Market: Location map.

The walling at Sandgate was being repaired in June 1567, at the expense of the town (TWAS Calendar of Chamberlain's Account Book, Newcastle, 1565–1572), and it is not known if this section was “in great ruin and decay” as the town's defences are described in a plea to Elizabeth I of 1593 (Welford 1887, 56). During the Civil War, fourteen artillery pieces were placed “upon the Quay” and it is recorded that there was considerable damage done to the wall (by mine) and to the houses at the east end of Sandgate, both by defenders, who set fire to houses near the wall, and the besieging Scots from a battery in Gateshead (Terry 1899).

There is no documentary evidence of a ditch outside the wall or around the Sand Gate,

either because the ditch was filled in at an early date, or because it was not possible to cut a ditch in the made-up ground of the waterfront. The absence of such a ditch encouraged the encroachment of buildings up against the defences. The Common Council occasionally moved to clear these (e.g., TWAS Calendar of Common Council Minutes, 9/2/1647). The last refurbishment of the walls was in 1745, but there must have been a considerable change in the town's sense of security because in November 1762, the Mayor and Common Council petitioned George III for permission to demolish the wall from Sandhill to the Sand Gate. It was “a very great Obstruction to Carriages and a hindrance to the dispatch of Business” (NOR ZRI 27/9). This included the Sand Gate itself,

and the length of wall beyond the junction with the Quayside length. The stretch from the gate to Forster Street was removed in 1803, (Twas Common Council Book, 24/3/1803) and the wall from Forster Street to Wall Knoll was demolished after 1830 (Thomas Oliver's Map of 1831, fig. 4).

The area to the south-east of the gate has been known as the Milk Market from at least the late seventeenth century, when that commodity was sold in the open area outside the Sand Gate. The Common Council appointed a keeper of the market in 1717 who was given permission to rebuild "the place where the milk was sett down" which was pulled down in "the late rebellion" and build a shop from which to sell the milk. There was a pant near

the gate and, in 1680, the Common Council constructed an engine to raise water from the river, housed in a building later known as "the Folly" (Brand 1789, 450) a name used as an address for the east side of the market place on Oliver's Map of 1831 (fig. 4).

The area to the south of the Milk Market was used as one of the town's major middens (earliest ref. 1566, from the Chamberlain's Account Book 1565-72, 40), and was enclosed by the south range of buildings facing on to the market (north), the river (south), the Wall (west) and buildings on "Sandgate Shore" to the east (in 1831 a large warehouse owned by Sir Thomas Bradford: Oliver's Map). While it was owned by the town, there were frequent requests to build upon it, for example, in 1732,

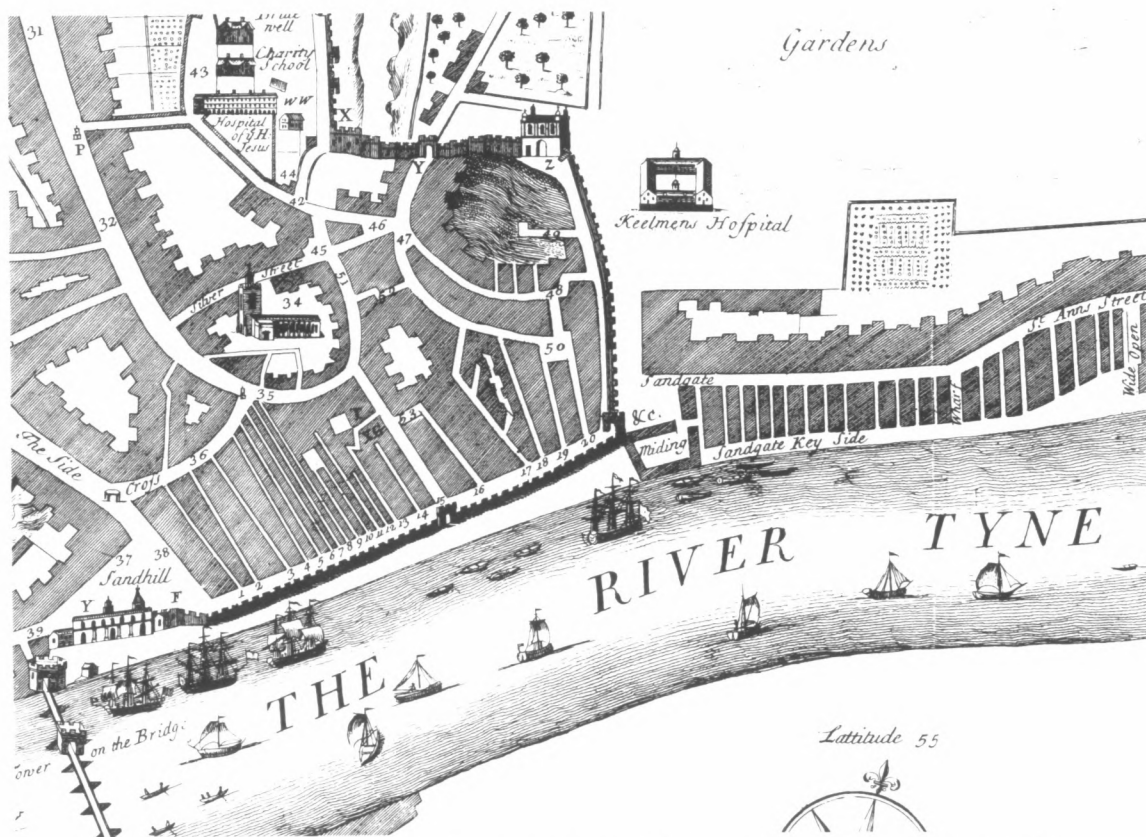


Fig. 2 Map of Newcastle upon Tyne as adapted for Bourne's History of Newcastle upon Tyne, 1736.

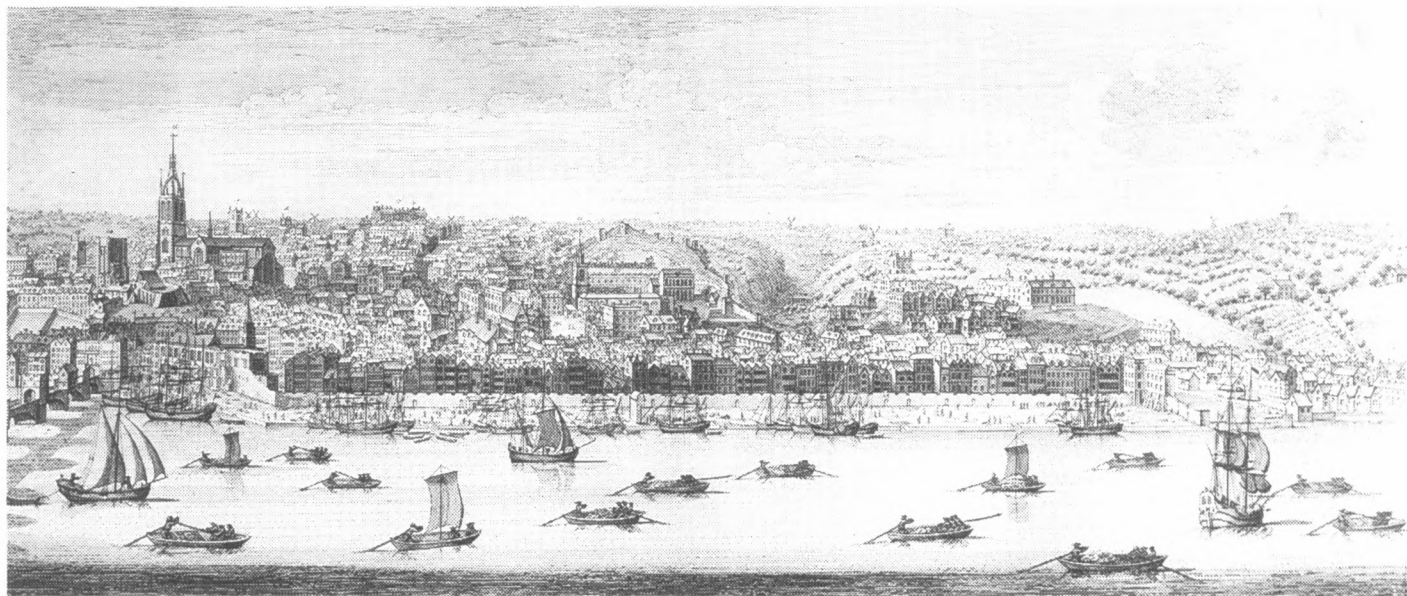


Fig. 3 N. and S. Buck, *Detail from "The South-East Prospect of Newcastle"*, 1745.

Joseph Peacock, smith, requested land for an extension of a house he had lately built upon part of the Sandgate midden, advancing that the  $2\frac{1}{2}$  yards requested would not inconvenience the town. He was told that he had exceeded his liberty on the last occasion, that he would not be granted further land, and that his rent would be adjusted to take account of his former encroachment (Twas Calendar of the Common Council Book, 1718–1743, 310). However, Joseph Peacock junior, was granted a further 12 feet in 1773 because he “sometimes had orders for anchors of a larger size than his workshop would admit” (op. cit. 1766–85, 186). This was on the north side of the midden and included the archway to the Milk Market; Francis, Joseph’s brother, a rope-maker, also had premises on this range (op. cit. 406–7). The Common Council ordered that the “street manure” in the town’s midden at Sandgate be advertised for sale at one shilling per fother (op. cit. 124). In 1820 the midden was ordered to be removed to a “less objectionable situation” (op. cit. 1817–24, 22).

One further topographical reference has not been located. This is the “Sylverles towre” mentioned in the Chamberlain’s Accounts of June and October 1567:

“Item paide to James Tenande for his quartriche for kepinge Sande Gaite Yaite and Sylverles Towre . . . 13d”

“Item paide to James Tenande for kepinge Sandgaite myddinge and the Sylverles towre . . . 6s 4d”

This name has not been encountered elsewhere; perhaps it refers to a small tower or bastion on the end of the wall that extends into the river. If so, it had gone by the time the first detailed maps and views were produced, perhaps being ruinous before the Civil War refurbishment, and therefore not put back into commission.

The wall is well illustrated in Buck’s “The South-East Prospect of Newcastle” of 1745 (fig. 3). The Quayside stretch is largely unencumbered, but the angle has buildings of four storeys, heavily buttressed on the river side. The length that runs to the river’s edge is

clearly of more than one build, and changes alignment as it approaches the terminal (see below). The butt-end is thicker than the wall width, suggesting a strengthening of the terminal, which may represent an end bastion, the “Sylverles towre” of 1567, repaired without the extra parapet.

#### PREVIOUS EXCAVATION AND RECORDING

The junction between the eastern and southern walls was exposed during the last major phase of road engineering, in 1905, and recorded in *PSAN* of that year by W. H. Knowles (*PSAN* 3, II, 62–3). The work involved lowering the road way by 10 feet, which revealed seven courses of north–south wall upstanding for a length of 56 feet (18 m), and approximately 10 feet (3.1 m) of the riverside stretch. These are drawn in elevation, and the north–south wall is shown in section. Individual blocks are recorded and offsets noted. The only other architectural features shown is a triangular niche or wall cupboard in the inner face of the riverside length. The walling is shown to be well preserved, and the junction shows no sign of the collapse recorded in 1992 (see fig. 12, and below).

Sections of the length along the Quayside were exposed in 1986 during the construction of a new interceptor sewer by Northumbria Water (Nolan *et al.* 1989, 74).

#### EXCAVATION DESCRIPTION

Trial holes for the engineering works located the wall in 1992. It was noted that the interceptor sewer constructed in 1986 directly abutted the north side of the Town Wall, destroying the ashlar face, and making archaeological investigation of the reclaimed landward side impossible.

The progress of the excavation followed the order of infrastructure work, with the trenches being opened, excavated and backfilled in progressive phases.

#### *Structural phasing summary*

- Phase 1 Pre-wall surface
- Phase 2 Construction of N–S Wall 032

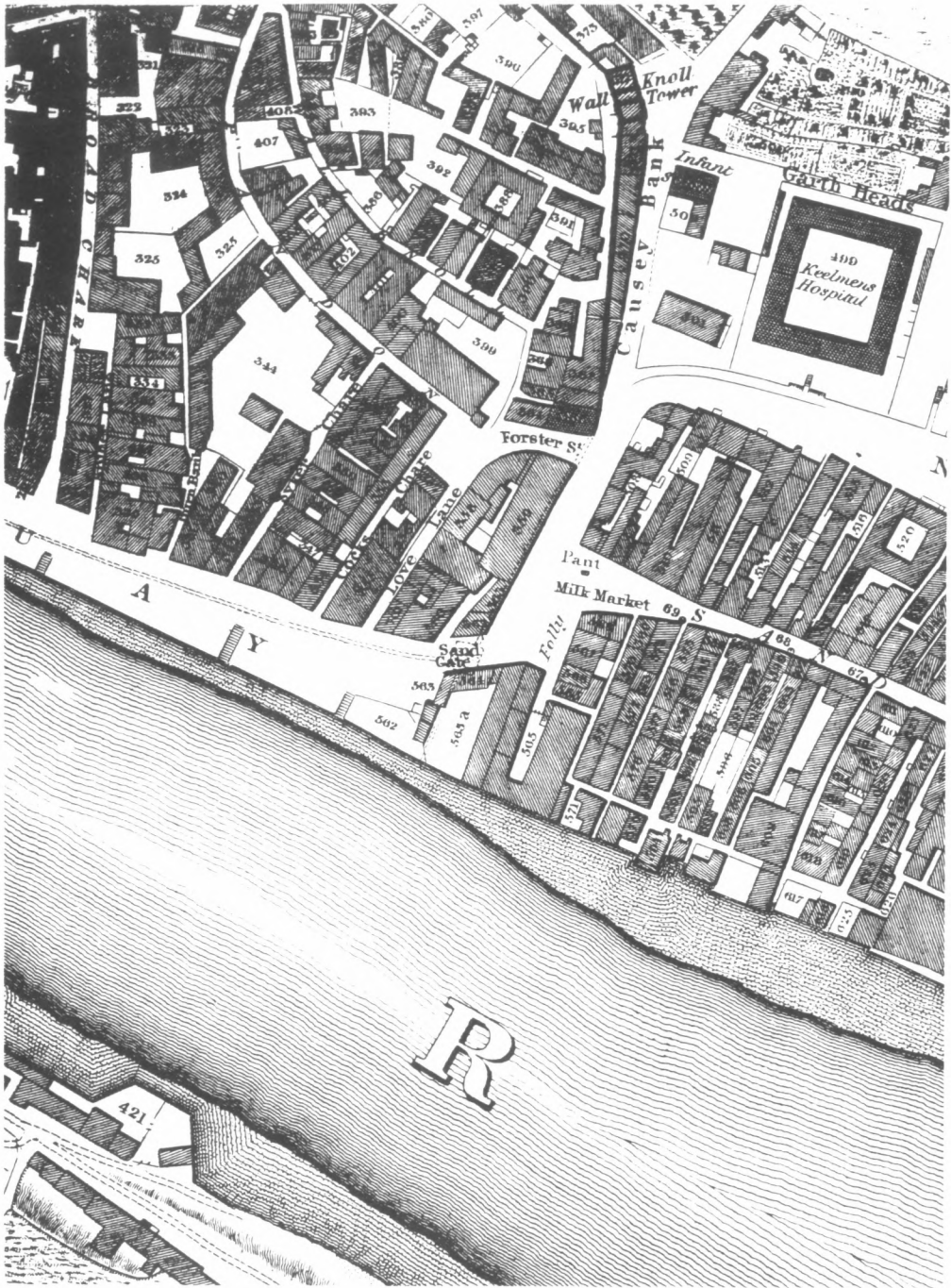


Fig. 4 T. Oliver, map of 1831.

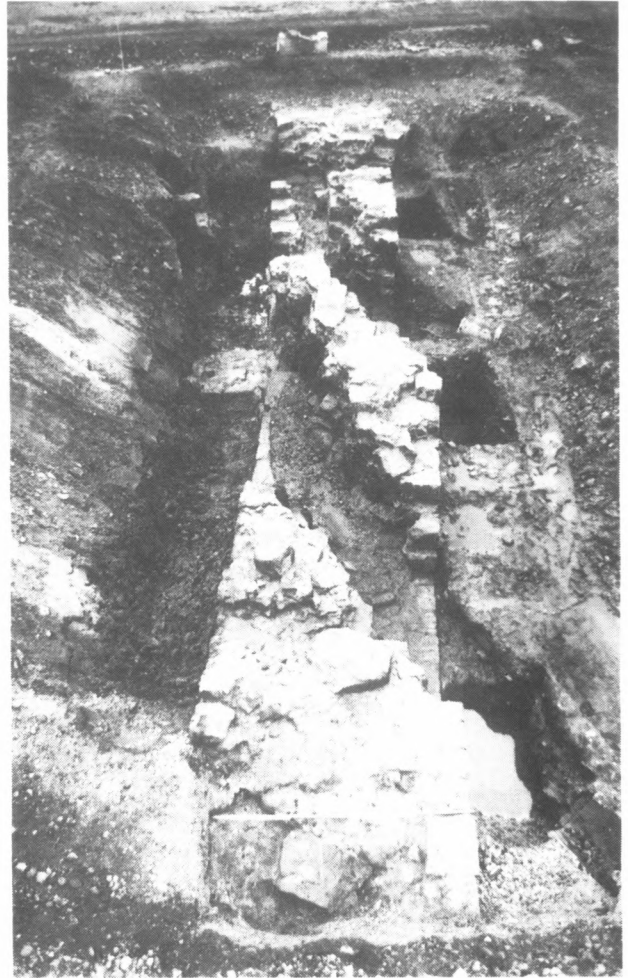
- Phase 3 Construction of Extension, Wall 033
- Phase 4 Construction of Wall 034 to bring 033 to width of 032
- Phase 5 Construction of E-W Wall (42/50/64/65/66)
- Phase 6 Construction of wharf
- Phase 7 Robbing of ashlar face of wharf
- Phase 8 Demolition of wall

#### *Phase 1—Pre-wall sand and gravel*

Excavation along the Quayside by O'Brien (1988) has confirmed the suggestion by Harbottle (1976, 121) that the flat land at the foot of the bank represents reclamation of the thirteenth and fourteenth centuries. That the pre-medieval ground surface of the Milk Market was riverbed is beyond doubt, and that the Quayside was created from dumped material likewise, but this was the first opportunity to examine the character of pre-Town Wall deposits east of the bridges and west of Sandgate (Goodrick *et al.* 1994). Pre-wall stratigraphy was observed beneath the riverside stretch (Phase 5 below), and consisted of a heterogeneous mixture of sands, gravels and coarse pebbles at 0.96 m OD. It was observed at up to a metre in thickness, but the natural riverbed was not reached. Geological analysis showed the material to have a varied origin, including a component from the Thames estuary, suggesting that the river side was being built up with ballast dumping (see Geological Report, below). This supplements the fuller investigation of ballast dumping to the east (Goodrick *et al.* 1994) and modifies O'Brien's proposal that the site of the earliest ballast dumping along the Tyne was to the east of the Milk Market (*op. cit.* 230); it can now be seen along the Quayside at least as far west as Byker Chare, although probably not at the thicknesses (5 m+) seen beneath Sandgate.

#### *Phase 2—The North-South stretch of the Town Wall*

The length of Town Wall uncovered in the northern half of Trench 1 represents the south-



*Fig. 5 Walls 32, 33 and 34 from the north.*

ern end of the eastern stretch of the circuit (fig. 5).

The plan of the surviving stretch, (fig. 6, B) shows the extent of nineteenth and twentieth century damage when sewerage and drainage outlets were knocked through the masonry to debouch into the Tyne. This concentration of outfalls represents the direct line for the services running from the upper town (e.g. along Tower and Argyll Streets) down Milk Market bank to the river.

The wall (fig. 7) was constructed on a foundation raft consisting of angular and rounded

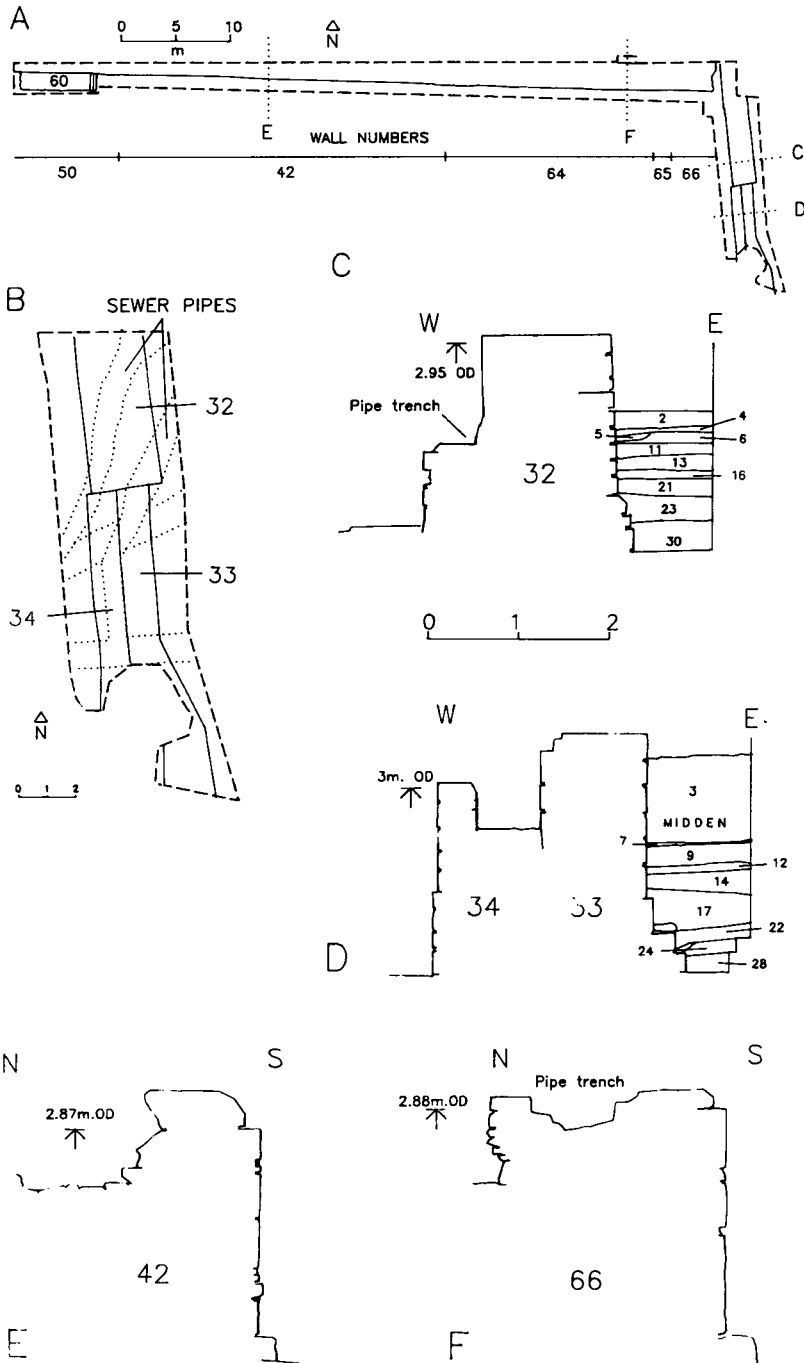


Fig. 6 The Town Wall:

- a) Plan of trenches with principal features.
- b) Walls 32, 33 and 34, with pipe trenches.
- c) Section, Wall 32

- d) Section, Walls 33 and 34
- e) Section, Wall 42
- f) Section, Wall 64.



sandstone blocks cemented together with mortar which had become stained yellow with age. The arrangement of the stones implies that care was taken to produce an even surface, though a gentle slope down to the river's edge was perceptible. The full width of the raft could not be resolved in the area available for excavation; it extended at least 2 m on either side of the wall for an unknown depth.

The upstanding facework was of good quality ashlar sandstone, in regular courses of differing thicknesses. A maximum of twelve courses were observed where the foundations were exposed (fig. 6, Section C). The wall was 2.40 m wide with no perceptible batter above the foundation courses. On the outer (eastern) face the foundations consisted of a well crafted chamfered course above two slightly offset undressed courses. As elsewhere on the town wall, the inner (western) face lacked the chamfer, having three slight offsets at the same level.

#### *Phase 3—The extension of the wall to the south, 033*

The wall was extended on the same alignment from the end of 032, set back 0.45 m from the outer face, for a distance of over 11.5 m. It then continued beyond the area to be affected by re-development; the southern 4 m of this area were not fully exposed as time did not permit full excavation, and only the upper surviving course on the eastern side was recorded. This is frustrating because the wall in this area changed alignment twice, in a single continuous build—a feature noted on the Buck drawing (fig. 3)—and it would have been illuminating to see if these changes were planned from foundation level.

The cutting of drainage pipe trench 1 into the core of the wall exposed the rear face of 033, giving this wall a width of only 1.10 m. That the rear face was *in situ* and not part of the pipe trench is proved by the quality of the masonry, and the fact that the coursing can be followed through the profile to the outer face (fig. 6, Section D). The foundations were recorded on the western face; three off-sets were noted, projecting a total of 0.44 m. The upper

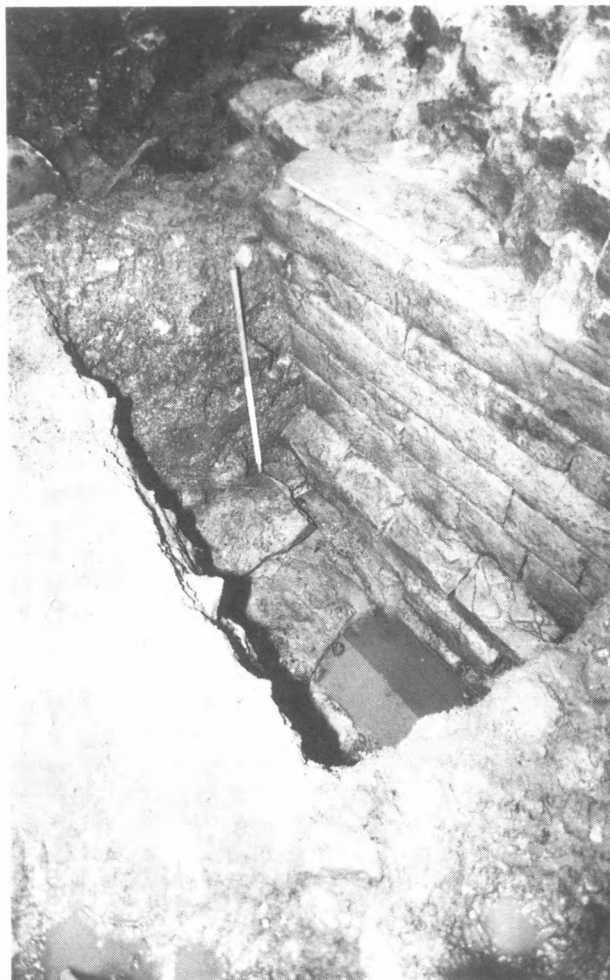


Fig. 7 Foundation raft and wall footings, Wall 32.

facework was of similar quality to the earlier wall, 032, and displayed the same variety of coursing thicknesses.

#### *Phase 4—the widening of 033*

Wall 034 was built against the western face of wall 033 to bring it to the same width as 032. The stonework was of comparable style and quality, and the foundation sequence of three offsets, none chamfered, resembled the outer face of 033. The southern end of this stretch was imperfectly recorded (being at some dis-

tance from the proposed engineering works); the inner face appears to show a widening of the wall but this may be an aberration at the point where the wall dog-legs towards the river.

#### *Excavation of Deposits adjacent to the Eastern Wall*

The layer immediately above the foundation raft was clay (Layer 23—fig. 6, C) its surface roughly corresponding to the height of the 3rd offset of wall 032. Large cobbles and sandstone fragments had been incorporated into the surface of the clay and may have stabilized the ground, perhaps serving as part of a beaching surface. Above this, a gritty sand (21) had been deposited, and was cut on the east side of the trench by a sub-rectangular feature with a depth of 23 cm. Its fill of decayed wood and irregular stone fragments is perhaps indicative of a post and its packing stones. It is possible that this feature supported a mooring post or some other structure associated with the riverside. The six overlying layers (16, 13, 11, 6, 5, 4) represent continuing riverine deposition, and consist of sands containing interleaved lenses of material. Organic material was present, including a large piece of drift wood in 11. All of these deposits slope downwards towards the river. At the top of the sequence a cobbled surface (4) was uncovered and appears to have compensated for the gentle incline of the underlying sediments. It would, therefore, have provided a stable surface on which riverside activities could have been carried out.

A trench was excavated 3 m to the south of the above, and while the deposit sequence (fig. 6, D) was similar it was by no means identical, the principal difference being that the upper layer (3) contained material derived from the Sandgate midden. It formed a homogeneous band 70 cm thick, but appears to have been disturbed, having been redeposited when the nineteenth century sewers were constructed, and containing material of that date. It was dark grey in colour, and of a mixed composition, containing fragments of charcoal, shell and coal, as well as stones and cobbles.

#### *Phase 5—Construction of the E-W wall*

It is not certain whether the original intention of the military architect was to close the circuit by running the wall along the riverfront from Sand Gate to Close Gate, or to leave the Quayside free from obstructions. Certainly, the progressive extension to the water's edge seen in Phases 2 and 3 show that the riverside stretch was added after some considerable time had passed, during which time the north-south stretch was felt to be adequate.

A total of 71 m of wall was exposed and recorded in the same way as the north-south wall; representative elevations and profiles were taken along the length, and the stratigraphy against the wall footings was recorded in three places.

The wall (fig. 8) was found to consist of one main phase, in which could be distinguished five clear breaks in the coursing or foundation treatment, but all beneath a continuous and, as far as can be distinguished, single phase chamfer course. These changes perhaps represent halts that took place during construction, or they may show that the riverside stretch was divided into sections, each worked on by a different gang. Stepping in the coursing, where extant (64/66) suggests that the wall progressed from west to east, but this may not reflect the situation elsewhere along the riverside wall, and the coursing breaks on either side of 65 might hint that 66 predated, or was contemporary with, 65.

The overall width was established at one point where the concrete surround of the interceptor sewer had not spread onto the wall (fig. 6, F). The northern face of walling was not faced at this height because the ground level on the inner side of the wall would have been several feet above the foundation chamfer on the riverside (fig. 9).

The foundations were broadly consistent along the length, differences only being noted in the extent of the offset of the bottom course, which varied from over 25 cm (91) to less than 10 cm (42). The upper courses of the masonry were dressed with coarse pecking in diagonal lines, while much of the lower walling, and



Fig. 8 *The Quayside wall, central section.*

especially the basal course, was completely undressed.

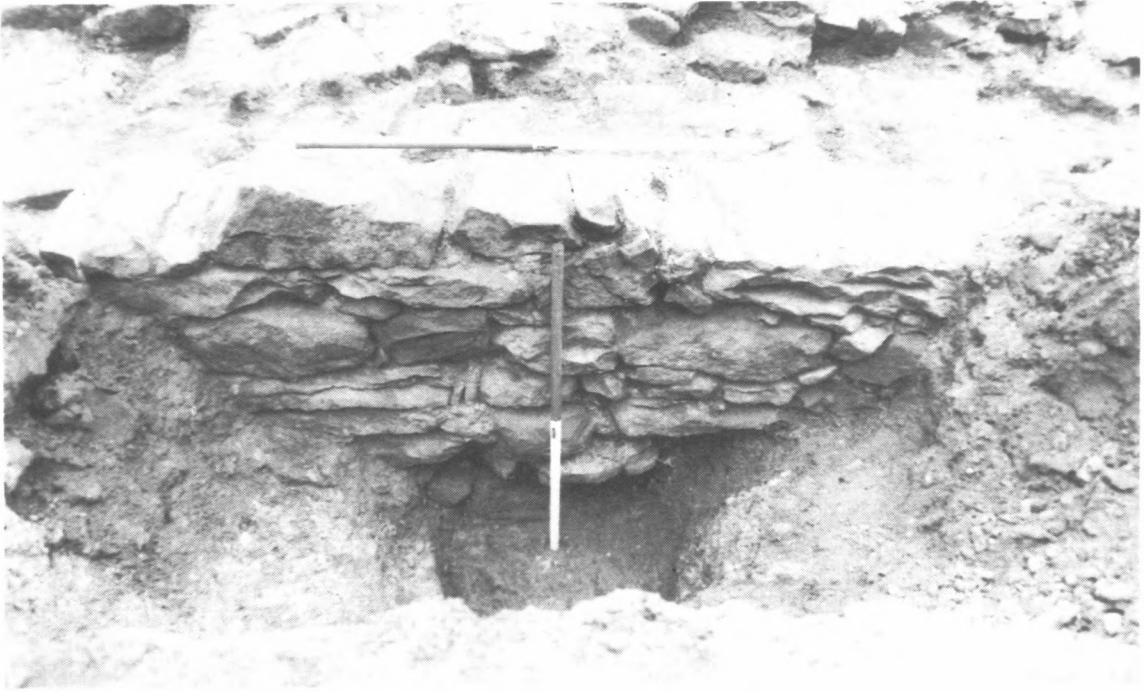
The basal course was constructed directly onto sand and gravel with pockets of clay and larger boulders. There was no foundation raft, as recorded beneath the north–south length. Hence, these foundations are even less substantial than those noted elsewhere in Newcastle, e.g. at Orchard St., where the wall stood on rubble in a shallow trench, 30–40 cm deep (Nolan 1993, 99). This may reflect the display element in civic fortification (*op. cit.*) but equally, the wall shows no sign of subsidence due to foundation failure, and so perhaps the necessary scale of foundation work was well judged.

Masons' marks were frequent along this length, usually consisting of groups of two or three marks on adjacent blocks (fig. 10). Their location did not tally with the changes in build phases, but they do seem to reflect a numerical sequence or system of some kind, and may

perform the function usually suggested for such marks, to identify the work of individual masons, journeymen or labourers for the information of the paymaster (Salzman 1952, 129).

*Phase 6—The construction of a sandstone platform, (60)*

Excavation at the western end of the riverside wall provided an opportunity to investigate an interesting feature built up against the town wall which appears to be the remains of a platform or wharf (fig. 11). It was 8.60 m in length, and extended 2.10 m into the river. A wall running south then east defined the boundaries of this structure, but it is thought that originally, the north–south wall may have continued south beyond the junction with the east–west stretch of wall. The west face of this wall was in good condition and was built from ashlar blocks with good quality smooth facing. It is likely then that the south face was constructed in a similar fashion. The interior of



*Fig. 9 The inner wall face of Wall 66.*

this structure had been packed with sediments, containing substantial quantities of cobbles and pebbles, to form a compact and level surface.

It seems likely that this platform provided loading and unloading facilities for shipping, and there may have been a water-gate in the adjacent wall to provide access to the town. A short flight of steps constructed with sandstone slabs and a rough core of cemented sandstone fragments was discovered at the eastern end of this platform. A small cut had been made at the base of the steps and parallel to them. It was thought to have functioned as a foundation trench for the missing bottom step. Evidence to support this was provided by the discovery of a fragment of worked stone in situ at the southern end of the cut. A cobbled surface runs up to the steps and appears to be roughly contemporary with the structure, providing a stable area for access to beached vessels at low tide. A posthole (42) with a depth of 42 cm had been cut into this surface and possibly served as a

mooring post or "fender" protecting the face of the Town Wall. The wharf appears to have undergone a second phase of construction, as part of the east-west stretch of the wall had been rebuilt at some point. A compact clay bonding was present between the two phases but it is unclear which phase it was associated with.

The remaining deposits excavated in this area appear to be associated with the abandonment and disuse of the wharf structure. The deterioration of the wharf towards the end of, or following, its working life resulted in the collapse of the eastern end of the platform. The effects of water action were noted on the fabric, with much of the mortar being washed from the stonework.

There is no direct documentary evidence to help in dating this structure, but the ceramic assemblage would point to a late sixteenth or early seventeenth century date. It is not shown on the Buck view of 1745 (fig. 3).



Fig. 10 Wall 42, showing masons' marks.

The wharf was eventually buried by riverine muds and silty sediments, and in 1820 the whole area was covered with dumped material to create the existing quay, with the riverside wall some 22 m to the south.

One final footnote concludes the history of

the wall at the east end of the Quayside. The junction of the north-south wall with the riverside stretch was in a collapsed state when excavated in 1992. This is in flat contradiction with Knowles' account and survey of 1905 (see above). The riverine deposits against the wall

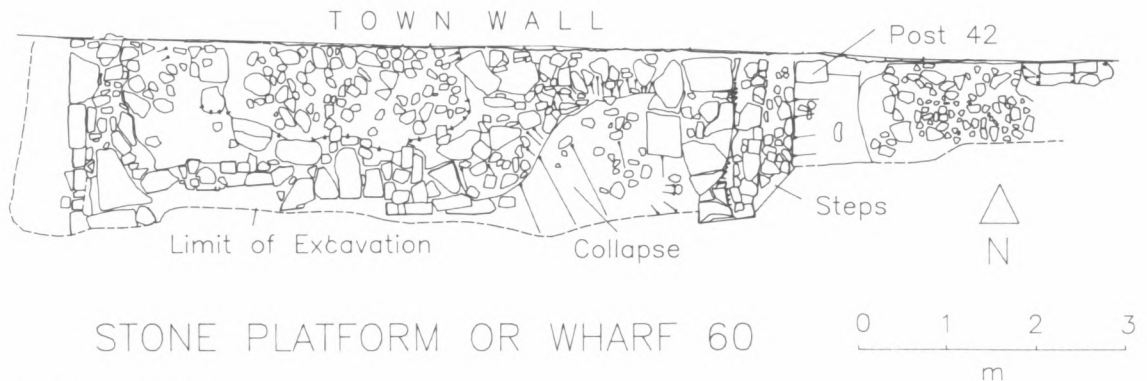


Fig. 11 Stone platform.



Fig. 12 The junction of the north-south stretch (Wall 32) and the riverside stretch (Wall 66) showing the collapse resulting from the modern pit.

in the angle of the junction were cut by a large pit which had undermined the wall and caused the collapse seen in Fig. 12. The inescapable conclusion is that this must have been dug on the instruction of Knowles to examine the relationship of the foundation of the walls at the junction. The trenches dug in the 1992 excavation were backfilled with aggregate and the wall was covered with a protective membrane before careful backfilling.

## POTTERY

### *Introduction and methodology*

A total of 441 sherds was recovered from 41 contexts. Most of these produced only a handful of sherds. The assemblage is summarized in

the two bar charts in which the material is represented as from a single phase. The numbers refer to the fabric groups listed below. In Chart 1 each pair of columns represents the percentage of the total number of sherds/total weight for the fabric type. In Chart 2 maximum and minimum vessel counts are represented. "Vesmin" was arrived at by counting only vessels represented by a form element (rim, base etc.) or groups of elements; "vesmax" by counting all sherd "families" (groups of joining sherds or sherds estimated to be from the same vessel) whether form elements were present or not. The number sequence used is not specific to this site.

The peak on number 32 represents the large cistern (illustrated below, fig. 14, 8) broken into 81 sherds. This underlines the discrepancies which can arise when using statistics to illustrate a small assemblage like this.

FABRICS PRESENT numbers in [ ] do not appear on charts

- [1 Roman]
- 4 Buff white wares including the "orange" type seen at Close Gate (Vaughan 1994)
- 6 Local gritty wares e.g. reduced greenwares 1, 2 and 3 and "oxidized gritty".
- 7 Later reduced greenware (RG)—includes RG4
- 9 Reduced greenware type 5—an early post-medieval type.
- 10 Other Medieval fabrics, unprovenanced
- 12 French whitewares e.g. from Saintonge
- 13 Beauvais wares

- 15 Langerwehe and Raeren stonewares
- 17 Cologne/Frenchen stoneware
- 18 Westerwald stoneware
- 19 Weser
- 20 Low Countries/imported redwares
- 22 Low Countries whiteware
- 24 Cistercian ware
- 25 Early Black glazed red earthenware
- 26 Post medieval Whitewares
- 27 English Redwares of 17th century type
- 28 Tin-glazed earthenwares
- 32 18th/19th century redware
- [50 Unknown and burnt fragments]

Chart 1

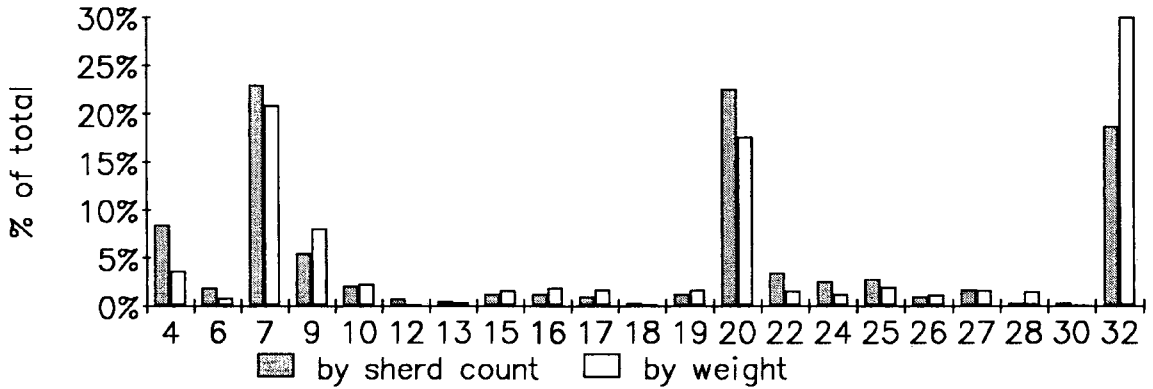


Chart 2

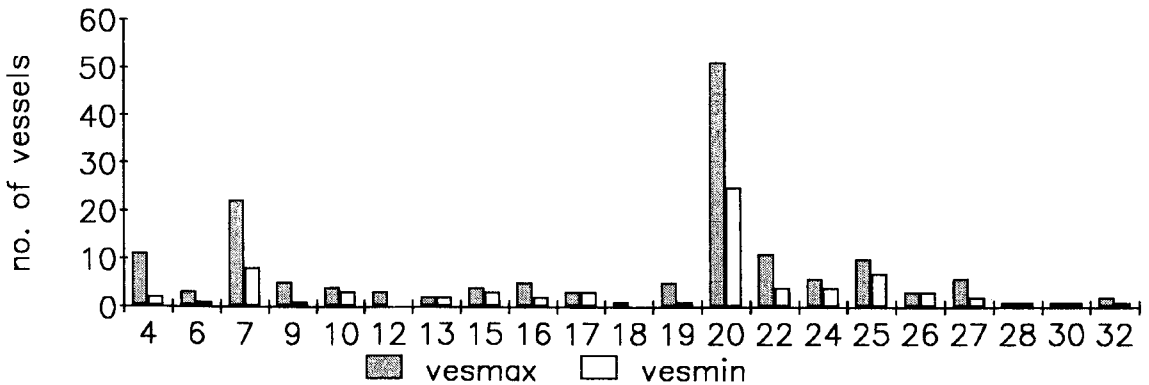


Fig. 13 Pottery charts: Chart 1, sherd count and weight; Chart 2, vessel maximum and vessel minimum.

### Discussion

The two largest groups of material are the locally produced reduced greenwares (groups 7 and 9) and the imported redwares (20) although, as the charts show, different ways of quantifying produce different patterns. Both these groups occur from the 14th century up to the late 16th century in the Castle Ditch assemblage (*Ditch* 1981, fig. 6) with the redwares reaching a peak in the 16th century and the reduced greenwares in the 15th century.

Small quantities of RG4 and other later reduced greenwares (fabric group 7) occurring in isolation, as they do on this site, cannot be used to give a firm framework for dating. RG5 as originally defined in the Castle Ditch report (*Ditch* 108) was a distinctly post-medieval fabric although carrying on the tradition of the earlier RG types. Its presence can, generally speaking, be taken to indicate a 16th century date. However, RG4, first occurring in the 14th century, is present in equal quantities with RG5 in the early 16th century phases of the Castle Ditch. In the late 16th century phases it is said to be residual and RG5 is the dominant type. However, it must be debatable at what point RG4 can be said to be "residual" and the later reduced greenwares (groups 7 and 9) from the Milk Market excavations may all derive from 16th century activity. Of form sherds present, a rim in RG5 as *Ditch* 29 again gives a 16th century date in Layer 3, the redeposited midden.

A large proportion of the two main groups came from general clearance of the overburden. However, none of the pottery recorded from this deposit appears to be later than the early 17th century. 16th century types present were RG5, Beauvais slipware and Cistercian ware and 17th century types included Weser, Cologne/Frechen stoneware and the imported redwares. Body sherds of redware can be difficult to date but four slip coated vessels (one of them a dish as *Orchard Street*, 54), a small sooted vessel on footing, and other vessels similar to Orchard Street material all suggest an early 17th century date (*Orchard Street* 1993, 107).

Several other contexts produced groups which, although much smaller, had a similar date range. In fact only two of the context groups with more than a handful of sherds could be said to be medieval. Apart from the large cistern already mentioned, possibly the latest vessel is the tin glazed dish, no. 7 below. A few other vessels of interest are illustrated or commented upon below (Figs 14 and 15).

1. Buff white ware. Light brown slightly streaky fabric with external surface varying from light orange brown to red brown. Internal surface varies from bright red brown to brown. Thin trickles of glaze with occasional small patches. Rim form similar to cooking pots from *Close Gate*, e.g. no. 3. Possibly a 13th century vessel. V. 58. [81]
2. Not illustrated. Fragment of a strap handle in sandy brick red fabric with grey core. Covered in uneven white slip and yellow (lead) glaze with incised grooves and stabs. Also from [81] and likely to be 14th century at latest. V. 61.
3. Low Countries Redware. Cauldron type vessel with flat topped rim for lid seating? as well as lid seated neck. Fully glazed though patchy externally. V. 7. [1]
4. Low Countries. Sandy light red unglazed fabric. V. 12. [3]
5. Low Countries Whiteware. Abraded rim, concave internally making lid seating. Fully glazed green. V. 47 [1]
6. English whiteware? Glazed externally, including "under" base, yellow. ?candlestick. Notching round outer edge. V. 44 [3]
7. Not illustrated. Tin glazed earthenware. Complete ring base of dish/charger. Bunches of blue grapes with green leaves surrounded by brown ochre motifs. See a more fragmentary example from Basing House (Lipski 1970—no. 194A p. 72 and fig. 18). Decoration of grapes (commonly associated with pomegranates) is found on dated chargers ranging between 1634 and 1647. V. 24 [67].
8. Almost complete large storage type jar with wide mouth, flat topped rim, a spigot/bung hole and two handles at right angles to it. Form is not medieval nor has it been



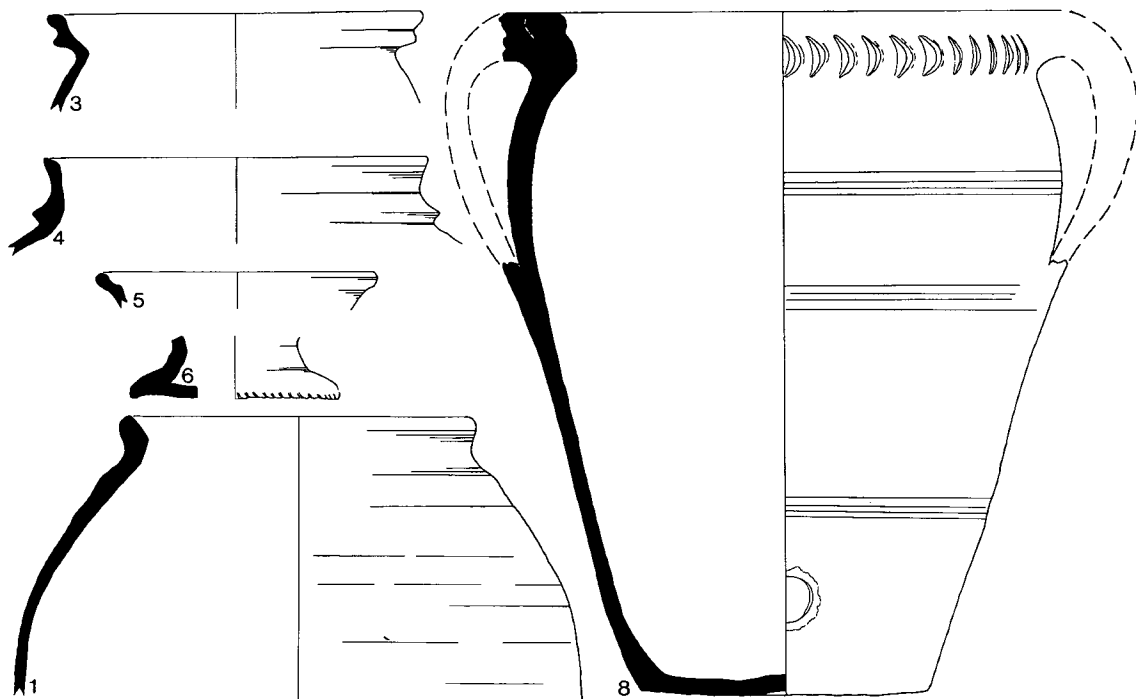


Fig. 14 Pottery—Scale 1:4.

recorded amongst the 17th century assemblages from Newcastle. The fabric is typical neither of 17th century redwares nor the later (18th–19th c.) local “brown” wares. Most probably an eighteenth century vessel. Cisterns were noted as being very rare amongst the post-medieval glazed red earthenwares from Norwich. One is illustrated with another large jar of a similar form (Jennings 1981, fig. 80 nos. 1354 and 1342, respectively). Another example (not redware) is illustrated from an 18th century well at Bishops Waltham (Barton 1969 no. 60 fig. 68 and p. 183). V. 62 [37].

#### CERAMIC BUILDING MATERIAL

**Brick:** A total of 38 fragments were recovered. The majority were medieval and late medieval

types with only one fragment of a distinct post-medieval fabric.

**Floor tile:** 3 of the 4 fragments recovered had traces of white slip.

**Roof tile:** 26 mainly small fragments, some joining, included a few pantile fragments and others with small spots and traces of glaze. All were in oxidized iron rich fabrics—red, red-brown—with grey reduction in parts (fig. 15, 9).

#### METALWORK

##### *Coins—R. Brickstock*

Two coins, both considerably earlier than the surrounding stratigraphy. The first, SF03, is a Scottish silver penny of a type current between 1280–1390 [Alexander III—Robert III]. The reverse bears a long single cross with mullets (open stars) in each angle. The obverse bears a legend but is only partially legible. This is

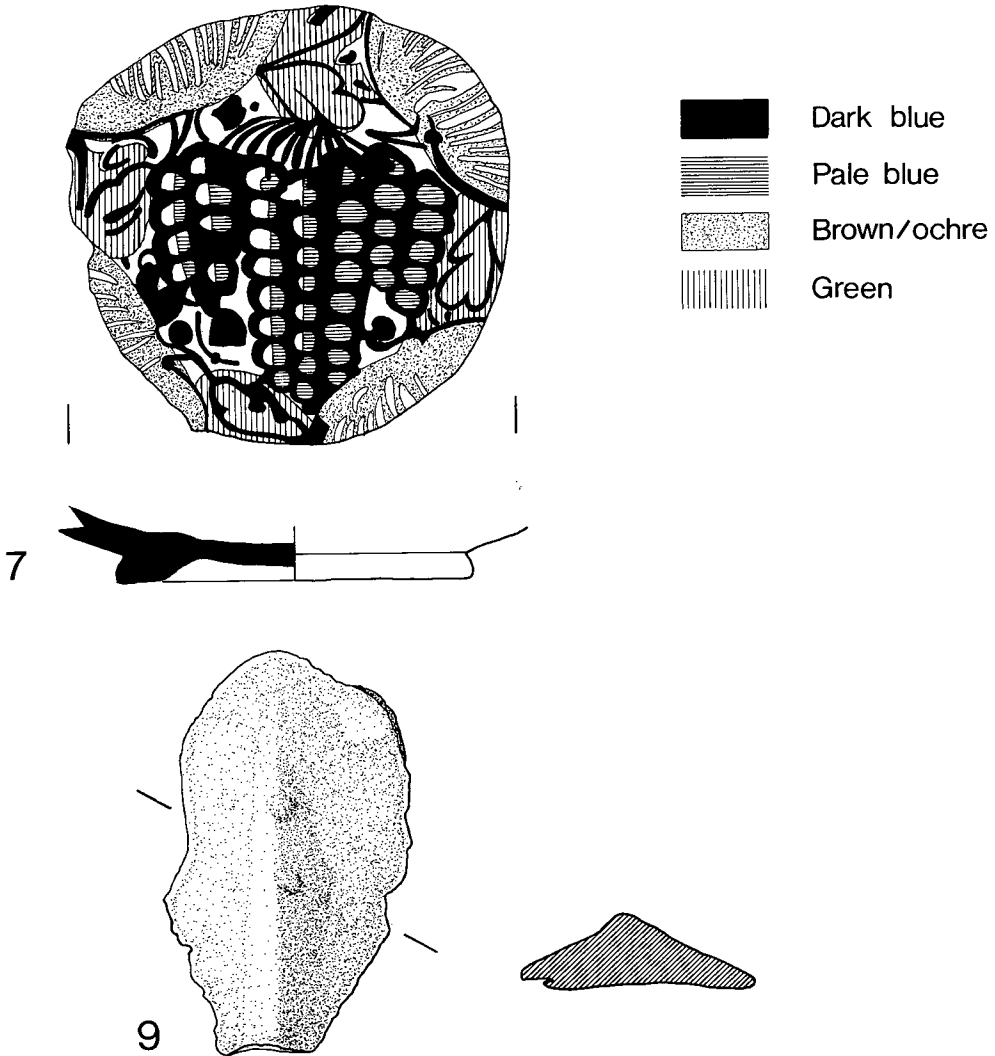


Fig. 15 Pottery and small finds—Scale 1:2.

probably a coin of David II (1329–79), and in particular of his second coinage (1357–61) (cf. Stewart 1955, 45). Each of the four reverse mullets is five-pointed, a characteristic which is normally taken to indicate a product of the Edinburgh mint.

The second coin, SFO4, is a billon (base silver) issue which appears to be one of the

many continental variants on the English (Tealby) coinage of 1154–80, which bore on its reverse a short cross potent (cf. North 1980, 952 ff.). Such issues belong to the late 12th and 13th centuries and, like the Scottish issue represented here, appear to have achieved wide circulation alongside the regular English coinage in this region.

*Iron*—21 objects

Identifiable from x-rays were 14 nails or fragments of nails including several with large domed heads. Other objects used in building or construction were a rove and a large staple (100 mm long).

*Copper alloy*—5 objects

A nail with domed head and a fragment of a buckle came from the general clearance. Other objects were a rim fragment of a copper alloy vessel with iron suspension loop and the object illustrated (fig. 15, no. 9) which was possibly a fishing weight.

GEOLOGICAL ANALYSIS OF GRAVEL FROM  
BELOW THE WALL FOUNDATION  
G. A. L. Johnson

A sample of gravel taken from below the foundations of the Town Wall at the east end of the Town Quay, Newcastle upon Tyne was supplied for examination. The coarse fraction, cobbles and pebbles were hand picked from the gravel and a representative sample of the finer material was separated and washed through sieves. The results of this work are fully reported in the Archive Report, and are summarized here.

The gravel from Town Quay, Newcastle appears to have been derived from two sources. The larger proportion of the sample is transported red-brown flint gravel from river alluvium derived from a Cretaceous chalk catchment. A minor proportion is locally derived sand and gravel alluvium from the River Tyne. The two different sources of alluvium are easily separated, the transported material is uniformly red-brown in colour whereas the local alluvium does not have the red-brown staining. In addition there are no natural flint gravel deposits in north-east England. The nearest Cretaceous Chalk deposits are in south-east Yorkshire and flint derived gravels occur south of this, but are particularly characteristic of the terraces of the River Thames. The presence of chalk fragments in

the gravel suggests that exposures of this soft limestone were present near to the source of the gravel. The chalk is so soft that it is not transported far by river currents and the pebbles are thus locally derived. The association of flint gravel with chalk suggests the lower reaches of the River Thames about Dartford and Gravesend on the south side of the river and about Purfleet and Grays on the north bank.

The transported flint gravel was brought to Newcastle as sailing ship ballast and dumped beside the River Tyne when the ship probably loaded coal for the return voyage south. It seems likely that the ship took on ballast in the lower reaches of the Thames, possibly the Dartford River. Coal fragments in the gravel may have come from residues of cargo in the hold of the collier or material lost over the side during loading the ship.

## CONCLUSIONS

The project was successful in facilitating the preservation of the monument beneath the existing road retaining wall. Detail on the sequence of building and construction techniques has been recorded. The north-south wall was more substantially constructed, and subsequently extended, although the detail of the terminal with its putative end-bastion was not recovered. The riverside wall was confirmed as a late addition, constructed on ship ballast, extending the known spread of ballast dumping west.

A small projection to the quay was uncovered and dated on ceramic evidence to the late sixteenth or early seventeenth century. Perhaps it represents the private wharf of a merchant or hostman.

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*Ditch*: Ellison 1981  
*Orchard Street*: Vaughan 1993  
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