*Proc Soc Antiq Scot*, 115 (1985), 401–428, fiche 1: E1–F11

# Excavations south of Bernard Street, Leith, 1980

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## ABSTRACT

*The excavation located an extensive midden, laid down in the second half of the 15th century to reclaim an area previously below the tide-line of the Firth of Forth. Some contemporary and later structural evidence also survived. Finds included an important hoard of 15th-century billon pennies.*

## CONTENTS

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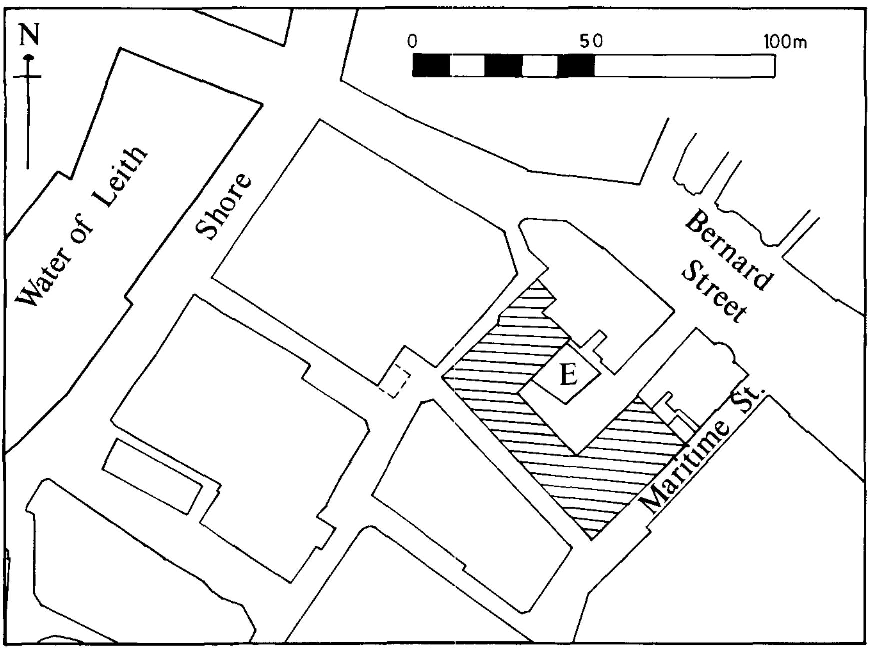
## INTRODUCTION

In November 1979 an application was received by Edinburgh District Council's Department of Planning for permission to carry out housing redevelopment on a vacant site to the rear of buildings at 25–37 Bernard Street, Leith (NGR NT 272 765). The site was bounded by Maritime Street to the SE, Chapel Lane to the SW and Carpet Lane to the NW, and had been occupied until the late 1970s by late 18th-/early 19th-century warehouses (illus 1). It lay within the area enclosed by the earliest town defences, which were erected around Leith by French forces sent to assist the Scots against the English in 1548. The seaward face of these defences stood roughly on the line now occupied by Bernard Street, with bastions on either side of the Water of Leith.

Trial trenches were dug in three places within the site, and those close to Maritime Street and Chapel Lane indicated that the construction of cellars belonging to the warehouses had resulted in the destruction of all archaeological deposits in the areas occupied by these buildings. A trial trench within what had been an enclosed courtyard in the middle of the site revealed the existence of structural remains and of midden deposits containing late medieval pottery; and during April and May of 1980 an area approximately 13 m square within this courtyard was fully excavated.

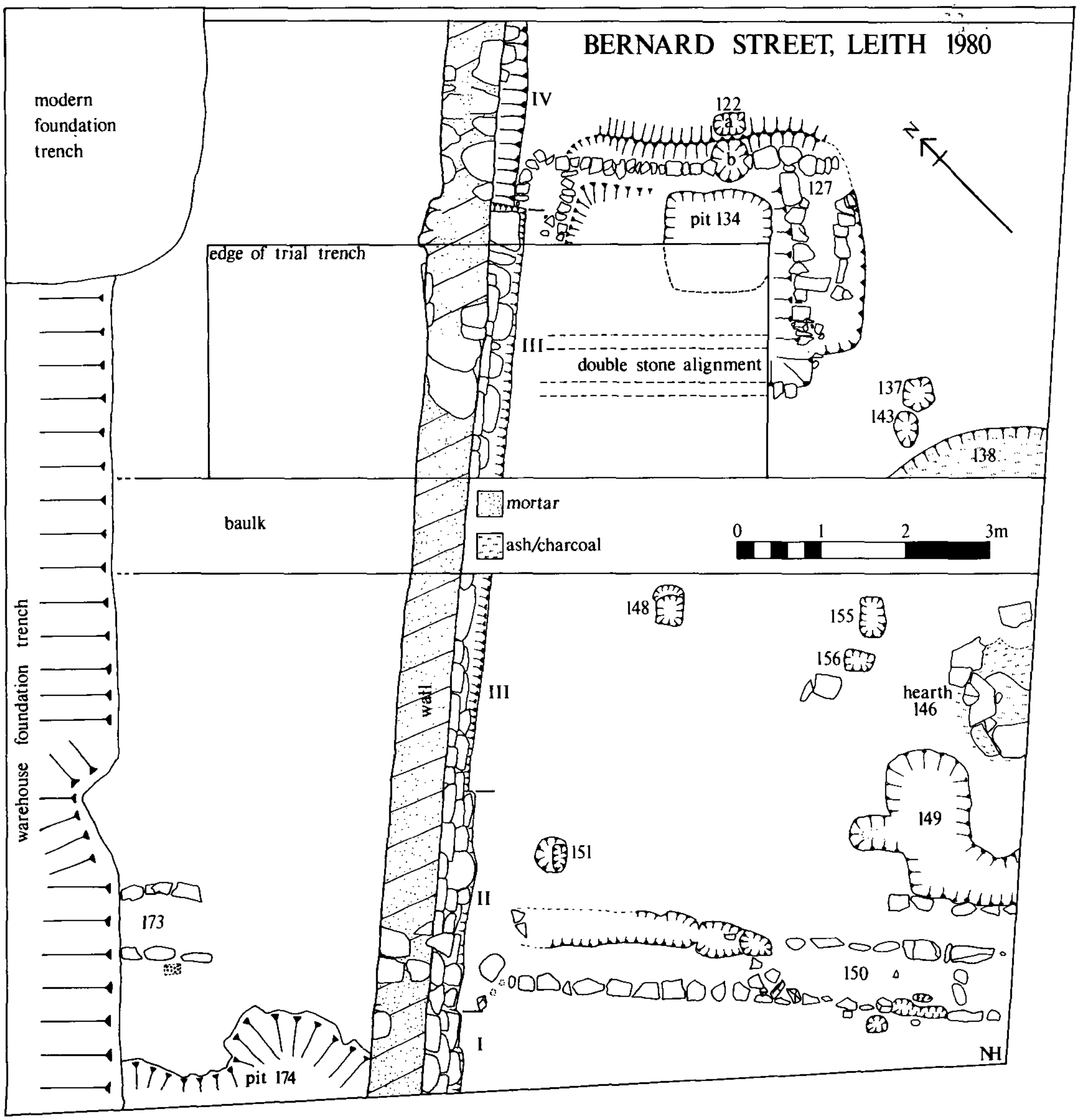



ILLUS 1 Location of site. Buildings shown hatched were demolished shortly before the excavation took place. E = excavated area

## SUMMARY OF RESULTS

The site was found to have lain on the shore-line of the Firth of Forth until the middle of the 15th century. Tide-marks were found on the surface of apparently natural yellow sand at the lowest level of the excavation, and sand-dunes had formed in the south-west half of the excavated area. A breakwater or retaining wall, built of granite boulders and mortar, had been constructed at right angles to the shore line; this displayed three distinct structural phases, each representing an extension towards the NE.

In the third quarter of the 15th century large-scale reclamation of this marginal land had taken place. Quantities of soil and sand, containing much domestic refuse, had been deposited on the beach, to a maximum depth of almost 1 m, in order to form a flat surface well above sea level. Various features associated with this phase of activity were discovered, including stone alignments, postholes, pits, and a stone hearth. Dating was provided by various coins found within the midden deposits, and in particular by a hoard of 358 coins, mainly billon pennies, deposited c 1470–5.




ILLUS 2 Features pre-dating, associated with, or cutting into the 15th-century midden/reclamation deposits. I–IV indicate the furthest extent of each phase of construction of the wall

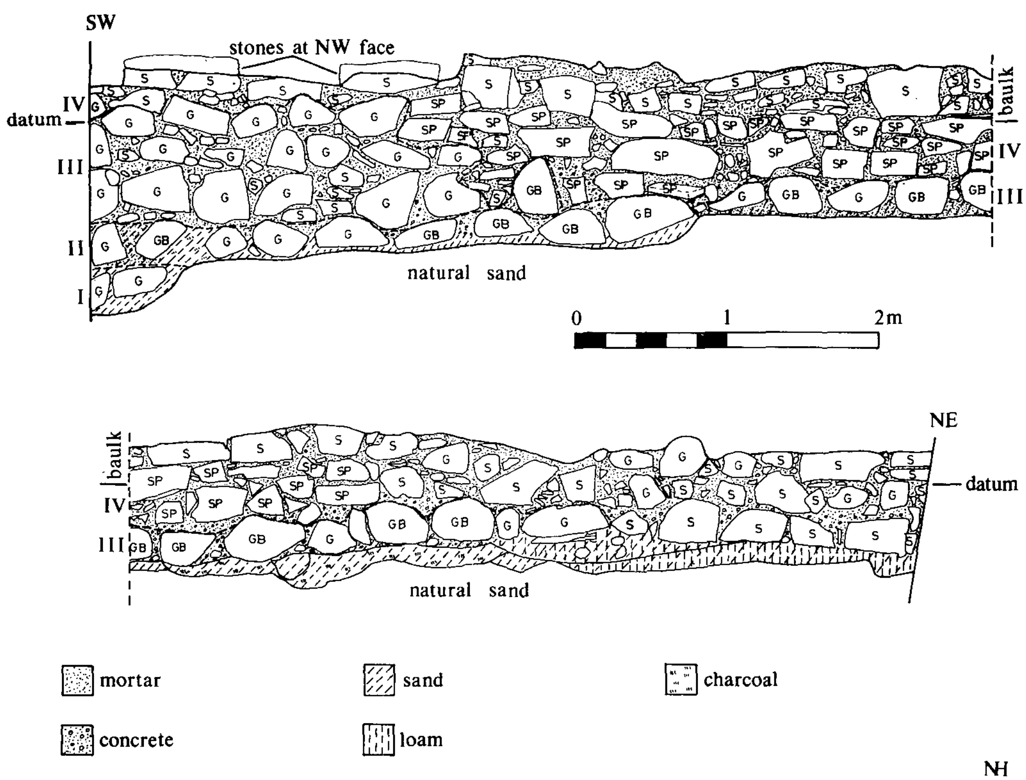
Above the midden was part of a stone building, which had covered the north-west part of the excavated area, extending beyond it on three sides. The south-east wall of this building was partly founded on the earlier granite wall. Pottery and a coin associated with the remains of timber floors suggest that the building was in use around the 17th century. A cobbled road ran across the site adjacent to the south-east wall, although pottery found beneath the cobbles indicates that this particular surface was not laid down until the end of the life of the building.

In the late 18th or early 19th century this building was demolished and replaced by a warehouse, standing slightly to the NW west of its predecessor. This in turn was demolished in the late 1970s, but the remains of the south-east wall were located immediately below the modern ground surface and served as the north-west boundary of the excavated area.

## THE EXCAVATION

### FEATURES PRE-DATING THE RECLAMATION

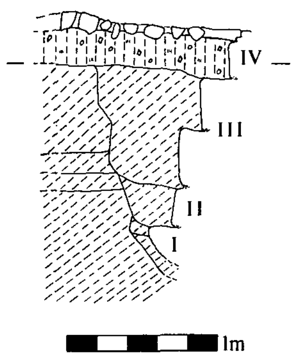
Human activity on the site prior to the deposition of reclamation material seems to have been confined to the construction of a stone wall and the disposal of small quantities of domestic refuse. In the north-west part of the site tide-marks were distinguishable on the surface of the beach sand, and this sand contained occasional fragments of pottery. These included one rim fragment from a cooking




ILLUS 3 South-east elevation of wall, showing masonry of building phases I–IV. Key: G, granite boulder; GB, granite boulder with barnacles; S sandstone; SP, sandstone forming part of foundation of Phase IV wall, but projecting forward to same line as Phase III wall

pot in white gritty fabric (illus 12, no 47), probably of 14th-century date, and a base sherd from a stoneware cup (illus 13, no 86), of Siegburg type and dating probably from the mid to late 14th century.

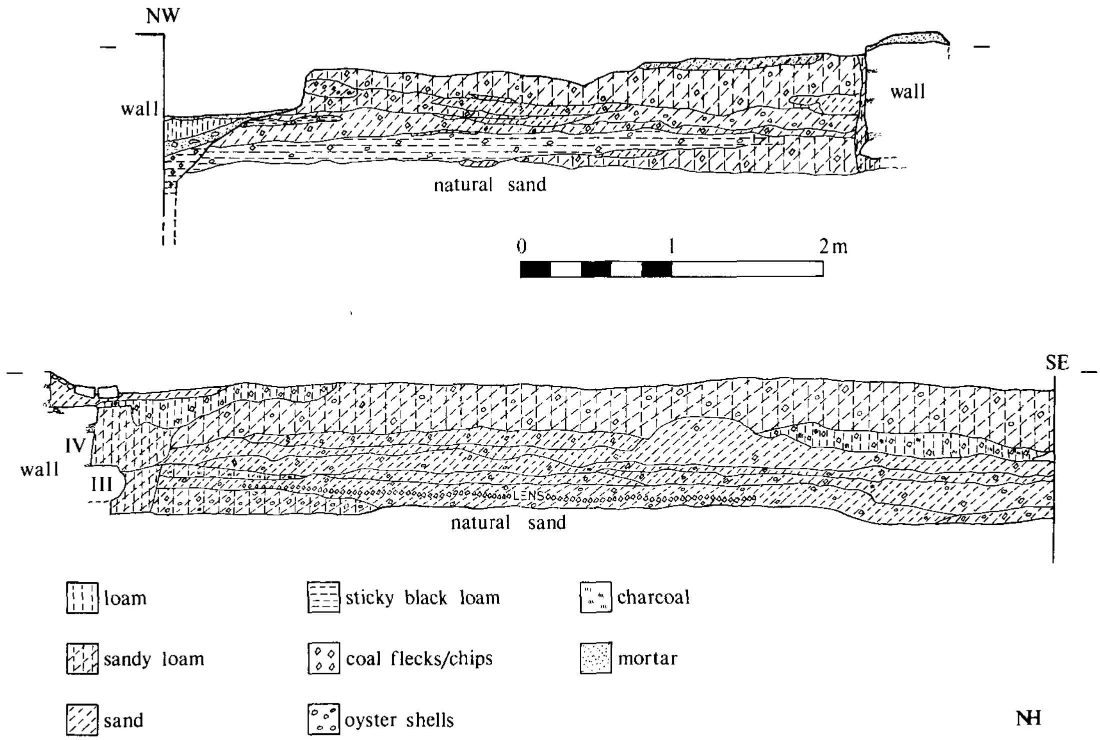
The mortared stone wall appears to have been designed as a retaining wall to control the formation and movement of sand-dunes. Three phases of construction in granite boulders were distinguished, with each phase being founded at a higher level and extending further NE towards to sea than its predecessor (illus 2 & 3). A section, at the south-west end of the site, across the foundation trenches dug for the various building phases confirms their existence and illustrates the gradual narrowing of the wall as its height increased (illus 4). This section also indicates that each phase of construction served only to raise the height of the wall to the contemporary level of the top of the sand-dune to the SE of it. It seems clear that the various phases represent successive stages of a more or less continuous process of construction at a time when wind-blown or sea-borne sand was accumulating rapidly on the beach. This hypothesis is supported by the fact that domestic refuse was contained within the make-up of the dune only in a few thin strata, suggesting rapid deposition of sand layers interspersed with short periods of inactivity.




ILLUS 4 Section at south-west end of excavation, through foundation trenches for successive building phases of wall. (Conventions as for other published sectons)

Very little of the phase I wall extended into the excavated area, so its relationship to the surrounding sand layers was not firmly established, but the fill of its foundation trench was distinct from that of phase II. Most of the surviving granite wall belongs to phase III, which appears to have been constructed after initial attempts at reclamation had commenced, as the foundation trench had been cut through several artificially deposited sand layers (illus 5). Many of the boulders forming the lowest courses of the phase II and III walls had barnacle shells adhering to them and these must therefore have lain below the tide-line at some stage, although not necessarily after they had been incorporated into the wall.

Phase I was represented by just two boulders, which projected 10 cm beyond the south-east face of the overlying phase II wall. Just one course of the latter was discovered, extending 4 m into the excavated area from the south-west section. The phase III wall stood up to three courses high at the south-west end, with the lowest course almost flush with the face of the phase II wall and the others set




ILLUS 5 Section of south-west face of cross-baulk, showing foundation trenches for wall construction phases III and IV

back some 10 cm. Further to the NE only one course of the phase III wall survived, and in places none of it at all. It appeared to have been partially demolished prior to the construction of the superimposed sandstone wall (phase IV) of the later building. The width of the phase I wall at the south-west section was 1·1 m, narrowing to 1·0 m in phase II and to 0·9 m for the upper courses of phase III. Illus 6 shows the south-east face of the excavated stretch of wall.

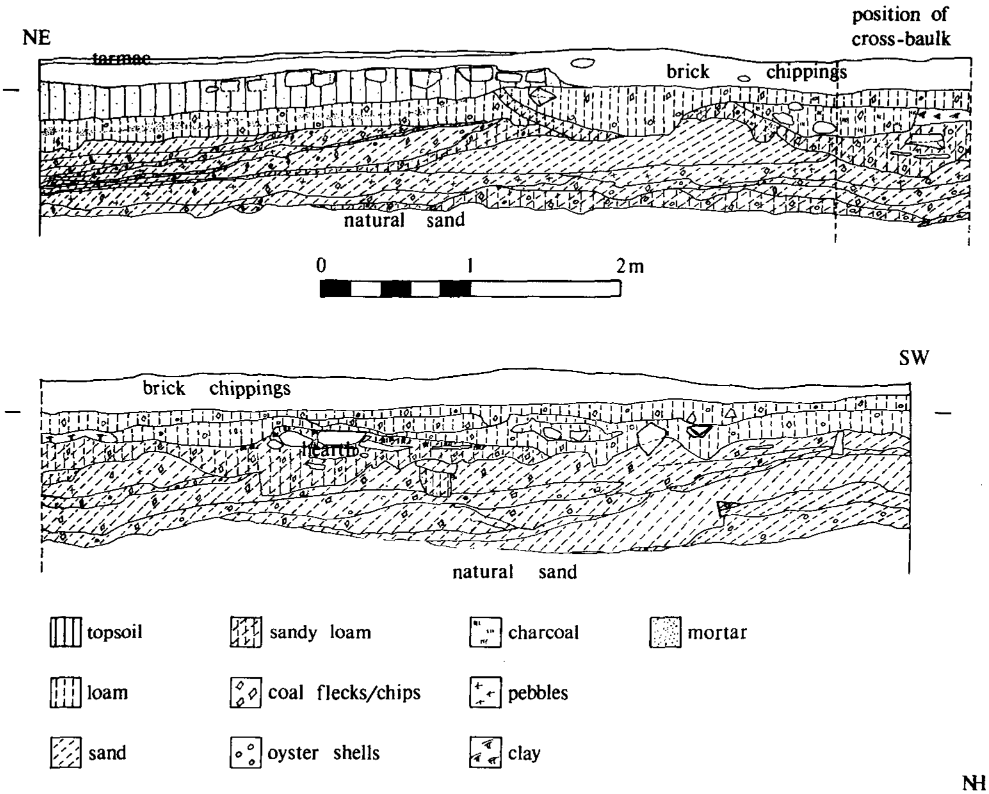
### THE RECLAMATION DEPOSIT AND ASSOCIATED FEATURES

The process of raising the land surface to a level at which it was sufficiently safe from inundation to permit development was achieved by the deposition of large quantities of sand and soil across the whole area. In the southern part of the site, to the SE of the boulder wall, only shallow levelling deposits were required, owing to the presence of deep sand-dunes, but further to the N and W material was deposited on top of the natural beach sand to a depth of up to 0·95 m. In the north-east area a rough surface of pebbles had been laid down at an early stage, and wheeled vehicles travelling across this had caused considerable rutting in the surface of the sand beneath (illus 7). It seems likely that carts were used to transport the midden material to the beach for deposition, but the surviving evidence was insufficient to permit any conclusions about the size or nature of these vehicles.

Most of the lower layers of the reclamation deposit comprised sand of varying colour and consistency, although occasional layers of sticky black organic material intervened. There was no apparent pattern to the deposition process, and most of the discernible layers covered only a limited surface area. It seems likely that the process consisted of fairly haphazard dumping of loads of

ILLUS 6 General view of site, facing NW, showing the south-east face of the multi-phase boulder and sandstone wall. Behind is the wall of the late 18th-/early 19th-century warehouse (photo P Raisen)

ILLUS 7 North-east area of site, facing NNW, showing wheel-ruts in surface at lowest level of midden (photo P Raisen)

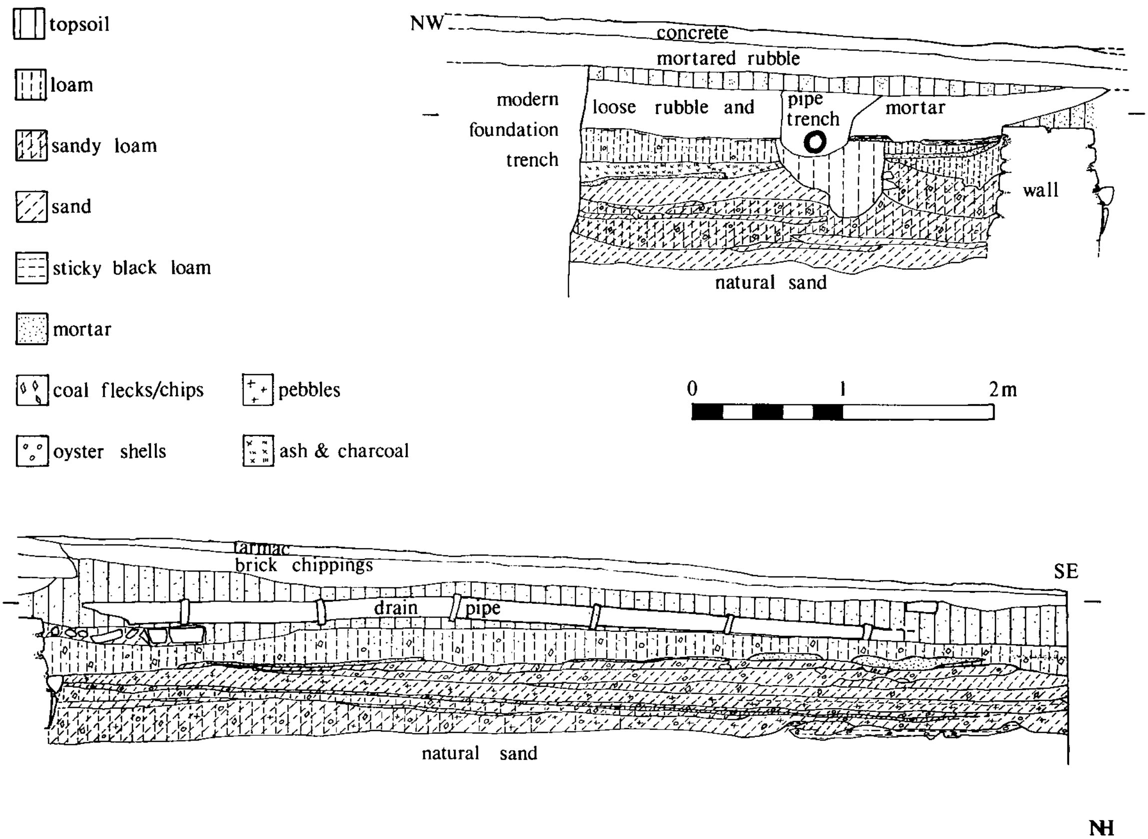



ILLUS 8 Section at south-east side of excavation

material brought to the site in containers of varying sizes. Some clearly distinguishable deposits contained no more than a bucketful of sand or soil. The upper layers comprised mainly a mix of loam and sand, and this material was presumably laid down intentionally at this level to provide a firm surface. Illus 8 and 9 show the relationship of the various midden layers at the south-east and north-east sides of the excavation.

All of these redeposited layers contained domestic refuse, including a great deal of pottery, and the dating evidence provided by this suggests that most of the process of reclamation took place during a fairly short period during the third quarter of the 15th century. Pottery from all but the highest layers is of types in use around this period, and confirmation is provided by coin evidence. Three stray finds from midden deposits – a 'Crux Pellit' penny and two James III 'black farthings' – belong to the period c 1450–80, and the hoard, buried in one of the sand reclamation layers, was deposited during the period c 1470–5. The upper, loamy, layers were probably laid down somewhat later. A billon lion (or hardhead) of Francis and Mary (1558–60) was contained within a clay layer between sand and loam deposits on the south-east side of the site.

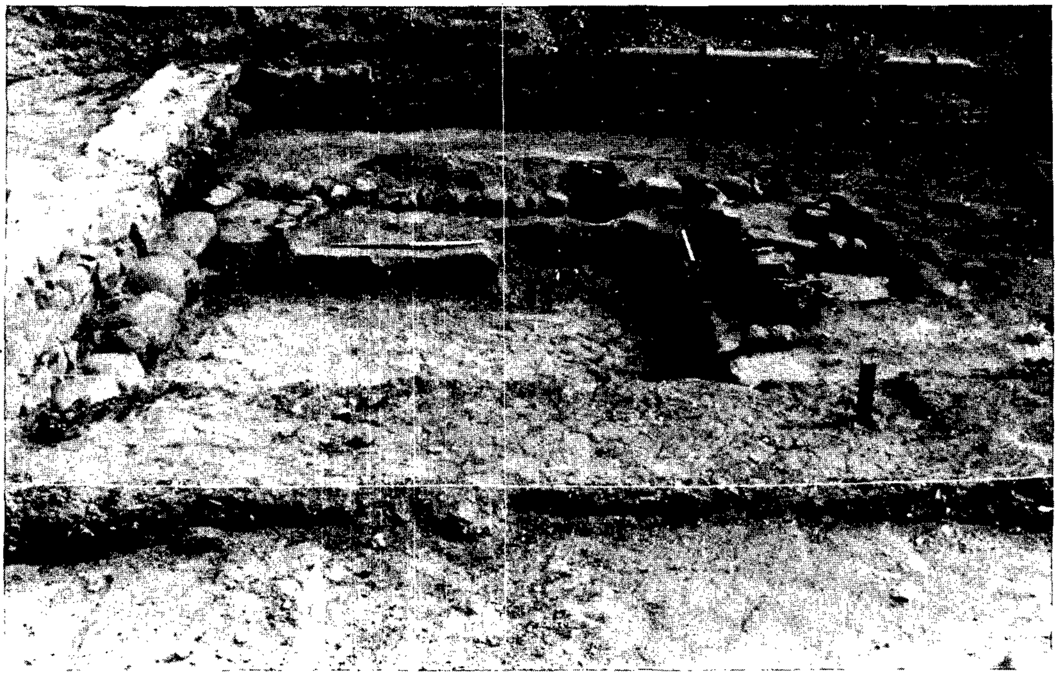
Associated with the reclamation deposits were a number of structural and other features, which indicated the presence of fairly primitive types of building. At the north-east end of the site, immediately abutting the face of the boulder wall, were traces of a small rectangular building. These took the form of alignments of stones within a hollow in the midden deposits (illus 2, feature 127; illus 10), with double rows, c 30–40 cm apart, on three sides and a single alignment on the NE. (A double




Illus 9 Section at north-east side of excavation

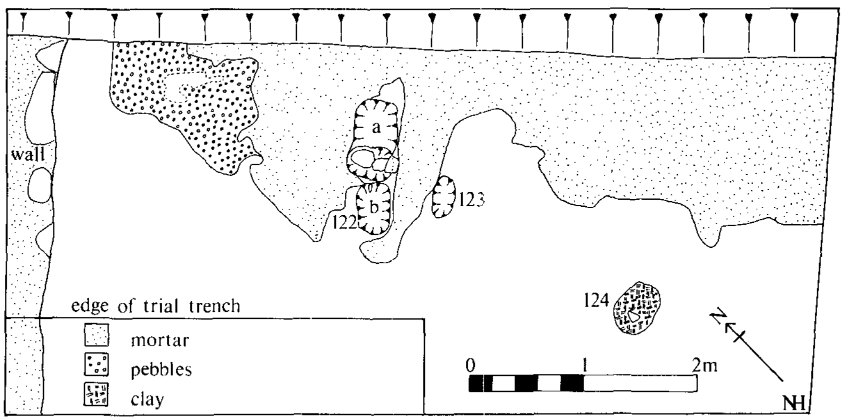
row was noted during the digging of the trial trench, and this subsequently proved to have formed the south-west side of this building.) It seems likely that the stone alignments were all that survived of revetments for banks of sand, in which the foundations of a timber building could have been anchored. Its dimensions would have been c 3·5 m by 2·5 m, and it is unlikely therefore to have served as more than a shelter or a storage shed for workmen engaged on the reclamation project. The floor area inside the building was covered with an occupation/midden layer containing much evidence of burning, in the form of charcoal and reddened sand, and through this had been cut a rubbish pit (feature 134). The entire hollowed area had then been filled in with further midden layers.

At the south-west end of the site were the remains of another double stone alignment (features 150 and 173), which extended on both sides of the boulder wall. The rows of stones were some 60 cm apart, and at the south-east end were traces of a third line of stones running parallel at a distance of c 35 cm, but there was no evidence of a return wall or bank within the excavated area. The stone alignments here were set on top of the highest layer of sand-dune or sandy midden and, as in the case of structure 127, the sand within the confines of the revetments was indistinguishable from that outside. In the area between structures 127 and 150 were a number of large postholes, cut into the sand/midden deposits. Postholes 137, 143, 155 and 156 formed an alignment on either side of the baulk, with a line from 156 to 148 roughly at right angles to it, but there was no clear evidence of structural plans.



ILLUS 10 Remains of structure (feature 127) as revealed during main excavation, looking NE. Evidence for the south-west wall was removed during the digging of the trial trench, shown re-excavated in centre (photo P Raisen)

Adjacent to, and partially beneath, the south-east section was a flagstone hearth (146), covered with red and grey ash and charcoal. The flagstones had been laid in a shallow depression cut into two midden layers, which contained respectively a James III copper 'black farthing' of the 1466 issue and a 'Crux Pellit' penny, dated to c 1452–80. To the NE of the hearth, and partially covered by the cross-baulk, was a shallow depression containing ash and charcoal, probably waste material from the hearth (138). An irregular hollow (149), adjacent to the hearth was of uncertain purpose.

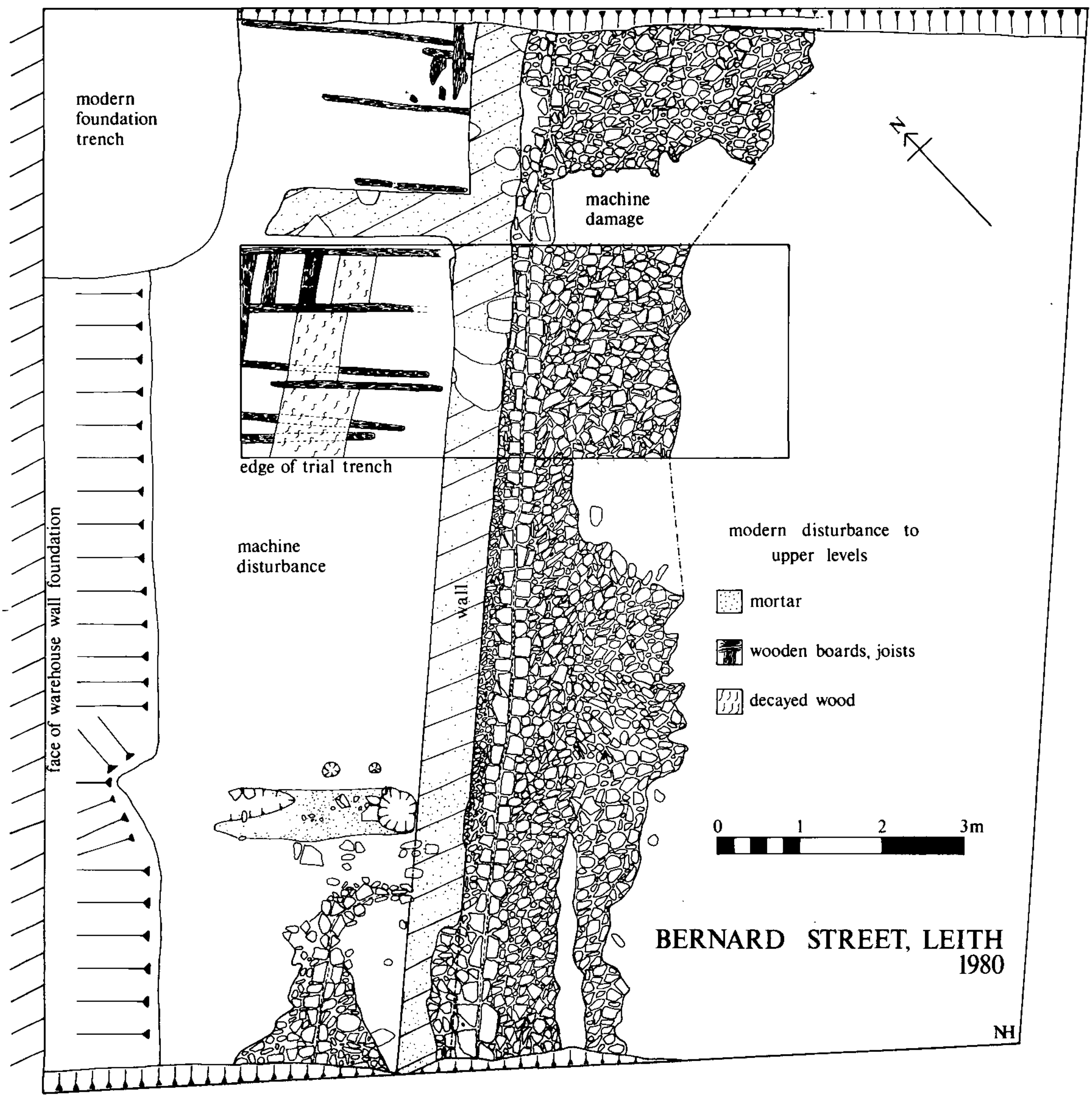



ILLUS 11 Extent of mortar and pebble spread in east corner of excavation

FEATURES POST-DATING THE MIDDEN

There was little in the way of dating evidence for the construction of the sandstone wall extending across the site, but the presence in the foundation trench of a sherd of white fabric slip-ware suggests a date in the 17th century. An irregular spread of mortar and pebbles in the east corner of the site (illus 11) appears to have been associated with the construction, as do post-holes 122a and b and 123, cut from the same level, and a small patch of clay (124).

The new building, of which the sandstone wall formed one side, extended beyond the excavated area on three sides (illus 12). The wall was founded on the partially demolished phase III boulder wall




ILLUS 12 Remains of the 17th-century building and later cobbled road

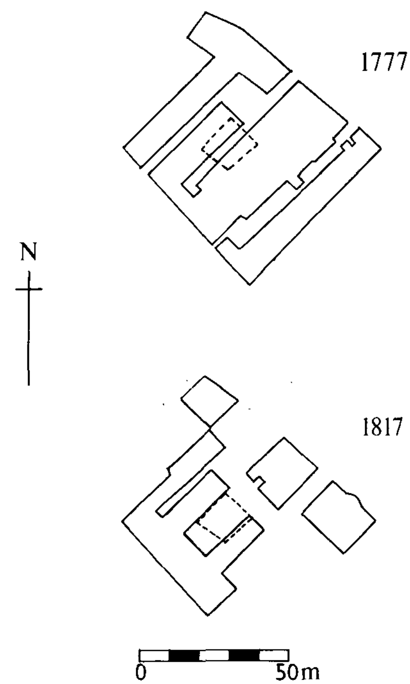
for most of its excavated length, with a 2 m stretch at the north-east end founded directly on midden sand within a very narrow foundation trench (illus 9). Further to the SW the foundation trench was much wider: over 50 cm at the cross-baulk (illus 5). The wall comprised a rough facing of hewn blocks on each side, with a rubble and mortar core, and the width was 60–5 cm, except where the wall widened near the junction with the more north-easterly of two partition walls.

This partition wall, some 2 m in from the north-east section, was of rubble and mortar construction, but without facing, and was bonded into the exterior wall. Its width varied from 50 to 58 cm and its surviving height from foundation approximated to that of two courses of the exterior wall. The second partition wall survived only in the form of an elongated hollow filled with loose mortar, with a large shallow posthole at the end adjacent to the exterior wall. It lay some 6·75 m SW of its companion. Both partition walls had been robbed out completely beyond a distance of c 2·4 m from the exterior wall.

In the areas on either side of the north-east partition wall were traces of timber floors. These had unfortunately been destroyed by machine action beside the edges of the trial trench, but substantial fragments were examined and recorded within the trial trench itself and beyond the adjacent partition wall (illus 12). Remains of timber joists survived in many of the beam-slots, and parts of the floor itself were present in the form of separate planks or areas of decayed wood. From the decayed fill of one beam-slot came a copper turner (twopence) of Charles I, struck in 1632. If this floor was contemporary with the construction of the building, as seems probable, this tends to confirm a 17th-century date. From another beam-slot came a fragment of worked amber (illus 17, no 5).

The partially destroyed cobbled road surface which ran parallel and adjacent to the outer face of the sandstone wall dated from considerably later. Even though the edge of the road respected the face of the wall over much of the excavated length, there is evidence to prove that this latest surface was not laid down until after the wall had been demolished to ground level. The sequence of events, as demonstrated by the relationship of various excavated features, must have been as follows. At some stage, presumably not before the 17th-century building had gone out of use, a rubbish pit was dug within it at the south-west end of the excavated area (illus 2, feature 174). This pit respected the sandstone wall at its south-east end, and this wall must presumably still have been standing at this time, as pit 174 was sealed by the same layer of demolition rubble and mortar as covered the remains of the wooden floors at the opposite end of the site. Pit 174 contained two sherds of blue and white slipware, but no more closely datable artefacts. Its north-west end was subsequently removed during the digging of the foundation trench for the warehouse wall which formed the north-west limit of the excavation, and this trench contained two sherds of pottery and a clay pipe-bowl dated to the late 18th or early 19th century. The construction of the warehouse was presumably followed, either immediately or at a later stage, by the laying down of the cobbled road surface, which overlay the demolished 17th-century wall at the south-west end of the site. The sand and soil matrix in which the cobbles were set contained pottery of 19th-century type and quantities of waste material from a glass-works. It was not possible to ascertain whether the area of cobbling which overlay the 17th-century wall and extended to the NW of it was laid at the same time as the stretch of road which respected the wall line, but there was no evidence to suggest that this was not the case. The cobbles sealed part of the layer of demolition material from the 17th-century building, and beneath this the filled-in pit 174. It is possible that the extent of the cobbles was originally much greater, as there had been much disturbance of the upper levels in the north-west part of the site during the demolition of the warehouse in the 1970s.

Confirmation of a late 18th- or early 19th-century date for the construction of the warehouse may be obtained from a study of old maps of the area, and in particular of those by Alexander Wood




ILLUS 13 The position of the excavated area in relation to buildings shown on maps by Alexander Wood (1777) and Robert Kirkwood (1817)

(1777) and Robert Kirkwood (1817). These were published at different scales, but when the buildings shown on each are transposed on to an outline plan of the area, they suggest quite strongly that the wall of the 17th-century building was still standing in 1777 and that by 1817 the warehouse had been erected (illus 13).

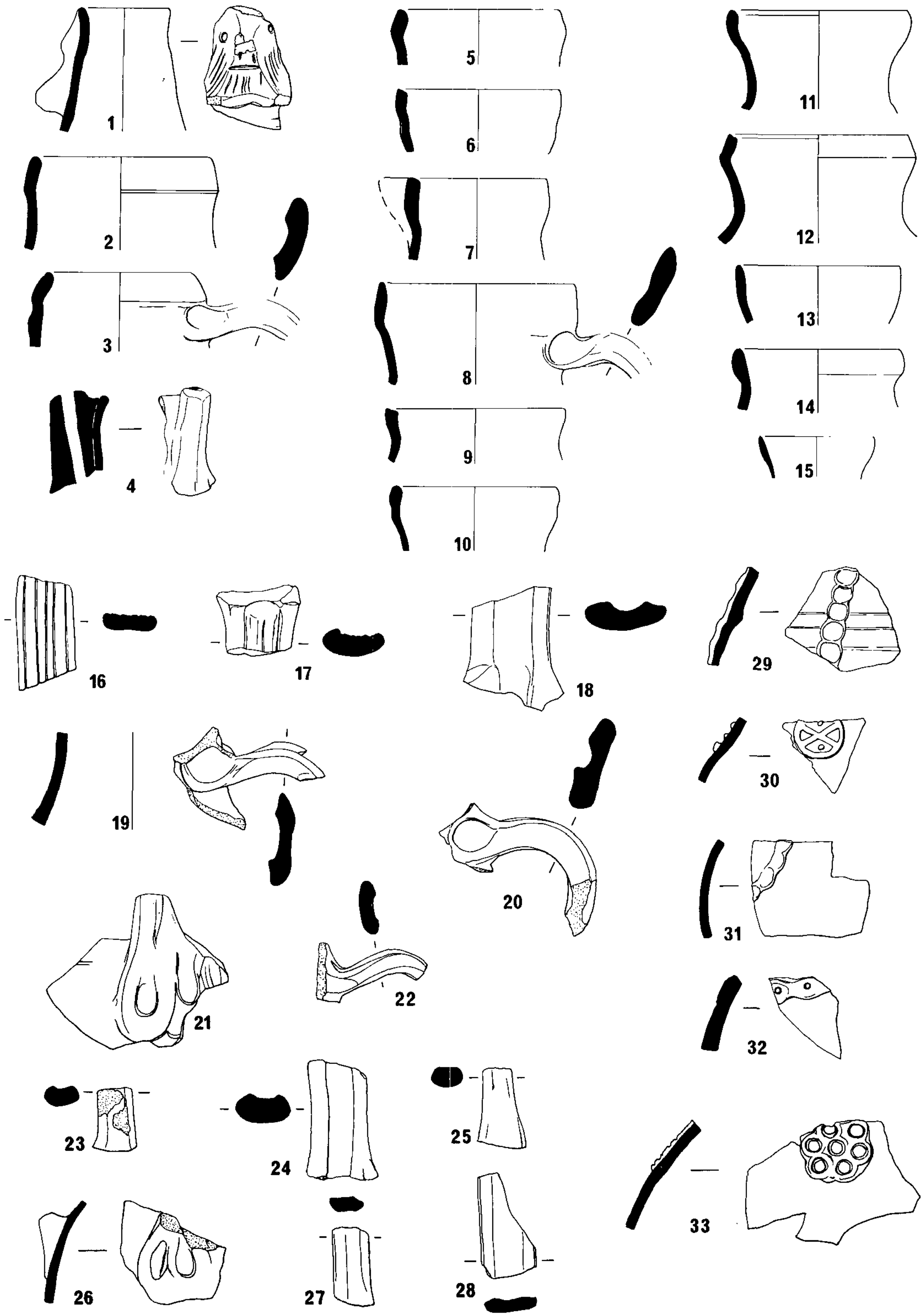
## THE FINDS

### POTTERY

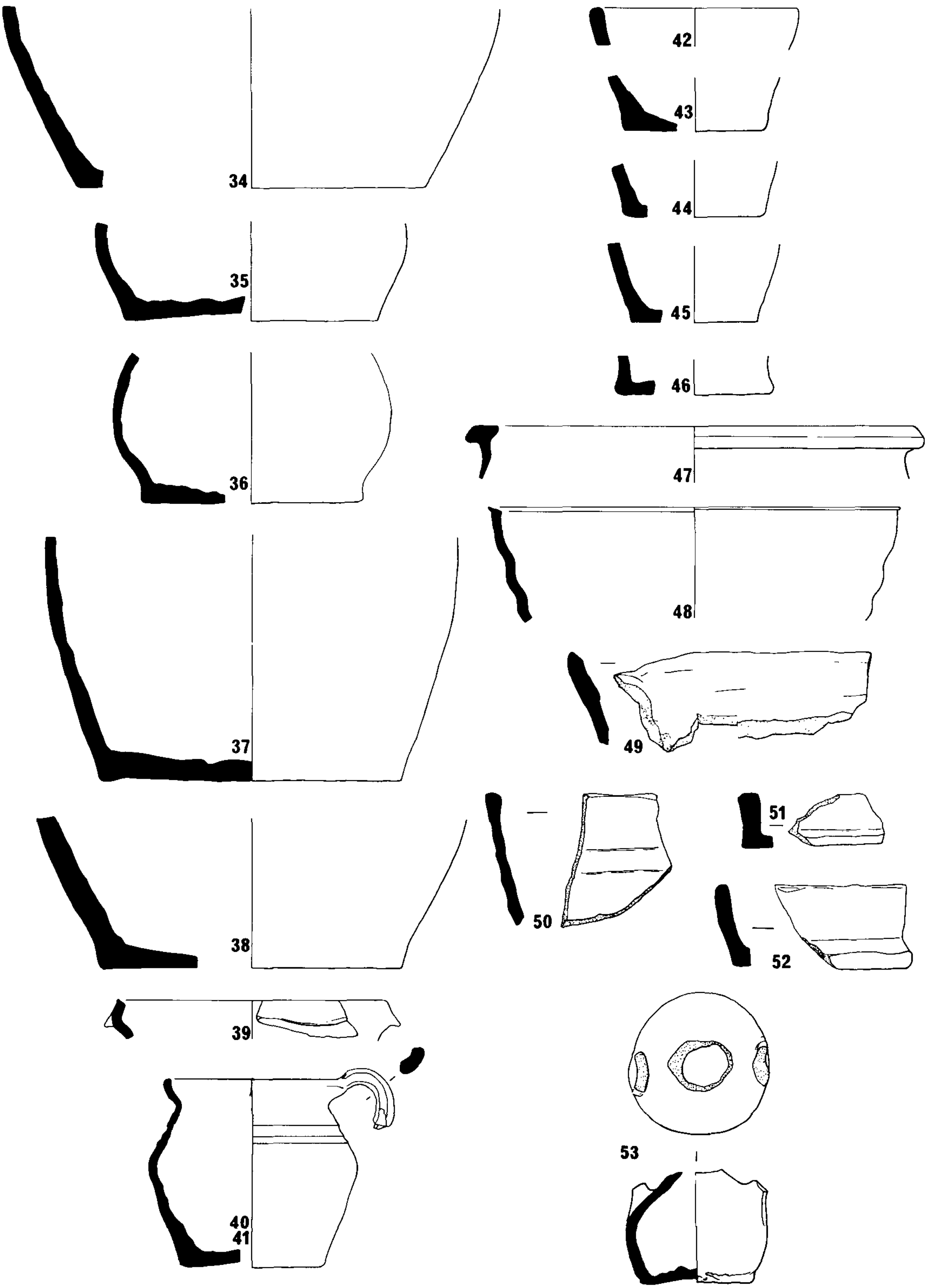
N MacAskill

The sherds recovered were examined and divided into broad fabric groups on the basis of visual distinctiveness. No scientific means of analysis were used, so these groupings serve only as a preliminary breakdown, which may be subject to revision on the basis of future work. The fabric groups are described briefly, and reference is made to comparable types from other sites. It is not suggested that the material in each fabric group is from a single kiln site, although in some cases, such as Group 6, this may be the case.

Table 1 (fiche 1: E3) shows the number and type of sherds present in the layers making up the 15th-century-midden, and table 2 (fiche 1: E3) summarizes the sherds present in significant post-midden contexts. Many of these sherds, especially those from contexts associated with the construction of the 17th-century building, represent redeposited midden debris. More detailed sherd counts for individual contexts are contained in the archive, and copies can be made available. Selected sherds are illustrated, grouped by fabric and sub-divided by sherd type. These show the range of vessel types represented in each fabric group. The catalogue of illustrated pottery (illus 14–16) is on fiche 1: E4–9.




ILLUS 14 Pottery, nos 1–33 (scale 1:4)




ILLUS 15 Pottery, nos 34–53 (scale 1:4)

### Fabric group 1

The sherds in this group are commonly white to off-white, sometimes with a pink or orange tinge and sometimes varying to grey. The clay matrix is quite fine in texture, with gritting consisting of quartz and other inclusions, probably including iron ore, in varying sizes and quantities. Many of the sherds have a reddish heat-skin, particularly on the external surfaces. Glaze was applied by splashing and is commonly medium green, varying to dark or light green and sometimes to shades of brown or yellow.

The commonest vessel type represented is the upright jug with slightly everted, thickened rim and strap handle. The bodies of these vessels were sometimes decorated with incisions or applied pads or strips. Cooking pots, often small, were also present. Some of these were handled and some had internal glaze. Bowls and dripping trays or 'fish dishes' were also represented, but in considerably smaller numbers.

The fabric and vessel types in this group are similar to the ware known as White Gritty, or East Coast Gritty, which has been found in large quantities on sites in Aberdeen (Murray *et al* 1982) and Perth (MacAskill, forthcoming b), and which appears to have been a common Scottish tradition from the 13th century onwards. It has been identified as predominantly an east coast tradition, but this may reflect more on the availability of evidence, as similar sherds were found in substantial numbers on a site in Ayr (W Lindsay, pers comm). The only known manufacturing site is at Colstoun in East Lothian, and the assemblage from this site has been published in detail (Brooks 1980).

The material from this site is not commonly as gritty as the wares from other sites, which are often earlier in date. The closest comparison may be with the assemblage recovered from excavations in Inverkeithing (MacAskill 1983). The fact that the Bernard Street material dates largely from the 15th century also ties in with conclusions reached from the Inverkeithing material that the tradition of white-firing gritty wares extends at least until this time, much later than was thought previously.

### Fabric group 2

This includes sherds which are basically similar to the Group 1 material but which are more finely textured, with few or no inclusions. There is probably considerable overlap between the two groups. Sherds *1–53* are in groups 1 and 2.

### Fabric group 3

The sherds (*54–7*) in this group are commonly grey to dark grey, sometimes varying to pink or orange, and finely textured with few inclusions. They have usually been glazed green. They are part of the tradition of grey, green-glazed wares which were common in Scotland from the 15th century through to the 18th century with little apparent variation or development. This type of material has been found on many late medieval and post-medieval sites throughout the country. It is discussed in detail in the report on pottery from Stirling Castle (Haggarty 1980) and a possible kiln site has been investigated at Throsk in Stirlingshire (Caldwell & Dean 1981).

### Fabric group 4

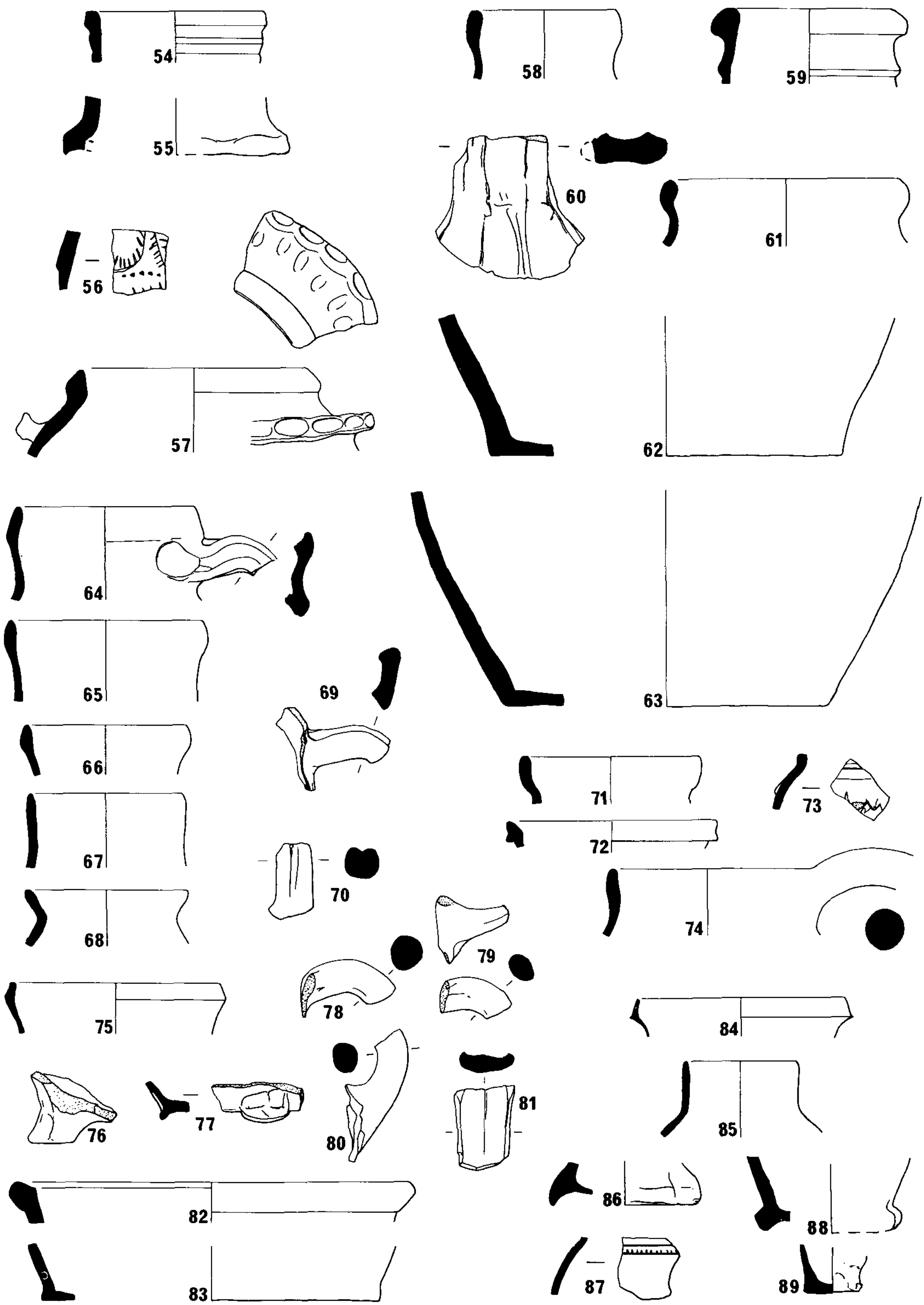
Sherds *58–63*. This is very similar to the Group 3 material, except that its fabric is sandy instead of smooth. Similar material has been found in Lesmahagow (Hall 1982) and Lanark (MacAskill forthcoming a).

### Fabric group 5

This covers most of the orange or pink wares which were represented on the site and probably includes a wide range of different fabric types. The sherds (*64–70*) vary from being hard and gritty to being fine and soft, but most are medium hard and sandy. Similar wares have been identified as local products in Aberdeen (Murray *et al* 1982), Perth (MacAskill, forthcoming) and Inverness (MacAskill 1982a).

### Fabric group 6

This is the most homogeneous of the fabric groups and it seems likely that all the vessels represented here came from a single kiln source. The fabric is medium hard and sandy and commonly has a rich brown glaze (sherds *75–83*). The vessels represented are mostly cooking pots. Some had thumbed bases, some were footed (ie pipkins), and flat, skillet-type vessels were probably also present. The presence of large bowls as well suggests that a wide range of cooking wares was being produced. The closest parallels to these




ILLUS 16 Pottery, nos 54–89 (scale 1:4)

are the examples of 'North European Earthenware' from sites in Scalloway (Lindsay 1983) and Kirkwall (MacAskill 1982b). The forms and general appearance are very similar, but the fabric is different, the Bernard Street sherds being much less gritty than the others. A European source for this material is possible, but no direct parallels have been found, and it is very possible that Scottish potters were producing wares imitative of imported kitchen wares.

### Fabric group 7

The range of German stone-wares (sherds *84–9*) found on this site appears to be much as one would expect from a site dating from the 15th century.

### Miscellaneous sherds

These include one example of Low Countries Greyware (no *74*) and two sherds which may have been imported from the north of England (*71* and *73*). There are also a number of fragmentary body-sherds which do not fit in to the established fabric groupings but which are insufficient to warrant individual description.

## COINS

### Isolated finds

The following items were recovered as individual finds from the excavation:

*Scottish*

1 Ecclesiastical issue, copper penny (c 1452–80), type IIIa (orb tilted upwards and to left, rosette in centre), reverse with saltires on cusps and annulets on spandrels. Type as Stewart (1955) 99. (LBS 80/33, context 145 – from midden deposit cut by hearth 146).

2 James III, copper 'black farthing', first issue (c 1466) (Stewart 113): square flan. (LBS 80/36, context 147 – from midden layer cut by hearth 146).

3 Another similar:square flan. (LBS 80/43, context 149 – fill of shallow pit in midden, below 147).

4 Almost certainly another 'black farthing', first or second issue: square flan of similar dimensions to nos 2 and 3, but with no surface detail surviving. (LBS 80/41, context 147).

5 Francis and Mary, billon lion, type 1 (1559–60) (Stewart page 150) (LBS 80/38, context 144 – clay layer overlying midden layer 145).

6 Charles I, copper turner (twopence), second issue (1632) (Stewart 237) (from trial trench, in one of the beam slots for the wooden floor of the 17th century building).

All these coins fall into the category of 'small change', ie such as would have been used for everyday transactions by ordinary citizens. Copper coins issued in the 15th century, as exemplified by nos 1–4, have until recently been generally regarded as rarities, but the results of recent excavations suggest that they survive in quite large numbers. 'Black farthings', which were often struck on squarish flans and which are usually recovered in poor condition, may well not have been recognized as coins by earlier excavators.

*?French*

7 A very worn and corroded billon coin, reconstructed from four fragments, but with several pieces missing. The diameter is in the region of 23 mm, ie similar to that of a Scottish plack of the late 15th century, but the few surface features which can be distinguished indicate an origin in France. The obverse has an indistinguishable design within a corded inner circle, and the reverse appears to bear a cross fleurdelissé, with lis in the angles, again within a corded inner circle. (LBS 80/61, context 169 – midden layer in western part of site).

*Unidentifiable*

8 Copper coin, probably a halfpenny of the late 18th or early 19th century. Diameter 27 mm, worn flat on both sides, large piece missing. (LBS 80/4, context 117 – disturbed layer contiguous with matrix for late cobbled road).

9 Probably a jetton. Thin copper disc, highly corroded and totally illegible. Diameter 27 mm. (LBS 80/35, context 147 – midden layer cut by hearth 146).

10 Several small corroded bronze fragments, apparently from a coin. (LBS 80/16, context 128 – from levelling material beneath?17th-century mortar spread at north east end of site).

## The coin hoard

When spoil from the trial trench was being removed from the area of the main excavation, this material was found to contain a small pottery vessel (fabric group 1–2) full of coins. (The pot is shown on illus 15, no 53). Because of the circumstances of its discovery it is of course impossible to determine from exactly which layer the hoard originally came, but the sand which adhered to the pot and blocked its neck indicated that it had been contained within one of the midden/reclamation layers. Since its original context had been destroyed, it was also impossible to say whether the hoard had been brought to the site with a load of midden material and deposited, or whether it had been buried intrusively at some later time. Fortunately, however, it was possible to date the deposition of the hoard to between c 1470 and 1475, and in view of the presence of two first issue 'black farthings' (c 1466) as isolated finds from the midden, it seems clear that the two events, if they were separate, were not of widely differing date.

It is not appropriate here to enter into a full discussion of the numismatic significance of the hoard. A complete catalogue of the coins and a comprehensive assessment of their significance appears elsewhere (Holmes 1983). For the purposes of this excavation report, a summarized list of coins and a brief discussion are deemed to be sufficient. All but 10 of the coins are Scottish, and the vast majority are billon pennies. They may be summarized as follows:

| | |
|---|---|
| *English* | |
| Edward III London half-groats, fourth coinage | 2 |
| Henry V York penny | 1 |
| Henry VI Calais half-groats, annulet issue | 3 |
| Henry VI Calais groats, rosette-mascle issue | 2 |
| Henry VI Durham penny | 1 |
| Edward IV London halfpenny, light coinage | 1 |
| *Scottish (Edinburgh mint unless stated)* | |
| Robert III Perth half-groat, heavy coinage, second issue | 1 |
| James I groat, first variety | 1 |
| James I penny, group A, Inverness | 1 |
| James I penny, group B | 1 |
| James I pennies, group C, Aberdeen | 2 |
| James I halfpenny, group A | 1 |
| James II groats, second coinage, first issue | 3 |
| James II groats, second coinage, second issue, type I | 2 |
| James II groats, second coinage, second issue, type II | 4 |
| James II groat, second coinage, second issue, type III/II mule | 1 |
| James II groats, second coinage, second issue, type III | 3 |
| James II groat, second coinage, second issue, type IV | 1 |
| James II penny, second coinage, first issue | 1 |
| James II pennies, second coinage, first/second issue mules (1 Perth) | 4 |
| James II pennies, second coinage, second issue (4 Aberdeen, 6 Perth, 1 Roxburgh, 1 uncertain) | 214 |
| James I or II unidentifiable pennies | 2 |
| James III pennies, class A | 106 |
| | 358 |

A *terminus post quem* for the deposition of the hoard is provided by the presence of the Edward IV halfpenny, issued in 1469–70, and the absence of any James III pennies of the relatively common class C, first issued in 1475, indicates that the hoard must have been deposited by around that year.

There are few known Scottish hoards buried in the 15th century, and this one belongs to a very rare type, consisting mainly of billon pennies, the 'small change' of the day. The only two similar hoards known are those discovered at Glenluce Sands, Wigtownshire, in 1956, and at Rhoneston, Dumfriesshire, in 1961 (Stewart 1959; Jope & Jope 1959; Stewart 1960; Stewart & Stevenson 1965). The Leith hoard has provided the first opportunity to study large groups of billon pennies of James II (the so-called 'crown groat' coinage) and of James III's class A. Several previouly unrecorded varieties of both series were included in the hoard, and much new typological analysis has been possible. In the case of the James II coins (Stewart 1955, 94 and variations), a relative chronology for many of the new and previously recognized varieties has been formulated, based on a chain of die-links. The typological classification previously in use for the class A pennies of James III (Stewart 1955, 115 and variations) has been superseded, as a result of the number of new types present at Leith, and a new classification has been developed, with some tentative suggestions as to relative chronology, again based on die-links.

The hoard was claimed as Treasure Trove, and it has been allocated to Edinburgh City Museums and Galleries. A piece of cloth, which was wedged into the top of the pot above the coins, is discussed below.

### OBJECTS OF COPPER ALLOY

A large number of complete and fragmentary objects of copper alloy were recovered, mostly pins or 'lace tags'. The latter term is used to describe thin cylindrical or tapering objects, made from rolled metal sheeting in the manner of a modern shoe-lace terminal.

Pins, with a solid metal shank and a globular head formed from either molten metal or twisted wire, were recovered from numerous layers, both in and above the 15th century midden. The length of complete examples varied from 25 mm to 53 mm. One pin, with a flat-topped conical head, appears to have been cast in one piece (length 44 mm).

'Lace tags' came exclusively from undisturbed midden deposits, with the exception of one example redeposited in the fill of the foundation trench for the wall of the 17th-century building. Most complete examples measured between 20 and 25 mm in length, the exception being 33 mm long. Some tapered sharply and others were almost cylindrical. One specimen held a fragment of woven lace or string, which projected from one end, thus confirming the suggested function of these items, but another fragment had a corroded globular head, indicating that pins were also made in this fashion. Many similar 'lace-tags' were found in late medieval graves during an excavation within St Giles' Cathedral, Edinburgh, in 1981: it appears that they formed the terminals of draw-strings for bags or sacks, in which the bodies had been buried.

Three broken buttons were recovered, two from the soil matrix for the late cobbled road surface and one unstratified from the trial trench. All had been flat and circular, with a fastening loop at the back.

Three other items are worthy of mention, all from the midden/reclamation deposits: a small strap-terminal (illus 17, no 1), a buckle (illus 17, no 2), and a wire twist (not illustrated). The latter comprises a length of wire, bent into a ring of diameter 7 mm, and with the ends twisted together. These items appear to be fairly common finds on late medieval and early post-medieval sites. Woodfield cites various examples (1981, 98, fig 7, no 117, 157, n 76), but all of these are dated to between 1520 and 1650. The presence of this example within the 15th-century midden extends the period over which their use has been recorded. Their precise function is unknown, but they are presumed to have served as fasteners for some form of clothing.

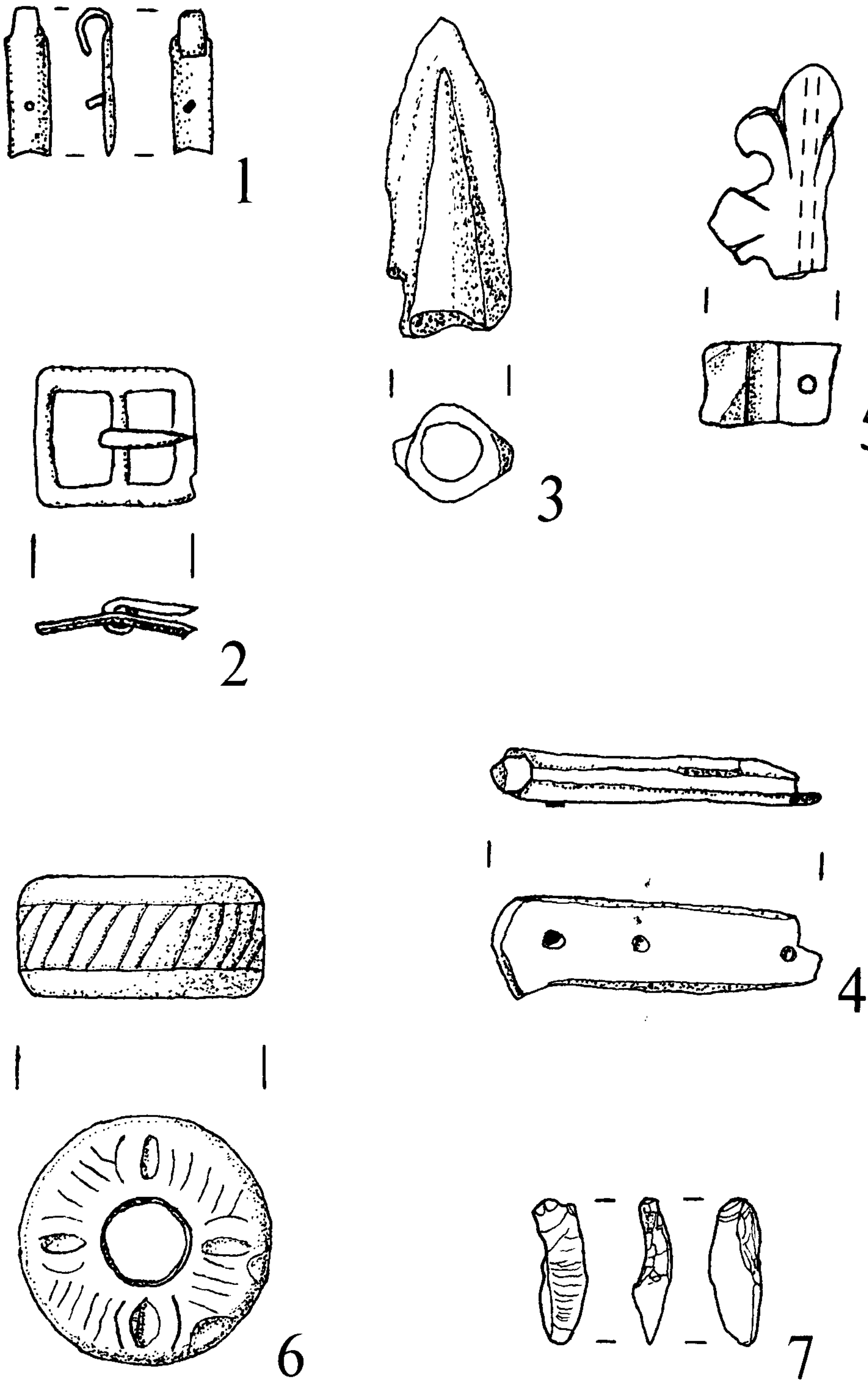
(Strap-terminal LBS 80/13, buckle LBS 80/42, wire twist LBS 80/59.)

### OBJECTS OF IRON

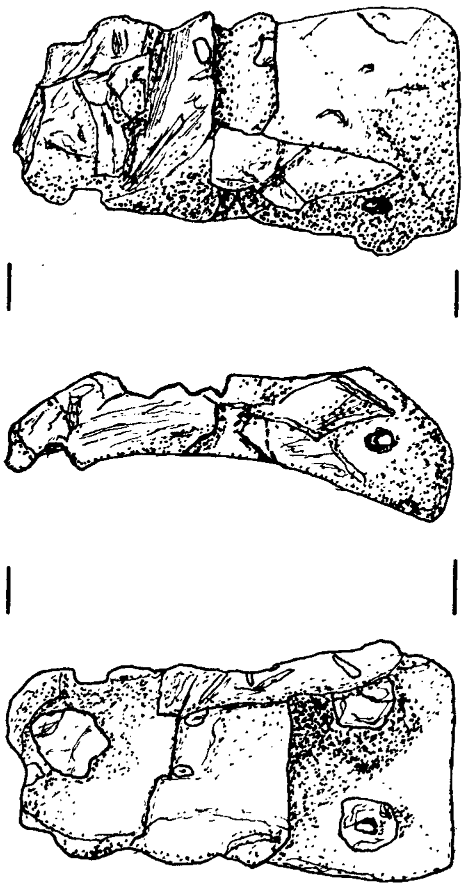
Numerous pieces of iron were recovered, almost all of them highly corroded and the vast majority comprising nails of varying sizes. Five objects appear worthy of individual mention, all from midden layers.

An arrow-head (illus 17, no 3) is leaf-shaped with a tapering central socket and appears to be a variety of London Museum type 10 (London Museum 1975, 65–73). The nearest parallel illustrated in the catalogue is on page 71, no A11944, plate XV, no 23, but even this specimen displays some extension of the socket beyond the base of the leaf-shaped section, which does not appear ever to have been a feature of the Leith example. The date suggested for type 10 is considerably earlier than might reasonably be attributed to this specimen, which came from the 15th-century midden, and its general similarity in appearance may therefore be coincidental. It has been suggested, on the basis of the diameter of the socket, that the head may have belonged to a crossbow bolt rather than to an arrow. (Length 43 mm; internal diameter of socket, before accretion of corrosion products, c 10 by 9 mm).

A knife-handle (illus 17, no 4) comprises two flat iron panels flanking the butt end of a blade, the three sections being held together by three rivets of copper alloy. The end of the handle is embellished with a small base-plate of copper alloy. A second knife-handle, now highly corroded, consists of a solid piece of iron, 65 mm long and slightly curved, with the bottom 22 mm of a blade socketed into it. One rivet-hole survives at the top (not illustrated). The handle end of a knife-blade, 62 mm long with a curved end, retains




ILLUS 17 Small finds. *1–2*: copper alloy; *3–4*: iron; *5*: amber; *6*: terracotta; *7*: flint (scale 1:1)



ILLUS 18 Iron armour fragment from a gauntlet (scale 1:1)

nothing of the panels which must have flanked it to form a handle except two fragments of copper alloy sheeting, set opposite to each other on either side of the blade (not illustrated).

Perhaps the most unexpected iron object recovered, in view of its context, was a small piece of armour (illus 18). This comes from a gauntlet and comprises the protective plates for the two lower sections of one finger – probably an index finger, to judge by its size. The fragment is made up of three sections, the two end ones overlapping the middle one on its outer side. The largest section, which would have covered the main joint of the finger, is shaped to allow freedom of movement. The iron plates would have been fixed to a leather gauntlet with iron studs, of which there are two on either side of the main finger-joint and a third at the tip of the finger. The fragment measures 62 mm in length, with a maximum width at the joint of 30 mm. (NB illus 18 shows the fragment after initial cleaning, with some deposits of corrosion products still attached. It is hoped that further treatment will improve its appearance.)

(Arrow-head LBS 80/64, knife fragments LBS 80/65, 66 and 67 respectively, armour fragment LBS 80/68.)

### MISCELLANEOUS FINDS

A piece of worked amber was recovered during the trial excavation from one of the beam-slots for the wooden floor of the 17th-century building. It comprises slightly more than half of a fleur-de-lis carving, and is pierced longitudinally along the axis of the design (illus 17, no 5) (LBS 80, context 1).

From the top of the midden came a terracotta loom-weight (illus 17, no 6), reddish-brown in colour, but with some parts blackened by fire. The two flat faces are decorated with finger-nail impressions and shallow incised lines, and the edge with a continuous pattern of shallow striations (LBS 80/14).

The matrix for the late cobbled road surface yielded a clay marble of diameter 16 mm (not illustrated).

The midden layers produced a total of five pieces of flint, only one of which showed any sign of secondary working. This was a small scraper (illus 17, no 7), which was recovered from the trial trench (LBS 80, context 14).

Clay pipe fragments were recovered from several of the upper levels of the excavation, but these included only one bowl. This was a decorated but unstamped specimen with a spur foot, and was found in the fill of the foundation trench for the warehouse wall. It has been dated to the late 18th or early 19th century (Andrew Sharp, pers comm). Of the stem sherds recovered 15 came from the demolition layers overlying the floors inside the 17th-century building, eight from the matrix for the cobbled road surface, including one with patches of yellow-green glaze, and four from other contexts.

Finds of glass were also mostly confined to the upper levels of the excavation. The midden yielded just one fragment of green bottle-glass and a small piece of slag from glass making, and the layers immediately overlying the floors of the 17th-century building produced a small quantity of bottle fragments and window glass, including part of a bull's-eye pane. From this demolition deposit came in addition four sherds of a fine vessel in bright cobalt blue glass, with diagonal corrugations on the exterior. Three more sherds of the same vessel were found incorporated into the matrix for the cobbled road. This matrix also contained a quantity of waste material from a glass-works, including slag and trial pieces.

### TEXTILES

Helen Bennett and Vanessa Habib

1 From inside the top of the pottery vessel which contained the coin hoard came a much decayed and fragmentary piece of linen, which appears to have measured c 20 cm by 10 cm originally. The cloth is of plain weave (one over/one under), and there are 50 to 60 threads to the inch – on average, slightly more in one direction than the other. Some linens have as many as 90 to 100 threads to the inch, so this is not of a particularly fine quality, but it is of a fairly open weave. The fragment includes a 12 cm length of edging, which is in the form of a rolled hem, stitched with linen thread. The date of its deposition is fixed by its association with the coin hoard to 1470–75, but it is not possible to estimate the length of its previous existence or the nature of its original function (LBS 80/5).

2 Several fragments of blackened cloth, forming a total surface area of c 50 cm$^2$, were recovered from one of the midden layers. The fabric is almost certainly wool and is of plain weave, with single-ply, Z-spun threads at c 14 by 12 threads per cm. The fragments appear to be from a light worsted type fabric: the threads are very smooth and not at all felted. The colouring is due to charring. There is no way of establishing original use, and the fragments were almost certainly brought to the site with a deposit of refuse (LBS 80/26).

3 From the burnt layer at floor level within the reclamation period building (feature 127) came a few small and severely charred fragments of cloth, probably woollen. The weave is two over/one under twill, and the threads are Z-spun in both directions. The cloth was probably coarse and uneven and of light to medium weight, but of uncertain use (LBS 80/18).

### BUILDING MATERIALS

The various 15th-century midden layers yielded a total of 23 fragments of brick, none of them mortared: full details on fiche 1:E10.

### PLAIN GLAZED FLOOR TILES

Elizabeth Eames

Thirteen fragments of glazed tile were recovered, nine of them from midden deposits clearly associated with the land reclamation of the middle of the 15th century.

The remaining four pieces are from later or unstratified contexts, but there seems little doubt that these represent survivals and belong to the same group as the fragments from the midden deposits. See fiche 1:E11 for descriptions.

The evidence combines to suggest that all the fragments belong to a single group, probably imported from the Netherlands. Since there was little evidence of building demolition contained within the midden deposits, and since none of the tile fragments has mortar adhering, it seems unlikely that they had ever formed part of a floor, and they may well have been rejects or surplus pieces from a consignment. They are therefore unlikely to have been made much before the date of deposition of the midden (c 1466–75). The tiles are comparable in many respects with a group found during the excavation of a site on the south side of the High Street, Edinburgh, in 1973 (Group II, dated c 1450) (Eames 1976).

## SHELLS

D Heppell*

The full report is on fiche 1: E13.

The assemblage of mollusc shells from Bernard Steet is exactly as might be expected from domestic and midden deposits in eastern Scotland, with no surprising occurrences or absences. The species which predominate are all edible, although some individual specimens are unlikely to represent food remains. A total of 25 layers within the 15th-century midden/reclamation deposits yielded shells of oyster, periwinkle, whelk and cockle: the same species were found associated with the wooden floors of the 17th-century buildings.

## FAUNAL REMAINS

Lin Barnetson†

The full report is on fiche 1: F1–11.

### Introduction

The excavation at Bernard Street, Leith, provided an opportunity to compare samples of domestic debris from, literally, two adjacent towns. Excavations in and around the High Street of Edinburgh, carried out over the past 12 years, have yielded a number of bone assemblages relating to the medieval and post-medieval occupation of the city (Chaplin & Barnetson 1975; 1976; 1980). Leith, the port of Edinburgh and a 'town' in its own right, had a special, if unenviable, relationship with the city as regards trade, and no doubt most of Edinburgh's salt-water fish would have been supplied from Leith.

### Material and methods

Of some 55 stratified and three baulk deposits yielding animal bones, 39 were constituent parts of the 15th-century midden. The range of species identified is given in tables 3 and 4 fiche 1:F10. As many contexts contained only one or two bone fragments, detailed descriptions of only the larger deposits are given in the fiche report.

### Discussion

Although the Leith assemblage was rather fragmented, several interesting points emerged from the overall analysis. Firstly, the high incidence of butchering marks on cattle bones and the possible predominance (for it is almost impossible to quantify in such a sample) of waste bones seem to point to carcass preparation rather than consumption. Sheep and cattle bones were present in roughly similar quantities throughout the Leith deposits, but the former were generally fairly intact compared to the highly fragmented cattle bones. Admittedly, the size of the carcass usually dictates the amount of butchering necessary, large carcasses requiring more cuts in order to reduce them to reasonably sized pieces.

Secondly, although it is difficult to assess the relative proportions, pig does appear to be better represented here than in any of the Edinburgh assemblages. Differential preservation of pig bones had been noted at other sites and is due to the composition of the bones themselves, although the different preparations used in preserving pork (salting, pickling, etc) may also be a contributory factor. For

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whatever reason, surprisingly few pig bones were found among the medieval and post-medieval faunal assemblages so far recovered from Edinburgh. It is possible that pigs were 'banned' from densely populated areas, with the result that pork had to be imported into the city, either in the form of live animals or, for example, as smoked hams. Pigs which are not securely penned can wreak great havoc in a built-up area, but Leith may have had more open spaces (even midden areas) where pigs could be kept and slaughtered for fresh pork.

Thirdly, the occurrence of two healed fractures on rib bones among such a small sample is perhaps rather unusual. Injuries of this kind are not uncommon among livestock and do not necessarily imply mishandling of the animals. If cattle are penned too closely together, jostling can result in rib fractures. The cattle rib in question, however, did appear to have been broken rather near the dorsal end, possibly indicating a blow from a goad, although this is purely speculative. Similarly, the pig rib could easily have been broken in the same manner.

Apart from one dental anomaly (the mandible in context 133), the sheep showed no signs of disease or ill health. Estimates of withers' heights were derived from three intact radii, and these placed the animals at the lower end of the size range for medieval sheep: 516, 553, 575 mm. (A modern Soay sheep stands roughly 500 mm at the shoulder.)

Age estimates of cattle, sheep and pigs, based on epiphyseal fusion of the long bones and eruption of the teeth, revealed a wide range of ages, from neo-nate (or foetal) to c 4 or 5 years. None of the bones appeared to belong to old animals except for a few of the horse bones.

Equid remains were recovered from 14 different contexts, and it was possible to estimate the withers' height of one of these animals as 1354 mm. This falls into the category of small to average-sized, and although stature could not be assessed for any of the other horses, most of them seemed to belong to this category.

The other domestic species were dog and cat, both of which probably acted as scavengers to judge from the amount of evidence from the assemblage as a whole of the gnawing of bones by carnivores.

The bird bones were predominantly of domestic fowl, although goose and herring gull were also present.

The fish bones were predominantly of cod, although ling, haddock and possibly plaice were also present. Delicate bones, such as the operculum, had survived, but it was not always possible to identify these fragments to species. Most of the skeletal elements were from the skull region, which suggests disposal of the non-edible fish-heads. Presumably fish were gutted at the harbour before being sold at the market, and it is possible that heads were removed at this stage. Cod and ling have been identified at the 16th/17th-century harbour site at Eyemouth, on the south-east coast of Scotland (Dixon, pers comm and forthcoming). Both are popular food fish today and can be caught off the coast in a day's fishing. It is difficult to estimate size of fish from fragmentary remains, but the Leith specimens all appeared to be in the > 2–3 kg range.

The haddock and flatfish were present in very small numbers and the bones were from small individuals, suggesting perhaps that these fish were sold entire, whereas the bigger fish, in this case cod and ling, had the heavy, inedible parts removed prior to selling.

The marketing of fish in this period is of great interest. For example, remains of haddock have been recovered from the 16th/17th-century deposits at Smailholm Tower, in the heart of Roxburghshire, and this points to a coast-inland trade, probably in smoked or salted fish (Good & Tabraham, forthcoming).

## CONCLUSIONS

This excavation has proved to be of considerable value, despite the scarcity and somewhat uninformative nature of the structural remains. It has provided the first archaeological evidence of medieval Leith, a town of some importance for the history of Scotland because of its function as Edinburgh's port, and it has yielded a large quantity of extremely well-dated domestic material from the 15th-century midden deposits.

There is little evidence for the exact location of the earlier medieval town and port of Leith, despite documentary proof of the existence of a harbour as early as the middle of the 12th century. It has generally been accepted that the earliest buildings stood on the right bank of the Water of Leith, beside 'the Shore', but this does not necessarily coincide with the modern street which bears this name. There is no evidence for the exact position or width of the river mouth in the Middle Ages. Only in the 16th century, with the construction of the defensive walls, is there a reliable indication of the size and boundaries of the town. Consequently it is of some significance for our knowledge of its development that the excavation has disclosed a mid 15th-century date for land reclamation in this area.

Observation of landscaping operations by a contractor on a site to the W of the river provided evidence to suggest that reclamation work was being carried out there at a similar period. Potsherds recovered from sandy midden deposits are of similar types to those from the 15th-century levels at the Bernard Street site. If a concerted operation to reclaim shore land was being carried out in both North and South Leith in the 15th century, this raises a question over the nature of the site of the building known as the King's Wark (RCAMS 1951, 266). Begun by James I in 1434, this combined royal residence, store-house and armoury stood facing the Shore, immediately to the south of the present Bernard Street (illus 1). (The name is still preserved as that of a public house which stands at the corner of the Shore and Bernard Street.) The site of the excavation is on much the same alignment in relation to the shore line of the Forth as that of the King's Wark (in fact, slightly further inland) and if this area was not reclaimed until the 1460s or 1470s, the implication is that the King's Wark must have been built on a promontory, either natural or artificial, at the mouth of the Water of Leith and must have occupied such a position until the adjoining beach was reclaimed.

The significance of the various groups of finds has largely been discussed in the individual specialist reports, but it is worth considering at this point to what extent, if at all, the entire assemblage of finds reflects Leith's position as a major port in the late medieval and post-medieval periods. Even allowing for the fact that most of the artefacts recovered represent domestic refuse, there is a notable lack of items of foreign origin. The pottery includes a few sherds of German stoneware, one fragment of Low Countries Greyware, and a couple of pieces of possible English origin. These sherds would certainly not be regarded as evidence for large scale foreign trade, and there is little else in the finds assemblage to suggest this either. The coin series contains one piece of apparently French origin, and a certain French influence may be recognized in the amber fleur-de-lis carving. The reason for this lack of evidence in the archaeological record for the large volume of foreign trade which is known to have passed through Leith may perhaps be sought in the uneasy relationship between the port and the city which it served. A royal charter of 1329 leased to the burgesses of Edinburgh for a fixed yearly payment the burgh of Edinburgh and the port of Leith, and a charter purchased from Logan of Restalrig in 1413 forbade the inhabitants of Leith to practise any trade, possess shops or warehouses, or keep inns for strangers. Edinburgh continued to restrict the activities of the people of Leith, which were in any case much limited by the fact that the port was not a burgh, but a community of legally 'unfree' people. Import and export trade was a monopoly of the royal burghs, and all goods unloaded at Leith had to be transported immediately to Edinburgh. In 1485 the merchants of Edinburgh were forbidden to enter into any partnership with inhabitants of Leith. By the middle of the 16th century the burgh records of Edinburgh contained many accounts of prosecutions relating to trade with the 'unfreemen of Leith', and it is clear that some imported goods did find their way back to the port, but the severe restrictions imposed must have limited this flow to a small fraction of what it would otherwise have been.

Previous attempts to locate, by trial-trenching, the remains of medieval Leith have been singularly unsuccessful, with most of the evidence in the areas investigated having been destroyed by later clearance and building operations. The presence and nature of the undisturbed late medieval deposits on this site serve to indicate that other, perhaps earlier, deposits may still survive in areas further back from the shore of the Forth.

## ACKNOWLEDGEMENTS

The writer wishes to record his thanks to various individuals and organizations for contributing to the success of the excavation. The Port of Leith Housing Association, owners of the site at the commencement of the excavation, and their agents, Messrs Kenneth Ryden and Partners, kindly gave permission for the excavation to take place in advance of proposed redevelopment. During the course of the excavation the site changed hands, and thanks are also due to the new owner, Mr E Ramsay, for allowing work to continue as planned. The excavation was financed by the City of Edinburgh District Council, through the City Museums and Galleries. Thanks are also due to the manager of the Royal Bank of Scotland, 25 Bernard Street, who kindly allowed part of the rear of his building to be used for the storage of tools and equipment.

Excavation, under the supervision of the writer, was carried out by Messrs T Chilton, P Holloway, P Raisen, J Rideout and D Roberts, and thanks are due to these gentlemen and to the various specialists who have contributed to this report.

Norman MacAskill wishes to thank Messrs W Lindsay and F Verhaeghe for comments on the pottery assemblage, and Mr N Bradbury for his assistance with the preparation of the pottery report.

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## NOTE ADDED IN PROOF

### POSTSCRIPT TO COIN REPORT

Further research on the poorly preserved French coin from the midden (no 7 in catalogue, p 418) has revealed that it is almost certainly a billon *Florette* of around 1420. Coins matching the general description of the Leith find were issued by Charles VI of France from 1417 to c 1420 and by Henry V of England during the period 1415–22. The diameter of this coin suggests that it belongs among the later issues of Charles VI, which were somewhat smaller than their predecessors (cf Ciani 1926, nos 526–45).

Ciani, L 1926 *Les Monnaies Royales Francaises*. Paris.

*This report is published with the aid of a grant from Edinburgh District Council*