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## 5 ARTEFACTUAL & ENVIRONMENTAL EVIDENCE (TRENCH 2)

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### 5.1 Medieval pottery, by Derek Hall

The 1053 sherds from this excavation were examined by eye and a ×10 hand lens and where possible identified to a known fabric type.

Nine hundred and ninety-nine of the sherds are variations of Scottish White Gritty Ware (*illus 13–14*, Nos 1–45), assumed to be a local product that currently has only one identified production site, at Colstoun near Haddington, although it is highly likely that many more await discovery (*Hall 2004*). Without chemical analysis it is very difficult to tie this fabric down to a specific production site, although it is notable that none of the variations identified in this assemblage match those identified from Colstoun, where the presence of iron concentrations in some of the clays gives this fabric a pink to red tinge. The vessel forms in this fabric are dominated by glazed jugs by a ratio of two to one, and there is a single example of a dripping pan from F24.

Scottish Redware was also present in the Colstoun kiln assemblage, although it is not known whether it was locally produced or imported from production centres further north (*Hall 1998*). All of the 29 sherds from Hallhill are from glazed jugs (*illus 14*, nos 46–47).

Rhenish stonewares, imported German fabrics which become common from *c* 1350 onwards and are common finds in the burghs of Perth, Leith and Edinburgh, were represented here by a single sherd from the surface of F7.

There are nine sherds which are not readily identifiable to known fabric types (*illus 14*, nos 48 to 49). Some of these may be imports, probably from England, but are too small to warrant accurate identification. Of most interest in this small group is the single sherd from a glazed vessel with a stamped floral decoration (no. 49).

Modern ceramics were represented by nine sherds of brown-glazed earthenware, two of salt-glazed stoneware and four of white earthenware, all of which date to the 19th century and are presumably from manuring of the field, though they were intrusive in earlier features.

#### Catalogue (*illus 13–14*)

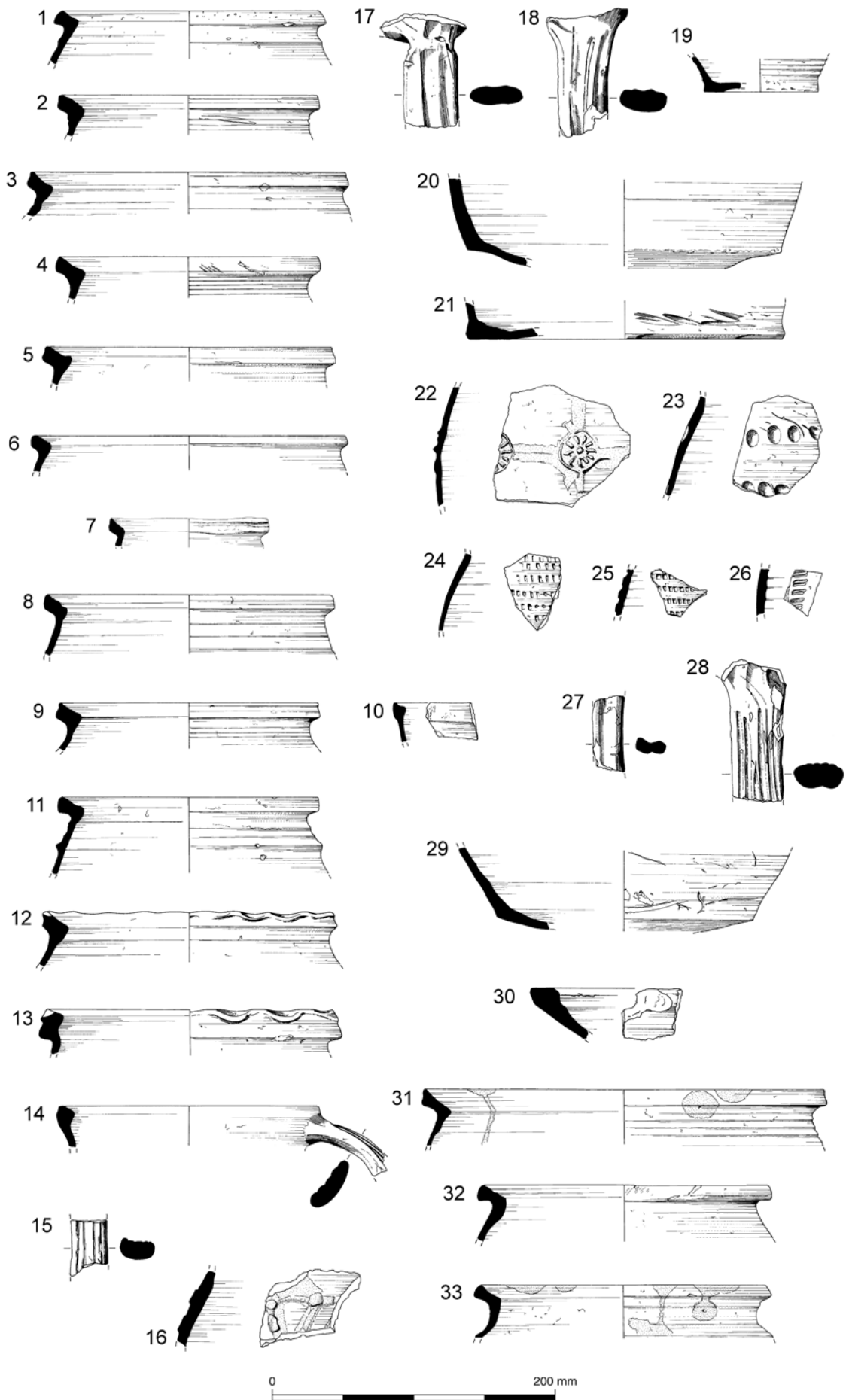
##### Scottish White Gritty Ware: Fabric 1

- 1 Rimsherd from unglazed jar. F8, SF 018.
- 2 Rimsherd from unglazed jar. F14, fill 1402, SF 125.
- 3 Rimsherd from unglazed jar. F19, upper fill 1904, SF 198.

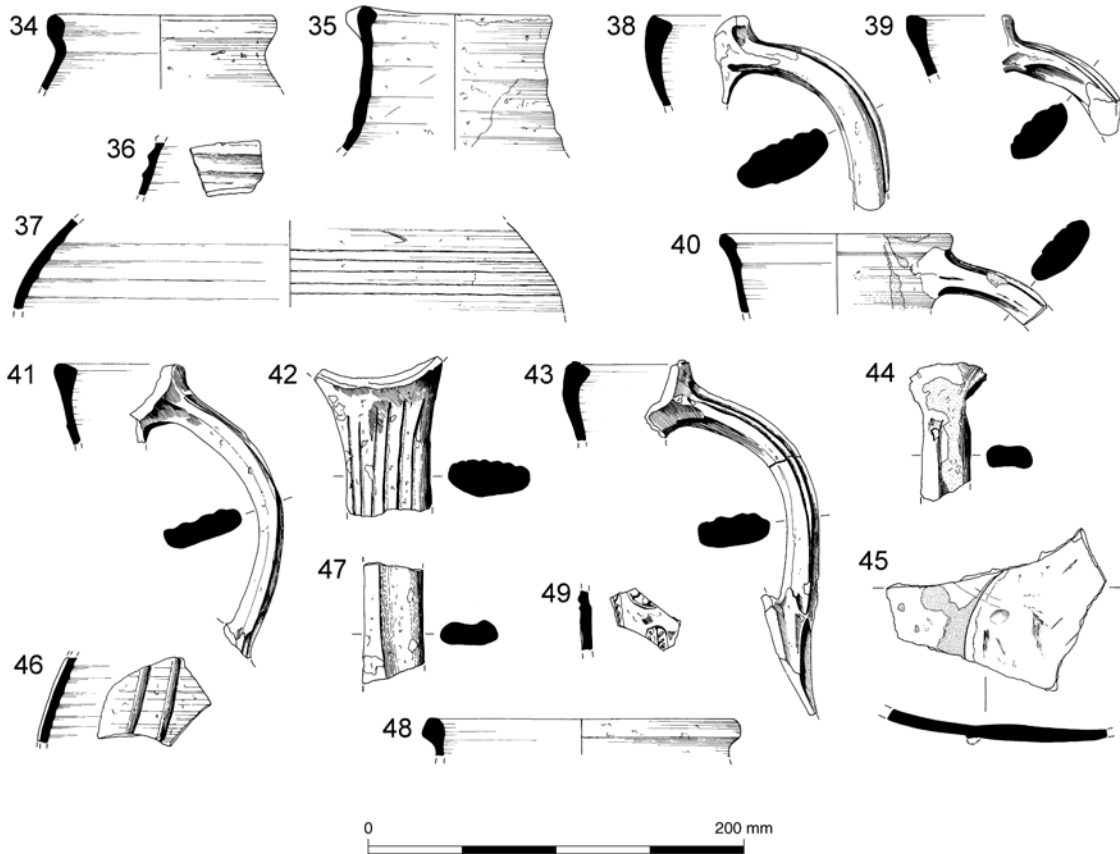
- 4 Rimsherd from unglazed jar. F19, upper fill 1904, SF 198.
- 5 Rimsherd from unglazed jar. F11, gully fill 1102, SF 056.
- 6 Rimsherd from unglazed jar. F33, fill 716, SF 111.
- 7 Rimsherd from unglazed jar. Trench 2, SF 202.
- 8 Rimsherd from unglazed jar. F24, SF 036.
- 9 Rimsherd from unglazed jar. F7, pit fill 702, SF 054.
- 10 Rimsherd from unglazed jar. F15, pit fill 1506, SF 147.
- 11 Rimsherd from unglazed jar. with pronounced cordon around vessel. F7, SF 204.
- 12 Slightly frilled rimsherd from unglazed jar. F24, SF 036.
- 13 Slightly frilled rimsherd from unglazed jar. F14, pit fill 1427, SF 180.
- 14 Rim and ribbed strap handle from jug splash-glazed green. F8, ditch fill 808, SF 079.
- 15 Narrow unglazed ribbed strap handle. F19, SF 170.
- 16 Bodysherd from green-glazed jug decorated with brown-glazed applied strips and pellets. F19, SF 008.
- 17 Strap handle and junction from jar with external smoke blackening. F19, SF 162.
- 18 Strap handle from green-glazed jug. F19, fill 1901, SF 230.
- 19 Basal angle from jar with external smoke blackening. F19 surface.
- 20 Basal angle from unglazed jug. F13, pit 1315, SF 130.
- 21 Basal angle from unglazed jug. Unstratified, SF 202.

##### Scottish White Gritty Ware: Fabric 2

- 22 Bodysherd from green-glazed jug decorated with brown-glazed strips and embossed pellets. F19, upper fill 1904.
- 23 Bodysherd from green-glazed jug decorated with impressed 'hollows'. F19 SE surface.
- 24 Bodysherd from green-glazed jug decorated with rouletted decoration. F19, SF 172.
- 25 Bodysherd from green-glazed jug decorated with rouletted decoration. F24, SF 036.
- 26 Bodysherd from green-glazed jug decorated with incised decoration. F16, pit fill 1602, SF 142.
- 27 Narrow strap handle from jug with patches of green glaze. F7, SF 208.
- 28 Ribbed strap handle from green-glazed jug. F24, SF 036.
- 29 Basal angle from unglazed vessel with patch of green glaze on base. F19, SF 172.



*Illus 13 Medieval pottery*



*Illus 14 Medieval pottery*

30 Rimsherd from dripping pan internally glazed green with patches of external green glaze. F24, topsoil 2401, SF 186.

Scottish White Gritty Ware: Fabric 3

- 31 Rimsherd from unglazed jar with spots of green glaze on rim. F12, pit fill 1202, SF 059.
- 32 Rimsherd from unglazed jar with patches of external smoke blackening. F14, upper fill 1402, SF 145.
- 33 Rimsherd from unglazed jar with spots of green glaze. F19, SF 207.
- 34 Rimsherd from jar with patches of external green-brown glaze. F19, SF 203.
- 35 Rim and neck from jug splash-glazed green. F19, hollow 1901, SF 230.
- 36 Bodysherd from vessel decorated with raised horizontal strips. F7, pit fill 702, SF 054.
- 37 Joining bodysherds from green-glazed jug decorated with horizontal incised lines. F19, SF 203.
- 38 Rim and ribbed strap handle from jug splash-glazed green. F19, SF 170.
- 39 Rim and ribbed strap handle from jug splash-glazed green. F19, hollow 1901, SF 230.
- 40 Rim and ribbed strap handle junction from jug with patches of green glaze. F11, gully fill 1102, SF 234.
- 41 Ribbed strap handle from jug splash-glazed green. F24, topsoil spread 2401.

- 42 Ribbed strap handle from green-glazed jug. F11, gully fill 1102, SF 234.
- 43 Ribbed strap handle from green-glazed jug. F24, topsoil spread 2401.
- 44 Narrow strap handle with splashes of green glaze. F21, SF 013.
- 45 Basesherd from jug splash-glazed green with stacking mark on base. F24, ditch fill 2404.

Scottish Redware: Fabric 4

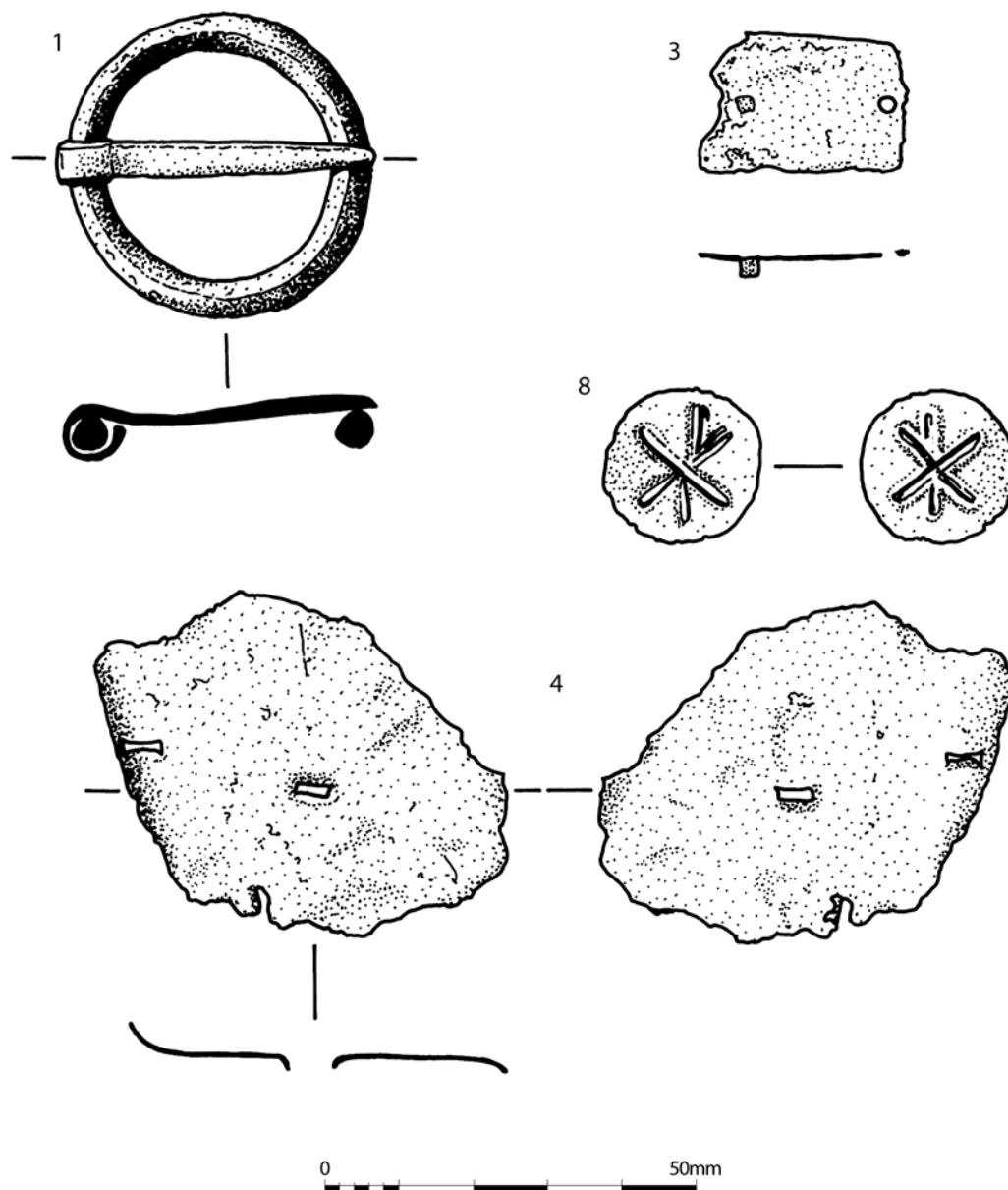
- 46 Bodysherd from green-glazed jug decorated with applied raised vertical strips. F19, upper fill 1904.
- 47 Narrow strap handle from jug with patches of yellow-green glaze. F19, upper fill 1904.

Unidentified fabric

- 48 Rimsherd from unglazed jar. F14, upper fill 1402, SF 145.
- 49 Bodysherd from green-glazed jug decorated with impressed leaves and embossed pellet decoration. F19, SF 203.

5.1.1 Discussion

This assemblage is dominated by locally produced fabrics, a common pattern in those areas with



*Illus 15 Copper alloy finds*

strong White Gritty Ware production. On the face of it the assemblage would seem to be of 13th- or 14th-century date, although the pitfalls of dating a site only on the evidence of the local wares are readily acknowledged. The presence of a single sherd of Rhenish Stoneware and a dripping pan would fit in with this suggested date.

The local fabrics are visually different from those excavated at the production site of Colstoun, which lies some 20km away, and may suggest the presence of a more local production site. The excavations at Hallhill represent a rare example of the excavation of a Scottish rural medieval site which makes this pottery assemblage a very useful addition to the ongoing study of the medieval pottery industry.

## 5.2 Copper alloy objects, by Adrian Cox

The range of copper alloy artefacts recovered represents a number of functional groupings. Of particular interest is the small group of artefacts representing vessel components and vessel repair, recovered from F21 and F24. Further evidence for the recycling of copper alloy came from the surface of F13 in the form of a rolled sheet. Other objects of interest are a group of buckle components, two ferrules and a crudely decorated token.

### 5.2.1 Costume fittings (*illus 15*)

A complete annular buckle (no. 1) and components

of two other buckles (nos 2 and 3) were recovered. The annular buckle has a cast frame and a pin made from a tapering strip. Such buckles are distinguished from annular brooches by having a frame uninterrupted by a constriction for the pin (Egan & Pritchard 1991, 57) and, in this case, the pin is able to move freely around the circumference of the frame. Such buckles were particularly common during the 13th and 14th centuries, although they can date from as late as the mid 15th century. They appear to have been used as belt buckles, either at the waist or the thigh.

Number 2 is from the frame of a buckle of approximately rectangular form, with sides of sub-rectangular cross-section, incorporating bevelled inner and outer edges on its upper surface. The rear of the frame is flat. The leading edge of the frame incorporates a shallow notch, which may be where the missing pin rested. The buckle form indicated by the surviving fragment suggests a probable 15th-century or later date. The fragment is most likely to be from a belt or girdle buckle. A probable buckle plate fragment (no. 3) is also probably of medieval date.

#### 1 Buckle

External diameter of frame 40mm; internal diameter 31mm; max. thickness 5mm; length of pin 43mm. Complete, annular buckle with a plain, circular frame of slightly faceted, circular cross-section and slightly uneven thickness. The tapering, blunt-tipped pin is made from a single strip and bears file marks at its looped wider end. F19; SF 163.

#### 2 Buckle frame (not illus)

Length 30mm; width 29mm; thickness 3mm. Fragment from the frame of a buckle of near-rectangular outline. F24, topsoil spread 2401; SF 183.

#### 3 Buckle plate?

Length 27mm; max. width 18mm; thickness of sheet 0.4mm. Approximately rectangular plate fragment, with two circular rivet holes on its central axis, one of which is occupied by a rivet. F19 surface; SF 173.

### 5.2.2 Vessel components (illus 15)

No. 4 is the largest component of an assemblage of associated fragments representing a repair patch, possibly for a sheet metal vessel. They appear to be of medieval date. The two largest fragments in the group both incorporate punched holes to accommodate sheet metal rivets, and there are 11 much smaller fragments, all with broken edges. It seems likely that all are fragments of a single repair patch which has been subject to post-depositional breakage. Although no traces of the accompanying rivets have survived, these were often fabricated from lozenge-shaped sheets and are sometimes referred to as paperclip rivets.

Examples of patched vessels and repair patches containing such rivets have been excavated at Linlithgow (Stones 1989, 160; illus 101, no. 236L) and Perth (Ford 1995, 961; Cox 1996, 770, illus 19, no. 144).

One of two fragments from the surface of F24, no. 5 appears to be from the rim of a vessel. It is flattened and distorted, and has been cut (possibly sawn) at one end, and broken at the other. The broken end exhibits possible signs of twisting in order to achieve the break. These fragments are probably of later date than no. 4.

#### 4 Repair patch

Length 54mm; max. width 44mm; thickness of sheet 0.3mm. Sheet fragment with roughly broken edges. Two linear rivet holes (length 7mm), with parallel axes, have been punched through the sheet, and traces of a third, set at nearly 90° to the other two, lie at one of the broken edges. F21, fill 2102; SF 190a.

#### 5 Vessel rim? (not illus)

Length 161mm; max. width 47mm; thickness 2mm. Fragment, possibly from the rim of a large vessel, cut at one end and roughly broken at the other. F24 surface; SF 035a.

### 5.2.3 Ferrules

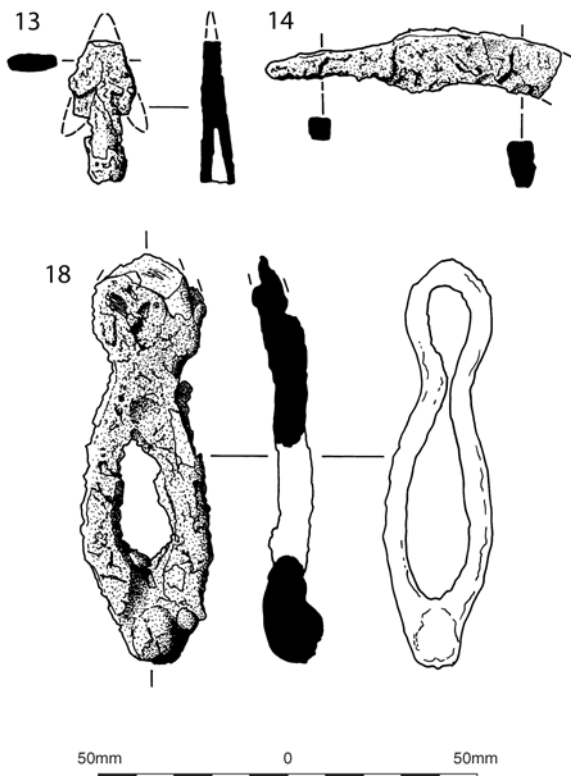
Two ferrules (nos 6 and 7) were recovered. No. 6 probably functioned as the terminal of a wooden accessory such as a pointed cane, or to terminate a broad leather thong. Given its width, the former function appears more likely. Although distorted by crushing, no. 7 probably originally had a circular or oval cross-section and an edge-to-edge seam. It, too, would have been used to terminate a wooden cane or similar object and was secured to it by one, or possibly two, rivets or nails. Both objects are of 17th-century or earlier date, and may possibly be medieval.

#### 6 Ferrule (not illus)

Length 47mm; max. width 12mm; thickness of sheet 0.3mm. Ferrule of oval cross-section, made from a single sheet with an overlapping seam. The object is open at the wider end, at which part of a circular rivet hole survives, and tapers towards a broken narrower end that may originally have been closed. Corroded. F33, fill 719; SF 117.

#### 7 Ferrule (not illus)

Length 78mm; max. width 39mm; thickness of sheet 0.5mm. Ferrule made from a single sheet. The object tapers slightly from the open end, at which a punched rivet or nail hole and possible traces of another survive, to a closed narrower end. A fragment broken from the closed end is now enclosed within the object. F5; SF 221.



Illus 16 Iron finds

#### 5.2.4 Miscellaneous (illus 15)

A circular disc, possibly representing a token (no. 8) came from F5. It bears a crudely executed design of crossed radial lines.

Two loops (nos 9 and 10) were found. In both cases, their mass indicates that they are solid, and made by casting. Both objects show little evidence of wear or corrosion. Considerable force must have been applied to no. 10 to cause it to fracture and become distorted. These appear to be of post-medieval date and may have functioned as links.

An object made from rolled sheet (no. 11) was possibly used to terminate a broad lace or thong. Its broken end may originally have been closed. No. 12 is a rolled sheet, possibly representing an offcut, intended for recycling. This object was associated with two other small fragments, one of which has been tightly folded to produce a double thickness of sheet. Although its original form cannot be determined, it is possible that this may represent part of a vessel rim or a collar around a wooden object.

#### 8 Token?

Diameter 21mm. Circular disc, possibly representing a token, bearing a moulded or impressed design of three raised, radial lines which converge in the centre of the face. F5, gully fill 504; SF 075.

#### 9 Loop (not illus)

External diameter 49mm; internal diameter

37mm; thickness 5mm. Complete, circular loop of oval cross-section. F24 surface; SF 035.

#### 10 Loop (not illus)

Original external diameter 49mm; thickness 7mm. Circular loop, of circular cross-section, broken and distorted. F7 surface; SF 053.

#### 11 Terminal (not illus)

Length 49mm; diameter 7mm; thickness of sheet 0.4mm. Object of distorted circular cross-section, made from a single, rolled sheet with an edge-to-edge seam. Broken at one end. F24 surface; SF 035.

#### 12 Rolled sheet (not illus)

Length 24mm; max. width 15mm; thickness of sheet 0.5mm. Plain sheet fragment with one surviving cut edge, rolled so that its ends overlap. F13 surface; SF 026a.

### 5.3 Iron objects, by Adrian Cox

The excavated iron objects are generally in a heavily corroded condition. X-radiography has been used to aid identification and define edges, and, where possible, measurements have been taken directly from the X-ray images.

A barbed and socketed arrowhead (no. 13; illus 16) was recovered from F7. This is heavily corroded, although almost the complete outline survives. With its flat barbs and a central spine, this is most probably a hunting arrowhead or a multi-purpose type that could have been used in either hunting or warfare. The closest identified parallels, including examples from Montgomery Castle (Knight 1993, 226–8) and the excavations at Lurk Lane, Beverley (Goodall 1991, 146), date from around the 13th century, although a slightly later date is also a possibility.

Several blades were recovered. Nos 14 (illus 16) and 15 are certainly from knives and may be of medieval date. The former, recovered from F19, is from a small knife of whittle-tang type. No. 15, from F5, is from a medium-sized knife with a straight back.

No. 16 is another blade fragment, the curved form of which indicates either a sickle or possibly a long pruning knife. Also found on the surface of F13 is another, smaller, curved object which may also represent a blade. This has a more pronounced curvature than that exhibited by no. 16 and possibly represents a blade from a small sickle. Both objects are very heavily corroded. No. 17 may represent a broad, heavy blade which may have functioned as a cleaver. The rectangular perforation near its terminal would have been used to suspend this implement from a nail. This example may be later than the other blades, possibly of post-medieval date.

Hasps like no. 18 (illus 16) were used in conjunction with staples and padlocks to secure gates, doors, and the lids of chests. One loop would be attached to the door or lid, and the other loop closed around a



*Illus 17 Window glass*

staple, to which a padlock could then be attached. Hasps have been excavated at a number of sites, for example at Rattray (Goodall 1993, 182, Fig. 35, no. 93).

No. 19 is a gently curving fragment with a rounded terminal. This may tentatively be identified as part of the arm of a spur, although it is in a heavily corroded and fragmentary condition. It is probably of medieval date.

A socketed object from F11 (no. 20) is probably from a hoe. The surviving fragment represents the socket into which a wooden shaft would have been inserted, and part of the head of the tool. This object appears to be of 17th-century or later date. A hooked terminal (no. 21) may be part of a fitting, or possibly part of a horse bit. No. 22 is probably a machine part and is probably of 19th-century date. It may be from a wheeled device such as a horse-drawn plough, turnip lifter or cultivator. A hooked object (no. 23) is unlikely to have functioned as a hook. More probably, it is part of a larger object incorporating a hooked bar.

### 13 Arrowhead

Length 41mm; max. width 13mm; max. diameter of socket 9mm. Almost complete, barbed and socketed arrowhead, in three conjoining fragments. The ends of both barbs are broken. F7; SF 207b.

### 14 Knife

Length 77mm; max. width of blade 12mm; thickness *c* 4mm. Almost complete blade and tang from a whittle-tang knife. The blade has a downward-curving back and appears to have had a straight cutting edge. The rectangular cross-sectioned tang is set horizontally, parallel to the blade edge. The tip of the blade is missing, and most of its edge has been lost to corrosion. F19; SF 171.

### 15 Knife (not illus)

Length 67mm; max. width 20mm; thickness 4mm. Blade fragment, broken at both ends. Heavily corroded. F5; SF 120.

### 16 Blade (not illus)

Length 142mm; max. width 20mm; max. thickness 4mm. Knife or sickle blade with a curved back and edge. The blade back curves

downwards near the missing tip. The opposite end is also broken. F13 surface; SF 024.

### 17 Blade? (not illus)

Length 283mm; max. width 46mm; max. thickness (at tang) 14mm. Possible blade, widening slightly towards the rounded terminal, which has a rectangular perforation. The broken, rectangular cross-sectioned tang is set parallel with the edge rather than the back. F24 surface; SF 200.

### 18 Hasp

Length 110mm; max. width 34mm; max. thickness 16mm. Complete hasp of elongated figure-of-eight form. Corroded. F7, pit fill 704; SF 053.

### 19 Spur arm? (not illus)

Length 84mm; max. width 10mm; thickness 6mm. Curving fragment of oval to D-shaped cross-section, possibly representing the arm of a spur. Heavily corroded. F14, fill 1402; SF 113.

### 20 Hoe fragment (not illus)

Length 192mm; max. width 66mm; max. thickness 35mm. Tapering, circular cross-sectioned socket and part of the head of a horticultural tool such as a hoe. F11, fill 1104; SF 084.

### 21 Hooked terminal (not illus).

Length 58mm; width 14mm; thickness 8mm. Hooked terminal made from a rectangular cross-sectioned strip, tapering at the hooked end. The opposite end is broken. F7; SF 207a.

### 22 Machine part (not illus)

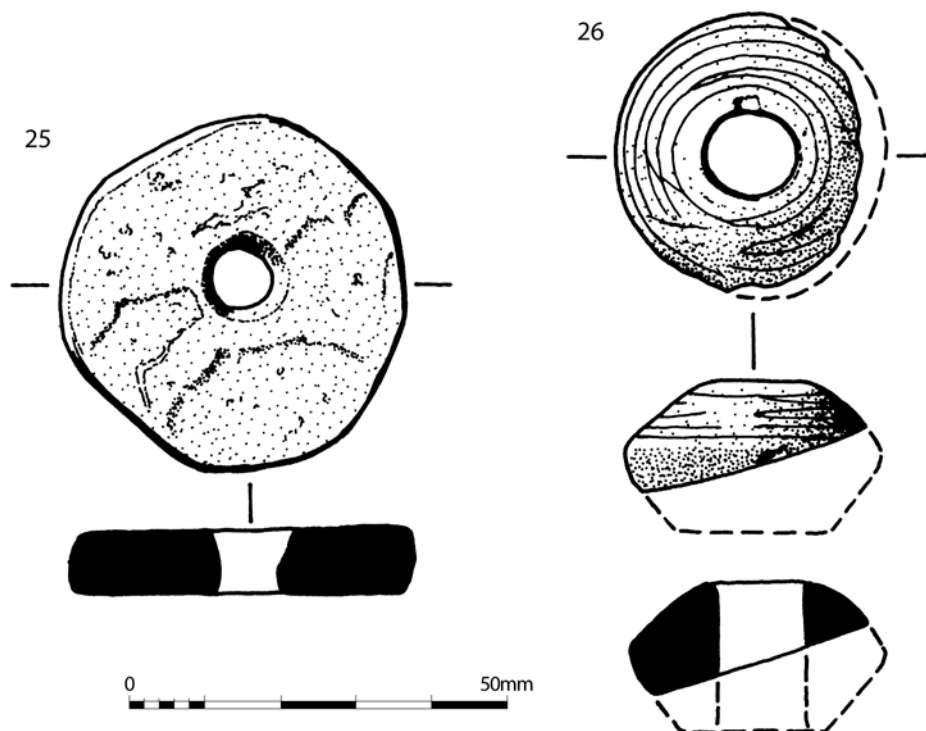
Length 217mm; max. width 29mm; thickness 8mm. Curved, rectangular cross-sectioned bar with a curving projection from the concave side. Broken at both ends. F13 surface; SF 024.

### 23 Hooked bar (not illus)

Length 93mm; max. width 27mm; thickness 13mm. Slightly tapering, rectangular cross-sectioned, hooked bar, broken at both ends. F15, pit fill 1507; SF 196.

## 5.4 Glass, by Adrian Cox

Four fragments of glass, including two of window glass and two of vessel glass, were excavated. Of chief interest among these is no. 24 (illus 17), a fragment of painted medieval window glass, decorated in a conventionalised grisaille style with cross-hatched



*Illus 18 Spindlewhorls*

grounds, possibly of 13th- or 14th-century date. The recovery of this fragment may indicate the former presence of a high-status building, possibly of an ecclesiastical nature, on or near the site.

A plain fragment of post-medieval window glass was recovered from Trench 2 (unstratified) and two fragments from the bases of 18th- or 19th-century wine bottles came from F7.

#### 24 Window glass

Length 45mm; max. width 29mm; thickness 4mm. Fragment of window glass bearing a painted design, probably executed in red, of curving, intersecting bands. One surviving zone between these bands is decorated by fine cross-hatching. The background is now almost opaque, and the interior of the fragment is laminated, although a core of clear glass with a slight greenish tint survives. At least one original edge survives. F19; SF 155.

#### 5.5 Coarse stone, by Adam Jackson

Sixteen worked stone objects (*illus 18–19*) were studied and catalogued; the majority were recovered from the three or four possible structures identified during excavation (F13, F14, F19, F22/24). Locally available sedimentary (sandstone) and igneous (dolerite, granite and gneiss) rocks are present in the assemblage; however, most of the finds are of sandstone.

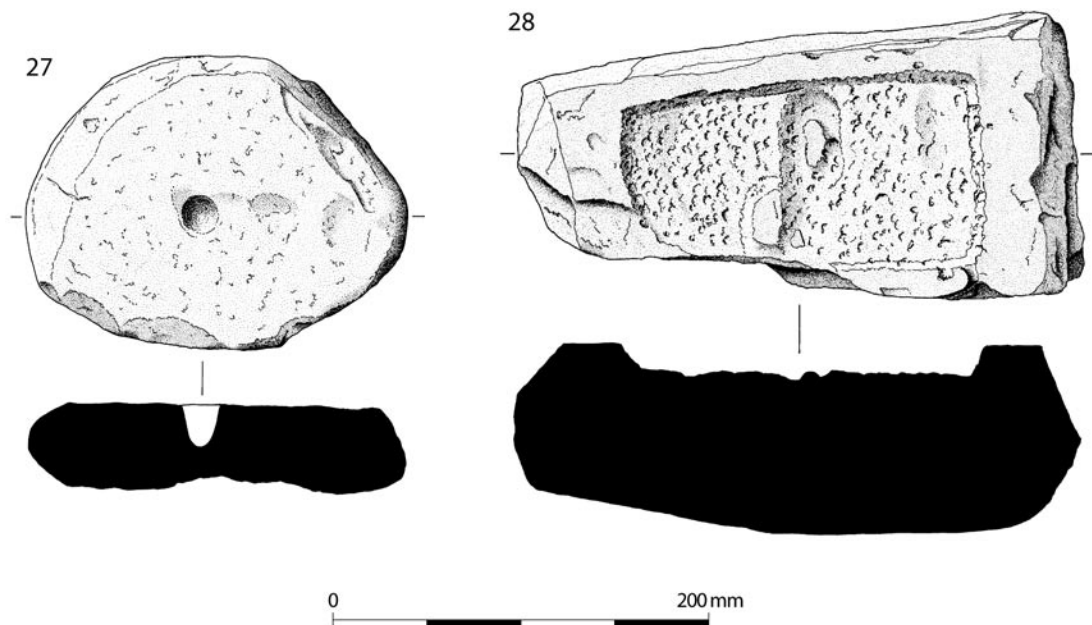
Most finds are of expedient form and comprise small unmodified sandstone boulders with one or

more pecked depressions caused by hammering or pounding. These were probably used as anvils or, in some cases, as crude mortars. Cobble tools make up the second-largest category; these comprise, in the main, waterworn stones that have been used as hammers, pounders and/or grinders. A mid-section fragment of a hone or whetstone was also identified. A full catalogue of these items is available in archive.

Curated finds include two spindle whorls, a fragment of a well-worked mortar, a sandstone trough that was discarded during manufacture and a pivot stone. The spindle whorls are of two common forms: a flat-sectioned, straight-sided perforated disc from possible structure F22/24 and a decorated biconical spindle whorl from F13 (nos 25–26, *illus 18*). Parallels for the former are known from excavations at Threave Castle, Galloway (*Good & Tabraham 1981*, 126, no. 193), Springwood Park, Kelso (*Dixon 1998*, 720) and Perth (*Ford 1987*, 149 no. 146). Biconical whorls are also common on medieval sites, although many of the closest published parallels are from English sites, eg King's Lynn (*Clarke & Carter 1977*, 315) and Northampton (*Oakley & H all 1979*, 286–9).

The trough (no. 28, *illus 19*) recovered from F14 was clearly broken during its manufacture and discarded unfinished. It may have been intended to serve as a water or food trough for livestock rather than as a domestic container. The context of its recovery, face down in the base of 1413, suggests it may have been reused as building material. The pivot stone (no. 27, *illus 19*) loosely resembles the base of a rotary quern in that it is roughly circular





*Illus 19 Coarse stone objects*

with a flat ground surface and a hole drilled in the centre. However, it is not drilled right through as one might expect and there are no striations to indicate a circular grinding motion.

To conclude, the assemblage is very limited in size and in function. The majority of finds are expedient in nature and cannot be assigned to a particular chronological period. However, the decorated biconical spindle whorl has parallels with finds from other sites of medieval date. The general absence of evidence of domestic milling equipment, with one possible exception mentioned above, is however interesting as it may indicate that domestic hand mills (querns) were prohibited during the period of the site's occupation. The prohibition of domestic querns became widespread in the British Isles from the 12th century onwards as tenants were obliged to take their grain to mills that were owned by the Lord of their Manor (eg [Biddle & Smith 1990](#)).

#### **25 Perforated disc**

Length 46mm; width 44mm; thickness 8mm; perforation 9mm. Grey quartz sandstone. Sub-circular, flat sectioned. Off-centre perforation drilled from two sides. Sides are straight and flattened by grinding. Flat faces have been partially smoothed. F22; SF 007.

#### **26 Spindle whorl**

Length 37mm; width 36mm; thickness 12mm; diameter of perforation 11mm. Steatite. Fragment. Biconical. Central perforation drilled from one side, hence slight narrowing near the top. Some drilling striations can be seen. Faint shallow grooves run vertically through perforation caused by abrasion against spindle. Worn decoration in the form of evenly spaced grooves

running around the circumference of the whorl. Damage clearly occurred in antiquity. F13, pit 1315; SF 132.

#### **27 Pivot stone**

Length 411mm; width 325mm; thickness 96mm; diameter of depression: 16mm (top), depth 39mm. Base. Coarse-grained quartz sandstone. Irregular sub-circular plan, with a single ground flat work surface. There is a roughly central V-shaped drilled depression. The depression is smooth-sided, with no visible spiral striations. The rim is worn and rounded. The artefact has been roughly shaped, the sides are pecked and flaked and the uneven base has been crudely flattened. Two parallel grooves near one edge were probably caused by a plough in antiquity. F13, pit fill 1314; SF 177.

#### **28 Trough waster**

Length 555mm; width 285mm; thickness 210mm; rim 35–40mm; depression 378mm long, 210mm wide, 35mm max. depth. Quartz sandstone. Large, roughly rectangular block. Unfinished trough broken and discarded during manufacture. One face has the beginnings of a rectangular depression. This was created using a hammerstone. The full outline of the vessel interior was defined first, prior to the central area being hammered out. Channels were pecked to pedestal larger chunks of stone that would then be hammered out. One corner and half of one long side is missing. The break occurs at a natural fault in the stone and was probably caused during hammering-out of trough. Base is uneven and approximately one third shows evidence of having been flattened using a hammerstone. F14, 1417; SF 178.

## 5.6 Animal bone, by Catherine Smith

### 5.6.1 Species present

The Trench 2 assemblage (1235 fragments) was dominated by the bones of domestic livestock: cattle, sheep/goat, horse, pig, dog and possibly cat bones were all present. A small number of red deer bones was also present. Bird species recorded were the domestic fowl (*Gallus gallus*), possibly cormorant (*Phalacrocorax carbo*) and oystercatcher (*Haematopus ostralegus*). A few fragmentary fish bones were also noted but were not identified to species. **Table 1** shows the species present by fragment count per feature (including surface finds).

The presence of cattle and sheep/goat bones is to be expected, since the medieval economy depended on hides and wool produced by these two species. However, the relative frequency of horse bones is far higher at Hallhill than is normally the case at urban sites in Scotland. Pig bones are present only in small numbers, as are those of red deer, not unusual in a medieval Scottish context.

Excavations at the multi-period site at Castle Park, Dunbar recovered substantial medieval and post-medieval assemblages (**Smith 2000**). **Table**

**2** presents percentages of food-forming livestock (cattle, sheep/goat, pig, horse and deer species) from Hallhill alongside comparable figures from Phases 15–20 (medieval) and Phase 21 (post-medieval) at Castle Park. In marked contrast to Castle Park, where cattle were the most numerous species and sheep/goats were less frequent than cattle (based on fragment count), cattle and sheep/goats were present in almost the same numbers at Hallhill (40.3% and 39.3% of food-formers). A further contrast is the far greater frequency of horse bones at Hallhill compared with Castle Park, mirrored by the lower frequency of pig bones (14.4% and 4.2% of food-formers, respectively). Deer frequencies were similarly low at both sites.

### 5.6.2 Age of animals at death

Due to the friable nature of the material, few mandibles, used to assess the age of the animals at death, were available in an intact condition. This was particularly true for cattle and pigs; however, ten sheep/goat mandibles survived. Tooth-wear assessment carried out on these jaws indicated ages of death of individual animals, as presented in

**Table 1 Total numbers of animal bone**

Feature	Species:														Total	
	Cattle	Sheep/goat	Pig	Horse	Red deer	Dog	cf Cat	Large ungulate	Small ungulate	Indet. mammal	Domestic fowl	cf Oystercatcher	cf Cormorant	Indet bird		Fish
F5	3	2						1		6						12
F6	1			1												2
F7	25	12		8				8	2	21						76
F8	1	5	2	4				2		14						28
F10	4	1		1				1	1	1					1	10
F11	2	2		4				9	2	1			1	1		22
F12	1									2						3
F13	3	2	1	1				1		11						19
F14	22	22	5	6				7	4	54						120
F15	11	11	4					5	15	30	9			4	2	91
F18		2														2
F19	82	88	6	26	9	1		23	6	304		1		1		547
F21	7	6								15						28
F22	5	12		7		1		2		22						49
F23	1								2							3
F24	41	40	4	17			1	17	7	93	1					221
F31										2						2
<b>Total</b>	<b>209</b>	<b>205</b>	<b>22</b>	<b>75</b>	<b>9</b>	<b>2</b>	<b>1</b>	<b>76</b>	<b>39</b>	<b>576</b>	<b>10</b>	<b>1</b>	<b>1</b>	<b>6</b>	<b>3</b>	<b>1235</b>

**Table 2 Numbers and percentages of food-forming mammals at Hallhill Farm and Castle Park, Dunbar**

Species	Hallhill Farm		Castle Park, Dunbar Phases 15–20 (medieval)		Castle Park, Dunbar Phase 21 (post-medieval)	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Cattle	209	40.2	2493	54.2	1549	60.7
Sheep/goat	205	39.4	1371	29.8	706	27.7
Pig	22	4.2	582	12.7	197	7.7
Horse	75	14.4	106	2.3	81	3.2
Deer sp.	9	1.7	46	1.0	18	0.7
<b>Total</b>	<b>520</b>	<b>99.9</b>	<b>4598</b>	<b>100.0</b>	<b>2551</b>	<b>100.0</b>

**Table 3 Wear stages of sheep/goat mandibles from Hallhill Farm, after Grant (1982) and Payne (1973)**

Feature	Context	SF No.	Grant wear stage		Payne stage	Age equivalent (years)
			Tooth-wear stage (TWS)	Mandible-wear stage (MWS)		
F8	802	095	hg-	32–37	G (est)	6–8
F14	1402	134	mhg	42	H	6–8
F15	1507	194	gcE	23	D	1–2
F19	1902	164	-gf	35–38	F	3–4
F19	1902	168	gfC	24	D	1–2
F19	1902/04		gg[d]	33	E	2–3
F19	1904	199	gb-	20–21	D	1–2
F24	2401	232	gg[d]	33 (est)	E (est)	2–3
F24	2401	232	-mm	51–52	I	8–10
F24	2404	224	hgg	37	G	4–6

**Table 4 Numbers and percentages of cattle and sheep/goat long bones, by age category**

Age category	Cattle		Sheep/goat	
	<i>n</i>	%	<i>n</i>	%
J			6	31.6
J/I	8	27.6	1	5.3
I	1	3.4	2	10.5
I/A	14	48.3	5	26.3
A	6	20.7	5	26.3
<b>Total</b>	<b>29</b>	<b>100.0</b>	<b>19</b>	<b>100.0</b>

Note: J = juvenile, J/I = juvenile or immature, I = immature, I/A = immature or adult, A = adult

**Table 3.** Three animals died or were killed between the ages of one and two years (based on modern animals), but at least one animal lived to an age between eight and ten years. Although this is a very small sample number, the importance of husbanding the animals to a fairly advanced age indicates the significance of wool production, as has been noted at Castle Park, Dunbar (*ibid*, 219).

Long bone epiphyseal fusion evidence was also

collected for the Hallhill bones. Although generally recognised to be less reliable than tooth-wear analysis, fusion states also provide a guide to age at death. Those cattle and sheep/goat bones in which the articular ends (epiphyses) were present were therefore assessed. The results, for what proved to be rather small samples, are shown in **Table 4**. It can be seen a number of cattle and sheep/goats died or were killed when young, although there was good survival into adulthood for other individuals. Notably, the epiphyseal fusion results for sheep/goat are in good agreement with the mandibular evidence.

The evidence for other species was rather sparse. However, one pig mandible (F14, fill 1402) came from an animal estimated to have died between the ages of eight and ten months. The pig long bones came mainly from juvenile or immature animals.

All horse long bones came from adults with the exception of two unfused examples (a distal metatarsal and a calcaneum) which represent a juvenile or immature individual (fill 1402).

At least one young red deer was also present in F19 (fill 1902) as shown by the presence of an unfused distal metapodial, although all other deer bones probably came from adults. Two conjoin-

ing fragments of frontal bone from a dog skull were unfused, indicating they came from a young animal.

### 5.6.3 Size and appearance of animals

Anatomical measurements were made on suitably intact bones of cattle, sheep/goat, pig, horse, red deer and domestic fowl. A full list is available in archive. The domestic livestock seem to have been of the small stature typical of animals in Scotland prior to the era of agricultural improvement. Comparison with data from medieval and post-medieval phases at Castle Park, Dunbar indicates a very good correlation with the animals recorded there (*ibid*, 238–77). One cattle metatarsal from a surface layer in F8 was estimated to have come from a beast of about 111cm at the withers (shoulders). This falls well within the range of withers heights recorded at Castle Park, Dunbar, where, for example, the mean for Phase 14 (medieval) was 110.6cm (*ibid*, 209) and indicates the bone was probably from a disturbed medieval or post-medieval context, rather than from a modern deposit.

Although complete sheep/goat bones were present, available measurements indicate that the sheep were also of the small stature associated with the medieval period. Two horn core fragments indicate that the sheep were horned: one in F33 (fill 716) was large, robust and probably from a ram. Another fragmentary example was present in a surface layer in F9 (NW corner).

Several of the horse bones were intact and provided good evidence of the stature of the live animals. Five complete long bones (a humerus, three radii and a metatarsal from F10, F6 and F14) were estimated to come from animals standing between 126.9cm and 129.5cm at the shoulder, based on Kieswalter's factors (*Ambros & Müller 1980*, 30). Traditionally, horses in Britain today are measured in 'hands', where one hand is equivalent to four inches. This means that the Hallhill horses were between 12:2 and 12:3 hands height. Since all horses under the height of 14:2 hands can be described as ponies, the Hallhill animals may be seen to be of relatively small stature. A survey of horses from Scottish medieval urban sites showed that only bones from ponies between 12 hands and 14:2 hands height were present; no larger animals have been recovered from urban sites as far afield as Inverness, Aberdeen, Elgin and Perth (*Smith 1998*, 870–2). The ponies from Hallhill are therefore typical of this period in Scotland. It is notable however, that a later medieval phase at Castle Park contained a single bone from an animal of 173cm or 17 hands height, but this is very unusual (*Smith 2000*, 216).

The few red deer bones recovered indicate robust animals. Unlike their domesticated cousins, red deer did not increase in size between the medieval and the modern periods. Rather, they show a marked decrease in size, due to the environmental pressures

of agriculture, forestry and 19th-century hunting practices.

### 5.6.4 Butchery

The animal bones were butchered using the tools typical of the medieval and post-medieval periods. In other words, cleavers or axes were used to disjoint carcasses and split bones. No saws, a fairly modern innovation, were used. Knife cuts were evident on some of the bones of cattle, sheep/goat, pig, red deer and horse. In the case of horse, these knife cuts, as well as chop marks made by cleavers, indicate either the consumption of horse meat, as food for humans or dogs, or skinning of the carcass. Where the bones have been chopped, however, it seems that the meat must have been used.

Evidence of removal of sheep horn cores from the frontal bone of the skull was noted in two examples. Presumably the horny outer sheaths were used in artefact manufacture, while the cores, having no further use, were discarded.

### 5.6.5 Discussion

The faunal assemblage indicates that domestic livestock, particularly cattle, sheep/goats and horses were kept and killed for food by the inhabitants of the site. Wool also seems to have been important to the local economy, as shown by the presence of mandibles from older sheep. The small stature of the animals, together with the style of butchery, indicates a medieval or post-medieval date for the bones.

The presence of so many horse bones on the site is unusual, and although some of the bones may indicate the burial of natural casualties, or those culled because of disease, the presence of butchery marks on some of the horse bones indicates that the animals were at least relieved of their hides before burial and in some cases the meat, too, was stripped off. The horse bones do not seem to represent discrete burials; rather the bones are scattered throughout the majority of the features and all come from pit or gully fills, in association with other domestic refuse, again indicative of use of the meat and hides after death. At Castle Park, Dunbar, there was also strong evidence to show that horses were not simply buried on death, but were used as a food source throughout the life of the site, from the Iron Age to the post-medieval period (*Smith 2000*, 231–3).

Wild animals were also hunted for their meat, particularly red deer, but sea birds were also potential suppliers of fat and protein. A bone, probably from a cormorant, was probably deliberately brought to Hallhill, presumably originating from the shores of the Forth or its islands such as the Bass Rock or Fidra. The oystercatcher may also have served as food, but was more likely to have been trapped at its breeding grounds inland. Coastal communities

in Scotland have exploited sea birds as food since prehistoric times; bones of various species including cormorant, oystercatcher, gulls and birds of the auk family were all found at Castle Park (ibid, 202). As at Castle Park, however, sea birds and wild mammals served only to supplement the diet at Hallhill, the main meat sources being cattle, sheep/goats, pigs and horses.

### 5.7 Marine shell remains, by Ruby Ceron-Carrasco

The marine shell remains derived from three contexts, F8 (802), F14 (1427) and F24 (2404), of which bulk samples were sieved to retrieve organic remains or ecofacts.

The results of the marine shell identification are given in Table 5 with the summary of species represented per context. Only gastropods were present and their frequency was estimated by counting the shell apices. The marine shell species were quantified to provide an idea of main species representation; when too fragmented, the shells were quantified in terms of their relative frequency within each sample. This frequency was recorded as:

\*\*= Present i.e. present in low quantities compared to main species (<10).

\*\*\*= Common i.e. present in large quantities similar to other species within a sample.

The most common species present was the edible periwinkle (*Littorina littorea*) also known as ‘wulke’ on the east coast of Scotland. Periwinkles are found on rocks, stones and seaweed on the middle and lower shores. Its shell may be up to 2.5cm high. Although it has been demonstrated that a variety of environmental factors can influence the shells of certain other molluscs, studies done by Hylleberg & Christensen (1977) on edible periwinkles suggest that there are no significant allometric differences in *Littorina littorea* shells attributable to their recovery from different environments. The limpet *Patella vulgata*, was also common and it is also a species found throughout the Scottish coast on all rocky shores and in shallow waters (Branch 1985; Campbell 1989). A very small amount of rough-periwinkle (*Littorina saxatilis*) was also recovered and it is assumed that these were accidentally gathered with the larger species of the edible periwinkles.

From early historical accounts it seems obvious that shellfish of various types were used as food in

Scotland and there is considerable regional variation in the uses as food. Furthermore, shellfish have also been traditionally used as fishing bait and fishing techniques have depended greatly not only on the availability of fish species and equipment but also largely on the seasonal variation in the type of bait (Fenton 1984). The two main species present in the Hallhill marine shell assemblage were periwinkles and limpets, which have been used as food and as fishing bait in Scotland (as well as mussel, although this was not present here).

The Burgh of Dunbar has had a long history of fishing, the construction of its harbour dating to the medieval period and, from at least the 18th century, it ranked as the main herring port in Scotland. Apart from herring fishing, Dunbar was also important for its ‘white-fishing’, ie fishing of cod fishes (cod, whiting, haddock, ling, etc) as well as flatfishes (sole, plaice, etc) and skate; for these, baited lines would have been required. Early historical records show that a variety of baits were used depending on local availability and on the fish being sought (Coull 1996).

In conclusion, as most of the specimens of shellfish present were from small juvenile specimens, it is assumed that these are the remains of shellfish that were used as fishing bait.

### 5.8 Dating evidence

As noted above, no palaeobotanical analysis was carried out on the samples from this site due to the heavily bioturbated nature of the soil. As a result, there was no programme of radiocarbon dating. This, together with the lack of any clear stratigraphic relationships, means that all dating is based on the artefactual evidence. Most features produced at least one or two sherds of medieval pottery which has been dated to the 13th/14th centuries (Hall, above). The few metal finds which could be dated were also largely of medieval date (Cox, above). Some post-medieval finds were also recovered, but these were generally surface or upper fill finds and were probably intrusive from the topsoil. It is therefore suggested that the majority of features on this site probably relate to a single phase of occupation in the 13th–14th centuries.

### 5.9 Distribution of finds

The largest groups of finds from the site were marine shell, bone and pottery. The large quantities of shell

**Table 5 The marine shell remains**

Species	Context 802	Context 1427	Context 2404
Periwinkle ( <i>Littorina littorea</i> )	310 (***)	250 (**)	260 (**)
Limpet ( <i>Patella vulgata</i> )	710 (***)	120 (***)	240 (***)
Rough periwinkle ( <i>Littorina saxatilis</i> )			12

were recovered from three contexts in F8, F14 and F24. Bone and pottery were both distributed across most features on the site, with particular concentrations in F7, F14, F15, F19 and F24. Finds were recovered both within negative features and on their surfaces, the latter often forming the greater proportion of the assemblage from each feature. The large quantities of finds recovered from the gullies of F19 and F7 are most likely to relate to the use of these features and may represent the middening of domestic waste during occupation. Pits were probably also used for the disposal of rubbish, and F15, for example, may have been in use during the

life of structure F14. The fill of the latter, however, is more likely to relate to post-abandonment dumping and the same may be true of surface deposits over the other features. Generally the finds are likely to have been deposited close to their areas of use, although the large group of material from the fill of F14 may reflect its use as a convenient dump site once the superstructure had gone, rather than representing material which was used in the structure itself. Nevertheless, pottery from underlying features was of medieval date and the structure is assumed to have been short-lived but contemporary with the rest of the site.