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A medieval farmstead at Laigh Newton North-West, East Ayrshire

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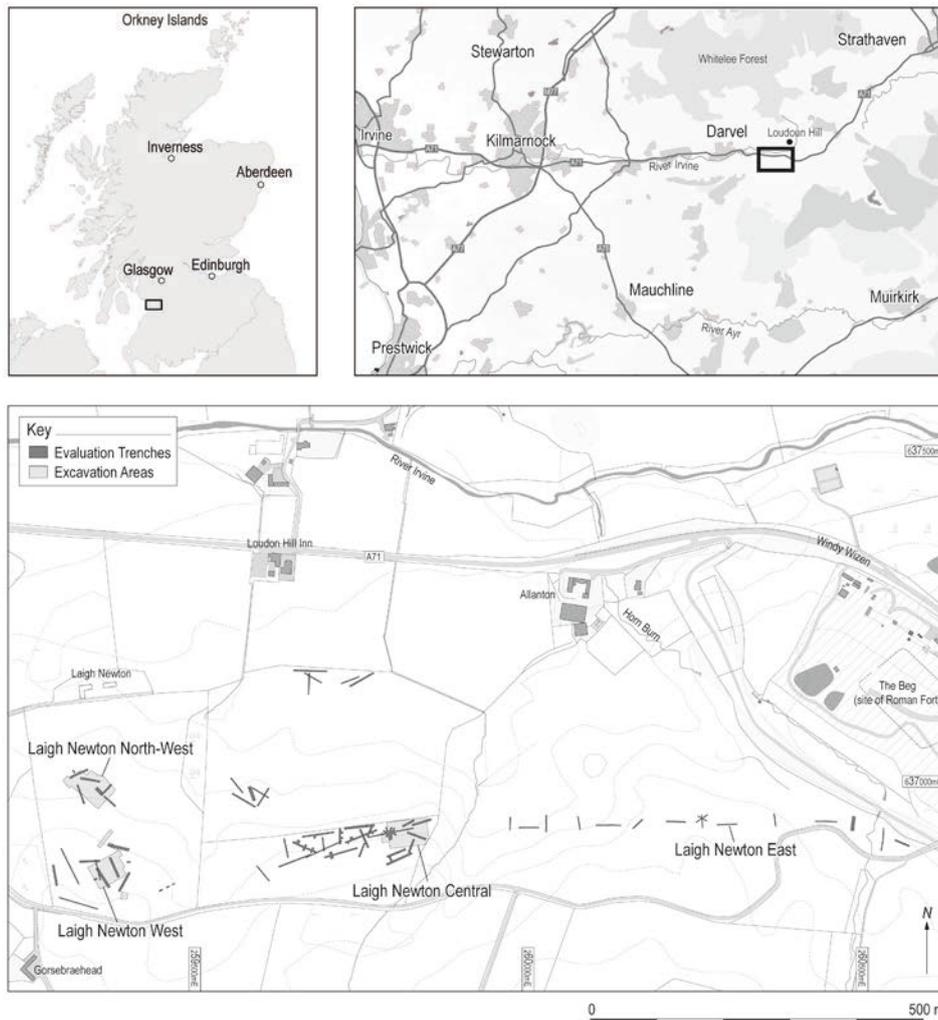
ABSTRACT

Excavations at Laigh Newton North-West Ayrshire in advance of quarrying revealed a rare late medieval farmstead consisting of a palisaded enclosure, four sunken stone- and turf-built buildings, one of which may be a charcoal kiln, two possible timber-built structures and drainage ditches. The pottery and radiocarbon dates indicate that the site was occupied in the 14th–15th centuries. It is thought that this site belonged to the farm of Newton, which was first documented in the late 14th century within the parish of Galston. At that time the parish of Galston belonged to the Lockhart family. The site probably went out of use in the 16th or 17th century as a result of a change of ownership and the increased commercialisation of farming practice. As a result the structures were demolished or allowed to decay, the ditches were filled in and the land turned over to arable.

2. INTRODUCTION

A proposed extension to the Loudoun Hill Quarry, Darvel, East Ayrshire, prompted a series of archaeological investigations which were carried out on behalf of Tarmac Northern Ltd

by Glasgow University Archaeological Research Division (GUARD). These works initially involved a series of evaluations (McLellan 2003; Carruthers 2005; Somerville 2005). A final programme of archaeological excavation was carried out in the spring of 2007 (James et al 2007) centred on two



Illus 1 Location of site

main areas of archaeological activity. Laigh Newton West proved to be predominantly prehistoric (see Toolis 2011) and Laigh Newton North-West, described here, was late medieval in date. This work was carried out between March and May 2007. These excavations were part of a mitigation strategy resulting from a negative suspensive condition on the planning consent imposed by East Ayrshire Council.

The site is located at NGR: NS 5937 3684 to the south of the A71 on land belonging to Allanton Farm (see Illus 1) and it lies approximately 155m above OD. Laigh Newton North-West was located on a terrace below Laigh Newton West, both currently used as grazing for sheep and cattle. The underlying drift geology of this area consists of fluvio-glacial and glacial sands and gravels, while the solid geology consists of old red sandstone sediments and contemporaneous lavas and ashes of calciferous sandstone (British Geological Survey).

3. ARCHAEOLOGICAL BACKGROUND

The site of Laigh Newton North-West lies within an area rich in archaeological remains from the prehistoric and medieval periods, being on a significant east–west route along the River Irvine. The prehistoric remains on the nearby upper terrace date from the Mesolithic to the Iron Age (see Toolis 2011). To the east of the site is Loudoun Hill, a significant landmark, to the south of which was a Roman fort belonging to the Flavian and Antonine periods, which has been destroyed by quarrying (NS63NW1). There may also have been a Roman road from Irvine to Edinburgh along the River Irvine (NS53NE42).

In the medieval period, Loudoun Hill was the location of two incidents in the Wars of Independence. In 1297 William Wallace ambushed an English convoy a short distance to the west of the present site (NS63NW6) and in 1307 Robert the Bruce won his first battle against the English at the Battle of Loudoun Hill (Macintosh 1890, 29–31; Barrow 2005). A cairn known as Wallace's Grave is located to the south of Loudoun Hill. This is possibly a natural mound where, according to tradition, the English soldiers killed by Wallace's army in 1297 were buried (NS63NW4). A small prehistoric fort called Wallace's Knowe also once

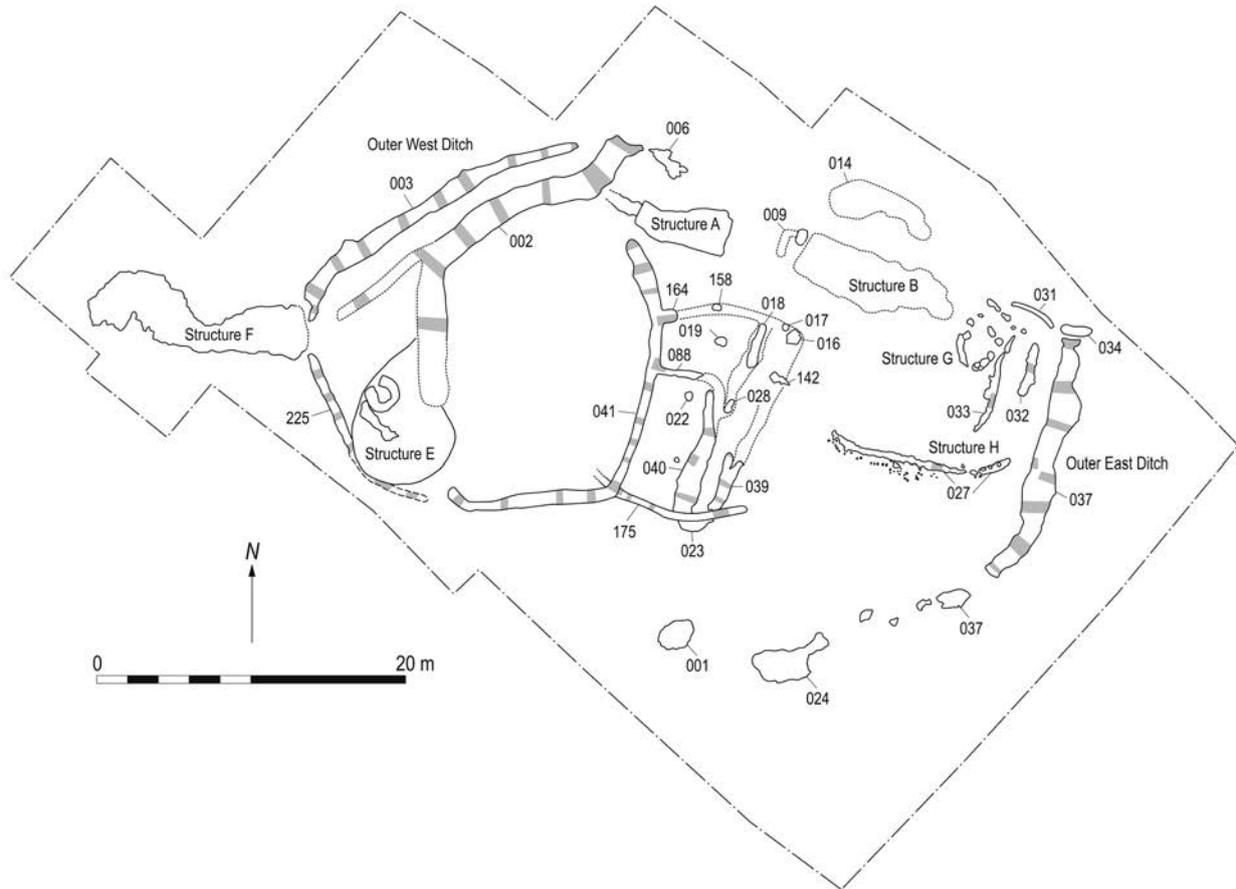
stood overlooking the River Irvine to the east of Loudoun Hill (NS63NW5). This was possibly used by Wallace for his ambush in 1297, but was levelled in the 19th century (NSA 1834–45: 180–1).

There are two tower houses in the parish of Galston, Barr Castle (or Lockhart Tower, NS53NW1) and Cessnock Castle (NS53NW2), both of which were possibly built over earlier motte and bailey castles. The principal landowners in the medieval period were the Lockharts of Barr, the Campbells of Cessnock and the Church. The only other recorded event in the vicinity was the Battle of Drumclog, which took place in 1679, a short distance to the east of Laigh Newton, when the Earl of Claverhouse was routed by Covenanters. Having defeated the earl the Covenanters then marched on to Edinburgh.

Prior to these excavations there was no evidence on the surface for any archaeological remains, the land having been ploughed intensively in the past. A survey of the Irvine Valley had highlighted the presence of prehistoric sites in the area, but there was little which could be interpreted confidently as being medieval in date within the parish of Galston (Mair et al 1996). Archaeological monitoring work in the vicinity of Loudounhill Quarry failed to reveal any archaeological remains (MacGregor & Johnson 2000; Sneddon & Coulter 2003; Duncan 2004) however, excavations at Loudoun Hill have revealed a series of prehistoric palisaded enclosures which were interpreted as a stock enclosure, but no evidence for medieval occupation (Atkinson 2000).

4. THE EXCAVATIONS

The site of Laigh Newton North-West had been evaluated in 2005 and a number of trenches and several curvilinear features, post-holes and stone structures were revealed, together with medieval pottery, indicating that this site was a potential medieval settlement (Somerville 2005, 9). In 2007 an area with maximum dimensions of 40m by 135m (an area of about 2,225m² in total) was stripped of topsoil by machine. The topsoil varied between 0.4m in the east and 1.5m in the west. Once this was removed and cleaned, several stone-built structures and curvilinear features were revealed and a programme of excavation was initiated.



Illus 2 Laigh Newton North-West plan



Illus 3 Aerial view of the site from the west (copyright Hawkeye Aerial Photography)

The remains consisted of six structures (A, B, E, F, G and H) and a series of linear ditches (see Illus 2 and 3). Linear features which were originally interpreted as Structures C and D were later reinterpreted as ditches.

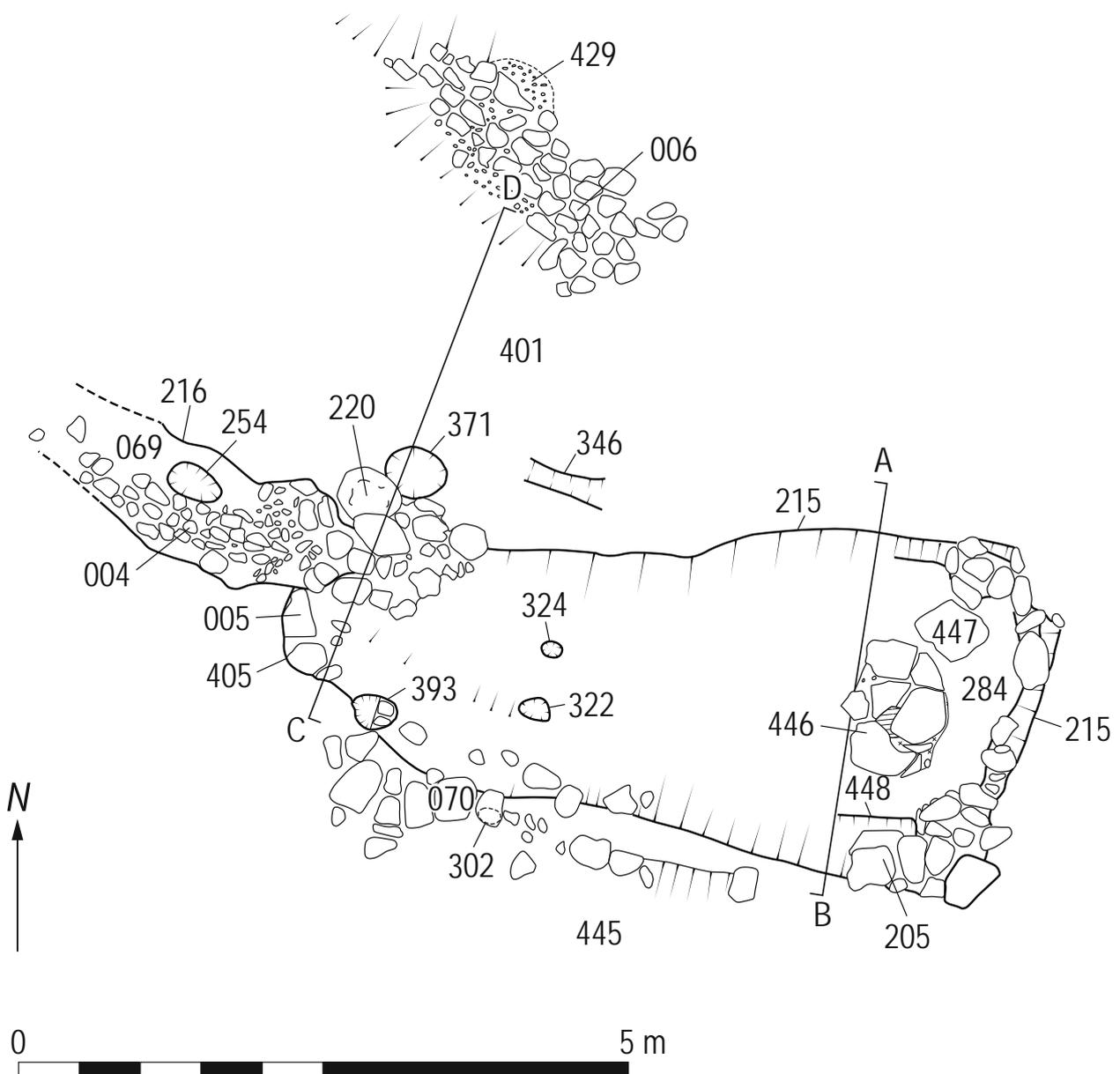
The dating of the stratigraphic sequence has relied mainly on the presence of pottery and radiocarbon dates derived from carbonised plant remains. These two strands of evidence have not always agreed and a decision has been made about whether one type of material is either residual, i.e.

appearing higher up the stratigraphic sequence than it should, or intrusive, i.e. material appearing lower down the stratigraphic sequence.

4.1 Structure A

4.1.1 Description

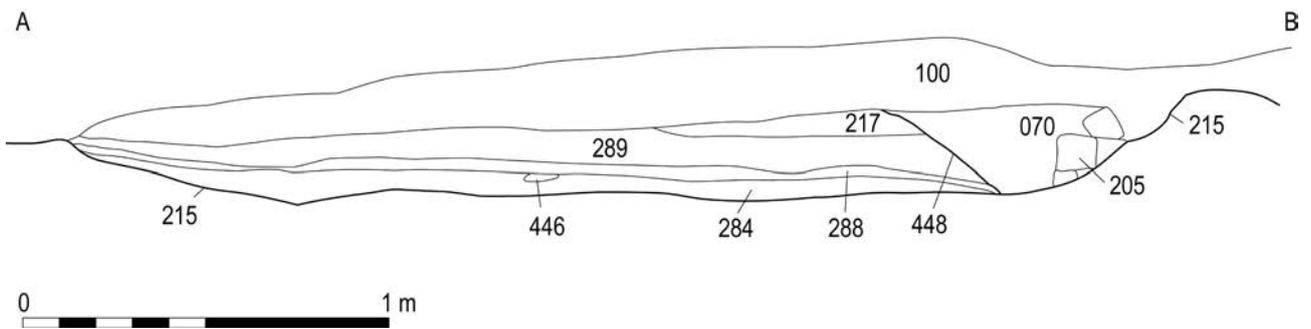
Structure A was located in the northern part of the site on the edge of the terrace. It measured 5.4m long internally and was 2.4m wide at the east end. It was aligned north-west to south-east, in line



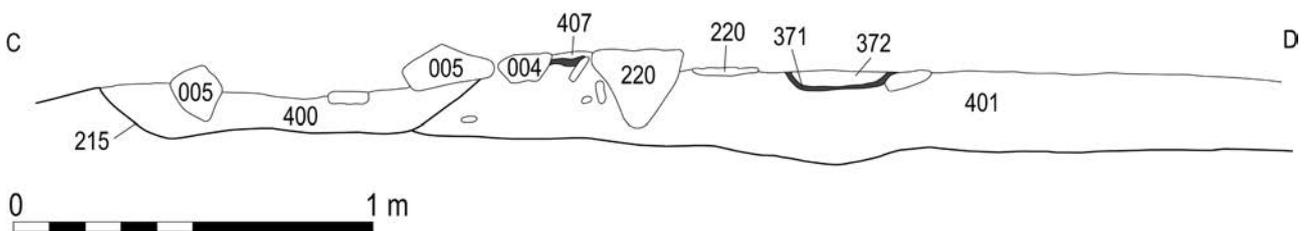
Illus 4 Structure A, plan



Illus 5 Structure A from the east



Illus 6 Structure A, section A-B



Illus 7 Structure A, section C-D

with Structure B (see Illus 4 and 5). The east end of Structure A was straight with rounded corners and the structure narrowed towards the west, although this may have been a result of plough damage. The structure had been built within a hollow (215) about 0.2m deep, cut into natural (see Illus 6 and 7). The hollow was lined internally on the south, east and west sides with unmortared stones (005/220) and a silt matrix (400/450) which was interpreted as a foundation wall and turf core. A medieval pot sherd was found within the stones (Illus 21, No. 1). On the south side there was also slight evidence for an outer skin of stones set against the outer face of the turf core. The hollow (215/405) sloped up gently on the north side where there were no lining stones. These stones may have been removed as a result of ploughing. A short length of the gully (346) was seen on the north side of Structure A (Illus 4), which may have been a foundation for a timber wall.

In the north-west corner of the structure there was a shallow circular hearth (371) with a burnt fill which had a charcoal-stained lens (372) of carbonised heather-type twigs. A shallow gully (216) cut through Wall 005 at this narrower west end. This gully (216) was up to 0.2m deep and was filled with dark brown silt (069) which contained significant quantities of burnt peat or turf and a small number of cereal grains (oat and six-row barley). There was an oval-shaped hearth (254) with charcoal and an orange silt fill (221 and 253) which had cut into the fill of Gully 216 and was therefore a secondary feature. These fills (221 and 253) produced only heather-type charcoal and burnt peat or turf, which suggests that peat and/or organic turves were used as fuel. The heather-type twigs may have been a part of a heathy turf or peat or perhaps had been collected separately. A single course of rounded stones (004) had been laid along one side of the gully, slightly overlying the hearth (254), which may have been a wall foundation or perhaps a cobbled surface. The stones (004) were sealed by a thin lens of red ash (099/407). Layer 099 contained a sherd of medieval pottery (SWGW, SF46) and Layer 407 contained heather-type twigs.

Within the structure the primary floor deposit was a yellow/grey clay (284 see Illus 6) which was laid 0.13m thick and contained birch, heather-type charcoal and a few barley grains. At the east end of the structure another hearth consisted of a

heat-shattered stone (446) which lay over the clay floor (see Illus 4 and 6). To one side of this stone was another flat stone (447), which had no sign of burning. The floor and hearth were sealed by three further occupation layers extending throughout the building, with a combined depth of about 0.2m (288, 289 and 217). Layer 288 was charcoal-rich (predominantly heather, but with some hazel and birch). It also contained some hazelnut shell and significant amounts of burnt soil, but no cereals (see Appendix 1). Layer 288 contained a sherd of medieval pottery (SWGW, SF122) but a radiocarbon date of 1880 BC–1690 BC (2 sigma, SUERC-22419, GU-18053) was retrieved from hazel charcoal (*Corylus*) from this same layer (see Table 1). Layer 289 was a dark-brown silt with charcoal and Layer 217 was a yellow clay which also contained a sherd of medieval pottery (SWGW, SF110) hazelnut shell and burnt soil.

Two small circular or oval-shaped features were cut into the bottom of the hollow (Illus 4) and were interpreted as possible post-holes or stone holes (324 (Fill 325) and 322 (Fill 323)). It was not clear from which floor layer these were cut. A third possible post-hole (302, Fill 303) was cut into natural to the south of the lining stones 005, in line with 322 and 324. A fourth possible post-hole also cut into natural (393) in the south-western corner of the structure. The fill of 394 included four packing stones. Fill 303 contained a single fragment of oak charcoal.

In the south-east corner of Structure A the wall had been rebuilt within a cut (448) through the floor layers (284, 288, 289 and 217, see Illus 6). Here corner stones (205) had been built in a more substantial manner than the rest of Wall 005. The rebuilt wall core (070) contained a medieval body sherd (Reduced Ware, SF64) and a very mixed charcoal assemblage of alder, birch, heather-type, ash and willow, suggesting that a deposit which contained the fuel waste from a hearth had been used to rebuild the wall core.

Structure A was sealed by dark-brown silt (100), which extended for about 2–3m beyond its walls in all directions, and up to 0.2m in depth. Layer 100 contained a single sherd of medieval pottery (SMR, SF65) and slight traces of birch and oak charcoal. This deposit was interpreted as the post-abandonment collapse of the turf walls and roofing material, incorporating the remains of spent fuel.

Table 1 Radiocarbon dates

Lab Code	Context No.	Feature	Depositional context	Species (charcoal)	Radiocarbon age BP	$\delta^{13}\text{C}$ relative to VPDB	Calibrated date (1 sigma)	Calibrated date (2 sigma)
SUERC-22419 (GU-18053)	288	Structure A – occupation layer	Secondary	<i>Corylus</i> (0.02g)	3455 ± 30	-25.4 ‰	1880 BC–1690 BC	1880 BC–1690 BC
SUERC-22420 (GU-18054)	427	Structure B – floor layer	Primary	<i>Betula</i> (0.09g)	335 ± 30	-24.9 ‰	1490 AD–1640 AD	1470 AD–1650 AD
SUERC-22421 (GU-18055)	285	Structure E – layer	Secondary	<i>Alnus</i> (0.02g)	2960 ± 35	-28.1 ‰	1260 BC–1120 BC	1310 BC–1050 BC
SUERC-22422 (GU-18056)	273	Structure E – layer	Secondary	<i>Corylus</i> (0.11g)	3460 ± 30	-27.5 ‰	1880 BC–1690 BC	1890 BC–1690 BC
SUERC-22423 (GU-18057)	238	Structure F – layer	Primary	<i>Salix</i> (0.02g)	485 ± 30	-26.0 ‰	1415 AD–1445 AD	1405 AD–1455 AD
SUERC-22424 (GU-18058)	422	Ourer east ditch fill of [037]	Secondary	<i>Salix</i> (0.02g)	4825 ± 30	-26.6 ‰	3660 BC–3530 BC	3660 BC–3520 BC
SUERC-22425 (GU-18059)	290	Ourer west ditch fill of [003]	Primary	<i>Alnus</i> (0.02g)	375 ± 30	-24.0 ‰	1450 AD–1620 AD	1440 AD–1640 AD
SUERC-22429 (GU-18060)	418	Inner ditch – fill of [002]	Secondary	<i>Salix</i> (0.02g)	2800 ± 30	-23.7 ‰	995 BC–910 BC	1040 BC–840 BC
SUERC-22430 (GU-18061)	361	Fill of ditch [041]	Secondary	<i>Alnus</i> (0.04g)	2305 ± 30	-26.7 ‰	405 BC–365 BC	410 BC–230 BC
SUERC-22431 (GU-18062)	350	Fill of ditch [040]	Primary	<i>Corylus</i> (0.11g)	490 ± 30	-25.4 ‰	1415 AD–1440 AD	1400 AD–1450 AD

At a distance of about 2m to the north-west of Structure A there was a metalled surface (429) over which a length of walling (006) was built (Illus 4). The walling survived to about 2.5m long and 0.8m in width. The walling (006) consisted of a single course of rounded stones, similar to Stones 004. Among these stones were four sherds of medieval pottery (SWGW and SMR, SF108). It is possible that this wall may have been the fragmentary remains of another structure to the north of Structure A which has been destroyed through ploughing.

4.1.2 Analysis

Structure A was a sunken-floored, rectilinear-shaped structure with walls on at least three sides, constructed of turf with a stone inner and outer lining. There were two post-holes within the wall core (302 and 393) and two within the walls of the structure, which would have supported a timber superstructure. At the east end of Structure A there may have been stone pad bases within 005 and 205 for a cruck roof.

The presence of the hearth (with a flat stone beside it) at the east end would suggest that this end may have served a domestic function. However, there were no artefacts or any evidence for a bed platform to indicate that it was occupied as a house. The west end, with the flue-like gully and the hearths, were suggestive of a kiln, with perhaps two phases of use. The severe truncation of this structure has made the interpretation of its function difficult, as few of the original structural elements have survived. The absence of metalworking slag or pottery waste and the presence of a few carbonised cereal grains suggest that this was probably not a metalworking area or a pottery kiln. It may rather have served as an area for drying grain, with the grain perhaps supported by a timber frame over a warm draught from a fire located to the west, the warm air being drawn through Gully 216.

There was no evidence for a stone and turf wall on the north side of the structure, although the gully (346) may have supported a timber screen, the less substantial nature of which could have assisted with ventilation. The north side is also a possible location for a doorway.

The dating of Structure A rests on the interpretation of only five sherds of medieval pottery

and a single radiocarbon date from hazel charcoal which indicates activity in the early Bronze Age. The medieval pottery includes SWGW which ranges from the 12th to the 15th centuries, and SMR which is dated from the 13th to the 15th centuries. The Reduced Ware from within the wall core of the rebuilt wall is thought to be early 14th–15th-century in date.

The factors which may affect the level of disturbance to this structure include the shallow nature of the stratigraphical sequence and therefore its exposure to ploughing, the presence of post-holes cut from higher levels and the method of topsoil stripping by machine. Such disturbances could possibly have led to the intrusion of some of the medieval pottery into lower layers. However, of the five sherds associated with Structure A, the sherd from Layer 288 is in the most secure context, in that it is low in the stratigraphical sequence and is sealed by two other layers. The other sherds are from less secure contexts, but taken as an assemblage which contains no prehistoric or post-medieval pottery, it could be seen as a coherent pottery assemblage, which suggests strongly two phases of activity, broadly dated to the 12th–15th centuries. The pottery was examined for abrasion and it was concluded that of the five sherds only one (SF65, SMR from Layer 100) was significantly abraded and this was the most modern sherd in the uppermost deposit. This abrasion was probably because of the softness of the fabric, coupled with being the most subject to disturbance (Bob Will pers comm). The lack of abrasion in the other sherds would argue for these being in situ rather than redeposited.

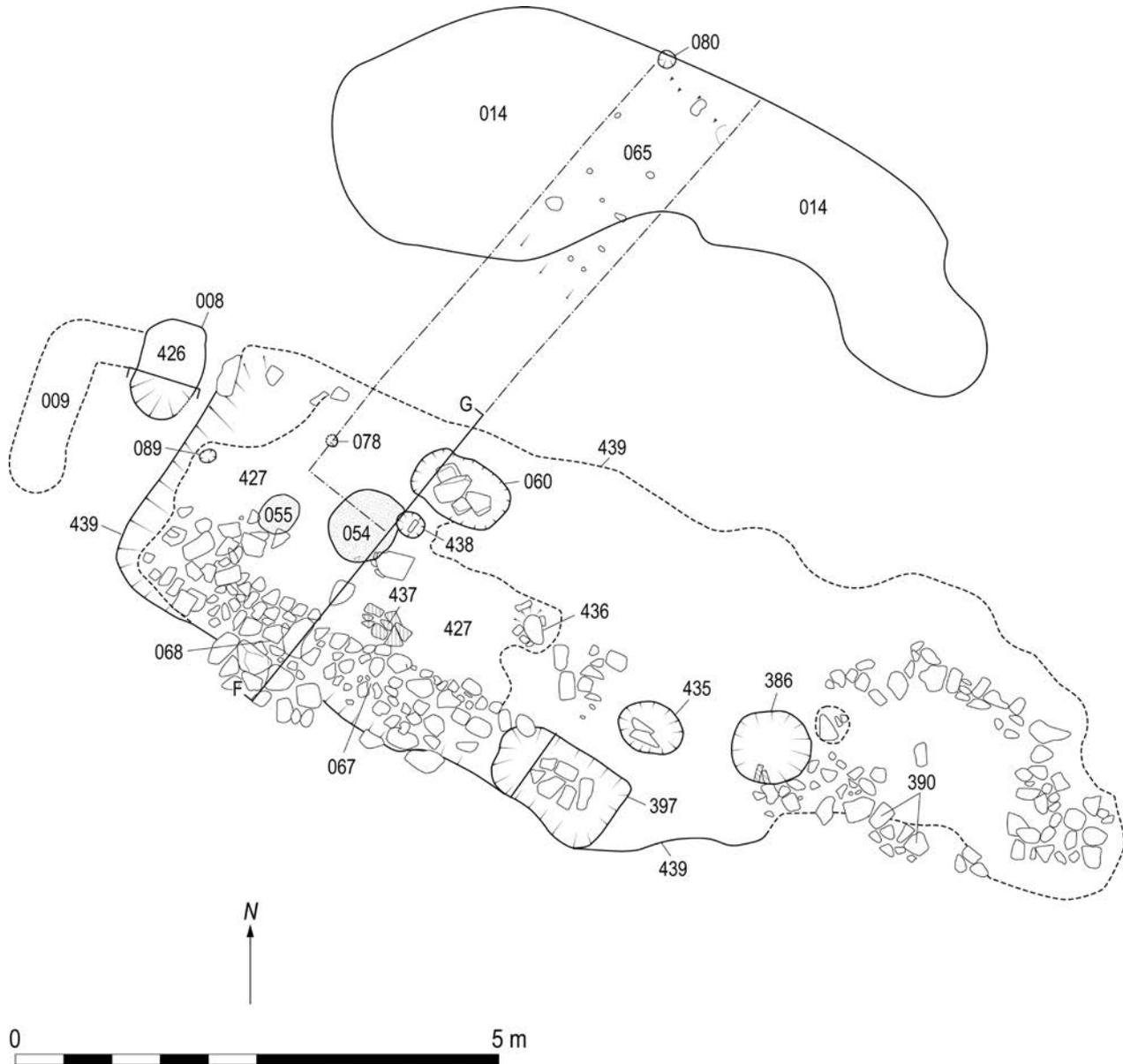
The number of radiocarbon dates was limited and so it is unfortunate that only one radiocarbon date could be submitted from this structure. This was of hazel charcoal from Layer 288, which was interpreted as an occupation layer which sealed the hearth stones (446). A re-examination of the charcoal to check for levels of abrasion was not possible at the time of this paper's completion, but would have been helpful to this discussion. This layer contained a mixture of charcoal, which was suggestive of domestic hearth waste rather than structural timbers. The layer also contained burnt soil which may have derived from turves brought

into the structure to be used as fuel. Therefore it is suggested here that the hazel charcoal was derived from turves brought into the site from elsewhere to be used as fuel, which has incorporated residual charcoal. The oat and barley grain from Gully 069 are quite usual cereals to find on a medieval site (Stronach 2004, 152) and it would have been useful to date this material as being more contemporaneous with the use of the structure. The function of Structure A remains ambiguous, although the author favours some kind of lightly sunken working or storage shed which required a hearth and perhaps good ventilation.

4.2 Structure B

4.2.1 Description

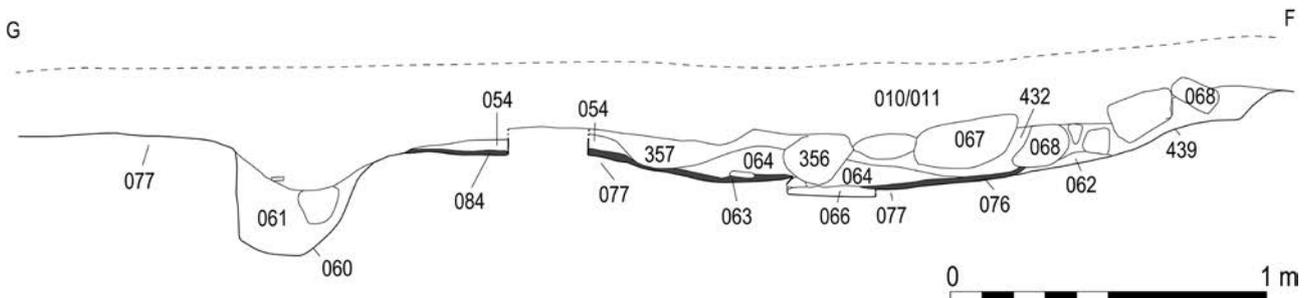
Structure B was located 5.5m to the east of Structure A (Illus 2). Structure B had one rectangular end wall and was aligned south-east to north-west, in line with Structure A. Structure B was about 3.5m wide internally and up to 12m long (Illus 8 and 9). A hollow (439) was dug into natural (077) with a maximum depth of 0.3m (Illus 10). The remains of a wall of rounded stones (068) was laid within the hollow, the best preserved section being on the south side of the structure. A maximum



Illus 8 Structure B, plan



Illus 9 Structure B from the west



Illus 10 Structure B, section F-G

of two courses of this foundation wall survived, with a maximum width of 0.5m. It is supposed that the north, west and east walls had been affected by plough truncation and had largely been removed.

Two large post-pits were cut into the subsoil within the structure. Post-pit 060, was oval in shape and its fill (061) contained large packing stones. Post-pit 386 (Fills 385 and 377) was circular and also contained packing stones. These post-pits contained only heather-type charcoal, which may have been the remains of fuel or perhaps a burnt

floor covering rather than being remains of posts which had presumably been removed or rotted in situ. Some cobbling (390) extended to the east of pit 386. There was a stake-hole (089, Fill 090) at the west end and several internal features, including oval-shaped Post-hole 435 (Fill 441), a central post-pad (436), a stake-hole (438, Fill 440) and a possible stake-hole (078, Fill 079). Stake-hole 438 contained a large quantity of oak charcoal, suggesting that an oak stake had been burnt in situ and therefore that the structure perhaps had an oak timber superstructure.

The primary floor deposit consisted of white sandy clay (433, not in section) which survived in patches and was devoid of carbonised remains. Further floor layers consisted of patches of earth, ash and charcoal (see 427 (Illus 8), 063, 064 and 076 (Illus 10), and 404 and 403 (not illustrated)). Floor layer 427 contained a small amount of birch charcoal, carbonised cereal grains (including oats and six-row barley) and a carbonised seed of nipplewort (probably a crop weed). Birch charcoal (*Betula*) from the floor layer 427 produced a radiocarbon date of 1470 AD–1650 AD (2 sigma, SUERC-22420 (GU-18054) see Table 1).

There were three hearths within these floor layers in the west end of Structure B. Hearth 437 consisted of a setting of seven stones laid directly onto subsoil covered in sandy ash, to the west of which was some flat paving (066). A layer of cobbles (356) and silt-sand (357) was also laid across the floor, sealing the hearth stones (437). This surface was best preserved on the south side of the structure. Two further hearths and their associated ash spreads were located near the west end. Hearth 055 consisted of a slight hollow which was filled with ash, charcoal and gravel (084, 062 and 073). The ash fill of Hearth 055 contained a mixture of charcoal types, with birch, heather-type, burnt peat/turf and cereal grains (including six-row barley). Hearth 054 (Illus 10) was partly surrounded by stones and consisted of a charcoal spread (084) and a layer of ash (054) lying over natural (077). The fill of Hearth 054 contained heather-type charcoal, burnt peat/turf and carbonised cereals, including six-row barley and a cultivated flax seed.

A wide stone platform (067) was inserted against the south wall, sealing the floor deposits and set in a layer of yellow sand (432). The platform consisted of flat slabs and cobbles which formed a fairly level surface that extended for about 3m long and was 0.6m wide, which was lower than the surviving outer wall (068) (see Illus 10). A large rectangular pit (397) was cut into the line of the platform to a depth of 0.45m. The sides showed no evidence of burning and it was filled with cobble stones (398) and charcoal (399) identified as heather-type with small amounts of birch.

A large possible post-hole (008) 0.3m deep and with straight sides, lay about 0.2m to the west of Structure B. Its fill of dark brown clay silt (426)

contained only heather-type charcoal and there was no evidence for a post, which probably means that it either decayed in situ or was removed rather than burned. This post-hole was cut by an L-shaped pit (009) with straight sides and a flat base and was filled with sandy clay, the purpose of which was unclear.

The above deposits were all sealed by a layer of dark brown sandy-silt (010/011) up to 0.22 m deep. This material contained 14 sherds of pottery (SWGW, SMR and one modern sherd, SF14, 15, 16, 17, 18, 42, 44, 80, 148, 154 and three sherds from the sample). Also found within Layer 010/011 were two stone spindle whorls (SF45 and 106, Illus 23) and three metal fragments (a corrosion lump, an unidentifiable iron fragment and a possible metal handle or large rivet, SFs 21, 22 and 43, not illustrated). The charcoal within Layer 011 consisted of alder, oak and willow, together with burnt turf/peat which differs from the assemblage found in the underlying layers. This layer was interpreted as the remains of the turf walls and roofing of Structure B.

To the north-east of Structure B there was a spread of dark brown clay with charcoal and tumble (014) within a slight hollow measuring 3.4m by 7.3m. Layer 014 contained 38 sherds of pottery (SWGW, SPMRW, SPMOW and SMR, SF1, 2, 3, 5, 7, 8, 24, 25, 32, 36, 37, 38, 113, 121, 129, 130, 156), a short chert flake tool (SF132, CAT25) and two metal fragments (a bent metal rivet or handle SF4 and stone and metal corroded lump, SF23, were not illustrated). The charcoal assemblage from this layer consisted of birch, broom/gorse and willow, which are unlikely roofing or structural materials. A slot, 1m wide, was dug through this layer and 12 possible stake holes were seen cut into subsoil (065). It is possible therefore that there was an earlier, less substantial structure here, represented by the stake-holes and artefact-rich spread. The charcoal in Layer 014 may therefore represent a combination of the clearance of a structure and the burning of scrub vegetation.

4.2.1 Analysis

The remains of Structure B indicate that it was a sunken-floored structure. Its shape was difficult to discern, but the west end was rectangular. The hollow was lined with a stone wall foundation,

although this only survived on the south side. There was evidence for internal post-holes and stake-holes which may have been of more than one phase, perhaps supporting a timber roof or room partition. The large charcoal-filled Pit 397 showed no evidence of in situ burning and so was probably an ash-pit. The hearths used peat with some heather-twig component as fuel and were possibly associated with domestic cooking involving oats, six-row barley and flax.

The stone platform (067) was not part of the original outer wall of the structure as it sealed floor layers. It could have acted as an internal stone bench (as suggested by the excavator) or perhaps been a foundation for a substantial turf wall, belonging to a second phase.

The dark spread which sealed the structure (010/011) (containing numerous artefacts including spindle whorls, metal objects and pottery) is thought to represent the timber and turf walls of the superstructure. The presence of these artefacts suggested that the building was also used for domestic occupations including cooking and spinning.

Structure B produced a radiocarbon date of the late 15th to 17th century and the majority of the pottery assemblage is consistent with this date range. Spread 014 has also incorporated some modern material, which is presumably intrusive. Occupation of Structure B may be slightly later than that of Structure A.

4.3 Structure E

4.3.1 Description

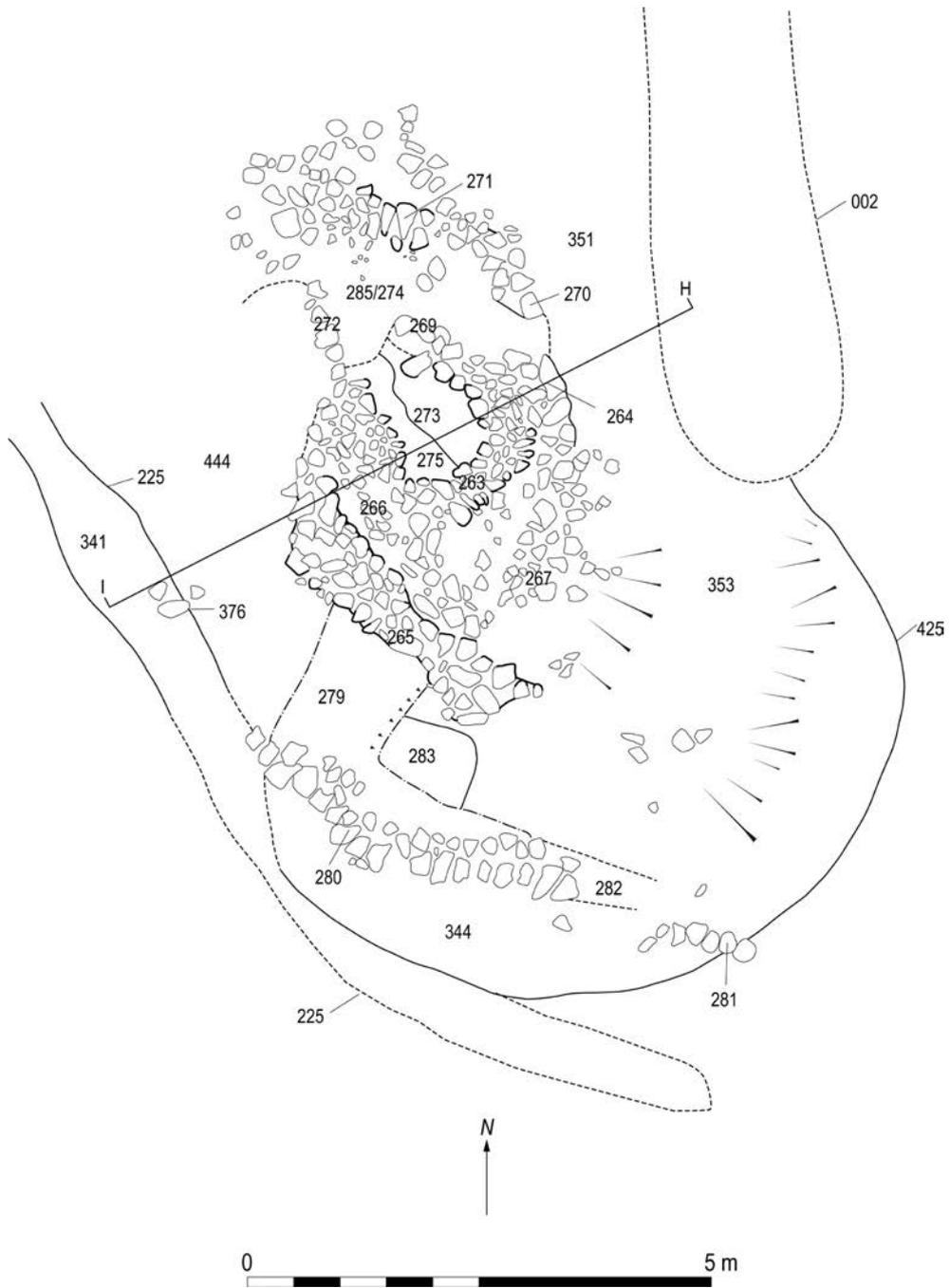
Structure E was located within the south-west corner of the palisaded enclosure (Illus 2). It consisted of the shallow remains of a stone-built structure, similar to a corn-drying kiln, built within another structure (see Illus 11, 12 and 13) and sealed by over 1m of soil. A shallow hollow (425) was initially lined with a rough metallised surface of small stones visible as 344 on the southern side and 355 on the northern side. Layer 344 was devoid of carbonised remains, but contained a sherd of medieval pottery (SWGW, SF91) which suggests that this first phase is at least medieval in date. Above this metallised surface was a deep silt clay layer (373/374). Layer 373/374 was devoid of carbonised remains, but contained

five sherds of coarse, hand-made Neolithic pottery. The Neolithic pottery consisted of five sherds of coarseware, the largest of which (22g in weight) was a partial collared rim from a Neolithic vessel. The external surface was sooted, as was the interior of the broken rim, and it is likely that it was slipped and burnished. The accumulation of iron pan on the sherds and their relatively crisp edges suggests they had lain in situ for a considerable time. The sharp edges on one side of the larger piece, and on the smaller sherds (a total of 12g), indicate that a part of a vessel was broken during excavation.

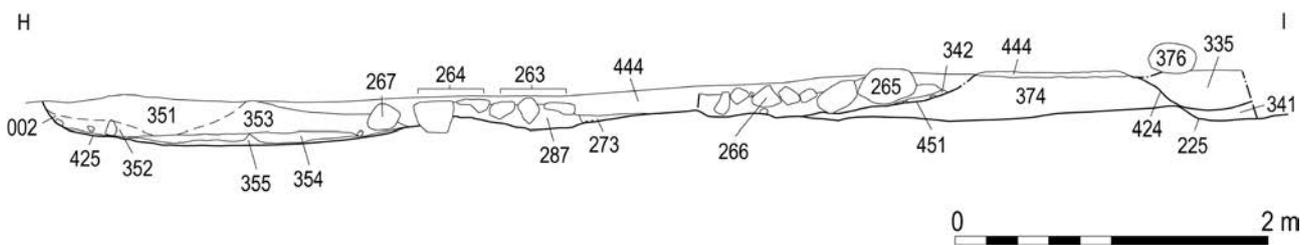
Also within this deposit were numerous tiny fragments of unburnt teeth and bone (SF125 and 126) and small amounts of alder charcoal.

A shallow hollow (451) was cut into the silty clay (373/374) and a second metallised surface of small stones was laid (342; see Illus 12). This surface only survived in patches. Structure E was constructed on this surface and consisted of an area of rough cobbles (266 and 267) with remnants of an outer wall to the south (265) and some fragments of walling to the north (264, 270 and 271). These may have formed a protecting kiln barn-type structure around a kiln bowl. A sherd of late-medieval pottery (Reduced Ware, SF147) was found within the stones of Wall 270. The rough cobble outer walling (264, 265 and 270) also contained small amounts of alder charcoal with some birch.

There was a D-shaped gap in the centre of the cobbles (266) which is thought to be the base of the kiln bowl (see Illus 14). The stones immediately surrounding this bowl (263, 269) had a foundation of yellow clay (287) and formed a pear shape in plan, measuring 1.10m by 0.9m, with a gap, presumably the flue, towards the north-west (see Illus 11). Charcoal retrieved from the stone surface of (263) and the clay (287) consisted mainly of alder with some oak and hazel. The upper part of the kiln bowl had been removed, probably by ploughing. The base of the flue was fire-reddened and it was bounded on the south side by a line of rounded cobbles (272). A remnant of the fill of the probable kiln bowl (273) contained charcoal flecks which were identified as hazel, but no cereals were retrieved from the sample. A radiocarbon date of 1890 BC–1690 BC (2 sigma, SUERC-22422 (GU-18056)) was returned from this hazel charcoal (*Corylus*) from Deposit 273. Outside the



Illus 11 Structure E, plan



Illus 12 Structure E, section I-H



Illus 13 Structures E and F from the south (copyright Hawkeye Aerial Photography)



Illus 14 Structure E, possible kiln

flue was a thin deposit of silt clay with charcoal flecks (285/274) identified as alder and birch. A date of 1310 BC–1050 BC (2 sigma) was returned from alder (*Alnus*) from Layer 285 (SUERC-22421, GU-18055) which, along with the hazel in 273, is thought to be residual. No pottery or metalworking waste were found within this feature.

Remnants of a turf embankment (279) 0.25m high, were laid on a gravel foundation (283 and 282) and abutted the south side of the kiln (Illus 11). It had an outer revetting stone wall (280 and 376), which sealed Ditch 225/424 and a deep silt clay (286/374/373). A possible stone pot lid or roughout roundel (SF69) was found within the wall stones (280) and the gravelly foundation (283) contained a single sherd of medieval pottery (SWGW, SF174). The turf embankment (279), revetment wall (280) and gravel foundation (283) were devoid of carbonised remains.

To the north of the structure the metallised surface (355), was sealed by a deposit of grey clay (354) 0.06m deep and a layer of waterlogged silt clay 0.25m deep (353). Layer 353 contained a wooden stake (SF84), traces of oak charcoal and a sherd of medieval pottery (SWGW, SF102). The fills of 353 and the linear feature (002) were fairly indistinguishable, but it was thought that Linear Feature 002 cut through, and therefore pre-dated, Fill 353.

Structure E was sealed by a spread of dark brown silt sand and gravel (343/358/410/423/444) which survived (after machining) to 0.2m deep and filled the hollow in which Structure E sat. Layer 444 contained 99 sherds of medieval pottery (SWGW, SMR and Reduced Ware, Illus 21 Nos 11, 12 and 13), four nails (SF161), a stone pot lid or roundel (SF162) and a small whetstone (SF163, not illustrated). Layer 410 contained a sherd of medieval pottery (SF124, SWGW) and Layer 423 contained one medieval pot sherd (SF115, SWGW). This material was interpreted as the remains of turf walling and roofing material which had incorporated occupation material. The samples examined (410 and 423) contained only small amounts of alder charcoal. Structure E is thought to be broadly contemporary with the ditches to the south and north of it (225 and 002) as they both contained medieval pottery.

4.3.2 Analysis

The interpretation of the silt clay deposit (374) below Structure E is problematic as it contained five sherds of Neolithic pottery, probably from the same vessel, which were not abraded and therefore may have broken in situ (see Ballin-Smith in Toolis 2011). This would suggest that the deposit has not been heavily reworked or redeposited and therefore is potentially prehistoric in date. However, the presence of fragmentary unburnt bone within the silt clay (374) would argue against this interpretation, as would the presence of a single medieval pot sherd from a metallised surface (344) which was sealed by Layer 374. This material may once have formed a bank of redeposited material containing prehistoric material. The bank was plough-truncated and contributed towards the depth of deposits sealing the structure (444 etc.). There are two radiocarbon dates from this structure, one early Bronze Age and one Middle Bronze Age, from the interior of the kiln and the flue respectively (Contexts 273 and 285). It would appear that there are several phases of activity on this site ranging from the Neolithic to the medieval periods which have been difficult to differentiate during excavation.

Two other medieval pottery sherds were also found within gravel surfaces associated with this structure (Layers 283 and 353) and a single sherd of Reduced Ware was found within the wall stones (270). The pottery associated with Structure E was generally unabraded, the exceptions being a few glazed sherds which had some signs of damage, possibly because of a chemical reaction in the soil.

It has been suggested that the function of the structure was as a kiln because of the fire-reddened central area and potential flue. There was no metalworking debris or pottery waste found which could have argued for it being a metalworking or a pottery kiln. The presence of alder might argue for use in an industrial process such as the production of charcoal. It was not thought to have been a food store, such as a potato clamp for example, because of the damp nature of the site, which would not have been ideal conditions for the storage of foodstuffs. Because the deposits beneath, within and sealing Structure E all contained medieval pottery, this structure

has been dated broadly to the medieval period, although the deposits within and just outside the flue returned a prehistoric radiocarbon date. This charcoal was probably residual and has presumably derived from reworked prehistoric deposits. The kiln is thought to be broadly contemporary with the features to the south and north of it (225 and 002) as they both contained medieval pottery (see below). The material sealing the structure is thought to have derived from occupation debris, turf walling and roof material.

The structure was therefore tentatively interpreted as the base of a kiln for the production of charcoal. This is because of the presence of predominantly alder charcoal which it has been suggested is a favoured type of fuel for this purpose (see Ramsey, 7.1, p.27). The kiln was surrounded by stone walling which may have been the remains of a kiln barn, perhaps belonging to a later phase. The dark spread sealing the structure was interpreted as the remains of the walls and roofing material which has incorporated numerous sherds of medieval pottery and other artefacts, including a stone pot lid or roundel, a small whetstone and nails. This might suggest that the structure was also used, perhaps latterly, for habitation.

4.4 Structure F

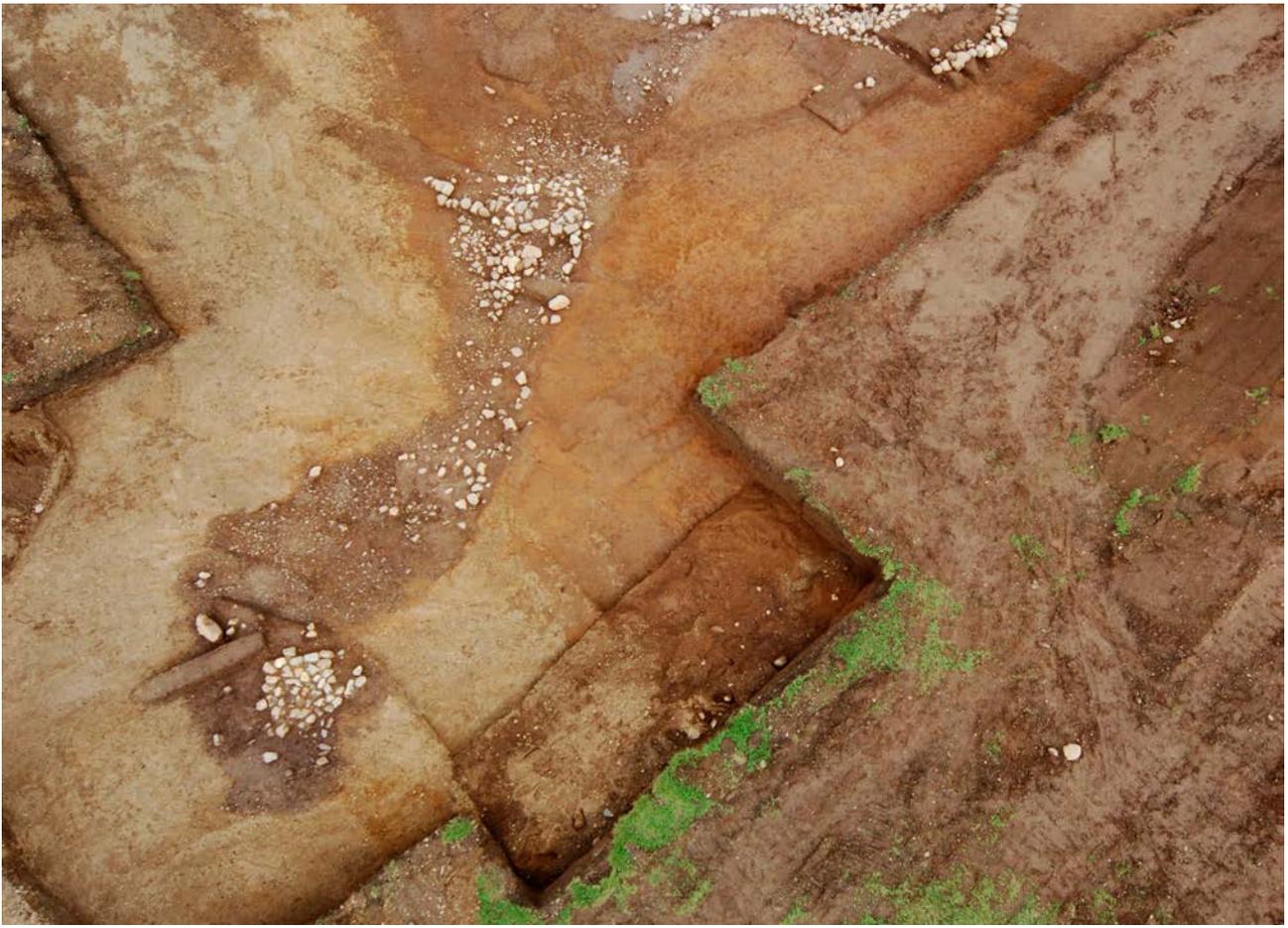
4.4.1 Description

Structure F was located in the south-west corner of Laigh Newton North-West, outside the palisade enclosure (Illus 2). This structure was disturbed by ploughing and only vestiges of the long south-east and north-east facing walls and floor deposits survived. The structure was aligned approximately east–west, extending up to 11m long and 4m wide (Illus 15 and 16). It sloped towards the palisade enclosure and Structure E.

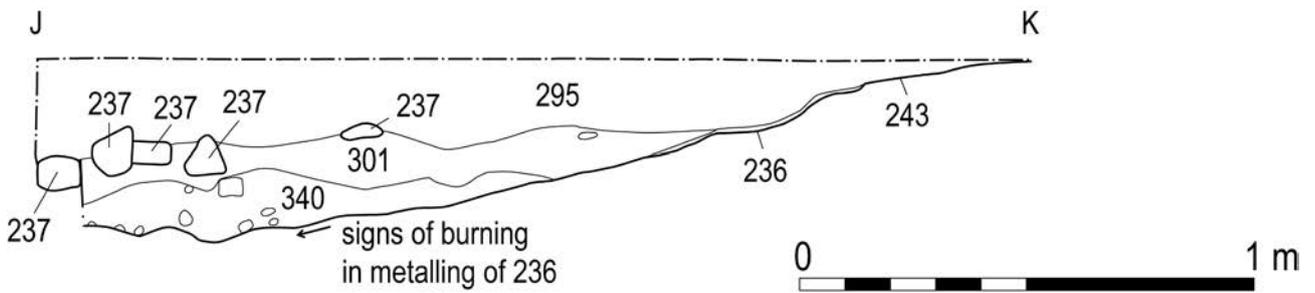
A hollow up to 0.4m deep (243/236) had been cut into the natural gravel (see Illus 17 and 18). A roughout sandstone roundel (SF49) was found on the surface of the natural. A metalled surface of small stones (238/242) was laid within the hollow up to 0.10m thick. This metalled surface contained 42 sherds of medieval pottery (SWGW and SMR, SF53, 55 (Illus 21, No.3), 57, 58, 59, 60, 61, 81, 109, 118, 119, 128 (Illus 21, No. 8)). Also found within this surface were an iron nail (SF82), and a chert chunk (SF164). The sample from Surface 238 contained a single fragment of willow charcoal and carbonised oak charcoal (*Salix*), which has returned a radiocarbon date of 1405 AD–1455 AD (2 sigma), (SUERC-22423 (GU-18057)), which is consistent with the medieval date of the pottery.



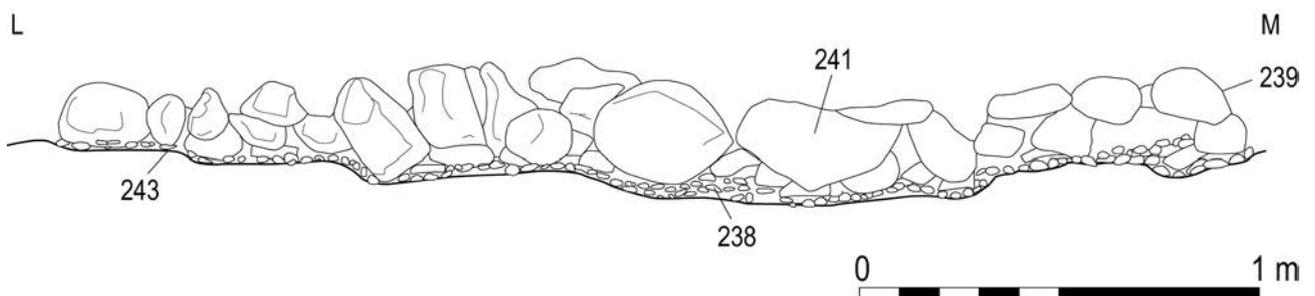
Illus 15 Structure F, plan



Illus 16 Structure F from the south-west (copyright Hawkeye Aerial Photography)



Illus 17 Structure F, section J-K



Illus 18 Structure F, section L-M

Traces of a wall (239/310) could be seen in the form of occasional large stones along the south side of the hollow. Several stones also formed a rough line parallel with it (311/359) and may have formed a dividing wall within the structure. This dividing wall (311/359) consisted of clay-bonded, round stones up to 0.2m high, extending over a distance of about 2m. It contained two sherds of medieval pottery (SWGW, SF86) and a sample of its soil matrix produced a single fragment of alder charcoal. At the east end there was a length of curving wall (312) with flat, clay-bonded foundation stones (452) which may have formed a round-ended structure with Walls 311/359 and 239/310. The walls were sealed by loose tumble (240, not illustrated), which was interpreted as the remains of a collapsed wall (312).

A straight length of walling (241) was set on a foundation of clay-bonded stones (451). Walling 241 was laid over and perpendicular to Walling 311/359 and a metalled surface (238), possibly forming a straight wall end for a second phase of construction which utilised 239/310 as its south wall, but extended beyond Wall 311/359. The wall (241) consisted of two skins of rounded and angular dry stones forming a wall up to 0.3m high. There were plough scars on the upper surface of its stones, confirming the presence of plough damage.

At the west end of Structure F, the metalled surface (238) was sealed by remnants of a possible floor layer of clay (340) 0.15m thick (Illus 17, section J–K). Layer 340 contained 19 sherds of medieval pottery (18 sherds of SMR, SF72 and SF88 and one sherd of Reduced Ware from the sample) and small fragments of bone (SF71). A single fragment of hazel charcoal was retrieved from the sample. This layer was sealed by a dark silt-sand-clay layer (301) up to 0.10m thick which contained four sherds of medieval pottery (two sherds of SMR, SF87 and one from the sample and two sherds of SWGW, SF73) and a possible carbonised oat grain. Above this dark layer was a roughly rectangular-shaped platform formed of a single course of rounded stones (237), measuring 1.5m long and 1.3m wide. There was no clear end to Structure F and it is not clear whether the platform (237) was part of a separate structure or annex to Structure F.

A dark brown sandy silt (295) sealed all the above deposits, extending beyond the walls and infilling the hollow up to a depth of about 0.5m deep. Layer 295 contained nine sherds of medieval pottery (SWGW, SF181, 63 and 78 and one sherd of Reduced Ware, SF182) and charcoal of oak and willow. This charcoal may have been the remains of a timber structure, perhaps with oak supports and willow wattle work panels, although the quantities of charcoal recovered were very small.

4.4.2 Analysis

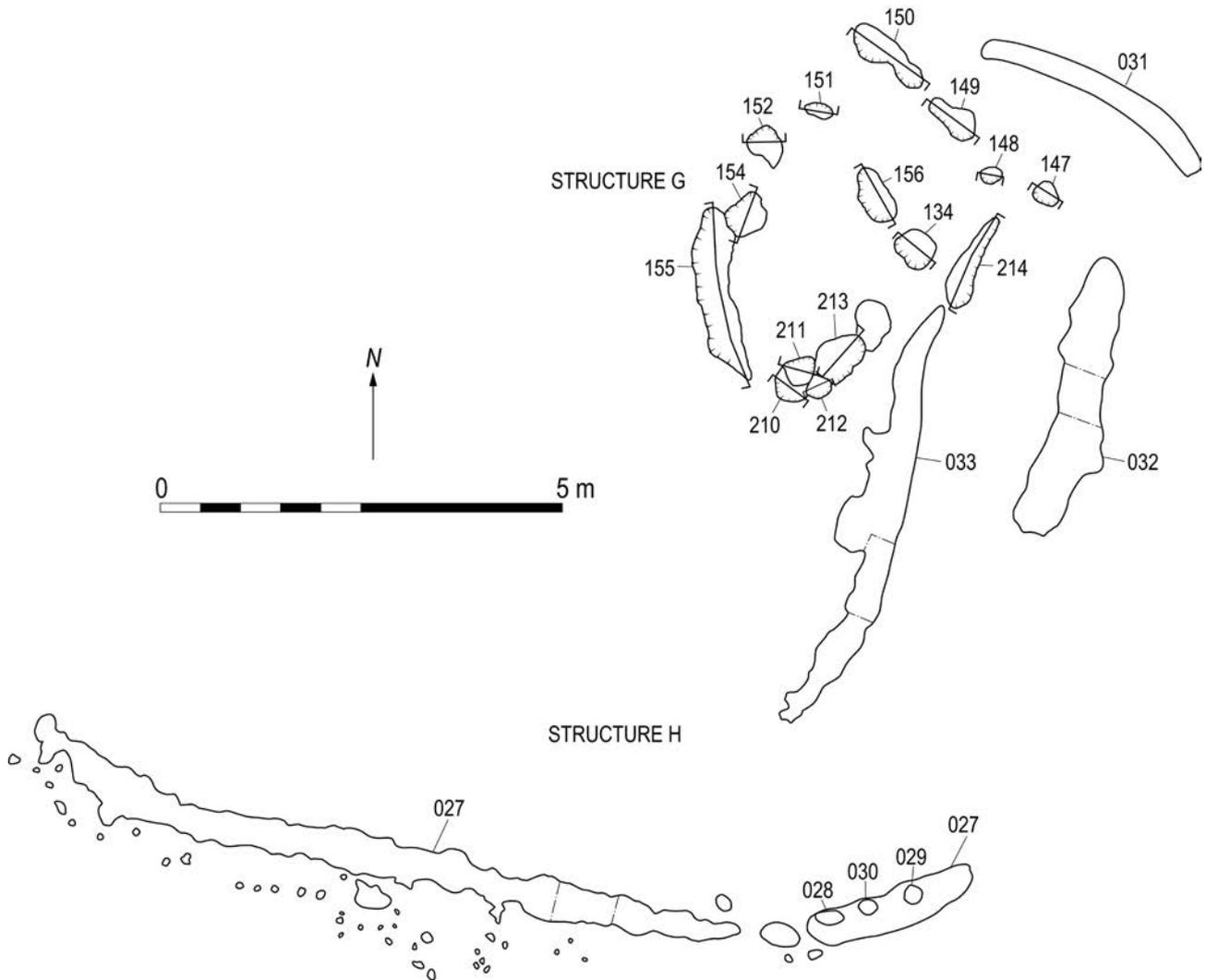
Structure F consisted of the remains of a medieval structure which may have been up to 11m long and perhaps 4m wide. A metalled surface was built within a hollow and there were rough stone foundations which were suggestive of walling. There appear to have been two phases of construction with initially a very narrow, round-ended structure being replaced perhaps by a wider square-ended structure, although very little of this survived. No post-holes, pits or hearths were found within Structure F, which might indicate that it was an open working area rather than a roofed structure. There was no clear evidence of its function, although the general lack of food plant remains might suggest that it was industrial/agricultural rather than for habitation. A stone platform at the west end was possibly the remnant of a once more extensive secondary floor layer, perhaps a threshing floor.

The dating evidence consisted of a single radiocarbon date of early to mid 15th century and numerous pottery sherds which are broadly consistent with activity within the structure during the 15th century. The pottery had very little or no abrasion except for the glazed sherds as seen above.

4.5 Structure G

4.5.1 Description

Structure G was a possible post-built rectangular structure to the east of Structure B (Illus 2). It consisted of shallow, linear pits and post-holes (134, 147, 148, 149, 150, 151, 152, 154, 155, 156, 210, 211, 212, 213 and 214) which may have formed



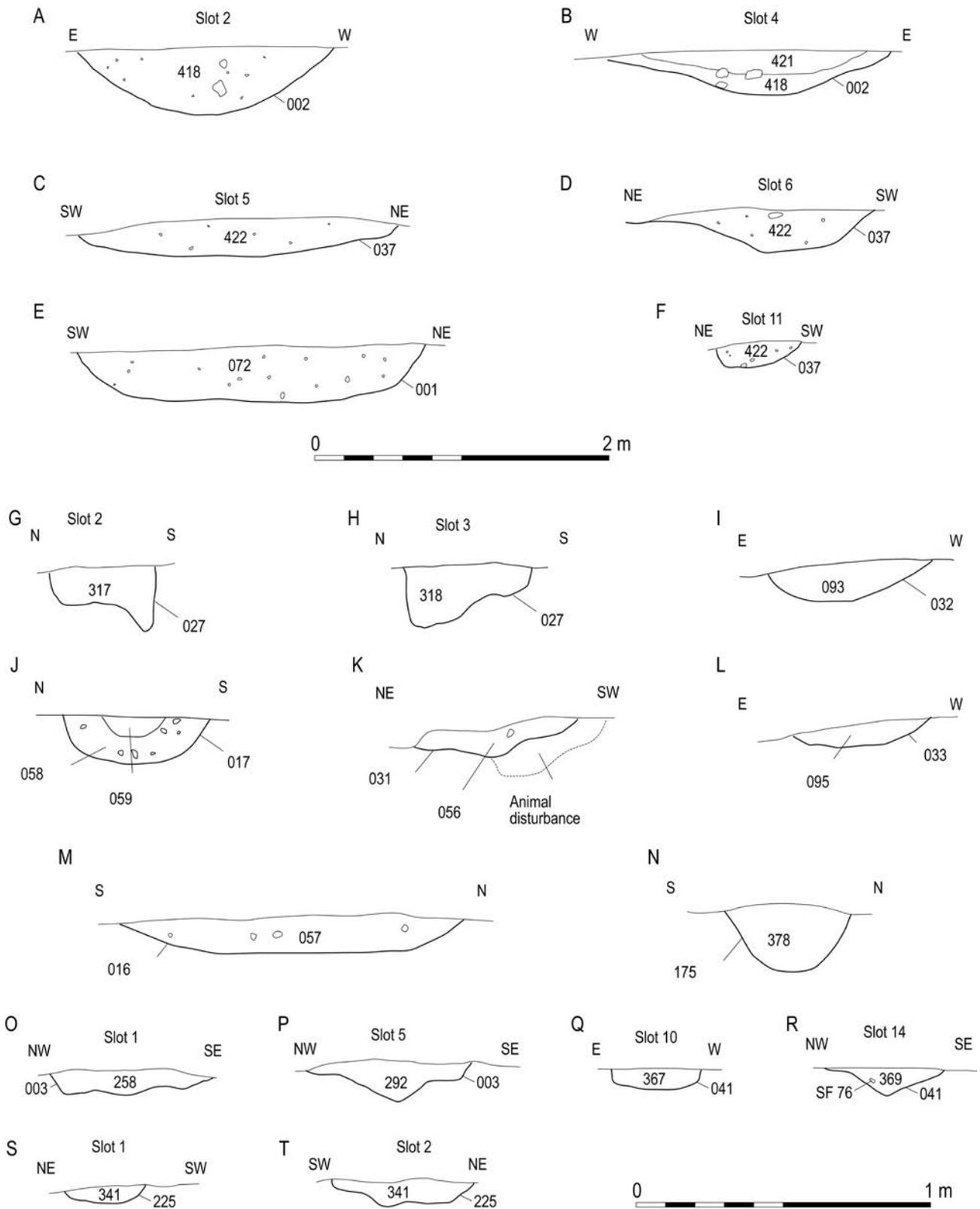
Illus 19 Structures G and H

a D-shaped structure measuring 2.6m by 1.4m (Illus 19). The shallow features were only 0.05m to 0.12m deep and the fills were predominantly light to dark brown silty clays or sandy silts. Although no post-pits were identified, the features were interpreted as post-holes because of their coherent pattern. However, apart from Post-hole 148, which contained an upper layer of charcoal, very little charcoal was noted within the fills. Features 148 and 149 each contained a sherd of medieval pottery (SWGW, SF11 and SF58). One pottery sherd (SF58) joined with SF61 from Surface 238 in Structure F, which might suggest that material from this area was used to construct the metalling.

4.6 Structure H (027, 031, 032 and 033)

4.6.1 Description

To the south-east of Structure B and surrounding Structure G was a group of linear features (see Illus 19). The ditches (027, Fill 045 and 031, Fill 056) were gently curving, perhaps forming a partial oval shape. Within these linear features were two further linear features (032, Fill 093/094 and 033, Fill 095) which were aligned roughly north–south. These features were investigated with a series of slots. Feature 027 was 12m long, 0.20m–0.50m wide and up to 0.25m deep, and its single fill was silt sand (316, 317, 318 and 319, see Illus 20/G, H). The asymmetrical nature of the ditch profiles of 027



Illus 20 Sections through features 001, 002, 003, 016, 017, 027, 031, 032, 033, 037, 041, 175 and 225 (see Illus 2 for locations)

and the presence of possible post-holes (028, 029 and 030) within the fill indicated that the feature had contained timber uprights. These uprights were spaced about 0.5m apart. The fill contained two sherds of medieval pottery (SWGW, SF59 and SF67). There were also slight remains of an outer line of stake-holes to the south of 027, but these were not investigated further.

Linear Feature 031 was examined with a single slot and was found to be up to 0.4m wide and 0.11m deep. Its profile was irregular and affected by animal burrowing. The single fill (056) was dark brown silt sand. At right angles to Feature 031 was Linear Feature 032, which was a shallow U-shaped ditch with a fill of mid-brown silt (093, see Illus 20/I). Feature 033 was also shallow, with a single fill of mid- to dark brown silt (095) and also showed signs of animal burrowing (Illus 20/L). These ditch fills contained very few carbonised remains, with only traces of alder, birch, hazel, oak, rose family and willow charcoal present. There were also a few oat grains and fragments of hazel nutshell, which is similar to the mixed domestic assemblage seen in the other ditch fills. If 031 formed the northern side of Structure H, then the enclosure would have measured at least 12m long and about 11m wide.

4.6.2 Analysis of Structures G and H

These linear features have been tentatively interpreted as the remnants of an oval-shaped, timber-built, unroofed enclosure which has linear internal subdivisions. The southern gully contained post-holes and stake-holes, but the northern gully was plough-damaged and no evidence for posts survived, although it did have an irregular profile and may therefore have held posts. Internally the enclosure was divided by two linear features, neither of which had evidence for post-holes, but which are assumed to have supported a timber structure of some kind, perhaps animal pens. The similar alignment of Linear Feature 033 with Feature 214 of Structure G and their similarly shallow character might indicate that they could have been part of the same linear feature, although this was not noted in the field. In general the features grouped as Structure G were characterised by post-holes and short linear features while those of Structure H were linear features. Overall these features were more coherent

when grouped in this way, however, it is possible that some elements of Structures G and H were part of the same structure.

Unfortunately, there were no stratigraphical relationships between Structure H and Structures B and G, which it might have overlapped, nor with the ditch to the east (037). The presence of medieval pottery indicated that Structure G was medieval in date and so while it is broadly contemporary with the other structures on site, there is no evidence to indicate their chronological order.

The remains at Laigh Newton North-West also consisted of linear features including a palisaded enclosure and drainage ditches.

4.7 Palisaded enclosure (Ditches 003, 225 and 041)

4.7.1 Description

A polygonal shaped enclosure measuring about 22m across was formed of three segmented linear features (003, 225 and 041, see Illus 2). Linear Feature 003 was 0.70–1.20m wide and was between 0.1m and 0.3m deep. It was excavated with several slot trenches and the single fill, a dark brown silt, was given separate context numbers in each slot (258, 259, 290, 291, 292, 313, 314, 315, 348 and 349). Its profiles varied between a V-shape and an undulating U-shape (see Illus 20), which suggested that it could have supported upright timbers, although post-holes were not identified. The fill contained 32 sherds of medieval pottery, including Reduced Ware (SF66, 118, 119), SWGW (SF55, 109, 118, 119 and 128), SPMRW (SF128) and SMR (SF128). The ditch (003) also contained two bar hones (SF117a and b) and five stone roundel rough-outs (SF133a–e) (see Illus 22). The sample from Feature 003 produced a single fragment of alder charcoal, which was radiocarbon-dated to 1440 AD–1640 AD (2 sigma, SUERC-22425 (GU-18059)), which is broadly contemporary with the medieval pottery.

Linear Feature 225 was formed of two fairly straight sections which skirted the south-west side of Structure E. It was about 0.5m wide and had a maximum depth of only 0.12m. Its profile was generally an undulating U-shape (see Illus 20/S, T). It was filled with a mottled silty sand and excavated in a series of slots (341, 362, 366, 367, 368, and

370). A single sherd of medieval pottery (SWGW, SF111) was retrieved from Fill 341. The fill also contained a mixed charcoal assemblage of birch, heather-type, oak and willow charcoal, with hazel nutshell. After a break of about 1.8m (perhaps a result of plough damage) the line of Feature 225 continued as Linear Feature 041.

Feature 041 consisted of two lengths of ditch with a single fill which was excavated with a series of slots (082, 305, 306, 307, 308, 361, 364, 367, 368, 369 and 370). The ditch profiles varied from a V-shape to a shallow U-shape (see Illus 20/Q and 20/R). Fill 082 contained two sherds of medieval pottery (SMR, SF107) but no noticeable charcoal, and Fill 369 contained a sherd of SMR (SF76). The carbonised remains from 041 were similar to those from other ditches on the site, with alder, birch, hazel, oak and willow charcoal together with occasional fragments of hazel nutshell. A radiocarbon date of 410 BC–230 BC (2 sigma SUERC-22430, GU-18061), was retrieved from Fill 361 from alder charcoal *Alnus*, which is thought to be residual given the presence of medieval pottery. The palisade enclosure had a possible entrance in the north-east, which was utilised by a wide linear feature (002) and was partially blocked by Structure A.

As no post-holes were identified it is not clear whether the palisaded enclosure was formed of a series of posts spaced some distance apart supporting horizontal timbers, or whether the timbers formed a continuous stockade. The enclosure had three breaks. One break in the north-east was occupied by Structure A and Linear Feature 002 (see below). A second break in the west corresponded with the east end of the stone platform, Structure F. A third break in the south was the narrowest of the three. The east side of this break turned in slightly (see Illus 2).

4.7.2 Analysis

As with the rest of the site, the remains of this enclosure were plough-truncated and so what remains was very shallow and lacking in clear evidence for the nature of the enclosure structure. There was no evidence for post-holes and the scant charcoal from within the ditches was very mixed, possibly representing redeposited fuel as well as structural timbers. The enclosure ditch may have

held a relatively unsubstantial structure such as a wattle fence or perhaps even a hedge. The few sherds of pottery retrieved from the fills of the enclosure ditch were all medieval in date. This would suggest that the ditch was infilled not earlier than the 15th century. There is insufficient evidence to indicate whether this was a deliberate backfilling or gradual silting-up. It is highly likely that the Iron Age radiocarbon date is residual, although it supports the suggestion that there was prehistoric activity on this lower terrace prior to the medieval period.

The radiocarbon date and the pottery suggest that the palisade was in use during the late medieval period. The interior of the palisaded enclosure was occupied by a charcoal-burning kiln (Structure E) and a linear feature (002). The construction of the palisade pre-dated the laying of the metallised surface of Structure F, although the use of the two structures could have been contemporary. No features were identified within the eastern half of the enclosure, which may therefore have been an open space, or (considering the plough truncation) occupied by features with shallow foundations. All three breaks in the palisade are thought to be entrances. The break in the west was aligned with a working surface (Structure F) which could most easily have been accessed from the enclosure through this gap. It is likely that Structure F was constructed here because of the pre-existing entrance. In the north-east Linear Feature 002 respected the line of the palisade until it changed direction and passed through the gap just west of Structure A. In the south, the gap was considered by the excavator to be a result of plough truncation. However, the turning-in of the palisade line here might suggest that this was an entrance with a slightly offset doorway, rather than a result of damage to an otherwise continuous palisade line. The palisade was either allowed to rot away or was dismantled.

4.8 Interconnected linear features

To the east of the palisade enclosure there was a series of shallow interconnecting linear ditches and gullies which formed a roughly rectangular shape with almost indistinguishable fills consisting of red/brown clay silts with little charcoal. These were stratigraphically earlier than the palisade trench. There were two shallow, flat-bottomed gullies

aligned north–south. The eastern gully survived as Features 039 and 142 (see Illus 2). The western gully (at a distance of about 1m) survived as linear Features 040, 028 and 018. These gullies were linked at the south end by a curving ditch (023). These features were U-shaped in profile and were shallow, with depths generally between 0.04m and 0.12m although Feature 040 was up to 0.24m deep. The ditch (023) had an identical charcoal assemblage to Palisade Trench 041. A possible firepit (016, Fill 057) was a distinct oval-shaped feature, 0.15m deep, filled with pink sand (Illus 20/M). It did not produce any carbonised remains and so is probably just the base of a firepit, the upper part of which has been plough-truncated. Two possible post-holes lay about 1m to the west of Gully 040/018. Post-hole 022 was only 0.08m deep and Post-hole 019 was 0.12m deep.

There were three shallow remnants of gullies aligned east–west. In the north there was a remnant of Gully 164 in a line with two possible post-holes (158 and 017) and Firepit 016. The fill of Post-hole 017 (Fills 058 and 059, see Illus 20/J) contained a sherd of medieval pottery (SMR, SF33), heather-type charcoal, carbonised oat grains and hazel nutshell, which suggests that it was associated with domestic occupation. To the south of this Gully 088 may have curved southwards at its east end merging with Feature 040. In the south a gully (175/086) was cut across by Gullies 040, 023 and 039 and was therefore stratigraphically later. Gully 175/086 was U-shaped, up to 0.09m deep (see Illus 20/N) with signs of animal burrowing. These three east–west aligned ditches were, in turn, cut by Palisade Ditch 041 (see 4.7.1 above), which was therefore stratigraphically later. Gullies 175/086, 088 and 164 contained small quantities of alder, birch, heather-type, ash and willow together with a few grains of oats and barley and hazel nutshell.

The fill of Gully 175 contained two sherds of medieval pottery, SWGW and SMR (SF34 and 137). The fill of 023 (083) contained a mid or late Neolithic flint blade tool (SF035, CAT23, see Ballin-Smith in Toolis 2011).

The excavators tentatively suggested that three phases could be identified here, although the fills of these linear features were difficult to distinguish. The earliest feature was the north–south-aligned Feature 039/086/040/023, which produced a 15th-

century radiocarbon date as well as a Neolithic flint flake. The flake is relatively sharp, but is patinated. It is presumably residual, and again attests to the presence of prehistoric activity on the site prior to the medieval period.

Feature 039/040/023 was cut by the east–west-aligned Feature 175/086, which was in turn cut by Palisade Trench 041.

The dating evidence from these linear features indicates that they were broadly late medieval. A primary fill of Ditch 040 was a discrete patch of hazel charcoal (*Corylus*), which produced a radiocarbon date of 1400 AD–1450 AD (2 sigma, SUERC-22431 (GU-18062)). Another fill of Ditch 040 (071) contained two sherds of medieval pottery (SMR, from the sample) and the fill of Gully 175/086 contained two sherds of medieval pottery, SWGW and SMR (SF34 and 137). The fill of 023 (083) contained a prehistoric flint blade tool (SF035, CAT23), which is presumably residual. These features were interpreted in the field as drainage ditches, but the presence of Post-holes 158, 017, 022 and 019 suggests that at least the northern gully might have been structural. They could perhaps represent wattle-walled stock enclosures. The presence of Post-holes 019 and 022 suggests that this area may have been roofed.

4.8.1 Linear Feature 002

A wide, curving linear feature (002) followed the inner line of the palisade (003) at a distance of *c* 1m (see Illus 2). At the north end the feature turned northwards through the palisade entrance and away from Structure A. At the south end the ditch widened and merged into the fill of the hollow beside Structure E. A possible insubstantial extension to this ditch continued to follow Ditch 003 south-westwards, but this was not investigated further. Linear Feature 002 was excavated with a series of slots and was found to have a wide U-shaped profile up to 0.47m deep (see Illus 20/A, B). The basal fill (044/256/351/418) was red-brown clay silt which contained 15 sherds of medieval pottery including SMR (SF93), SWGW (SF99, 98, 95, 97 and one from the sample) and Reduced Ware (SF101 and 83). The fill also contained a hone/hammer stone (SF40) and a chunk of flint (SF94, not illustrated). A radiocarbon date of 1040 BC–840 BC (2 sigma)

was returned from carbonised oak (*Salix*) from the basal Fill 418 (SUERC-22429 (GU-18060)). This charcoal was interpreted as residual because of the presence of medieval pottery. The basal fill contained a very mixed charcoal assemblage of alder, birch, hazel, heather-type, rowan-type, oak and willow, a single oat grain and fragment of hazel nutshell, and much of this should also be considered residual. An upper fill of brown clay silt (421) was identified in only two of the slots (see slot 4, Illus 20/B). This upper fill contained no finds.

Linear Feature 002 was back-filled with material which probably contained hearth material from domestic occupation. The diversity of the charcoal types present suggests that there was a random collection of domestic fuel from a local woodland source. The presence of the medieval pottery strongly suggests that it was not infilled until after the 15th century and so was broadly contemporary with the medieval structures. This suggests that the feature was filled with occupation/midden material which was probably used to fill the feature after the site went out of use. Linear Feature 002 was interpreted in the field as a ditch, dug to remove surface water from the kiln area and dispose of it downhill to the north. The wet nature of the site at the time of the excavation would support this interpretation. However, another possibility is that it was a pathway, worn into the old ground surface through continuous use. This interpretation is supported by the route it takes from the palisade entrance to Structure E with a side route towards the working surface (Structure F).

4.9 Ditch 037/034/024 and Pit 001

In the south-east corner of the site there were segments of a curving ditch (037), which continued in alignment as shallow scoops (034 and 024) and a pit (001). Ditch 037 was excavated with a series of slots and was found to be up to 2.2m wide and 0.4m deep. The profile was generally U-shaped (see Illus 20/C, D). The fill of Ditch 037 was coarse sand (038/422), which contained a sherd of medieval pottery (SWGW, SF100) and fragments of bone (SF27). There were only traces of charcoal, and the assemblage was similar to that from the fill of Ditch 002. A radiocarbon date of 3660 BC–3520 BC (2 sigma) was returned from oak charcoal (*Salix*) from

the Fill 422 (SUERC-22424 (GU-18058)), which is residual as medieval pottery was also present. Ditch 037 terminated with an oval-shaped scoop (034) 0.2m deep, at the northern end.

The fill of the shallow scoop (024) was silt sand (053) which also contained a sherd of medieval pottery (SWGW, SF24), some bone fragments (SF6) and two chert chunks (SF11). A modern bottle stopper (SF134) also found within 053 is presumably intrusive, probably through animal burrowing. Fill 024 also contained only traces of charcoal similar to the fill of Ditch 037. A large pit (001) with a maximum depth of 0.35m continued the line of the Ditch 024 towards the west (see Illus 20/E). Its fill, brown sandy clay (072), contained three sherds of medieval pottery (SWGW, SF155 and 157) and a mixed charcoal assemblage containing significant amounts of alder and hazel, with lesser amounts of oak and willow. The homogeneity of the fill and the nature of the charcoal suggests that this was dumped domestic hearth waste. Ditch 037/034/024 may have been a ditch dug in the medieval period in order to provide additional drainage to the eastern part of the site. It is similar in character to Ditch 002 and may have been dug at the same time.

The excavations have revealed several oval-shaped, turf and timber structures with evidence for activities such as textile weaving and perhaps charcoal production. Carbonised cereals were present, but in small numbers. The material culture was not rich and the metalwork was unidentifiable, although the presence of stone hones indicates the use of metal knives. Wheel-thrown pottery was in use and has suggested a broadly late medieval date for the occupation of this settlement. The glazed SWGW sherds were generally badly abraded, which was thought to be a result of a chemical reaction in the soil, but the unglazed sherds were generally unabraded.

The prehistoric material consists of six of the ten radiocarbon dates: five Neolithic pottery sherds and a single Neolithic flint. None of this prehistoric material is associated unambiguously with any of the archaeological features, as small amounts of medieval pottery were also present either within the same contexts or sealed beneath them. Therefore, this prehistoric material is interpreted as being representative of a prehistoric presence on the site prior to the medieval period, and so residual.

5. HISTORIC DOCUMENTS

The site lies in the parish of Galston, which is bounded on the north by the River Irvine. Galston parish is partly in Kyle district, which was one of the three Ayrshire sherriffdoms in the medieval period, with the other districts of Cunningham lying to the north and Carrick to the south. Walter FitzAlan was created High Steward of Scotland by David I (1124–53) and for his services to the Crown was granted the northern part of Kyle in Ayrshire, which became known as Kyle Stewart. The southern part of Kyle, ‘Kings Kyle’, remained in the king’s hands (Barrow 1980: 51 and 62). This establishment of an Anglo-Norman feudal elite encouraged subsequent settlement of lesser lords and tenants into the area from England, the Welsh Marches and the continent (ibid: 64–65). This influx of Anglo-Normans into this previously Gaelic-speaking area is attested by placenames such as Galston, Perceton and Riccarton, which are perhaps derived from a personal name and ‘ton’ or ‘town’ (ibid: 40).

The placename Newton is fairly common in the vicinity as there is one also just outside Ayr and another example in Loudoun parish. In order to confirm that the Newton referred to in the historical records is the one in Galston parish, an attempt was made to identify the other sites mentioned as belonging to Lockhart in Galston parish in the late 14th century. It was found that only some of the lands of Newtown, Achinbert, Maxwoddis, Gallartlandis and Colehuche which are included in the lands of Bar in 1440/41 are also included in the lands of Bar in 1553, namely Auchinbart and Maxwode (RPC Vol. IV, No. 2184). So far only Maxwode can be identified in the contemporary landscape as ‘Meikle Maxwood’ and ‘Little Maxwood’, which both appear as placenames west of Galston village on the first edition OS map. This would support the location of Newton as also being in the parish of Galston.

The records show that a settlement of Newtown was in the hands of the Lockhart family from the late 14th century. Between 1390 and 1400 Andrew Lockhart received a charter of the lands of Bar, Gallartlands, Makiswodeis and Newtown in the barony of Walters Kyll from Robert III (RMS/i, App 2, #1782; Paterson 1863: 511). In 1440/41 John Lokkart de le Barr granted his son Robert Lokkart

the lands of Barr, Newtown, Achinbert, Maxwoddis, Gallartlandis and Colehuche all in the barony of ‘Kyle-Senescalli’ (RMS/ii, #258). It was probably Robert who built the tower house, known as Barr Castle, in the village of Galston in the 15th century (NS53NW1). When Robert died the lands of Bar came into the hands of the Crown and after 20 years were sold to Robert Colvie in 1505/06 (RMS/ii, #2919). The lands were back in the Lockhart family’s hands by 1507 when there was a grant of the lands of Bar *cum turre* (with tower) to John Lokart, the grandson of Robert (RMS/ii, #3092).

The Lockharts were Protestants and keen supporters of John Knox and allies of the Protestant Campbells. This contributed to a feud during the 16th century between the Campbells of Loudoun and the Catholic Kennedies of Carrick. Following the murder of the Earl of Cassilis, the Kennedies sacked Loudoun Castle and burned Loudoun Kirk (Paterson 1866: 541; Robertson 1889: 83–93).

By 1548 there is historical evidence that the lands of Newton had been split, probably to accommodate a rising population. The three pound land of ‘Nethir Newtown’ and the three pound land of ‘Owir Newtown’ are mentioned in the Register of the Privy Seal of Scotland as being within the lands of Barr (RPC/iv, # 2184, dated 1553). As only O[wir] Newton was depicted by Pont in the late 16th century this might suggest that while the two properties were of the same value in the mid 16th century, one may have gained a higher status by the end of the century.

In the 17th century the fortunes of the Lockharts of Bar were in decline and by about 1613 their lands had passed to another branch of the family, the Lockharts of Boghall. The farm of Newton was still part of the lands of Bar and in 1655 a charter of George Rosse of Galstone mentions a ‘William Andersone yr., portioner of Newton’. The Lockharts were involved in the struggle of the Covenanters and they did not prosper. In about 1670, Barr Castle and its lands were bought by the Campbells of Cessnock, who were already important landowners in the Galston parish (residing at Cessnock Castle). After the Restoration, the Campbells fell from royal favour and in 1683 Sir Hugh and George Campbell were imprisoned and the lands of Cessnock, Galstoun and Barr were annexed to the Crown. In 1686 the lands were granted to John

Drummond, Viscount Melfort, however in 1691, after the accession of William of Orange, the lands were restored to the Campbells. The estate was later inherited by Alexander Hume, who became the Earl of Marchmont (Paterson 1863: 511–23).

The 1691 Hearth Tax records for the parish of Galston provide further information on the subdivision and occupation of the Newtown farm. There is reference to ‘Cessnock vassels’ in ‘Nethernewtown’ who are named as James Finlay (two hearths) and William Findlay (one hearth). There were also James Morison in Newtown (three hearths) and James Broun in Gourbrahead (three hearths), both of which then belonged to the Bankhead estate (Urquhart & Close 1998: 46–7).

By 1727 the List of Heritors included ‘Alexander Morison of Cowrsbraehead’ (Paterson 1863: 530n) with no mention of Newtown, which suggests that its occupants were not of sufficient status to be heritors. Miss Scot of Scotstarvit bought the lands of Cessnock (among others) in 1787 and became the most significant landowner in the parish (Sinclair 1791–99: 76). By this time about 25% of the population in the parish lived in the village of Galston and about 100 farmers practised a mixed economy with lands divided between arable, pasture and hay. Some specialised sheep farms had been established rearing black-faced sheep (ibid: 74–5). The *Old Statistical Account* also remarks that up to about forty or fifty years before that time, the principle fuel in the parish was peat from Galston muir (ibid: 77–8). By the time of the second *New Statistical Account* (1834–45) there had been some limited agricultural improvements, including the planting of trees, drainage and the improvement of fences, although a traditional system of crop rotation followed by several years of fallow was still practised (NSA 1834–45: 186–90).

6. HISTORIC MAPS

Pont’s 16th-century manuscript map of this part of Ayrshire (which is usually the earliest useful map of the 16th-century settlements) unfortunately does not survive. However, Blaeu’s *Atlas of Scotland* was based on Pont’s map and does depict what are probably the most significant settlements in the area during the late 16th century (Blaeu 1654).

The Atlas depicts Loudoun Hill as a significant geological feature, to the west of which is ‘Litol Loudoun hil’ and ‘Hall’ which relate to the vicinity of Loudoun Castle. To the south of the River Irvine the settlements of ‘Allantoun’ and ‘O. Neutoun’ are depicted. This is the earliest map reference to a site called Over Newtown. Herman Moll’s map of Ayrshire (published in 1745) depicts ‘Loudon H[ill]’ and ‘Loudon C[astle]’. The boundary of Cunningham and Kyle is depicted along the River Irvine south of Loudoun Hill. To the south of the river the only settlements depicted are ‘Gaistoun’ (Galston), and ‘Achinrugglan’ (location unknown).

Roy’s military map of Scotland, dated to the mid 18th century, depicts ‘Loudon Hill’ and ‘Allandon’ to the north of the river. The road from Ayr to Hamilton and Edinburgh is shown meandering in a general east–west direction, on the south side of the River Irvine. Between the river and the road are extensive areas of strip fields along with the two settlements of ‘Cotthill’, ‘Gousebraehead’ and ‘Allandon Mill’. To the south of ‘Cotthill’ is a settlement called ‘high Newton’, which is located on hill ground and is not immediately surrounded by strip fields. There is no sign of a second settlement at Newton. John Thomson’s *Atlas of Scotland* (1832) depicts the settlements of ‘Gowersbraehead’ and in the vicinity are ‘High Newton’, ‘Over Newton’ and (for the first time) ‘Laigh Newton’, all as individual settlements. The route of the main road has been shifted northwards nearer the river, probably utilising the line of the old Roman road.

The first edition OS map of the mid 19th century is the first accurate survey of the area. From this map the location of the excavation site can be seen to lie in open ground between the farms of Laigh Newton and Gowersbraehead, with High Newton further south and a third farm, Over Newton, to the south-east. The farm of Allanton is depicted further north on the south side of the road.

Settlement splitting and settlement shift are both processes which were in action by the 16th century throughout Scotland and both can be detected in this comparison of the historic maps. Blaeu’s Atlas depicts O. Newton and the use of the O for ‘Over’ would suggest that there were other Newtons in the vicinity, although not significant enough to be worthy of depiction. High Newton first appears on maps by the mid 18th century and Laigh Newton

by the early 19th century. While taking into consideration that the location of the settlements was not accurately surveyed until the 19th century, the relationship of the settlements to each other and to the geological features such as hills and rivers, as depicted on the historic maps, would suggest that there was significant shift in settlement location since the 16th century. It is possible to suggest that the excavated medieval site (occupied in the 14th–15th centuries) was located within the bounds of a late-medieval farm of ‘Neutoun’ which had split into at least two settlements. Its abandonment may be related to a change of ownership in the late 15th century when Robert Lokkart died and the lands of Bar came into the hands of the Crown for twenty years before being sold again. Other farm names, including Gallartlandis and Colehuche, also disappear about the same time. It is not known when the land became part of the Allanton farm.

7. SPECIALIST REPORTS

7.1 Botanical remains

Susan Ramsay

The results of the botanical report have been incorporated into the above text. The full report is in the site archive. See also Appendices 1 to 5.

7.1.1 Discussion

The majority of the carbonised material recovered from this area of the site was probably domestic hearth waste. There must still have been significant areas of local woodland available for the collection of fuel, as a diverse range of wood types are recorded from these features. However, the diversity of type might also suggest that these woodlands had significant areas of scrub woodland rather than mature woodland with large trees present. This is reflected in the scarcity of oak from the medieval features, suggesting that this tree-type was probably in short supply and kept for construction purposes rather than simply being burned for fuel.

Evidence for cereal processing or consumption was scarce. Oats and barley were both recorded within this area, but only at trace levels. The possible corn-drying kiln, Structure E, produced no carbonised cereal grain (see Appendix 3). The

main charcoal type found within Structure E was alder, which is a favoured type for the production of charcoal for fuel. This might suggest that, rather than alder wood being burnt for fuel, the alder might have been converted to charcoal first. Charcoal-burning generally results in a hotter temperature than green wood and so is often used for industrial processes rather than those associated with domestic occupation. Little evidence for other food plant remains was present on the site. Only hazel nutshell fragments were recorded, but these were generally at low levels and may simply be from hazelnuts that were accidentally burned along with hazel branches used for fuel.

Structures A and B produced similar carbonised remains, with mixed charcoal assemblages dominating from the majority of features (see Appendices 1 and 2). These remains are thought to represent domestic hearth waste rather than structural remains. There is little evidence in this area for the burning of structural timbers, although Stake-hole 438 in Structure B did produce a quantity of oak charcoal. Of note was the relative abundance of burnt turf/peat within these structures, which might suggest that a limited amount of oak timber was used for the superstructure of these buildings, but that the walls were constructed from cut turves. Although the burnt turf remains may have come from turf walls of the structures if they were destroyed by fire, they could also be the remains of turves used for fuel. Turves may be used when a slow-burning fire is required. This may be for drying cereals or perhaps meat, or to keep a fire lit overnight. Heather stems found in the same contexts as the burnt turf might indicate that the turves were cut from heathland rather than grassland, although heather might also have been used for flooring, bedding or even roofing material.

The ditches in the areas around and between the above medieval features were also thought to be medieval in date as a result of the pottery fragments that were recovered from their fills. The carbonised remains are consistent with this date, as oats seem to be the commonest cereal type present, although never at anything above trace levels. The charcoal assemblages recovered from the fills of the ditches show a remarkable consistency of charcoal types, suggesting they had resulted from the dumping of

domestic hearth waste generated from fuel collected within the local area. The assemblages are similar to those recovered from the structures and probably result from the same periods of occupation. Only Ditches 027 and 164 contained evidence for post-holes, but the fills of these produced no carbonised remains of the original posts.

By the medieval period there is very little evidence for the use of oak for fuel or construction, suggesting that it had become a rare commodity in the local woodlands. Construction probably relied on a minimal timber superstructure, with turves forming the main walling material, possibly with heather as thatching on the roofs. The wood types used for fuel became more diverse and included scrub woodland types and possibly heathy turves. Although evidence for agriculture is minimal, there is an indication that oats had begun to succeed barley as the main crop in the area. This change is seen over much of Scotland during the early historic/medieval periods (Dickson & Dickson 2000).

7.2 Medieval pottery

Bob Will

7.2.1 Introduction

The assemblage recovered from all stages of the evaluation and excavation comprises 342 sherds (5268g) of late medieval to modern pottery, although one possible Roman sherd was also recovered. The main assemblage dates to the late 14th or 15th centuries, and all the sherds were probably made locally. The importance of this assemblage is that there are very few published excavations from this area. The closest parallels to the pottery from Laigh Newton are probably those of Lesmahagow Priory (Wordsworth & Gordon 1982) and Lanark (Wordsworth & McGavin 1985) to the east and Dundonald Castle (Ewart & Pringle 2004) to the west, although the rural settlement site of Perceton (Stronach 2004) near Irvine is probably the most comparable. There have been other excavations largely unpublished from the general vicinity, e.g. Ayr (Franklin & Hall forthcoming).

All the sherds retrieved from the excavation were individually examined and weighed with diagnostic features such as rims, handles and bases, and differences in fabric and decoration recorded. The breakdown of sherd numbers and fabrics present are

summarised in Table 2. The pottery was catalogued according to guidelines and standards produced by the Medieval Pottery Research Group (MPRG 1998 and 2001).

7.2.1 Possible Roman piece

An out-turned rim in a badly abraded red fabric with large white inclusions was recovered from hillwash during the evaluation (Trench 39, Context 003). The sherd has a polished or burnished interior and may be from a large bowl.

7.2.2 The medieval assemblage

Scottish White Gritty Ware (SWGW)

One hundred and seventy-eight sherds of Scottish White Gritty Ware were recovered from the excavations and represent mainly jugs, although several sherds may be from cooking or storage jars (e.g. Illus 21, No. 1). They form the largest category of pottery from the excavations. White Gritty Wares occur in large quantities mainly in the east of Scotland but increasingly throughout the country, including the west, with large assemblages recovered from Ayr (Franklin & Hall forthcoming). At present only one kiln site has been identified, at Colstoun near Haddington, but recent analysis of white gritty fabrics suggest that there were a number of different kilns throughout the country producing a range of similar vessels in visually similar fabrics (Jones et al 2003). The earliest dated group of White Gritty Wares were recovered from the excavations at Kelso Abbey (Tabraham 1980) where a pit group was dated to the late 12th century, but similar fabrics carry through into the late 15th and early 16th centuries. The earlier vessels tend to be thin-walled straight-sided cooking pots with flat bases, while the later material is much thicker and heavier, with a wider range of vessels, particularly jugs.

Identification of the Laigh Newton sherds as Scottish White Gritty Ware is problematic, as most of the sherds are reduced to grey or black on the interior or core and often the surfaces are obscured by a pink or reddish heat-skin or glaze. If a white margin was visible below the glaze, the sherds were catalogued as White Gritty Ware. However, the surfaces of many of the sherds are badly abraded, which can cause problems of identification.

Table 2: Pottery numbers by fabric and element

Fabric	Total	Rims	Bases	Handles	Body sherd	Weight (g)
Roman?	1	1				14
Modern white earthenware	11	3	3		5	198
Modern red earthenware	1				1	17
Modern tile	1	1				58
Medieval Reduced Gritty Ware fabrics	21		2		19	291
Medieval Scottish White Gritty Ware (SWGW)	180	9	14	5	152	2433
Scottish Medieval Redwares (SMR)	101	5	13	8	75	1503
Scottish Post-medieval Reduced (SPMRW)	21		2	1	18	558
Scottish Post-medieval Oxidised (SPMOW)	6	2	2	1	1	195
<i>Total sherds</i>	<i>343</i>	<i>21</i>	<i>36</i>	<i>15</i>	<i>271</i>	<i>5267</i>

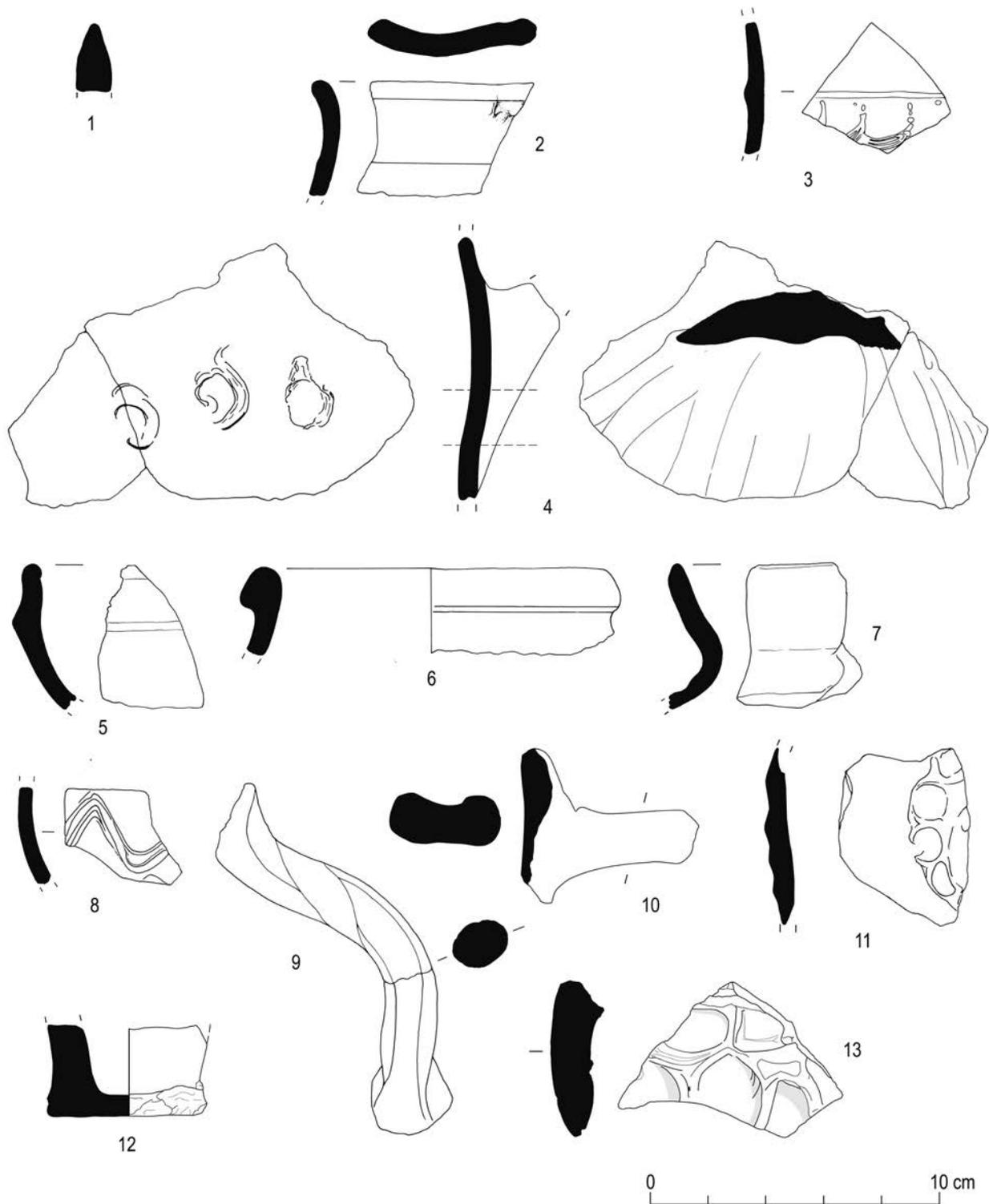
There was very little decoration on the sherds and some were quite badly abraded and had split, two sherds were decorated, both from a late medieval context (Context 444). One sherd in a reduced white gritty fabric (Illus 21, No. 11) has part of an applied strip with thumbled decoration that forms part of a circular border for a rosette or seal. Unfortunately, the surface of the sherd is abraded and there is no trace of glaze surviving; this type of decoration is common in the later 13th/14th century, particularly in Yorkshire. The other sherd, in a thick reduced fabric (Illus 21, No. 13), has applied strip decoration and thumbing to form horizontal and vertical bands; these are much thicker and cruder than No. 11. Sherds with a similar style of decoration were recovered from Bothwell Castle and probably date to the 15th century or even later (Cruden 1952). Nos 3 and 8 (Illus 21) are body sherds with combed decoration.

The complete base of a small pot was recovered from the same context (Illus 21, No. 12). The pot is a reduced white gritty fabric with quite thick walls and green glaze, unusually there is damage all the way round the base that suggests that a possible thumbled decoration has been deliberately removed. The scar from the damage is undulating and slightly

angular, which may suggest a small frilled and thumbled base similar to 15th-century Rhenish stonewares. Examples of frilled bases copying these imports have been found in local Scottish fabrics.

Another interesting sherd from a technological point of view is a large body sherd with a reduced core and white margins under its exterior green glaze, along with flashes of red/orange areas (Evaluation Context 014) which joins with SF121, a rim sherd (Illus 21, Nos 4 and 6) from the same context. On the exterior surface it has smoothed-out terminals for the attachment of a large grooved strap handle, matched on the interior by three clay pegs that have been pushed through the wall of the vessel to attach the handle. The interior is abraded but traces of green glaze remain.

There was also a large crude base sherd (Context 120, SF136, diameter 100mm) with a large inclusion of quartz 11mm by 8mm in size that protruded through the fabric. There were other holes/depressions in the fabric surface that could indicate where other similar inclusions had fallen out, and there was also evidence of air bubbles within the fabric. There are possible marks from knife-trimming on the exterior.



Illus 21 Medieval pottery (Scottish White Gritty Wares Nos 1, 3, 4, 6, 8, 11–13; Scottish Medieval Redwares Nos 2 and 9; Reduced Gritty Wares Nos 5 and 10; Scottish Post-medieval Oxidised Wares No. 7)

Reduced Gritty Wares

This category is used to describe sherds that are thin-walled with a slightly gritty fabric reduced to black, usually with an all-over dark-green or brown glaze. In addition, these sherds often have a cordon on the shoulder or neck, and wavy decoration. Similar material was recovered from Linlithgow Palace, where it comprised approximately 75% of the total assemblage. At Dundonald Castle this type of pottery has been dated to the 14th or 15th centuries (Caldwell 2004). Illustrated are the rim of a bowl and the rim of a jug with a strap handle (Illus 21, Nos 5 and 10).

Scottish Medieval Redwares (SMR)

The term 'Scottish Medieval Redware' is a general name to describe a group of similar fabrics found throughout Scotland. These wares form the second-largest group of sherds at Laigh Newton and comprise mainly jugs and bowls. The jugs have pulled spouts (Illus 21, No. 2) and grooved strap handles, although rod handles were also recovered, along with an unusual handle made by twisting two strips of clay together. Some of the jugs are decorated with thumbing along the base, although most sherds are undecorated. Several sherds from bowls were recovered and are identified by glaze on the interior as well as exterior surfaces. One base sherd was also recovered, with glaze on the interior. The assemblage contains a mixture of fabrics; some are quite thin-walled and well made while others are thicker. Similarly, some sherds have been highly fired while others are soft and friable, a few are abraded and worn. The largest assemblages of Scottish Medieval Redwares have been recovered from excavations in Aberdeen, Perth and other east coast burghs, which, along with kiln sites at Rattray near Peterhead and Stenhouse near Falkirk, have led to the use of the fabric name East Coast Redware (Hall 1996). Generally these fabrics date from the 13th to 15th centuries.

There are two sherds that join, SF145 (u/s) and SF93 (Context 418) (Illus 21, No. 9), from a handle formed by twisting two strips of clay together. Although an unusual find, there are parallels from the kiln site at Stenhouse (Hall & Hunter 2001), where several twisted handles were recovered. In addition, in that report there is an illustration of a highly decorated jug from Linlithgow Palace that

has a face mask with a beard made from two twisted strips of clay. The Stenhouse material dates from the late 14th century and the 15th century (Hall 2009). A number of reduced greyware sherds with oxidised orange surfaces have been recovered from Dundonald Castle where a date range 'mostly in the 13th and 14th centuries' was suggested (Caldwell 2004). These may be the closest parallels to the Laigh Newton sherds but as there were a number of cooking pots in that assemblage the Laigh Newton material is probably later.

The post-medieval assemblage

Twenty-seven sherds dating to the post-medieval period were recovered and these consist of Scottish post-medieval reduced and oxidised wares. They represent mainly jugs although an everted rim from a vessel shaped like a chamber pot was recovered in an oxidised fabric (Illus 21, No. 7). These fabric types were first classified at Stirling Castle (Haggarty 1980) and the pottery dates from the late 15th to early 18th centuries. The only published kiln site for these wares in Scotland is at Throsk on the banks of the Forth near Stirling (Caldwell & Dean 1992), although recent work in the Gallowgate in Glasgow has identified the location of a kiln site there that had previously only been known from historical records (Firat Archaeological Services 2003).

Scottish Post-medieval Reduced Wares (SPMRW) are thick-walled, and the fabric is usually heavily reduced to grey or black with few inclusions and tends to be covered with a thick dark green glaze. The oxidised wares are very similar except they are reddish orange or more commonly partially oxidised or partially reduced; these variations are the result of firing conditions in the kiln. The best range of vessels so far recovered comes from Throsk and Stirling Castle where platters, bowls, skillets, fish dishes and money boxes or *pirlie pigs* as well as the more common jugs have been recovered. The Laigh Newton sherds are similar to the Medieval Reduced Wares and probably represent a transitional phase between the main medieval and post-medieval pottery traditions. The distribution of these fabrics was quite limited and they tend to have been recovered from the ditch (Context 003), the debris beside Structure A (Context 014) or to be unstratified.

Modern pottery

Thirteen sherds of modern ceramics were recovered from the excavation, which includes eleven sherds of white earthenware. There were two large fragments from a ribbon plate and a saucer from Evaluation Trench 4 (Context 402) while the remaining sherds were all quite small, with no decoration. One unstratified sherd was decorated with a blue band. Amongst the remaining white earthenware sherds was one sherd of possible ‘pearlware’ (Evaluation Trench 39, Context 39001, SF39011). This type of pottery has a slightly bluish tinge to the glaze and begins slightly earlier than the main factory white earthenwares, although pearlware continues to be made alongside the white earthenwares. Another sherd has a green transfer-printed design and part of a maker’s mark on the base (Context 010, SF16), unfortunately not enough to determine which factory it was from. There was also a fragment of a modern moulded dark red glazed tile, possibly from a fireplace.

Only one red earthenware sherd was recovered (Evaluation Trench 49, 49001, SF49001), which came from a large slip-lined dairy bowl. The exterior was unglazed while the interior of the bowl had a white slip under the clear glaze, with spots of decoration in green and a dark yellow/brown. This type of vessel is very common although the decoration is less so.

7.2.3 Conclusion

Although the number of comparative sites in the area is limited, in general the Laigh Newton assemblage fits nicely with other late medieval pottery assemblages from the area (Perceton, Lesmahagow Priory and Dundonald Castle). The same range of fabrics and vessels are present at all these sites and are presumably of local origin. There were no

imported wares from England or the Continent, which again fits the general trend for this area as none were recovered from Dundonald Castle and only two sherds were recovered from Lesmahagow. There are some unglazed Scottish White Gritty Ware sherds which may be late 13th/14th century but the white gritty sherds are mainly cruder, with thick walls, reduced fabrics and green glaze which would indicate a later date in the late 14th/15th century for the main assemblage. Interestingly, Laigh Newton, a domestic rural settlement site, shares the same ceramic assemblage as a castle and a priory nearby, suggesting that the sources of pottery vessels available in this area were limited.

7.3 Worked stone

Beverley Ballin-Smith

There were fourteen worked stone artefacts from Laigh Newton North-West which are likely to be medieval or later in date. The assemblage weighs a total of 2.57kg. The artefacts were assessed for their geology and type, and in addition they were weighed, their attributes examined and a catalogue prepared (see Appendix 6).

7.3.1 Results

Only four artefact types were recovered (see Table 3) but it is worth noting that the majority of artefacts are roundels or roundel roughouts (Illus 22). As expected from a rural settlement, hones are the next most numerous, followed by two perforated whorls (Illus 23).

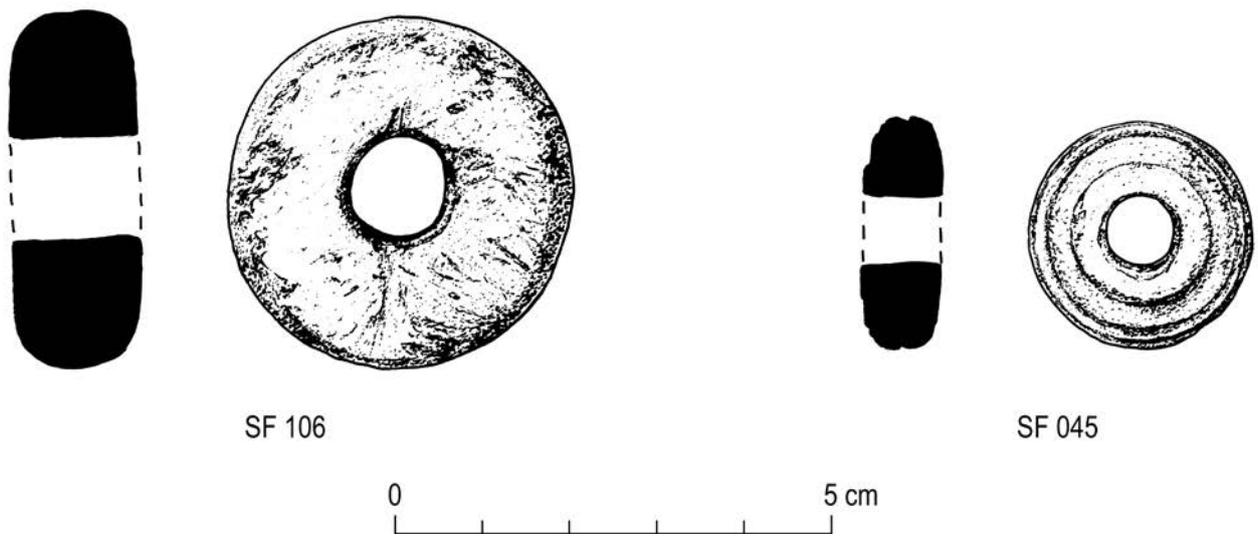
All the stones are locally derived from the subsoil, found in the topsoil after ploughing, or from the sides of the River Irvine in the bottom of the valley, and most of them are rounded. This indicates an expedient use of local resources. The rock types used for artefacts include quartz, quartzite,

Table 3 Coarse stone tools by type

Description	No.	SF No.
Coated pebble	1	033
Perforated whorls	2	045, 106
Roundel/roundel rough-outs	8	049, 069, 133a, b, c, d, e, 162
Hones/whetstones	4	040, 117a, 117b, 163
<i>Total</i>	<i>15</i>	



Illus 22 Group of roundel roughouts



Illus 23 Spindle whorls SFs 046 and 106

various sandstones and meta-sedimentary rocks. Generally the stones show limited alteration in their manufacture to artefacts. Techniques used include splitting pebbles by hitting them; knocking the ends off longer, thinner stones to make bars; rough chipping around the edges or circumferences of round and flat stones; and drilling to produce holes. The perforated whorl 045 was lathe turned.

The manufacturing techniques are crude, with chipping the result of hammering the stone. None of the stones, apart from the two perforated whorls, show any evidence of being finished or of much wear. The hones/whetstones were made on very fine-grained stones and the main alteration of these stones has been the wear produced on a side or face through use in sharpening iron tools. SF163 is a small whetstone, which has evidence of extended wear, and could have been kept in a pocket for sharpening small knives. The other hones are larger stones used for agricultural or industrial purposes.

The stone roundels or roundel roughouts were crudely manufactured and were not finished. Their diameters vary between 57mm and 110mm. Their function is open to interpretation, with rough pot lids or gaming pieces being the most logical suggestion.

The drilled hole in whorl SF106 is typical of the manufacture of spindle whorls from the prehistoric period to modern times. The artefact is undecorated and is not particularly characteristic of any specific period or date even though its central perforation has elliptical wear. SF45 is the most complex piece found on the excavations. It was finely produced on a lathe with a thin channel around its circumference to hold a fine thread. Its sides are stepped. Both these perforated whorls were found in the building debris over Structure B, which indicates their likely domestic use. SF45 could have been used on a spinning wheel or some other mechanical device.

7.3.2 Provenance

The finds from Laigh Newton North-West came from five separate contexts. Both the perforated whorls are associated with the final phase of activity of Structure B (Context 010). The two hones and five roundel roughouts, SF133a–e, were located in the fill of the outer ditch (Context 003) in the

north-west part of the site. The hammerstone SF40 came from the fill of a ditch (Context 002). A third hone SF163 and two roundel/roundel rough-outs (SF69 and SF162) were closely associated with Structure E (Context 444) and the revetment wall to its immediate south (Context 280), in the western part of the site. One additional roundel rough-out was unstratified.

7.3.3 Comparisons and conclusions

In spite of the paucity of stone finds from this area, the rarity of this site makes them important simply because there is so little information on rural life from the medieval period in mainland Scotland. There are few excavated sites for comparison and even fewer of these have produced comparative finds (Barclay 2001; Pollock 1985; Stronach 2004; Yeoman 1991). In remoter areas, such as Shetland, the occasional medieval farmstead has been excavated in recent years (Crawford & Ballin-Smith 1999, and Owen & Lowe 1999) where the high numbers of well-made locally and imported stone tools contrasts markedly with the settlement at Laigh Newton.

Numerous urban medieval excavations have taken place across Scotland in Ayr, Perth, Dundee, Glasgow, Aberdeen, Dumbarton and St Andrews, but although their evidence may provide some additional comparative information, the differences between urban and rural life may contrast strongly.

An archaeological intervention in the drain at Paisley Abbey produced artefacts from its fill that are very similar to those from Laigh Newton. Several roughly made slate discs, 30–110mm in diameter, were found (Johnston & Driscoll 1991: 29 and Figure 18). These were considered to be either playing pieces or lids for pottery vessels. A spindle whorl (RF 710, *ibid*, Figure 19) was also similar to SF106 from Laigh Newton. These are medieval finds and associated with pottery vessels of that period.

The finds from Laigh Newton can be described as mundane: ordinary tools made from local stone that everyone would have had access to during the medieval period. There are no imported stone artefacts. The roundel roughouts are, however, more unusual, as presently it is uncertain what exactly the finished artefact would have been. It is

possible that they were used in the raw state and finishing was not part of the design. They were, however, made at the site. The lack of decoration and finishing of these artefacts suggests that the use of them was purely expedient and somewhat ad hoc.

8. DISCUSSION

Heather F. James

Four slightly sunken, possibly oval or rectilinear-shaped structures (A, B, E and F) were spread across a terrace below the prehistoric site of Laigh Newton West (Toolis 2011). These structures were associated with a palisaded enclosure, a large outer ditch and fragmentary remains of other timber structures and were sealed by a deep deposit of post-medieval plough soil (0.4m to 1.5m). Beneath the ploughsoil the remains were found to have been significantly plough-truncated.

8.1 Medieval structures

The four structures (A, B, E and F) represented the remains of medieval occupation as shown by the presence of hearths, working surfaces and flues. Within the Scottish Lowlands, the remains of medieval rural settlement are still relatively rare and generally show a great variety of construction methods (see Springwood Park, Eldbottle and Pitcarmick (Dixon 1998, Hindmarch & Oram 2012; Carver et al 2012)). None of these examples are directly comparable with the short, sunken structures at Laigh Newton, which perhaps reflects their varied chronology, distinct regional building styles, quality of resources and function.

The presence of a charcoal-filled pit within the width of the wall/bench in Structure B is paralleled at the Early Historic site of Kennox, South Lanarkshire (Johnson 2005), which suggests that the practice of placing charcoal in a pit near to a hearth was a long-lived and widespread tradition. This pit may have been used for the disposal of the fire ashes, or perhaps it acted as a slow-cooker.

Structure E was interpreted as a possible charcoal kiln because of the presence of alder charcoal and the lack of cereal grain. Its D-shape is not typical of a kiln, but may be the result of plough damage or later occupation.

8.2 Timber structures

Structure H has been interpreted as part of an oval-shaped, timber-built, unroofed enclosure which has linear internal subdivisions. The walls may have been constructed of upright timbers woven perhaps with wattle, possibly braced with a line of stakes. This is a similar technique to that utilised in the construction of a creel house. The partial nature of the enclosure may be a result of plough truncation.

Structure G survived as a group of extremely shallow features which were interpreted as post-holes for a possible D-shaped structure measuring about 4m by 3m, the function of which is not known. This structure was in line with Structures A and B and it could have been in contemporary use.

8.3 Palisaded enclosure

A palisaded enclosure, measuring about 22m across, was formed of three gullies which would have held upright timbers (003, 225 and 041). The enclosure had three entrances, one to the west towards Structure F, one to the north-east (partly blocked by Structure A) and one to the south. The interior of the palisade was occupied by Structure E and a linear feature (002) which might have been a drain or perhaps a path, worn down through time. The remainder of the interior was devoid of archaeological features, which does not mean that the area was not in use, just that any foundations were not deep enough to survive.

On the eastern side of the palisade there was a rectilinear structure which could have pre-dated the palisade, or been in contemporary use. This structure was difficult to interpret, but could represent open animal pens or perhaps a covered rectangular structure. A small firepit (016) located in the north-east corner resembles the location of a firepit at Jarlshof in Shetland (Fenton 1978, 380).

Palisaded enclosures have generally been dated to the first millennium BC although recent examples have extended their chronological span into the first millennium AD, as at Titwood in Perthshire (Johnson & Rees 2003) and into the 10th to mid 13th centuries at Upper Gothens, Meikelour, Perthshire (Barclay 2001; Taylor 1990). At Perceton, North Ayrshire, several linear features containing medieval pottery were interpreted as a palisaded enclosure

with possible beam slots for lean-to structures, and were radiocarbon-dated to the late 12th and 13th centuries (Stronach 2004).

8.4 Ditches

The site at Laigh Newton had two main drainage ditches, one skirted the eastern part of the site and the other may have drained Structure E through the northern entrance of the palisade. It was noticeable that during the wet weather the vicinity of Structure E became flooded, thus confirming the need for drainage from this area at the back of the terrace. There were fragmentary features which continued the line of the ditch in the south, suggesting that it had originally extended as far as Feature 024 (Feature 001 being a pit filled with domestic hearth waste), beyond which there was no further evidence for a ditch. The curving nature of the ditches at Laigh Newton are different from the linear ditches at Gogar, where they were interpreted as the boundaries of individual tofts (Morrison et al 2009, 239). Laigh Newton would appear to represent a more isolated settlement.

At Gogar, near Edinburgh, a series of linear ditches, gullies and pots were thought to be medieval in date (*ibid*). No structures were identified at Gogar, but the layout of ditches was suggestive of rectangular tofts, on the edge of a settlement. As at Laigh Newton, interpretation of the site at Gogar had proved difficult because of the lack of stratigraphy, along with potentially residual radiocarbon dates and intrusive post-medieval pottery. The authors resolved this by considering the 'dominance of the finds assemblage by medieval pottery' backed by medieval radiocarbon dates as being indicative of date for the majority of excavated features (*ibid*, 239).

8.5 Dating

The majority of the pottery assemblage and four of the radiocarbon dates are medieval in date and this suggests that occupation of the site took place in the late medieval period, probably during the 14th and 15th centuries, although there are issues of residuality and intrusion.

For example, unabraded Neolithic pottery was retrieved from a relatively deep layer by Structure

E (373/374), but the interpretation of this layer as a prehistoric horizon is problematic, as the layer also contained unburnt bone which is unlikely to have survived since the Neolithic. Layer 373/374 sealed a surface which produced a single sherd of medieval pottery and was itself sealed by the remains of Structure E, which was of medieval date. The deposit is therefore likely to represent redeposition in the medieval period from up-slope, incorporating some prehistoric and more recent material. This material may have formed an earth bank around the south side of Structure E.

The earliest medieval pottery on site, the SWGW, could be as early as 12th century, but as it was still in use during the 14th and 15th centuries its presence is not necessarily evidence for an earlier origin for this settlement. The high degree of abrasion which was noted on the SWGW sherds suggests that they had been subject to ploughing prior to their deposition, although soil conditions may have played a part.

There is a small number of post-medieval sherds (SPMRW and SPMOW) which were found in the outer ditch (003), the upper layer of debris (014) and in the uppermost layer sealing Structure F. These sherds were not noticeably abraded and are probably intrusive as a result of ploughing or animal disturbance. The deposits containing post-medieval sherds are all located around the northern extremity of the site. There was no post-medieval pottery from Linear Feature 002, the outer east ditch (037) or Structures A, B, E, G or H. It is therefore thought likely that this material has become incorporated into the features as a result of post-abandonment ploughing. The source of this material is probably from a post-medieval midden which has been brought to the site as manure for arable fields, and is not evidence for occupation at this site during this period.

Of the ten radiocarbon dates, six ranged widely from the Neolithic to the Iron Age. These attest either to prehistoric activity on the lower terrace or to redeposition of material to the lower terrace in the medieval period. The remaining four radiocarbon dates range between the 15th and 17th centuries and are consistent with late medieval occupation, which would correspond with the possession of the Newton farm by the Lockhart family who were based in Galston.

Because of the lack of stratigraphic relationships between features, and the presence of small to substantial amounts of medieval pottery in most of the significant features, the phasing of the site has been problematic. No potentially prehistoric features could be identified as the few features which have produced prehistoric radiocarbon dates or prehistoric material also contain medieval pottery or post-date features which contain medieval pottery.

Some tentative sub-medieval phasing has been suggested. The palisaded enclosure (041) could be later than the timber structures to the east of it, which themselves may consist of two phases. If Structure H represents a structure rather than a single fence line, then Structures H, G and B could not all have been in use at the same time, yet they all contained medieval pottery.

8.6 Economy

The botanical and artefactual evidence suggests that Laigh Newton was a medieval rural settlement where mixed farming took place. There is evidence for grain processing in the form of carbonised cereal remains, a charcoal-burning kiln (Structure E), a possible corn-drying platform (the west end of Structure A) a fire pit (016) and a possible threshing floor (Structure F). The cereals were predominantly oats with some barley and flax. The presence of spindle whorls is a clear indication that spinning was taking place within Structure B. The stone roundels have been interpreted as possible pot lids, but they could also be loom weight roughouts. These items were found within the metalled floor of Structure F, the ditch (003), within the walling of Structure E and in the spread which sealed Structure E, none of which are primary deposits. It is possible that there was a single cache of roughout loom weights which were never completed and have become dispersed throughout the site. Textile production was clearly practised in Structure B and possibly elsewhere on site. The wheel-thrown pottery was all locally made jugs and cooking vessels with no foreign imports. The metalwork consisted of a few nails and unidentifiable objects, and the stone hones attest to the use of metal knives, although none were found (possibly because of the wet conditions). The amount of animal bone surviving was insignificant

and so it is not possible to suggest what type of animal husbandry would have been utilised. The presence of animals is however suggested by the palisaded enclosure and possible animal pens. The hearths were all associated with ash and charcoal which was derived from locally available wood and heathy turf, suggesting a domestic rather than an industrial use.

8.7 Conclusions

The evidence therefore indicates that Laigh Newton represented a rare survival of a late medieval rural settlement which was occupied in the 14th to 15th centuries. The site consisted of a charcoal-burning kiln and possible animal enclosures within a palisaded enclosure and other timber structures which survived to varying degrees just outside the palisade. There were other sunken structures outside the palisade, with inner stone linings, turf walls and hearths. There are few excavated parallels for this type of building in Scotland, although these utilised similar materials to the earlier Pitcarmick buildings.

By the mid 16th century there were two settlements or farms called Newton ('Nether Newtoun' and 'Owir Newtoun'), neither of which refer to this site, as the evidence suggests it was abandoned by the late 15th century. By the late 17th century a relatively high-status farm with three hearths called Newton had passed to the Bankhead estate, and the site of Laigh Newton had been turned over to cultivation. This may have been a result of a change in ownership perhaps in the 16th century when the estate was taken over from the Lockharts by the Campbells, or in the 17th century when the estate was annexed by the Crown, either of which could have involved investment of new money, re-leasing of the farm and perhaps consolidation of properties to make them more efficient and productive.

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The author would like to apologise for the long time gap between the completion of the first draft and the final publication of this report. Unfortunately, it has not been possible to bring the report completely up to date with reference to more recent parallels, but a decision was made to publish it as it is or not at all, in the hope that it will still be of use to fellow archaeologists.

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APPENDIX 1 BOTANICAL REMAINS: STRUCTURE A

Structure A	Context	69	70	100	221	284	288	289	303	327	372	407
Sample		11, 38	47, 186	52	37	46	79, 185	80	53	82	142	144
Modern		+++	+	+	+	+	+++	++	++	+	+	+
Volume of charcoal >2mm		<2.5ml	2.5ml	<2.5ml	<2.5ml	<<2.5ml	<2.5ml	2.5ml	<2.5ml	<2.5ml	2.5ml	<2.5ml
Volume of charcoal >4mm		2.5ml	2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml	10ml	<2.5ml	<2.5ml	2.5ml	-
Extrapolated results		*						*				
Charcoal												
<i>Alnus</i>	Alder	8 (0.36g)	4 (0.30g)									
<i>Betula</i>	Birch	2 (0.06g)	2 (0.06g)	1 (0.01g)		3 (0.06g)	1 (0.02g)	12 (1.64g)				
<i>Corylus</i>	Hazel						4 (0.08g)					
<i>Ericales</i>	Heather-type	34 (0.58g)	3 (0.03g)		14 (0.16g)	4 (0.01g)	16 (0.15g)			10 (0.26g)	19 (0.09g)	
<i>Fraxinus</i>	Ash	2 (0.08g)	1 (0.03g)									
<i>Quercus</i>	Oak			1 (0.05g)					1 (0.02g)			
<i>Salix</i>	Willow	2 (0.06g)	1 (0.05g)									
Indet. charcoal		4 (0.48g)										
Burnt peat/turf		++ (4.4g)			+ (0.17g)					+ (0.10g)		
Burnt soil							+++					
Cereals (carb)												
<i>Avena</i> sp.	Oat	1										
<i>Hordeum vulgare</i> var. <i>vulgare</i>	Hulled six-row barley					1						
<i>Hordeum vulgare</i> s.l.	Six-row barley	3				1						
Cereal indet.						1						
Seeds etc (carb)												
<i>Corylus avellana</i> nutshell frags	Hazel nutshell frags						1 (<0.01g)				1 (0.01g)	
Key												
Indet.	Indeterminate											
Fragments	Fragments											

APPENDIX 2 BOTANICAL REMAINS: STRUCTURE B

Structure B	Context	011	014	054	055	058	061	062	377	398	399	426	427	440
Sample		2, 141	4, 184	14	17	13	208	18	122	140	139, 203	172	207	210
Modern		+	+	+	+	++	+	++	+	+	+	+	+	-
Vol. of charcoal >2mm		<2.5ml	<2.5ml	<2.5ml	25ml	<2.5ml	2.5ml	<2.5ml	<<2.5ml	<2.5ml	<2.5ml	<<2.5ml	<2.5ml	10ml
Vol. of charcoal >4mm		<2.5ml	<2.5ml	-	2.5ml	5ml	2.5ml	-	<<2.5ml	<<2.5ml	<<2.5ml	<<".5ml	<2.5ml	20ml
Extrapolated results					*									
Charcoal														
<i>Alnus</i>	Alder	2 (0.08g)												
<i>Betula</i>	Birch	2 (0.03g)			8 (3.72g)					2 (0.04g)			2 (0.21g)	
<i>Cytisus</i>	Broom/gorse	1 (0.04g)												
<i>Ericales</i>	Heather type		5 (<0.03g)	40 (0.65g)	18 (0.46g)	9 (0.25g)			4 (0.02g)	8 (0.05g)	2 (0.03g)	2 (0.05g)		63 (11.13g)
<i>Quercus</i>	Oak	1 (0.04g)												
<i>Rosaceae</i>														
<i>Salix</i>	Willow	1 (0.03g)	1 (0.03g)											
Indet. bark														
Indet. charcoal	Indet. ch													
Indet. cinder	Indet. cldr							++						
Burnt peat/turf	Burnt soil/turf	+ (0.55g)	+ (0.80g)	+ (2.16g)	++ (15.1g)	+								+ (0.25g)
Cereals (carb)														
<i>cf Avena</i> sp.	<i>cf</i> Oat					5								2
<i>Hordenum vulgare</i> var. <i>vulgare</i>	Hulled six-row barley													1
Cereal indet.	Six-row barley		7	4										1
Cereal indet.	Cereal indet.	1	11	9										5
Seeds etc (carb)														
<i>Corylus avellana</i> nutshell frags	Hazel nutshell frags					2 (0.05g)								
<i>Lapsana communis</i>	Nipplewort													1
<i>Linum usitatissimum</i>	Cultivated flax		1											
<i>Plantago lanceolata</i>	Ribwort plantain					1								
Misc														
Bone														+ (0.06g)

APPENDIX 3 BOTANICAL REMAINS: STRUCTURE E

Structure E	Context	263	264	265	270	273	274	275	285	287	335	341	345
	Sample	86	87	71	188	67	195	193	187	88, 189	69	70	194
Modern		+	+	+	+	+	+	+	+	+	+	+	+
Vol. of charcoal >2mm		<2.5ml	<<2.5ml	<2.5ml	<2.5ml	<2.5ml	2.5ml	-	<2.5ml	2.5ml	<<2.5ml	5ml	-
Vol. of charcoal >4mm		2.5ml	<<2.5ml	2.5ml	<2.5ml	<2.5ml	5ml	<2.5ml	<2.5ml	<2.5ml	<<2.5ml	10ml	-
Extrapolated results		*					*				*	*	
Charcoal													
<i>Alnus</i>	Alder	8 (0.26g)	3 (0.17g)	3 (0.17g)	8 (0.44g)	1 (0.03g)	1 (0.02g)	5 (0.18g)	1 (0.04g)				
<i>Betula</i>	Birch		1 (0.09g)						1 (0.02g)			1 (0.02g)	
<i>Corylus</i>	Hazel	2 (0.10g)			3 (0.18g)								
<i>Ericales</i>	Heather-type											1 (0.19g)	
<i>Quercus</i>	Oak								2 (0.07g)			8 (0.64g)	
<i>Salix</i>	Willow											4 (0.12g)	
Indet. charcoal	Indet. charcoal	1 (0.02g)			1 (0.02g)		2 (0.28g)					8 (0.20g)	
Seeds etc (carb)													
<i>Corylus avellana</i> nutshell frags	Hazel nutshell frags	1 (0.02g)										1 (0.01g)	2 (<0.01g)
Structure E													
	Context	351	352	353	358	374	410						
	Sample	91	92	93, 135	95	90	196						
Modern		+	+	+	+	+	+						
Vol. of charcoal >2mm		<2.5ml	<<2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml						
Vol. of charcoal >4mm		<2.5ml	<<2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml						
Extrapolated results													
Charcoal													
<i>Alnus</i>	Alder				2 (0.06g)	1 (0.03g)	3 (0.15g)						
<i>Betula</i>	Birch												
<i>Corylus</i>	Hazel		1 (0.02g)										
<i>Ericales</i>	Heather-type												
<i>Quercus</i>	Oak				3 (0.06g)								
<i>Salix</i>	Willow		1 (0.09g)										
Indet. charcoal	Indet. charcoal												
Seeds etc (carb)													
<i>Corylus avellana</i> nutshell frags	Hazel nutshell frags												

APPENDIX 4 BOTANICAL REMAINS: STRUCTURE F

Structure F	Context	238	295	301	340	359
	Sample	173, 174, 175, 176	181, 182	129	107, 108, 130	121
Modern		+	+	+	+	+
Volume of charcoal >2mm		<<2.5ml	<2.5ml	<<2.5ml	<<2.5ml	<<2.5ml
Volume of charcoal >4mm		<<2.5ml	2.5ml	<<2.5ml	<<2.5ml	<<2.5ml
Extrapolated results						
Charcoal						
<i>Alnus</i>	Alder					1 (0.04g)
<i>Corylus</i>	Hazel				1 (0.02g)	
<i>Quercus</i>	Oak		2 (0.16g)			
<i>Salix</i>	Willow	1 (0.02g)	1 (0.03g)			
Indet. charcoal	Indet. charcoal		2 (0.05g)			
Cereals (carb)						
<i>cf Avena</i> sp.	<i>cf</i> Oat			1		
Seeds etc (carb)						
<i>Corylus avellana</i> nutshell frags	Hazel nutshell frags		1 (0.01g)			

APPENDIX 5 BOTANICAL REMAINS: DITCHES

Ditches	Feature	Pit 001	Ditch 002	Ditch 003	Ditch 003	Ditch 023	Ditch 024	Ditch 027	Ditch 031	Ditch 033	Ditch 034
Context	072	418	044	290	083	053	317	056	095	048	
Modern	+	+	+	+	+	+	+	+	+	+	+
Volume of charcoal >2mm	70ml	5ml	<2.5ml	<2.5ml	7.5ml	5ml	-	<2.5ml	5ml	5ml	5ml
Volume of charcoal >4mm	190ml	2.5ml	<<2.5ml	<2.5ml	2.5ml	<2.5ml	<2.5ml	2.5ml	5ml	5ml	2.5ml
Extrapolated results	*										
Charcoal											
<i>Alnus</i>	Alder	127 (14.0g)	3 (0.04g)	1 (0.02g)	3 (0.06g)	1 (0.05g)			1 (0.03g)	1 (0.10g)	
<i>Betula</i>	Birch		3 (0.05g)		2 (0.02g)			2 (0.03g)	1 (0.03g)	3 (0.11g)	
<i>Corylus</i>	Hazel	133 (13.7g)	2 (0.13g)	1 (0.03g)	1 (0.03g)	1 (0.05g)	1 (0.02g)				
<i>Ericales</i>	Heather-type		3 (<0.01g)								
<i>Fraxinus</i>	Ash										
<i>Malvaceae</i>	Rowan-type		1 (0.07g)								
<i>Quercus</i>	Oak	13 (1.53g)	1 (0.01g)	2 (0.06g)	5 (0.08g)	1 (0.10g)	1 (0.01g)		9 (0.30g)		
<i>Rosaceae</i>	Rose family								1 (0.03g)		
<i>Salix</i>	Willow	13 (1.40g)	1 (0.02g)	2 (0.03g)	1 (0.02g)			1 (0.04g)		1 (0.02g)	
Indet. cinder	Indet. cinder										
Burnt peat/turf	Burnt soil/turf		+ (0.04g)					+ (1.05g)			
Cereals (carb)											
<i>Avena</i> sp.	Oat		1						3		
<i>cf Avena</i> sp.	<i>cf</i> Oat										
<i>cf Hordeum vulgare</i> s.l.	<i>cf</i> Six-row barley										
Cereal indet.	Cereal indet.										
Seeds etc (carb)											
<i>Corylus avellana</i> nutshell frags	Hazel nutshell frags		1 (0.05g)					2 (0.04g)			
Misc											
Bone											

cont.

Ditches	Feature Context	Ditch 035 049	Ditch 037 422	Ditch 038 047	Ditch 039 075	Ditch 040 071	Ditch 041 381	Ditch 041 382	Ditch 041 350	Ditch 041 041	Ditch 041 306
Modern		+	+	+	+	+	+	+	+	+	+
Volume of charcoal >2mm		-	2.5ml	<<2.5ml	2.5ml	2.5ml	<<2.5ml	2.5ml	10ml	5ml	2.5ml
Volume of charcoal >4mm		<<2.5ml	<2.5ml	-	2.5ml	5ml	<<2.5ml	<2.5ml	10ml	5ml	2.5ml
Extrapolated results											
Charcoal											
<i>Alnus</i>	Alder	1 (0.02g)			2 (0.08g)	7 (0.15g)	1 (0.07g)	1 (0.03g)	4 (0.25g)	4 (0.09g)	
<i>Betula</i>	Birch				2 (0.08g)	3 (0.06g)					
<i>Corylus</i>	Hazel				1 (0.03g)			1 (0.04g)	26 (1.01g)		
<i>Ericales</i>	Heather-type		1 (0.02g)								
<i>Fraxinus</i>	Ash										
<i>Malvoideae</i>	Rowan-type										
<i>Quercus</i>	Oak	1 (0.02g)				4 (0.14g)			1 (0.06g)	1 (0.02g)	
<i>Rosaceae</i>	Rose family										
<i>Salix</i>	Willow	1 (0.02g)	1 (0.02g)			1 (0.05g)			2 (0.08g)		
Indet. cinder	Indet. cinder										
Burnt peat/turf	Burnt soil/turf										
Cereals (carb)											
<i>Avena</i> sp.	Oat	1									
<i>cf Avena</i> sp.	<i>cf</i> Oat										
<i>cf Hordeum vulgare</i> s.l.	<i>cf</i> Six-row barley										
Cereal indet.	Cereal indet.					2					
Seeds etc (carb)											
<i>Corylus avellana</i> nutshell frags	Hazel nutshell frags		2 (0.01g)	3 (0.05g)		2 (0.01g)					
Misc											
Bone											+ (0.12g)

cont.

	Context	337	339	364	378	379	309
Modern		+	+	+	+	+	+
Volume of charcoal >2mm		<<2.5ml	<2.5ml	5ml	<<2.5ml	<2.5ml	2.5ml
Volume of charcoal >4mm		<2.5ml	<2.5ml	5ml	<<2.5ml	<<2.5ml	<2.5ml
Extrapolated results							*
Charcoal							
<i>Alnus</i>	Alder				1 (0.02g)		4 (0.04g)
<i>Betula</i>	Birch	3 (0.06g)	1 (0.01g)	6 (0.40g)			
<i>Corylus</i>	Hazel					1 (0.02g)	
<i>Ericales</i>	Heather-type						
<i>Fraxinus</i>	Ash		2 (0.02g)				
<i>Malvoideae</i>	Rowan-type						
<i>Quercus</i>	Oak						
<i>Rosaceae</i>	Rose family						
<i>Salix</i>	Willow			6 (0.18g)			
Indet. cinder	Indet. cinder						
Burnt peat/turf	Burnt soil/turf						
Cereals (carb)							
<i>Avena</i> sp	Oat						
<i>cf Avena</i> sp	<i>cf</i> Oat	1		2			
<i>cf Hordeum vulgare</i> s.l.	<i>cf</i> Six-row barley			2			
Cereal indet.	Cereal indet.	1	1				
Seeds etc (carb)							
<i>Corylus avellana</i> nutshell frags	Hazel nutshell frags					3 (0.02g)	
Misc							
Bone							

APPENDIX 6 CATALOGUE OF COARSE STONE

SF No.	Context	No.	Weight (g)	Description
040	044	1	530	Fine-grained meta-sedimentary rock used as a hone on one surface. One end with flaking scars from being used as a hone.
045	010	1	8	Lathe-turned meta-sediment perforated whorl, with central straight perforation 8mm diameter. Has a shallow <i>c.</i> 1mm-wide incision around circumference, with three stepped turnings from centre to edge on each side. Widths vary. Slight damage on one face and circumference. Fine fly wheel from a lathe or spinning wheel?
049	u/s	1	474	Rough out for a sandstone roundel.
069	280	1	190	Split sandstone with chipped edges. One surface smooth. Roundel roughout.
106	010	1	38	Spindle whorl of meta-sediment with 12mm-diameter central hole. Has flat surfaces which slope towards the edges. Some surface chipping. Perforation has slight elliptical wear.
117a	003	1	296	Fine-grained quartzite hone/whetstone with one polished surface. Bar hone.
117b	003	1	252	Fine-grained micaceous sandstone hone/whetstone with one smoothed and incised surface. Incision runs lengthwise through the worked surface. Bar hone.
133a	003	1	332	Thin, flat and rounded sandstone chipped round one-third of circumference.
133b	003	1	114	Fine-grained sandstone roundel made on a split stone. Edges coarsely chipped, otherwise unworked.
133c	003	1	68	Pink micaceous sandstone roundel roughout made on a slit stone. Circumference chipped to shape.
133d	003	1	62	Fine-grained micaceous sandstone roundel roughout made on a split stone. Edges coarsely chipped to shape.
133e	003	1	36	Fine-grained micaceous sandstone roundel roughout made on a split stone. Edges chipped to shape.
162	444	1	130	Split sandstone with chipped edges. Roundel roughout.
163	444	1	32	Thin red sandstone hone used on both long edges. One is faceted. Whetstone.
	<i>Totals</i>	<i>14</i>	<i>2562</i>	