

3 EXCAVATION RESULTS

Prior to the arrival of the archaeological team in 1997, the earthwork bund had been constructed on the south side of the site from topsoil removed from the site without archaeological supervision. The topsoiled area was then used by the contractor responsible for preparatory works as a temporary stockpile for subsoil. The subsoil mound was then removed by mechanical excavator by the same contractor, again without archaeological supervision, leading to severe truncation of archaeological features in the southern half and at the north-east corner of the area subsequently defined for archaeological excavation. Large areas had to be hand-cleaned to remove a compact deposit of clay introduced as part of the foregoing operations. This led to serious time pressures towards the end of the excavation. Another factor that affected progress was the presence of relict palaeochannels, partly infilled with a natural impervious blue-grey clay; as a result, the site was prone to serious waterlogging after heavy rain.

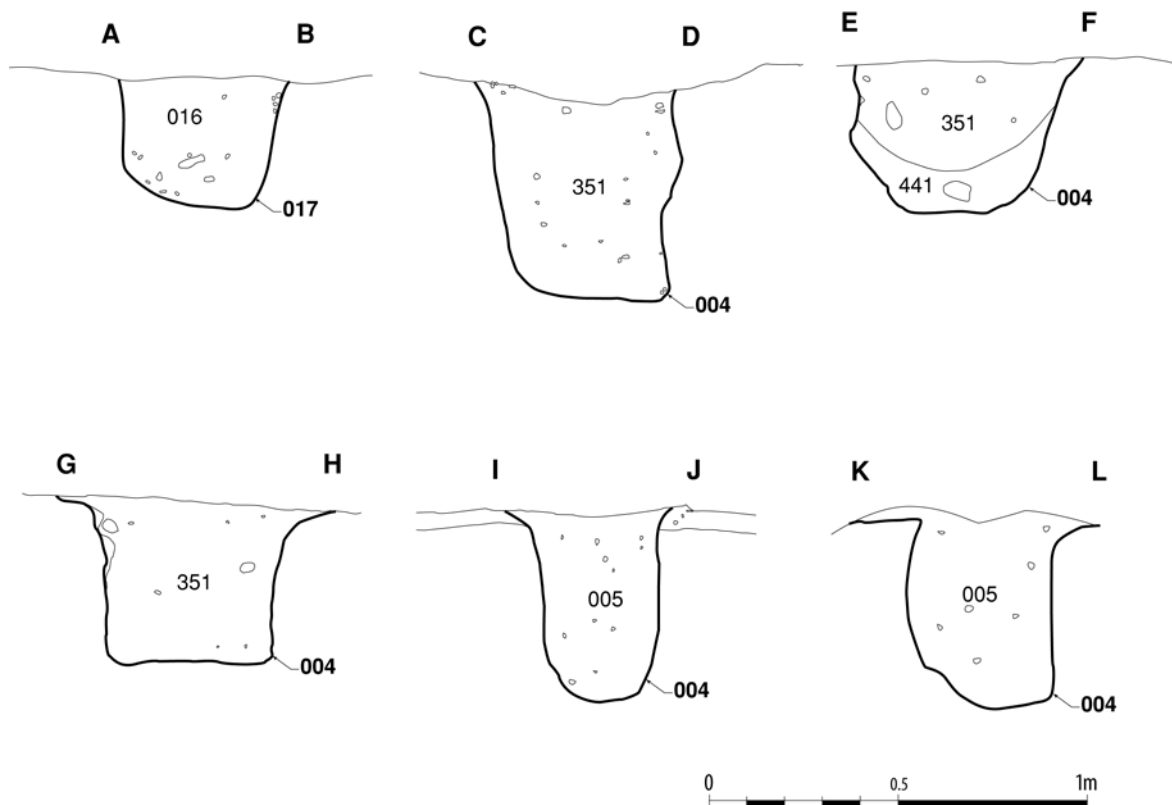
A single excavation trench, measuring 85m x 50m (4400m²), was opened to investigate the features revealed by aerial photography, geophysical survey and trial trenching. The area in which the brooch

had previously been found could not be further investigated as it lay under the earthwork bund screening the site.

The principal structures recorded are shown on *illus 3*. They included a ring-groove structure (Structure A) in the north-east corner of the trench, a double post-ring structure (Structure B) situated on the southern boundary, and Structure C. Immediately north of Structure C, running in a clockwise direction, are the remains of additional post-built structures (Structures D-H) and possible rectilinear post-built structures (I-M).

3.1 Structure A

Only the southern and western portions of this ring-groove structure survived (*illus 3*), at least two-thirds of its interior having been removed when the site was originally stripped of topsoil. Three sections were cut through this groove (017). The sides of the groove itself were vertical and up to 0.4m deep and 0.44m wide, with a rounded and tapered base (*illus 4a*). Its fill consisted of a black, charcoal-rich, sandy silt. The ring-groove, as extrapolated, would



Illus 4 Sections of ring-groove Structure A and penannular ditch of Structure B

originally have enclosed an area with a diameter of 16.7m. Heavy truncation had removed any evidence of floor deposits and the entrance to this structure was also presumed to have been lost. The surviving section of the ring-groove was cut at one point by a recent field boundary ditch associated with a former hedge line (006) and by a shallow linear feature of unknown age (027).

A group of small pit or post-hole features was recorded either side of the ring-groove, but they are undated and their relationship with the structure and each other is uncertain. Two of the features, 026 and 094, contained tiny fragments of unclassified slag, and a piece of unburnt bone was found in 020, but no other finds were recovered. Features to the outside of the ring ditch were all less than 0.1m deep. Such shallow, irregular features could be the result of animal activity, perhaps during the lifetime of the structure.

3.2 Structure B

‘Structure B’ was the largest feature recorded at this site (illus 3) and is clearly visible on the aerial photograph (illus 2), on which a number of internal features can be seen within the penannular ditch. Part of this structure was identified during trial trenching in 1996 (Cressey & Finlayson 1996), when a T-shaped trial excavation trench was placed directly over the large cropmark shown in illus 2. In 1997 during the construction site preparation works, part of the south-western side of the structure was buried by a large bund of earth and no further work could be carried out in this area.

Excavation of the accessible part of this structure revealed a series of post-holes and pits, cut into compact clay subsoil on the eastern side and sand subsoil on the western and southern sides. The pattern of post-holes was neither regular nor complete, thus limiting understanding of the relationship between these features. A large spread of carbon-rich soil (033) was interpreted as the remains of a possible destruction layer which, due to disturbance by the contractor creating the bund, was now heavily truncated and survived best in the northern half of the structure between the inner and outer ring of post-holes.

3.2.1 Penannular ditch

The penannular ditch (004) measured 24m in diameter and, on average, was 0.4m wide and 0.6m deep and filled by a brown sandy soil (illus 4b-g). No post-holes or other features were recorded other than those found at the entrance. The single entrance, situated on the east side, was 1.6m wide. Its southern terminus was found to contain a series of fills. A primary deposit of compact silt with sub-angular stones (099) was sealed by stiff clay (096) which in turn underlay a compacted dark brown

sandy silt including fragments of charcoal (005). The primary deposit may have acted as packing for three post features which were situated on the southern side of the entrance (353, 355, 360). A single-entity sample of *Quercus* sp. charcoal from the fill of the slot (351) produced a radiocarbon date with a calibrated range of 110 BC–AD 140 (2 σ ; AA-35531). Also on the southern side of the entrance a narrow groove (098) was identified running along the outer edge of the ditch. This groove measured 0.32m deep and 0.09m wide, and tapered steeply inwards to a narrow base only 0.2m wide. It possibly represents the latest phase of activity identifiable within this feature and post-dated the main phase of sediment accumulation within the ditch. A whetstone (illus 10c) was found in post-hole 355, and a relatively large quantity of slag (two smithing hearth bottoms, tapped slag and smithing slag amounting to almost 1.5kg) was recovered from the fill of the southern terminus (096) which overlay post-hole 355. Small quantities of undiagnostic burnt animal bone were also found in the entrance.

3.2.2 Outer post ring

Post-holes running concentrically within the ditch include 415/485, 368, 424, 413 and 442, defining a ring some 17–18m in diameter. Post-holes 364, 366 and a third unexcavated feature appear to represent a partition to the left of the entrance. Post-hole 368 contained a small quantity of slag, but none of the other excavated features in this ring contained finds. A post-hole (417) between this ring and the inner ring contained charcoal, a single-entity sample of which was dated to cal 50 BC–AD 220 (2 σ ; AA-35530).

3.2.3 Inner post ring

Post-holes 289, 480, 427, 411 represent the inner post ring on the south-east side with post-holes 440, 438 and conjoined postholes 447, 459 and 462 on the north-west side. Sealing the latter post-holes was demolition layer 033, which contained half a rotary quern and a hammer stone (see Section 4.2). The post-holes formed a rough circle almost 10m in diameter. Smaller post-holes within the interior formed no coherent pattern but may represent the foundations of partitions belonging to this structure. Finds associated with this ring were fragments of slag from post-hole 411 and burnt animal bone and ?worked antler from 427. A single-entity sample of *Betula* sp. charcoal from post-hole 447 provided a radiocarbon date with a calibrated range of 170 BC–AD 90 (2 σ ; AA-35529).

3.2.4 Interpretation

Within the limitations of the excavation results, three possible interpretations of this structure are

presented below in an attempt to elucidate how this arrangement of slots and post-rings may have occurred, in the light of conventional knowledge of roundhouse construction.

Interpretation 1: a single post-built structure within a penannular ditch

Disconformities within the asymmetry of the inner and outer rings tempt the theory that a single structure demarcated by the inner ring was present more or less at the centre of the penannular ditch. The inner ring was not symmetrical with either the outer ring or the penannular ditch and invites the theory that this was a single timber-built structure sharing more or less the same diameter as House G. The outer ring of features could represent the position of a stockade fence where upright posts held hurdle panels to keep livestock away from the domestic areas and grazing on the thatched roof. The area between the stockade fence and the penannular ditch could have contained a folding area for livestock. The penannular ditch itself may have held a timber fence, despite the lack of post-hole evidence; upright timbers in the form of a palisade seem the most likely explanation for its profile.

Interpretation 2: a double-ring structure with penannular ditch

The argument for a single, double-ring post-built structure would require the inner ring to have been the main load-bearing structure, which would necessitate a ring-beam arrangement. The outer ring, although not load-bearing, would require shorter upright posts and hurdle or turf panels within the structure.

If we accept that the building was a double-ring post-built structure then it was very large indeed. Massive roundhouses did certainly exist. Pope (2003) mentions that there are twenty structures recorded in northern Britain that have a diameter of 15m or above. These are not known before the Late Bronze Age but do continue into the Roman Iron Age. Nevertheless, structures in excess of 15m are very rare – 99% of circular structures in northern Britain have a diameter of less than 15m – and no published structures are known with a diameter in excess of 19m (*contra* Bersu 1947, 88).

Interpretation 3: more than one phase of construction

This interpretation is based on the presence of layer 033 on the east side of the structure. The layer appears to cover the inner ring, whilst running concentrically with the outer ring, perhaps indicating that the latter was still standing when it formed. The inner ring could therefore be an earlier structure which was replaced by a larger post-ring roundhouse inside a penannular ditch. However, the range of both radiocarbon dates and dating from

small finds suggests that the structure was relatively short-lived.

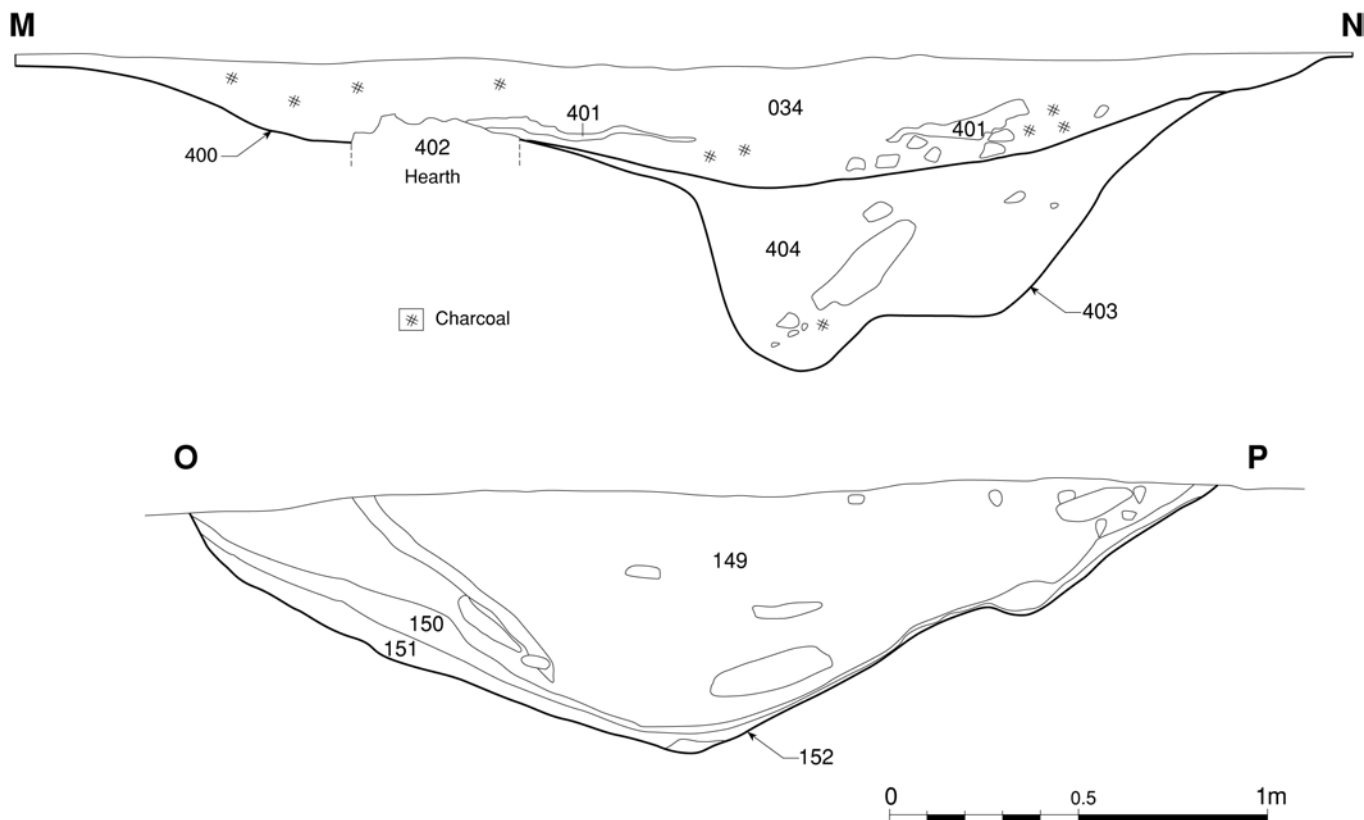
Discussion

Structure B outer ring has a diameter of 17.5m, which would put a structure of this size towards the larger end of roundhouse sizes. Bersu's search for the 'big buildings of the aristocracy' was manifested at Scotstarvit (Bersu 1947), where he excavated what he saw as a 19m-diameter triple-ring structure. Reinterpretation of the site suggests a 13m diameter, re-built, double-ring structure with an enclosing, concentric fence or palisade (Pope 2003, fig. 4.25). This becomes clear when the position of the doorpost is considered, and also the nature of Bersu's inner-ring – a wall-slot – implies load-bearing continuous walling, a feature only rarely found in the interior of a structure. If the Seafield West structure is interpreted in the same way, it was considerably larger than Scotstarvit.

Apart from Scotstarvit, other 'substantial' timber roundhouses have been identified in recent years. At the Candle Stane, near Insch, Aberdeenshire (Cameron 1999) a ring-groove with an extrapolated diameter of c 15.5m was found to contain up to three concentric rings of post-holes. House 1 at Bannockburn (Rideout 1996, fig. 18) is very similar on plan to Seafield Structure B; this structure was dated to the 6th/5th centuries BC and is therefore some 400 years earlier than the Seafield one. The incomplete remains of a timber structure below the Fairy Knowe broch at Buchlyvie, Stirlingshire (Main 1998) are open to a number of interpretations, but one of these, 'Option 4', could be a 21m-diameter palisaded house suggested, like Seafield, to date to the 1st centuries BC/AD. Culduthel Farm, Inverness, provides the geographically closest parallel, with a large palisaded house some 20m in diameter (Murray 2006). A large (c 15m diameter), heavily truncated palisade at Birnie, Moray (Hunter 2003, fig. 6) has been interpreted as a stock enclosure, although some post-holes survived internally.

A palisaded enclosure identified at Wardend of Durris, 6km south-east of Banchory, Aberdeenshire (Russell-White 1995, Enclosure 2) was interpreted as an enclosure around a series of post-ring structures, although potentially a larger concentric inner ring could also be interpreted amongst the myriad post-holes there. However, perhaps a 26m diameter is stretching the size of these substantial structures a little too far, if it is assumed they were completely roofed. A palisaded enclosure was also identified at Balloan Park, Inverness (Wordsworth 1999), but this was 30m in diameter.

On balance, a smaller structure comparable with others on the site, but separated from them by a palisade and internal timber fence (ie interpretation 1) seems the most likely explanation for the ground plan. This is suggested as the most probable interpretation due to the presence of an apparent entrance porch on the inner ring, marked by two



Illus 5 Section through ring-ditch Structure C with pit and hearth features (BS3) and pit 152

sets of double post-holes to the south-west, which would not be required if the ring formed an inner circle to a larger structure. However, this does not deny the possibility that the inner ring structure was slightly earlier than the rest of Structure B and may have stood alone for a while, even though the dating suggests that the structure as a whole lasted perhaps no more than a century.

3.3 Structure C

This building was situated immediately to the west of Structure B (illus 3) and showed up clearly as a penannular cropmark on the aerial photographs. The structure was identified during the excavation as a crescentic spread (034) of black silty loam with maximum dimensions of c 14m \times c 5m. Incorporated within this layer was a substantial quantity of charcoal with stratified lenses of red ash, which possibly suggests that the sequences were associated with demolition material. Sections were placed through this spread in order to determine its depth, and these revealed an intense layer of fire debris which appeared to be widespread. The depth varied from 0.1m at the southern end, through 0.2m at the centre. The ditch fill incorporated a bright red layer of peat ash at the north-east section. Finds recovered from this layer included two rimsherds of Iron Age pottery (illus 9b), the shaft of an orna-

mented Roman headstud brooch (see Section 4.3.2), and small quantities of slag and burnt bone.

The sections appear to confirm that this was a ditch-like feature (cut 400, illus 5 M-N), potentially forming part of a ring-ditch structure. Some of the unexcavated post-holes to the south and east might then represent internal posts. Although no continuing ring-ditch was identified to the south during the excavation, the aerial photographic evidence that it existed is unequivocal and it is assumed that evidence was removed during unmonitored stripping of the area. This structure is therefore interpreted as a possible ring-ditch house of the type discovered at so many later Bronze Age and Iron Age sites in recent years (eg Douglasmuir, Kendrick 1995; Kintore, Alexander 2000 and Cook & Dunbar 2008; Dryburn Bridge, Dunwell 2007). Potentially the large double pit 155/455, which was recut at least once, could mark the north side of its entrance.

Two features were identified below 034 (illus 5 M-N). A pit (403) to the north side of the section had a near-vertical face on its eastern side, whilst the opposite side sloped gradually. A large stone measuring 0.3m \times 0.1m was exposed in section and slumped at an angle of about 30°. Charcoal was present towards the base of the fill. It is possible that the pit was an earlier feature truncated by the ring-ditch (400), although similar features were present in the ring-ditch of Kintore Structure 3 (Alexander 2000, illus 8) and were interpreted as

structural elements. The two large unexcavated pits on the opposite side of the structure, 387 and 389, could represent the remains of similar features in the base of the missing ring-ditch there, although they would be at the terminus of the ditch in this area.

At the base of the section, a collection of burnt stones (402) was exposed. These were interpreted as the base of a hearth or oven. The hearth lay on the upslope end of the ditch cut, sealed by layer 034. The fact that it was overlain by so much burnt material seems unlikely to be coincidental. The hearth could possibly have been constructed here after the structure had been demolished, and the ditch filled with debris related to this later use. It is interesting to note that Structure 4 at Kintore (Alexander 2000, 29–31 and fig. 17) consisted of a very similar spread of burnt material, with a similar section, and associated post-holes.

Several pits of variable depth and diameter were excavated within the circumference of the ring-ditch. It is possible that some of the smaller, unexcavated post-holes formed an inner ring of posts which belonged to the structure (although if so this would negate the need for the larger post-holes postulated above). Small quantities of slag were recovered from two of the pits (154 and 155) and a layer (161) in this area, and pit 158 contained fired clay. Pit 381 contained unburnt bone which, if not intrusive, may indicate a recent date for this feature; the pit also contained the largest single quantity (by weight) of fired clay from the site.

It seems most likely that the features in this area were the remains of a ring-ditch structure with an inner ring of posts. The structure would have been some 14m in diameter, although the possibility that there was a broad outer wall of turf might extend this to incorporate possible entrance post-hole 155, making it closer to 16m. Following its demolition, the area seems to have continued in use, with a hearth and various pits being related to this later activity.

3.4 Structure D and adjacent features

A group of post-holes lay immediately north of Structure C and formed a roughly circular ring, with a diameter of approximately 9m (illus 3). The post-holes on the west side of the structure survived best and were seen to be more or less equidistant at *c* 2.5m apart. No occupation deposits survived within the structure. These pits and post-holes were not excavated. In the absence of any evidence for an outer ring, it is tentatively interpreted as a single ring structure. The entrance may be marked by the two closest post-holes at the south-east side, possibly extending out to post-holes 132 and 136. However, these two features and two other nearby pits (141, 148) produced modern finds, and one of them (141) was certainly of recent date, as a ballpoint pen was recovered from its base.

Sub-rectangular pits 146 and to the south-east were unusual in having shallow V-shaped sections longitudinally, sloping to the centre at an angle of approximately 30–45° from both ends (illus 5 O–P); they do appear to form a pair but their purpose is unknown. A lead bead (see Section 4.3.3) was recovered from a sample taken from sub-rectangular pit 152, possibly indicating a Roman or later date for the fill. Further to the north-east, large pit 431 contained an iron tool of uncertain type.

3.5 Structure E

Structure E was demarcated by nine unexcavated features, *c* 2.5m apart, that formed a circular arrangement with a diameter of about 9m (illus 3). Like Structure D, this is interpreted as a single-ring structure with a possible entrance at the south-east.

No floor deposits survived within this group, but there were at least three pits within the area delimited by the post-holes. One of these (085) was excavated: it measured 0.7m in diameter and 0.5m deep and had a dark sandy-loam fill which contained a fragment of a mould for a bronze sword (Cowie below). A single-entity sample of charcoal recovered from this feature was radiocarbon dated and indicated a date range of 1260–920 cal BC (2 σ ; AA-35528). Whilst the pit may be associated with the surrounding structure, it is not possible to associate the two with any certainty.

3.6 Structure F

A curving line of excavated and unexcavated post-holes appears to form a ring, Structure F, including 061, 063 and 065 (illus 3). This group was roughly annular, with a diameter of approximately 7m. Posts were less regularly spaced, varying between 1.5m and 2.5m apart. The west side was formed by an arc of post-holes situated in the north-eastern half of Structure E, making it clear that Structures E and F could not have been contemporary, but their relationship is unknown. The double post-holes 042/044 and 035/037 to the south-east could mark the position of the entrance. Parallel groups of three unexcavated post-holes on the southern side within the ring could potentially indicate an entrance to another structure which has otherwise disappeared, or may represent partitions within Structure F.

A post-hole within Structure F, 069, contained a sherd of Middle to Late Bronze Age pottery, but like the pit in Structure E, cannot definitively be related to the structure in which it was situated. An unfinished rotary quern came from a post-hole in this area (084); if related, this may suggest a later date for the structure. Another find consisted of a piece of iron slag from post-hole 061. No occupation deposits survived within this structure. Another fragment of sword mould was found in post-hole/pit 071 to the

east of this structure. Although only circumstantial evidence, this could suggest that 085 (mentioned above in association with Structure E) was also an external feature related to Structure F, and that this was a Bronze Age structure.

3.7 Structure G

This post-built structure comprised a series of 16 post-holes (illus 3, 6), each approximately 1m apart. Six of the postholes lay outwith the excavation area but after extending the trench 5m northwards, the remaining post-holes were plotted; due to time constraints these were not excavated. The diameter of this structure measured approximately 9.5m and the mean diameter of the ten excavated post-holes was 0.87m (range *c* 0.75–1.1m), with an average depth of 0.53m. Post-holes 048, 055 and 111 contained packing stones. In general the post-hole fills comprised a grey-brown sand with varying quantities of charcoal. Finds included small quantities of burnt bone, slag and fired clay. No occupation deposits survived. A date was obtained from a single sample of charcoal from post-hole 111 (cal 200 BC–AD 50 at 2 σ ; AA-35532). As the posts of this building were so closely spaced, it is suggested that it consisted of a single ring forming the outer wall, since movement between the posts would be restricted. A similar structure was excavated at Tavelty and produced a date range of cal 190 BC–AD 20 from a carbonised barley grain within one of the post-holes (Alexander 2000, 37).

The entrance is suggested to have been on the south side of the structure represented by post-holes 126, 198, 215 and 217. However, two elongated pits were found on the west side of the structure (035/037 and 042/044). These features may represent either an earlier or a later phase of entrance, if they did not belong to Structure F (or could even have linked the two together via a short passageway). In theory, either position would have afforded some protection from the winds emanating from the Moray Firth, less than 1km to the north.

Feature 124 was a shallow bowl-shaped cut lined with sandstone and granite blocks which contained an ashy, charcoal-rich deposit. It was identified as a possible hearth, although its position close to the eastern side suggests it could also have belonged to putative Structure H. Feature 121 also contained possible hearth debris. Other features identified within the structure may represent partitions within Structure G or could perhaps belong to Structure H.

3.8 The smithing hearth

Post-hole 207, in the south-east quarter of Structure G (illus 6), had been re-cut and its secondary fill (125) contained a substantial amount of sizeable lumps of charcoal derived from tooled wood. This charcoal

was probably the remnants of a fuel cache for a smithing hearth (127) which cut the edge of adjacent post-hole 208. This hearth (illus 6–7) measured 1m \times 0.95m with a depth of 0.3m and was edged with sub-angular sandstones up to 0.35m \times 0.2m \times 0.08m in size. The internal fill comprised grey-black ash and sand, with lenses of smithing slag present in the upper portion of this deposit. The hearth was stratigraphically later than Structure G. It may conceivably be related to Structure H, which survives as a near-concentric ring of post-holes, if this were the case then the smithing hearth would have been more or less at its centre. A conventional radiocarbon date from a single piece of charcoal weighing 8g obtained from fill 125 produced a date range of cal 180 BC–AD 70 (2 σ ; GU-8032).

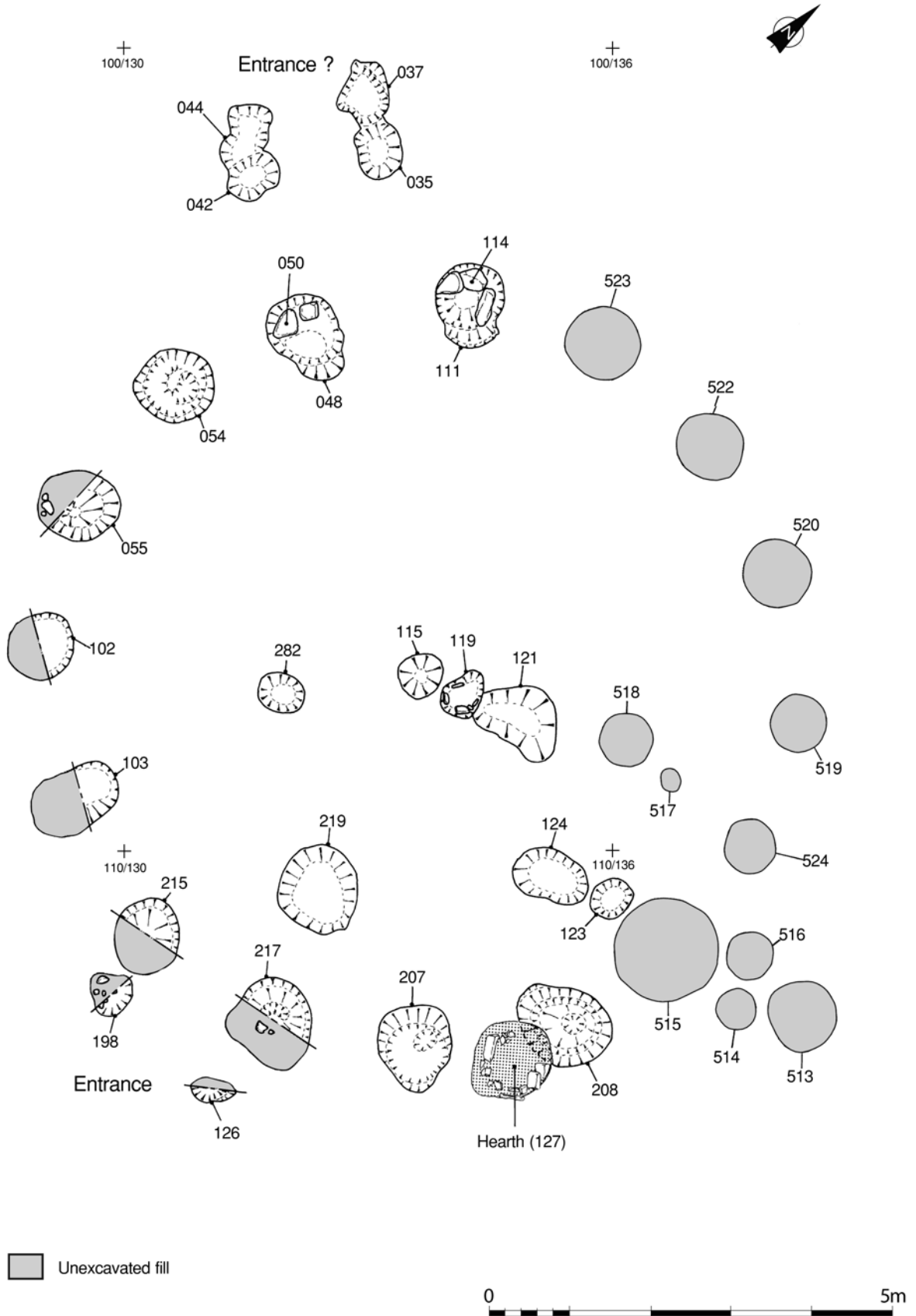
3.9 Structure H and 'lean-to'

This structure was superimposed on the eastern half of Structure G. The feature comprised an arc of sixteen unexcavated and excavated post-holes running from 282 (or possibly 103 as this feature appears to have been recut) through 115, 119, 518, 516, 513, 516, 510, 509 and three unnumbered post-holes, 287, 244, 195 and 242. The excavated features ranged in size between 0.25m and 0.4m in diameter, with depths ranging from 0.3m to 0.5m. No occupation deposits were recovered from the interior of the structure. It is conceivable that this structure was in fact some form of windbreak or unroofed shelter surrounding the smithing hearth described above. A semi-circular windbreak might explain the apparent absence, noteworthy given the sizes of the other examples recovered, of post-holes in the western sector of the structure. A curving line of post-holes to the south, several of them double (eg 234, 236/239, 249/247, 229, 201, 291/293), could suggest the presence of yet another structure in this area, or possibly a lean-to for Structure H.

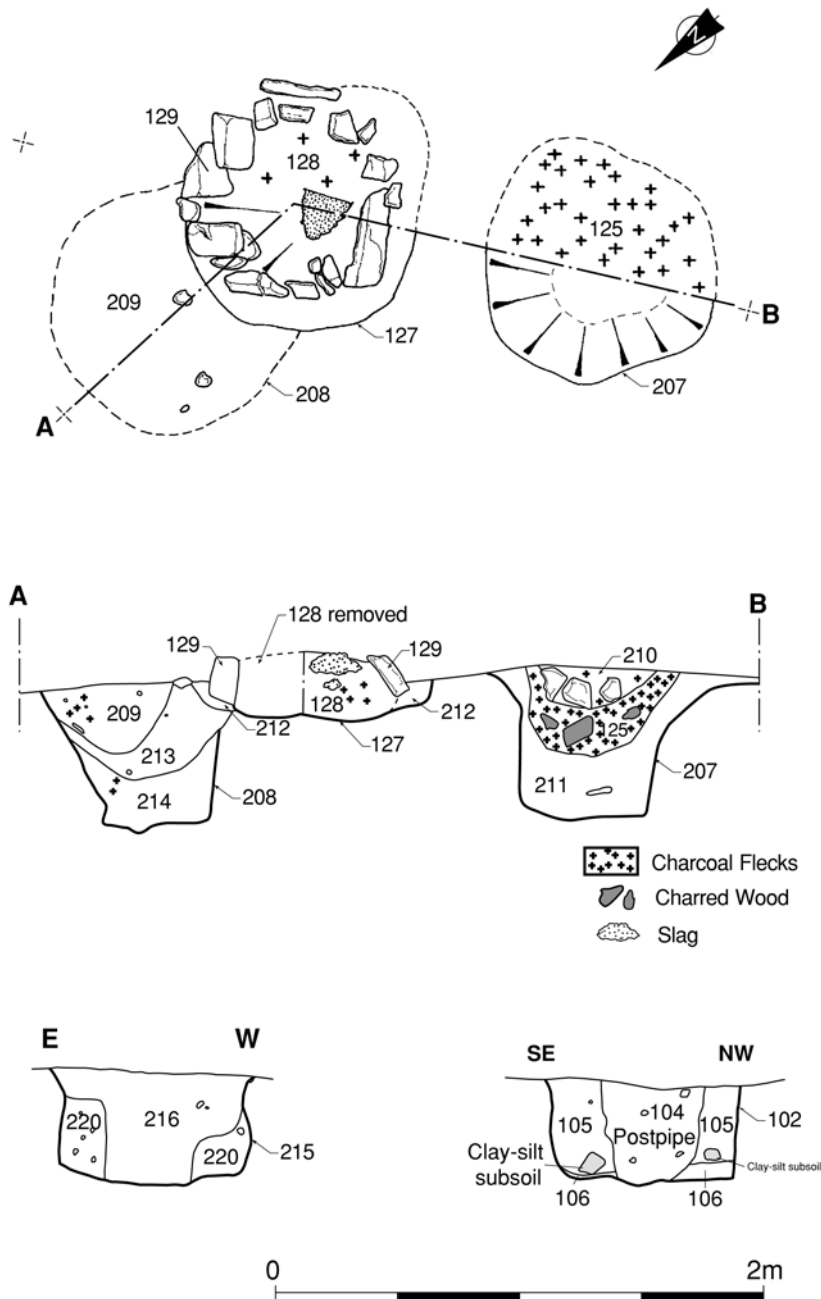
Other explanations for the lack of corresponding post-holes might include (a) the buildings were not finished, (b) the buildings only required deep foundations on one side or (c) they were built partly of another material that is now lost.

3.10 Other structures

To the east of Structures F and G are a number of post-holes which can be reconciled, in some instances at least, into putative structural patterns (Structures I–J). It is postulated that some of these post-holes may relate to a series of four-post structures measuring approximately 3m \times 3m. Structure J could relate to a slightly curved post-built structure, with a length of approximately 12m, although it seems more likely to have formed a series of smaller, neighbouring structures. Small rectilinear settings of posts have previously been associated with storage, livestock holding pens and



Illus 6 Structure G, post-hole arrangements



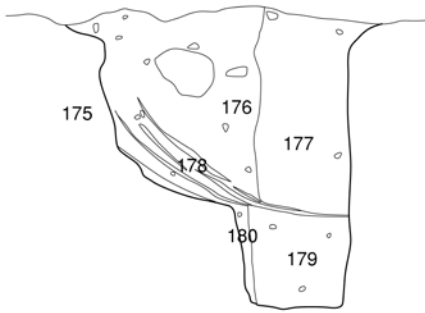
Illus 7 Section through hearth and adjoining post-hole in Structure G, and other post-holes of Structure G

other less prosaic functions (Ellison & Drewett 1971). There are similarities between the Seafield structures and four- and six-post structures found elsewhere in the north-east of Scotland, for example at Douglasmuir, Angus (Kendrick 1995, fig. 24), at Ironshill, near Inverkeilor, Angus (Pollock 1997, fig. 16) and Houses 3 and 8 at Dryburn Bridge (Dunwell 2007). A line of post-holes may represent part of a stockade fence (represented by, from north-west to south-east, 521, 513, 508, 507, 505, 503, 502, 144, 276, 338). Structure I could represent an entrance *c* 7m long through this fence, with holding pens set either side of it.

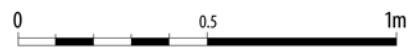
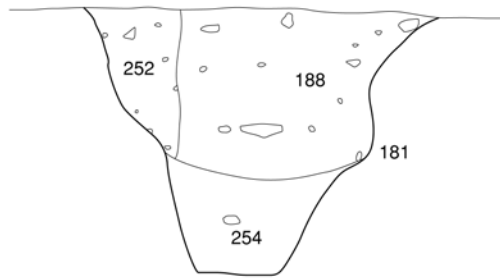
Whilst an interpretation related to livestock control seems reasonable, it should be noted that

several of the excavated post-holes in this area were very deep (up to 0.75m), post-hole 175 in particular (illus 8) but also 181, 182 and 184. This latter contained a glass bead (dated 1st century BC to 2nd century AD, see Section 4.3.3), a base sherd of undated pottery and a small quantity of slag and vitrified hearth lining. Nearby feature 181 also produced slag and hearth lining fragments, and a small quantity of burnt bone. It is unclear how these objects would have been deposited in an area used entirely for stock management, and it may be that another roundhouse was located here at some point. Curving lines of post-holes can be discerned amongst the general background scatter.

(a)



(b)



Illus 8 Sections of post-holes associated with Structure I