

# St Germain's, Tranent, East Lothian: the excavation of Early Bronze Age remains and Iron Age enclosed and unenclosed settlements

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with contributions by A Gleeson, F Hunter, A Sheridan & J Thoms

## ABSTRACT

*Cropmarks of a ditched Iron Age enclosure were excavated in advance of opencast coal mining and archaeological features representing a number of different phases were recorded. The earliest identifiable activity on the site is represented by a spread of Early Bronze Age artefacts, from within a layer sealing a number of pits and post-holes in the south-east of the excavation area, some of which may have originated from a possible ring-ditch burial. A series of occupations in the first millennium BC began with an unenclosed ring-groove house, of which only a small portion survived. This first house was replaced by another ring-groove house enclosed by a polygonal ditched enclosure. Subsequently, a broad defensive ditch was constructed around the site with an entrance protected by a post-built gateway to the south-east. Over time the ditch silted up; a number of stone-paved floors represent the probable locations of later houses, some of which were built into the upper fill of this defensive ditch. At this time the settlement appears to have been unenclosed, although there are indications that the entrance to the south-east was replaced by a causeway across the ditch in its north-eastern circuit and a short length of the ditch was re-cut on either side of this new entrance. Occupation on the site appears to have lasted until the Roman Iron Age. Finally, the site was affected by medieval ploughing. The project was funded throughout by Historic Scotland (formerly Scottish Development Department/Historic Buildings and Monuments division).*

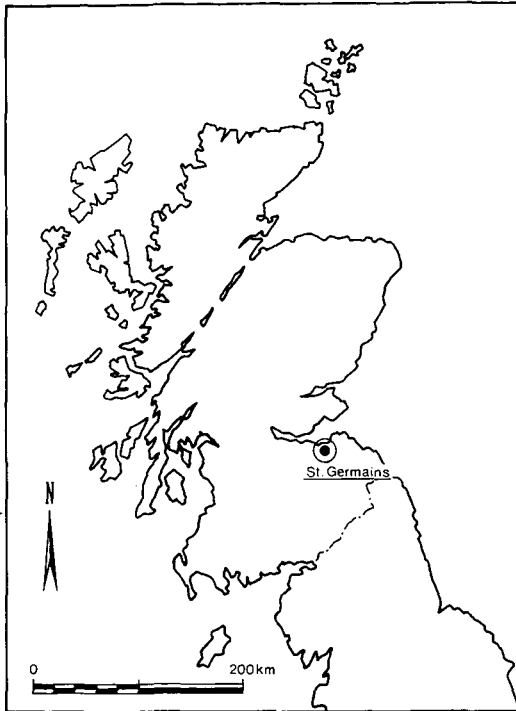
## INTRODUCTION

### TOPOGRAPHY

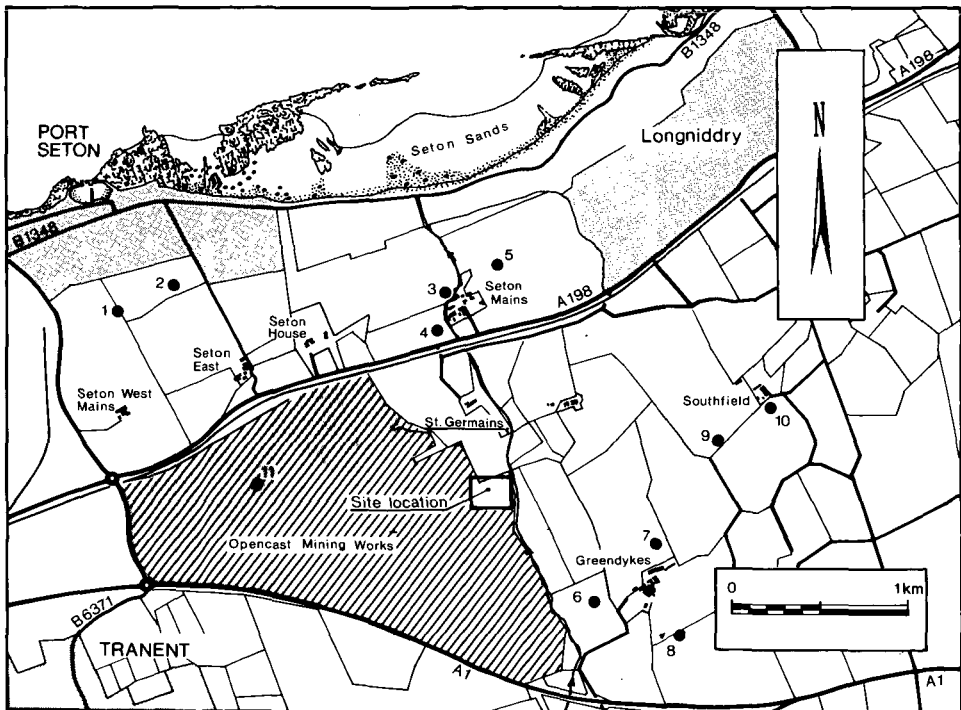
The site at St Germain's (NGR: NT 427 742) lay in arable land between the A1 and the A198 North Berwick road, to the north-east of Tranent in East Lothian (illus 1). The topography is formed by gently undulating land sloping northwards towards the coast. Although much altered by modern field drains and opencast quarrying, the drainage pattern in the immediate area still

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1. Fishers Road West enclosure
2. Fishers Road East enclosure
3. Seton Mains fort and enclosure
4. Seton Mains possible enclosure
5. Seton Mains palisaded enclosure
6. Greendykes enclosure
7. Greendykes enclosure
8. Greendykes enclosure
9. Southfield enclosure (possible ring ditch)
10. Southfield enclosure (site of)
11. Riggonhead fort (destroyed)



ILLUS 1 Location maps. (Based on the Ordnance Survey map © Crown copyright)



ILLUS 2 Photograph of cropmark (*Royal Commission on the Ancient and Historical Monuments of Scotland*  
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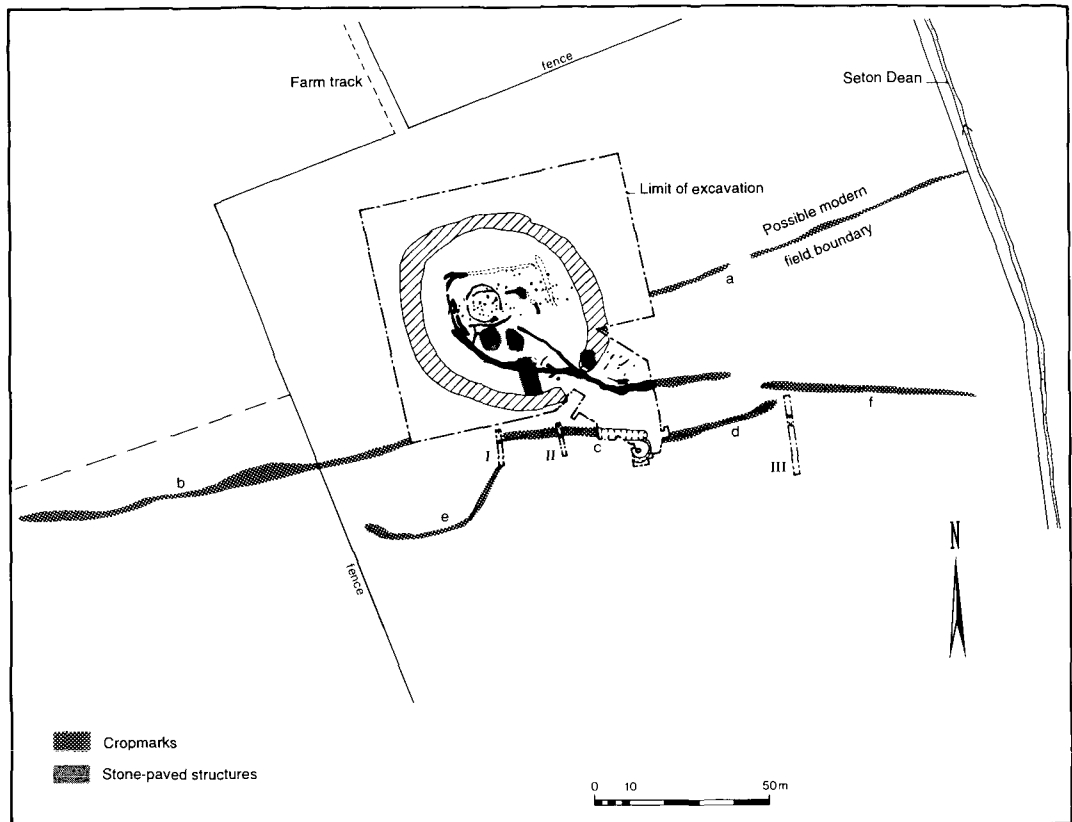
consists of a number of small streams flowing NNW directly to the sea. St Germain's sits c 60 m west of one of these small streams, the Seton Dean.

#### SUB-SOIL

The underlying geomorphology of the site is glacial till of well-consolidated silty clay or sandy clay, containing numerous rounded pebbles and boulders, mostly of local origin, although with some far-travelled erratic rocks. A number of glacial drainage channels are recorded c 700 m south-east of the site. The sub-soil on the site itself is a glacial till with variable amounts of stone, which made excavation and definition of feature edges painstakingly difficult.

#### ARCHAEOLOGICAL BACKGROUND

The site of St Germain's was first identified in the summer of 1975 by aerial survey as a rather blurred set of cropmarks in a barley field (illus 2) and is one of a number of similar cropmark enclosures in the vicinity. The cropmarks indicated a penannular enclosure with an entrance visible in the south-east and a number of external linear features running from east to west. The accuracy of the rectified cropmark plan (illus 3) was limited by the number of available control points. The fine linear cropmark (illus 3, a) to the north-east of the enclosure is parallel to the field boundary to the north and may be an old fence-line. The more irregular linear cropmark (illus 3, b) to the south-west may be a continuation of the external ditch which was also visible as a cropmark (illus 3, c) and subsequently confirmed by excavation. Although a number of other cropmarks are visible, the complexity of the imagery precludes precise interpretation. The



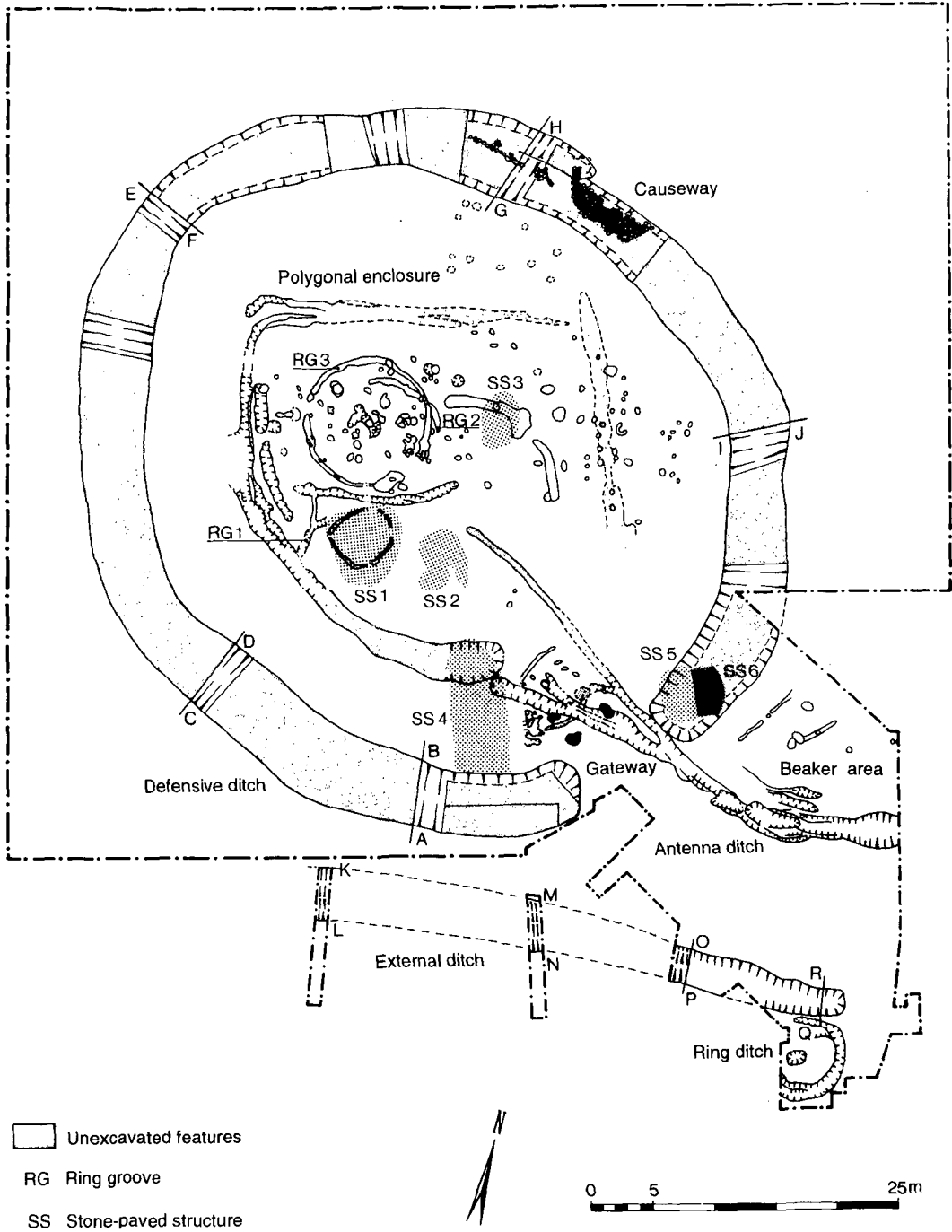
ILLUS 3 Plan of Trench positions and approximate extent of cropmarks

curvilinear feature (illus 3, e) could be a ditch although it may reflect a change in the underlying sub-soil, and is perhaps the result of a relict stream channel. The linear cropmark (illus 3, f) appears to merge with cropmark (illus 3, d) although the rectified cropmark image does not match the ditch located by excavation in Trench III.

The site was threatened by the extensive opencast coal mine to the west and is now buried beneath the mine's spoil heaps. The rescue excavations were funded by the Scottish Development Department (Ancient Monuments) and were directed by Trevor Watkins with the support of the Department of Archaeology of the University of Edinburgh. Subsequent post-excavation work was undertaken over a number of years. The present report was commissioned by Historic Scotland and undertaken by the Centre for Field Archaeology in association with Trevor Watkins, using the original site archive. This paper represents the final site report and follows the basic site sequence outlined in the proceedings of the conference on later prehistoric settlement in south-east Scotland (Watkins 1982). In general, the sequence of events related therein remains unchanged.

#### WORKING METHODS

The investigations began with a geophysical survey and the excavation of sections of the main ditch in the spring of 1978 and continued with summer seasons in 1978–81, with a final season of excavation at Easter 1982.



ILLUS 4 Plan of major features in all phases

The strategy of the investigation was to excavate the whole enclosure including areas beyond the defensive ditch where there was slight cropmark evidence suggesting the existence of external features (illus 3). To this end, geophysical survey was employed using both a resistivity meter and a magnetometer. These hopes were largely thwarted, and despite the use of more sophisticated techniques in 1980, geophysical survey was found to be fairly unproductive on this site. The enclosure was mechanically stripped of plough-soil, half in 1978 and half in 1979, together with some areas beyond its defining ditch. The area outside the enclosure to the north proved to be relatively free of archaeological features. The most productive external area, that in the south-east, was the most difficult in geophysical survey terms, and was therefore dug in a sequence of *ad hoc* extensions.

After topsoiling, it was evident that the northern half of the enclosure had been truncated to the extent that the sub-soil surface was reduced. In contrast, however, the southern part of the excavation area contained stratified deposits, vertically separated within a brown soil of some depth, below the reach of modern ploughing.

#### LIMITATIONS

Unfortunately, at the end of the first two weeks of excavation in 1982 the site huts were broken into and over a hundred finds and samples stolen, along with all the exposed film record of the excavations, the card index of finds and some equipment. Subsequently the huts were broken into again and set on fire. These acts of vandalism have prevented more detailed analyses and interpretation of the excavation results than would otherwise have been possible, especially with regard to the artefact assemblages. In addition, this report was prepared without the aid of the original field drawings, although inked copies were available. Apart from the later prehistoric pottery, the remainder of the illustrated artefacts are also missing and, consequently, comments on these are based on previously prepared illustrations. An almost complete lack of sizeable pieces of charcoal from the site prevented radiocarbon dating at the time of excavation and has restricted the interpretation of the chronological sequence. Despite these problems, it is clear that the archaeological results represent a significant contribution to our understanding of south-east Scotland in the Iron Age.

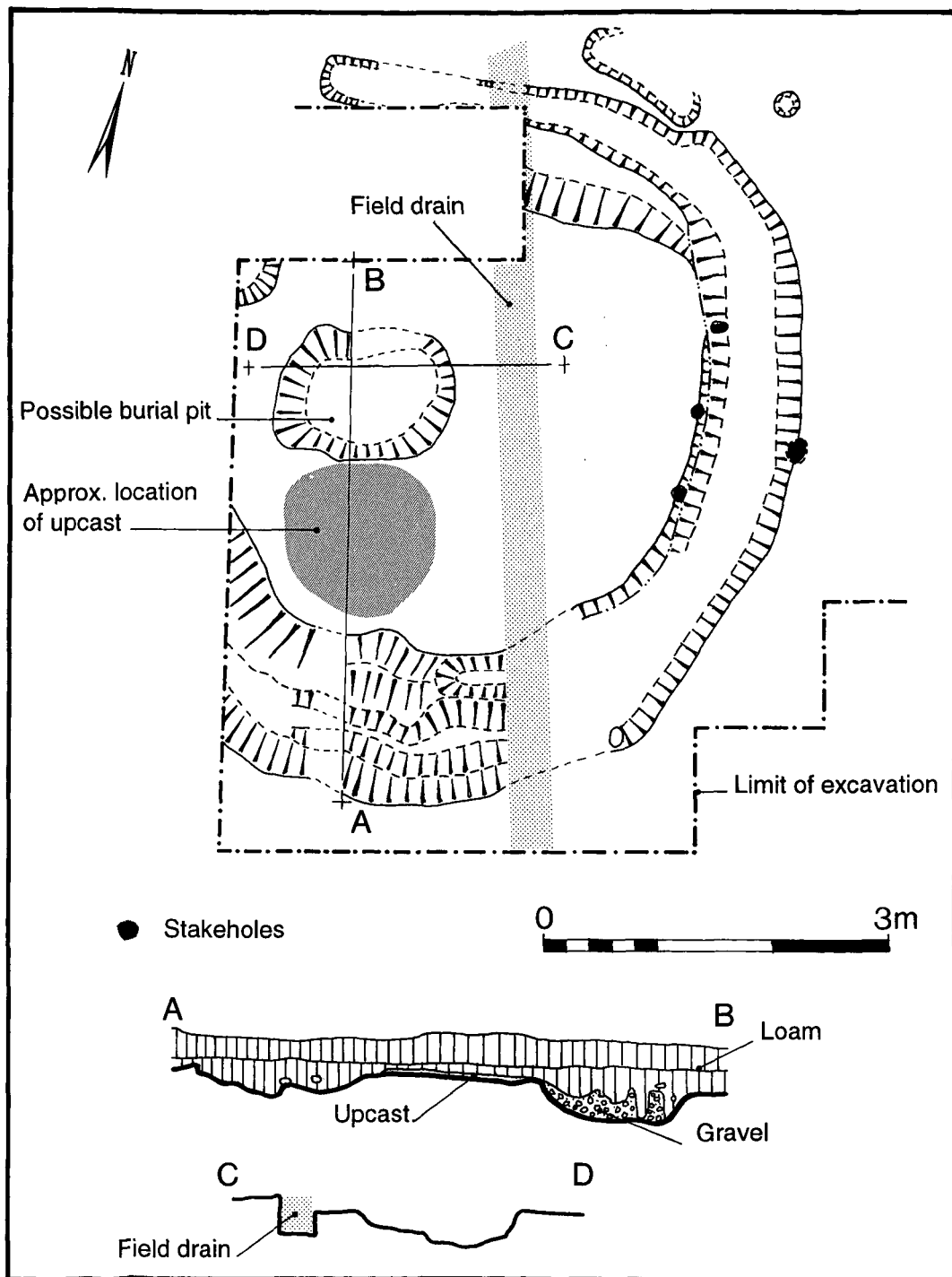
#### ARCHAEOLOGICAL RESULTS

The structural history of the site can be divided into a complex six-period sequence. The earliest evidence is of Early Bronze Age date. Then there follow four periods of Iron Age occupation. Finally, the abandoned settlement was under arable agriculture in the medieval period, with some traces of this agricultural system overlying the last Iron Age occupation and underlying the modern plough-soil.

##### PHASE I: EARLY BRONZE AGE ACTIVITY

Two concentrations of Early Bronze Age activity were recorded. The first lay outside the defensive ditch to the south-east (illus 4) and consisted of a spread of unstratified flint and pottery, including Beaker sherds, within a mixed layer of colluvium. (This layer also contained some later prehistoric artefacts.)

A penannular ring-ditch was located in the south-eastern corner of the excavation area. A large, shallow pit was located near the centre of the ring-ditch. Although neither a funerary vessel



ILLUS 5 Plan of possible Beaker burial and ring-ditch

nor skeletal remains were found within the pit, these features are interpreted as the remains of an enclosed burial, probably of Bronze Age or Iron Age date.

#### *'Beaker' area (illus 4)*

Around 50 pieces of chipped stone were recovered from the mixed colluvium layer which overspread this area, including a barbed-and-tanged arrowhead (illus 6, no 882). Around 13 sherds of pottery were recovered, including at least four sherds of Beaker pottery (illus 6, nos 1–4 and possibly nos 5 & 6). The Beaker sherds were recovered from just above the natural sub-soil and were probably redeposited from Early Bronze Age activity in the immediate vicinity. Another artefact which may date to the Early Bronze Age is the phallic-shaped amber bead (illus 18, no 310) although Hunter (below) prefers an Iron Age date for this item.

A spread of negative features was sealed below this layer of mixed colluvium. These included a number of slots, pits, post-holes and stake-holes. The slots all contained post-holes set at variable distances which suggest that these features may have supported short lengths of palisade or light fencing. No clear pattern could be discerned among these features which would indicate a single structure. None of the diagnostic Early Bronze Age artefacts was found within any of these features, but with the concentration of flint flakes and Beaker sherds, and in the absence of any more positive evidence, they are tentatively attributed to the earliest phase of occupation on the site. Quantities of later prehistoric artefactual material were also recovered from this vicinity, however, and some of these features could have been related to the later prehistoric occupation. In particular, the alignment of the two features which run parallel to the antennae ditch, and the slots which appear concentric to the edge of the defensive ditch, may support this alternative interpretation (illus 4).

#### *Ring-ditch (illus 5)*

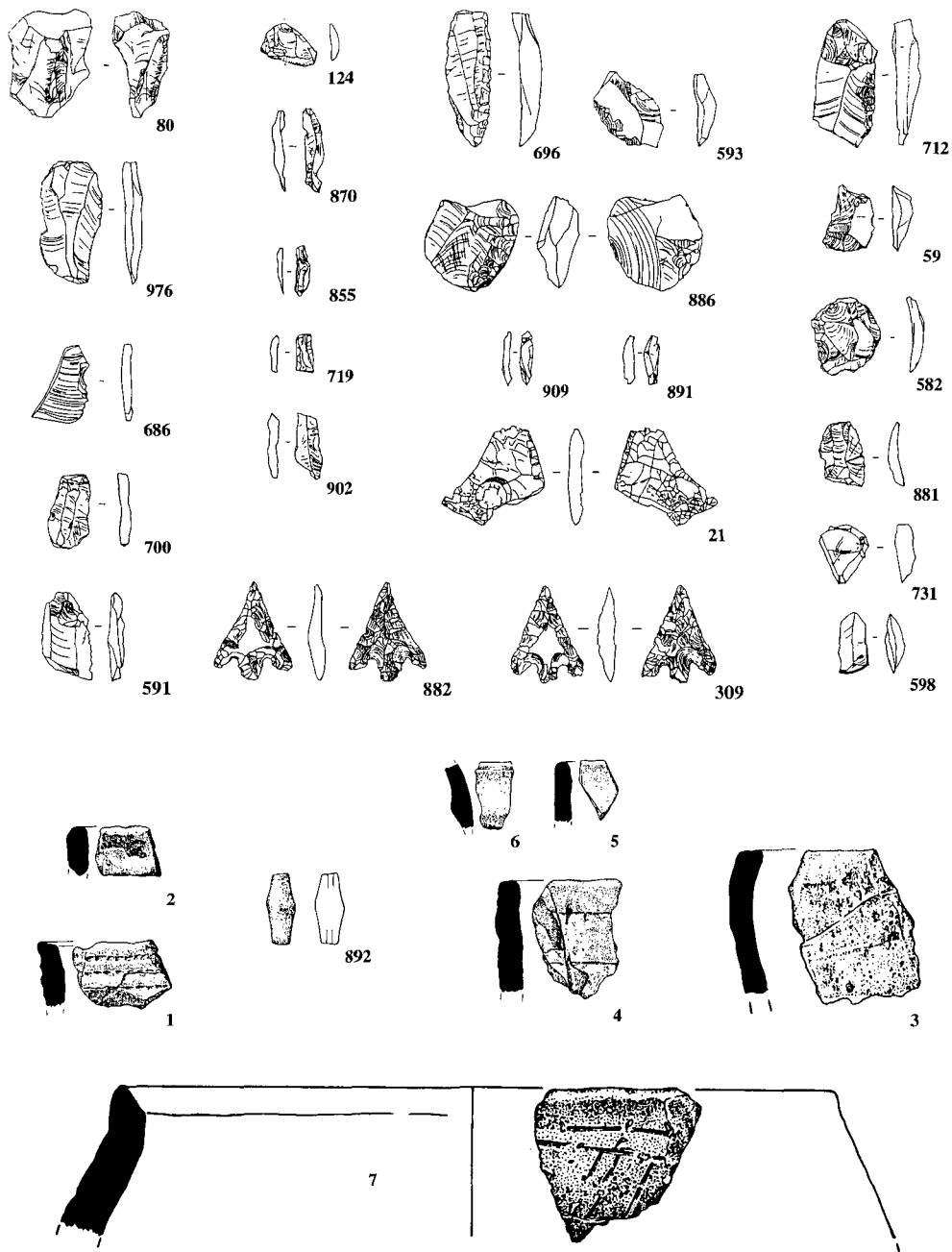
A penannular ring-ditch with its entrance facing north-westwards was located in the south-eastern corner of the excavation area. Its western side was not fully exposed. It was 6.2 m in overall diameter and was formed by a shallow ditch 0.9–1.3 m wide by 0.3 m deep, enclosing a central area 3.8–4.1 m in diameter. The ditch was filled by a brown loam which contained a random scatter of stones. A large, shallow, sub-rectangular pit was located slightly off-centre within the ring-ditch. It measured 1.55 m long by 1.1 m wide and was up to 0.4 m deep. It was filled with re-deposited, orange-brown, gravel sub-soil.

This ring-ditch and central pit are interpreted as the remains of an enclosed burial, probably of Bronze Age or Iron Age date. A flint flake (illus 6, no 976) was recovered from the fill of the pit while a flint core was found in the plough-soil above, but no diagnostic artefacts were recovered from the fills either of the ditch or of the central pit. There were no remains of an inhumation, however phosphate tests provided weak to regular reactions, perhaps indicating that the pit formerly contained a burial (although evidence of animal activity was noted in the north-east corner of the pit and may offer an alternative explanation of these results). A low gravel mound — 0.05 m high — lay directly to the south of the pit and was interpreted as the remnant upcast from it. It is conceivable that the scatter of stones recovered from the ditch fill may be the remains of a low cairn which originally covered a grave.

A line of stake-holes along the eastern side of the ring-ditch may relate to later activity on the site, possibly forming part of a fence running southwards from the terminal of the external ditch.

Another barbed-and-tanged arrowhead (illus 6, no 309) was recovered when cleaning the upper surface of the infilled defensive ditch c 5–10 m west of its south-west terminal. The close similarity in size and shape between both the barbed-and-tanged arrowheads from the site (nos 309 & 882) is remarkable; they may perhaps represent part of a set originating from the disturbed burial.





ILLUS 6 Early Bronze Age objects (Phase 1): chipped stone, Beaker sherds and jet bead

## EARLY BRONZE AGE ARTEFACTS

Alison Sheridan

*'Jet' bead (illus 6, 892)*

An unstratified fusiform bead was recovered from the 'Beaker Area' to south-east of the defensive enclosure (L 20 mm; D 8 mm; perforation D 2 mm; unphased). In the absence of the bead itself its raw material cannot be ascertained, but fusiform beads of jet and jet-like substances (principally cannel coal and lignite) are known from numerous Bronze Age contexts in Scotland. Their earliest use dates to the Early Bronze Age, where they are found in funerary contexts as components of spacer-plate necklaces and bracelets, and of disc- and fusiform-bead necklaces. (One disc- and fusiform-bead belt has also been found, at Culduthel in Inverness-shire.) Although these types of jewellery are unevenly distributed within Scotland, there are several examples from the south-east. Such jewellery is associated with Food Vessel and Beaker pottery, occurring in the latter case with examples traditionally regarded as being stylistically 'late' (although the British Museum's recent radiocarbon dating programme has cast doubt on whether a clear chronological sequence for Beaker pottery can yet be established: Kinnes *et al* 1991).

Fusiform beads are also found singly, or in small numbers, in Middle Bronze Age funerary contexts, associated with urned cremation burials. However, given that the St Germain's example is associated — however loosely — with the 'Beaker Area' of the site, an Early Bronze Age attribution seems to be more likely.

*Chipped stone (illus 6)*

The chipped stone assemblage comprised 80 pieces of flint, 23 pieces of quartz and 12 pieces of chert. None of this material is now available for examination, but surviving illustrations indicate that, although generally consisting of undiagnostic flakes and debitage, the assemblage does contain a number of items, such as the edge retouched blade (illus 6, no 696) and the scraper (illus 6, no 886) which are likely to be of late Neolithic/Early Bronze Age date (B Finlayson, pers comm). The two barbed-and-tanged arrowheads are very similar and both are of Sutton type b (Green 1980, 138). This type spans the full chronological range for such arrowheads but occurs with particular frequency in the graves of Beaker archers. All of the illustrated material (illus 6) is flint, apart from no 719, which is described as chert.

*Pottery (illus 6)*

Six possible Beaker sherds were recovered, five rim sherds and one body sherd. Sherd no 1 is decorated with three rows of twisted cord impressions. Both rim sherd no 3 and body sherd no 6 have traces of horizontal, possibly incised, lines. The rest of the sherds are undecorated. The curvature of body sherd no 6 suggests it came from the waist or neck of the vessel. In addition to the Beaker pottery, an unstratified rim sherd from a possible Food Vessel (illus 6, no 7) was recovered. This had an internally bevelled rim and was decorated with horizontal and diagonal incisions.

## PHASE 2: IRON AGE PRE-ENCLOSURE SETTLEMENT

The first element in the life of the Iron Age settlement may have been a single, unenclosed house, if a stretch of curving ditch can be interpreted as part of a single, circular, ring-groove house (illus 4, RG1). The remains of this structure were very fragmentary and different segments of the ring-groove were identified in neighbouring areas during successive seasons of excavation. The slot, which ran in an arc from north-east to south-west, was filled with brown loam and stones and

measured c 0.4 m wide and up to 0.3 m deep. The full extent of the structure could not be determined since its south-western end was cut by both the later polygonal enclosure and by a modern field drain, but the surviving portions suggest the structure may have been 9–10 m in diameter. Its stratigraphic position is at best ambiguous, therefore, although it clearly pre-dated the polygonal enclosure (Phase 3). No associated finds or datable samples were recovered from this feature and it remains the sole trace of the Phase 2 pre-enclosure settlement.

### PHASE 3: IRON AGE EARLY ENCLOSURE

A new ring-groove house was built in Phase 3. This was enclosed by a polygonal ditch, which may once have been edged by a fence set within a bank. The enclosure was internally subdivided.

#### *The ring-groove house (illus 7)*

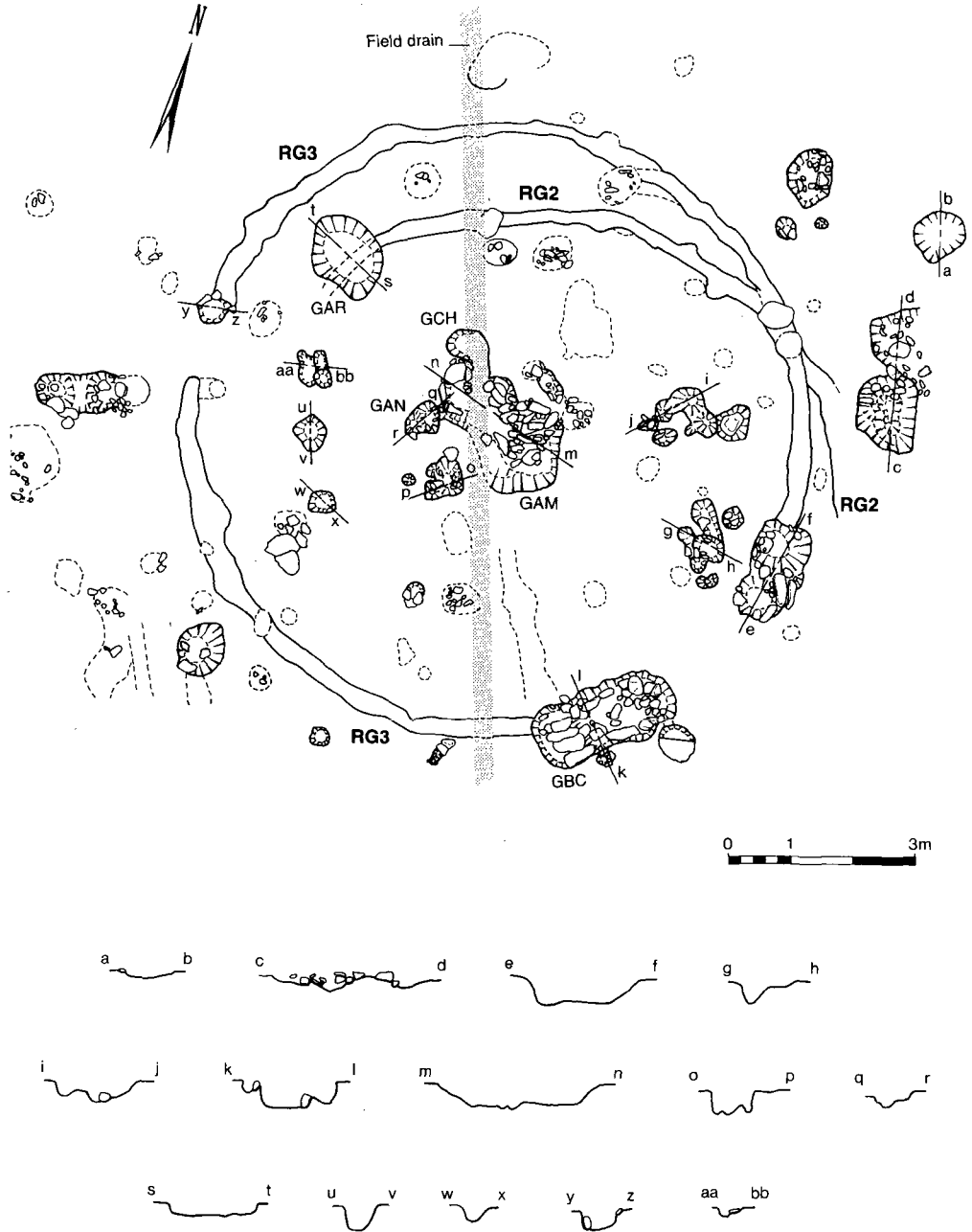
The ring-groove house appears to have been rebuilt at least once on the same stance. The evidence for the first build (RG2) is an arc of ring-groove, c 0.4 m wide, filled with redeposited sub-soil and stones. The positions of at least three posts were visible along its length. It described an arc running from east to west, forming the north wall of the house. The east, west and south sides had been removed, possibly in antiquity, since the surviving arc was preserved only within the interior of the later ring-groove house (RG3). The surviving arc represents some 37% of a house circumference with an estimated diameter of 10.5 m. This ring-groove cut through the fill of a large pit (illus 7, GAR) which may either have belonged to an earlier phase or was an integral part of the construction.

The second house (RG3) appears to have been slightly smaller, c 10 m in diameter, with its centre positioned a little to the north-west of that of house RG2. The main entrance faced south-eastwards and consisted of large post-holes which formed the terminals of the ring-groove on either side of a doorway over 2 m wide. The north-eastern terminal appears to have supported two large posts. Another, smaller door, 0.9 m wide, was located in the western side of the house. The larger post-hole there, on the northern side of this entrance, suggests that a door would have been hung on that side. An undecorated stone ball (illus 18, no 198) was recovered from the fill of the ring-groove slot.

The interior of house RG3 contained over 30 features, though some of these may have been associated with the earlier house RG2. The majority appear to have been post-holes, probably for the roof-supports in one or other of these structures. In general the pattern suggests an outer wall based in the ring-groove slot with an internal post-ring set at 1.4–1.6 m from the wall.

In the centre of the building a large pit (GAM) was intercut with two other pits to the north (GCH) and west (GAN). These features are comparable to the large double post-holes on either side of the entrance to the house and, although disturbed by the insertion of a later field drain, appear to represent a double post-hole for a central roof support. Alternatively, the intercutting pit group may simply represent post replacement.

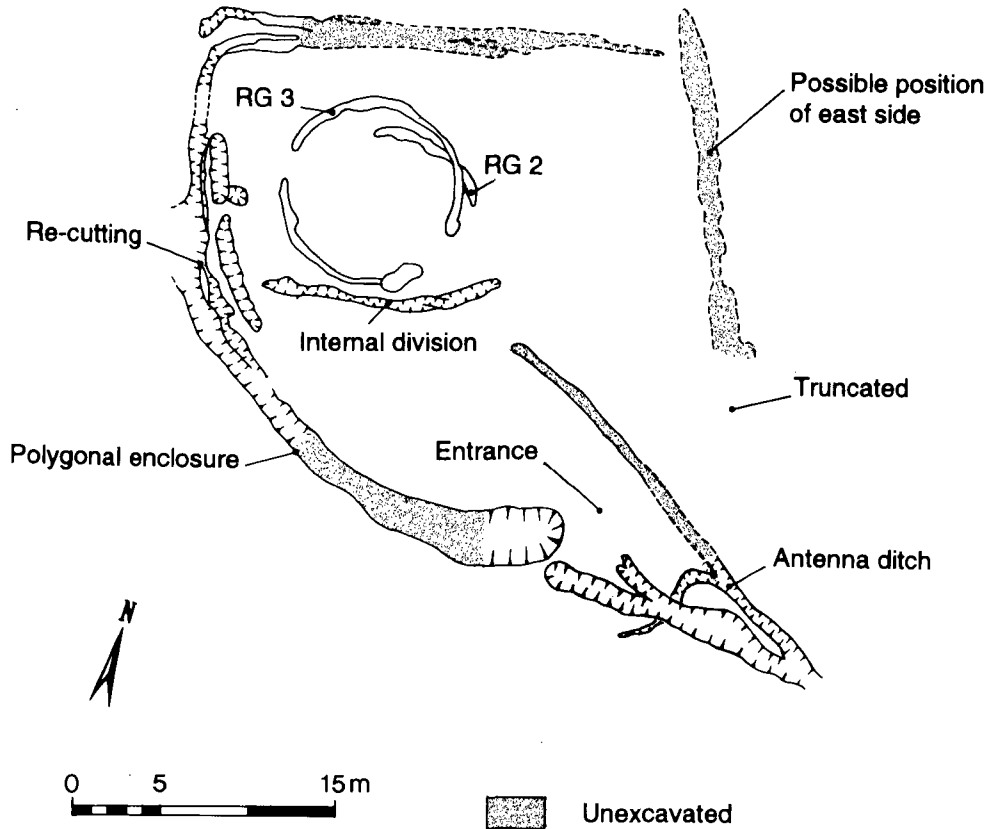
The largest pit (GAM) was roughly figure-of-eight shaped. It was 1.9 m long, 1.0 m wide, 0.4 m deep and was lined with stone slabs, set on edge. This lining was from one to three stones thick but formed no set pattern. Some stones rested on the base of the pit while others appeared to have been set into slots 30–50 mm deep. The fill was generally a mid-brown loam. A layer of small pebbles was scattered over the base of the pit. Near the base at the north-west end was a round patch, 200 mm wide and 50 mm thick — of an orange clay-like substance which, on analysis, produced high phosphate readings. At the south-east end, 100 mm from the base, were some sherds of a coarse ware vessel (illus 13, no 8). The sherds appear to have been associated with a thick layer of gritty charcoal-like substance and a fire-cracked pebble. Sherds from the same vessel were also recovered from the small, intercutting pit (GAN) immediately to the west. A bone point (not illustrated) was retrieved from the east end of the larger pit, 200 mm above the base, along with two sherds of medieval pottery. A sherd of possible Roman pottery (no 224) was recovered from the fill of



ILLUS 7 Plan of ring-grooved houses RG2 & RG3 (Phase 2)

adjacent pit GCH. These last finds may have been intrusive, as associated deposits of burnt bone and clay appear to have been incorporated as a result of animal activity in both pits.

The interior of the ring-groove contained a number of other pits and post-holes, only some of which were excavated. Immediately west of the main entrance a linear feature extended north/south from the wall towards the centre. This feature may represent a radial floor division or partition wall.



ILLUS 8 Plan of the polygonal enclosure (Phase 3)

### *The polygonal enclosure (illus 4 & 8)*

The ring-groove house (RG3) sat within a polygonal enclosure with a maximum width of 27 m, on the north side. The whole of the east side of the enclosure was lost through plough truncation, although a linear band of moisture-retaining soil perhaps marked its former location. In general, the ditch was very irregular in shape, both in plan and profile. Its width and depth varied (depth 0.2–0.5 m) and there were numerous indications of re-cutting or reshaping. The irregular nature of the ditch, coupled with its small size, indicate that it was not constructed as a defensive barrier. It may simply have been used as a quarry for material to form a low perimeter bank. Although no remains of a bank were identified, a number of irregularly spaced post-holes and stake-holes along both the inner and outer lips of the ditch may be the remains of a wooden fence or bank revetment. A fence of this sort might have defined the focus of the settlement, protected the structures within from livestock, or provided limited shelter for open-air activities within the enclosure.

The doorway of ring-groove house RG3 faced south-east towards a possible entrance to the polygonal enclosure. The southern-western terminal of the enclosure ditch was well preserved but nothing survived of the opposite, north-eastern terminal.

A short section of ditch lying immediately to the south of house RG3 appears to have formed an internal division within the polygonal enclosure. This feature was slightly bowed to the south, apparently respecting RG3, and thus very likely to have been contemporary with the house.

There was no direct stratigraphic relationship between the polygonal enclosure and the larger (Phase 4) defensive enclosure. Thus, the chronological relationships between the two can only be surmised by

logical inference. Other enclosures with multiple ramparts generally feature a series of ditches with dump-constructed banks, often sited on a gradient which allows the innermost earthworks to overlook the outer ones. In the present example, in contrast, there is no surviving bank and the polygonal ditch is too slight, in any case, to have been a defensive feature. Finally, it is unclear what purpose the smaller ditch and its upcast could have served if it had been contemporary with the larger earthwork. The space between the two would have been negligible and practically inaccessible. In consequence, the two enclosures are best seen as succeeding one another, the relatively slight polygonal ditch (and bank?) being replaced by the much more impressive (Phase 4) ditch and rampart.

#### *Antennae ditches (illus 4 & 8)*

Antenna-like ditches extended south-eastward from either side of the proposed entrance to the enclosure; these converged after a short distance. These antennae ditches displayed multiple periods of construction. On the south-western side there were at least three re-cuts, though their alignments were slightly displaced south-westwards each time. It was only after the last of these three re-cuts that the feature seems to have formed a continuous link with the polygonal enclosure. Beyond the point where the two antennae ditches converged there was also evidence for a complex series of re-cutting. Once again, there were at least three phases of superimposed intercutting. The initial phase, representing a shallow, irregular ditch, first silted up and was then re-cut by deeper, but discontinuous, ditched segments. This segmented ditch also silted up before its upper fill was re-cut by another shallow ditch.

The upcast from these ditches may have formed banks along either or both sides. A small spread of redeposited silty-clay soil on the north side of the cut, where the ditches had converged, appeared to represent the remains of a bank. The lower fill of the primary cut was similar to this material, suggesting a bank had slumped in. In the later re-cuts there was no further evidence of redeposited bank material, suggesting that the bank had stabilized by then. The upper fill of the final re-cut, at its south-eastern limit, was a dark brown, moisture-retaining, silty clay which is interpreted as a midden deposit.

#### *Finds from the polygonal enclosure and antennae ditches*

A range of materials was recovered from the fills of the polygonal enclosure ditch. The majority of the finds were from the west and south sides. They included over 20 sherds of pottery, a whetstone (not illustrated), a stone spindle whorl (illus 18, no 602) and flint flakes, as well as charcoal flecks and fragments of burnt bone. The sherds were mainly from plain coarse ware vessels with upright rounded rims (illus 13, nos 12 & 13; illus 14, no 14). A sharply inturned rim (illus 16, no 27) was also recovered from a layer of stone paving overlying the infilled ditch but this is ascribed to Phase 5. Artefacts recovered from the internal dividing ditch include a rim sherd (illus 13, no 10) and basal sherd (illus 14, no 17).

Section trenches cut through the midden layer in the final re-cut of the antenna ditch yielded 10 sherds of pottery, including two rims, as well as charcoal, burnt coal and small fragments of burnt bone. A band of similar midden material to the south of the ditch included two flint flakes, charcoal, burnt coal and slag. Elsewhere, the uppermost fill contained a bone fragment and a stone ball (not illustrated).

#### PHASE 4: IRON AGE DEFENSIVE ENCLOSURE

The fourth phase began when the simple bank and ditch of the polygonal enclosure were replaced by a much more impressive ditch, probably with an associated bank of similarly large proportions (illus 4). These new fortifications were built round the outside of the old polygonal enclosure, the new entrance, like the old, being in the south-east. Along the line of the former antennae ditches a layer of small stones formed the surface of a broad roadway which extended south-eastwards from the entrance of the fortified enclosure over a distance of at least 20 m (illus 2 & 4).

*Defensive features (illus 4 & 9)*

The enclosure consisted of a large ditch, 5–6 m wide and up to 1.5 m deep, with an internal rampart (little of which survived at the time of excavation) in which the entrance was defended by a hillfort-style gateway. The defensive ditch enclosed an area c 52 m long (SE/NW) by 43 m wide. The rampart was constructed on the inner edge of the ditch and was reveted by a drystone wall or kerb on both the inner and outer faces. On the basis of the span between the surviving lengths of inner and outer revetment, the width of the undisturbed area between the polygonal enclosure and the ditch and the width of the gateway, the bank was an estimated 4–5 m wide. Thus, the remaining internal area would have been about 42 m long by 33 m wide.

The gateway was represented by a four-post structure, 4.5 m long by 3.2 m wide (the north-eastern post-hole had been destroyed by the construction of a telegraph pole). The entrance sloped gently and the two post-holes on the lower or south-west side were slightly deeper at the time of excavation; the southern of these post-holes reached a maximum depth of 0.7 m while the other two were c 0.4 m deep. The outer two post-holes, facing south-east, each consisted of three intercutting pits which may have contained separate structural elements, the support for a gate tower perhaps having been separate from the frame for the gates. Alternatively, these multiple cuts may represent episodes of replacement or repair, perhaps corresponding to the successive re-cuts of the ditch. The ditch was cut or re-cut in at least three separate episodes, described below as Phases 4A–4C.

*Ditch and bank: Phase 4A*

The first cut defined a deep, V-shaped ditch with a base which was variously flat or rounded (illus 8, E–F). This was cut through the till into the surface of the limestone bedrock (regolith), where quarrying marks of a pick-axe or mattock were preserved. Only fragmentary traces of the corresponding bank survived. The outer face was reveted by a drystone wall or kerb, a single course in height, of which only a few lengths survived on either side of the entrance. Immediately to the east of the eastern ditch terminal the bank was represented by a band of reddish brown stony soil, 4–5 m wide and up to 0.15 m high, which curved along the inner margin of the ditch. Tumbled stonework lying within the remnant bank is interpreted as the remains of an internal revetment. Two pits were cut through the bank, but their precise relationship with it is unclear and they may belong to a later phase. Otherwise, there was no evidence of earth-fast timbers forming a palisade, box rampart or timber wall face. No buried turf-line was apparent below the bank, suggesting that the ground had been stripped prior to its construction.

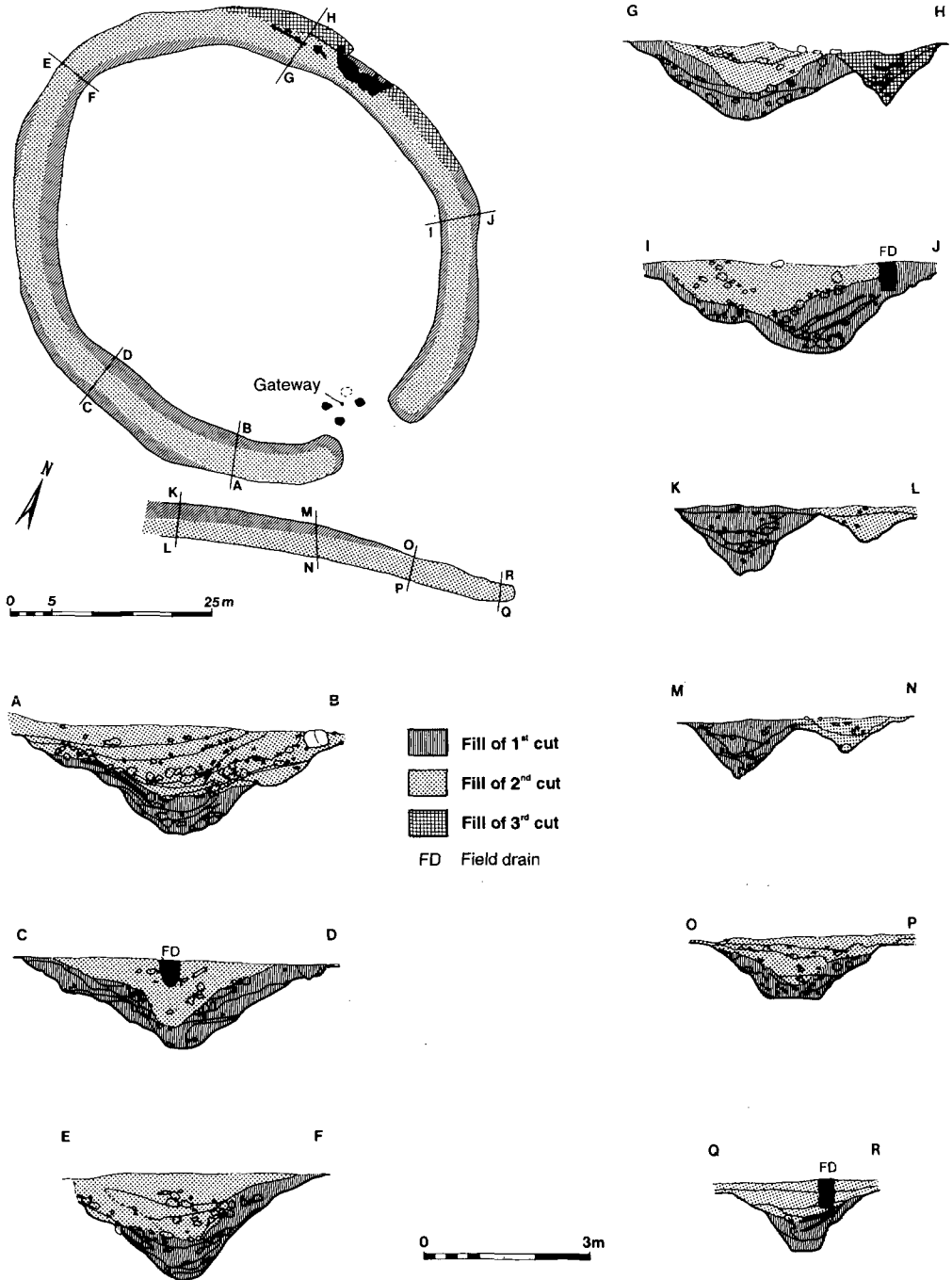
The tumbled stonework of the inner revetment and silt which had accumulated against it produced a number of sherds of coarse ware pottery, including two rim sherds (illus 14, nos 21 & 22), a basal sherd (illus 15, no 23), and three body sherds.

In the interior of the enclosure, the remains of a roughly cobbled area underlay the tumbled bank revetment. Sherds of coarse pottery were found both within and on top of this cobbled surface. The relationship of this feature to the primary bank is not well defined, but the overlying tumbled revetment stones suggest they may have been contemporary.

*Ditch and bank: Phase 4B*

A period of neglect and decay ensued, during which some of the revetment stones collapsed into the base of the ditch and were gradually sealed by alternating layers of light brown silt, with turfines of varying thickness (10–100 mm).

After this period of neglect, the fortifications were recommissioned by re-cutting the ditch and refacing the collapsed bank. The ditch re-cut appears not to have been as deep as in the first phase, only attaining approximately 1 m in depth with gently sloping sides. The line of the re-cut generally followed that of the original ditch, but in parts of the circuit it was displaced slightly towards either the interior or the exterior, resulting in a stepped profile (illus 9). Once again, the bank revetment or kerb consisted of a single course of



ILLUS 9 Ditch sections (Phase 4)



large stones. At both ditch terminals, the stone revetment for the second bank overlay the fill of the first ditch.

A large piece of charcoal, possibly part of a shaped wooden bowl, was recovered from the upper silts of the ditch near the entrance. Away from the terminals, few or no artefacts were recovered from the ditch fills. A single tubular iron object was recovered 13 m west of the south-west ditch terminal. Elsewhere, flecks of charcoal occurred.

#### *Ditch and bank: Phase 4C*

The third episode of earthwork construction was limited to an extraordinary revision of the phase 4B scheme in the north-east, where a new entrance was made. This consisted of an area of flat paving stones laid across the infilled ditch, forming an entrance causeway. Two bands of stone extended along the centre of the former ditch on either side of this causeway and are interpreted as the kerb of a re-faced bank, now extending partly over the earlier ditch fills, and fronted by a re-cut external ditch with a V-shaped profile (illus 9, G–H). This third ditch cut extended only for 22 m to the south-east of the new causeway and at least 18 m to its north-west.

In contrast to the remainder of the ditch fills, this sector of the defensive circuit produced a large quantity of artefacts including flint and quartz flakes, fragments of bronze, an iron nail, a large body sherd of pottery and a bone bead (illus 18, no 729), as well as a quantity of burnt bone. These were all recovered from the paved area at the causeway or amongst the stone alignments to either side.

#### *External ditch*

South of the enclosure, an external ditch was identified running approximately east/west, passing close to the outer edge of the main defensive ditch. This long, straight ditch had evidently been re-cut on at least one occasion, as the section trenches excavated towards the west end of this earthwork revealed the profiles of two separate ditch cuts (illus 9, sections K–L, M–N). The northern or primary cut was deeper and the shallower southern cut was made only when the northern ditch had silted up. The northern ditch was up to c 3.0 m wide and up to 1 m deep; the southern or re-cut ditch was c 1.6 m wide and up to 0.65 m deep.

The precise relationship between this external ditch, the defensive enclosure and the antennae ditches remains unclear. It is possible that this external ditch was contemporary with the defensive enclosure and acted as some form of land division relating to the settlement, perhaps for agriculture or livestock control. Several details point to this relationship. Although smaller in scale, the terminal of the external ditch has a flattened end similar to those of the defensive ditch. Furthermore, a layer of cobbles extending over the area outwith the entrance to the defensive enclosure appeared to respect the line of the external ditch, partly overlying the upper fills along its northern edge. A machine-cut trench at the terminal of the external ditch revealed a series of undulations in a deeply buried palaeosol — possibly narrow-rig cultivation features — running parallel to the external ditch on its south side. Finally, the re-cutting of the external ditch may correspond to one of the episodes of re-cutting the defensive ditch.

An iron spearhead or knife blade (not illustrated) was recovered from the basal fill of the first cut of the external ditch, along with some charcoal and organic material. Around 20 sherds of pottery were recovered from the cobbled area extending between the terminal of the defensive ditch and the edge of the external ditch.

#### *Internal structures?*

It is possible that the Phase 3 ring-groove house (RG2/3) continued in occupation during Phase 4. It is also possible that some of the Phase 5 stone-paved structures (see SS1, SS2 & SS3 below) may have originated during the occupation of the defensive enclosure, especially structure SS3, which may be the remains of a ring-ditch house.

## PHASE 5: UNENCLOSED IRON AGE SETTLEMENT

The fifth and final phase of settlement saw a major change in its form. The enclosing fortifications were allowed to decay into a series of mere bumps and hollows. It is possible that the number of houses in the settlement had already begun to increase during the preceding phase; now the settlement spread to cover the former gateway of the fort and beyond, thereby blocking what had been the approach road to the entrance. Certainly the south and south-east of the old enclosure was overlain with new houses (SS1, SS2 & SS4). These were identified as paved scoops cut into the sub-soil. Due to the deep plough truncation of these sectors, together with the general lack of deep post-holes in the construction of the later houses, it is difficult to know how far towards the centre and north of the former enclosure the unenclosed settlement may have spread.

*Stone-paved structure 1 (illus 10, SS1)*

Stone-paved structure SS1 consisted of a series of superimposed, stone pavements, using slabs c 0.4 m by 0.7 m. Some of the stones bear heavy plough scars and it is possible that the outer margin of this structure, including the wall line, has been removed by ploughing. This floor proved to be very uneven and it was difficult to disentangle the stone work of the individual layers in its make-up. The paving sealed a foundation slot, 0.1–0.2 m deep, for an almost square structure. A series of post-pits were cut through the bottom of the groove, indicating that there may have been two phases in its construction. It is unclear whether this ring-groove represents the wall line of a very small timber structure 4–5 m across or the central element of larger structure; two offset post-holes at the eastern side may represent part of an entrance or porch to a smaller structure.

From the upper levels of paving came a fragment of possible Roman glass, sherds of pottery and pieces of bone which included a small mammal vertebra, animal teeth and one bone with saw marks. A sherd of pottery was recovered from the lip of the southern entrance post-hole. Two sherds of pottery and two burnt bone fragments were recovered from a levelling layer beneath the main area of paving in the western part of the structure.

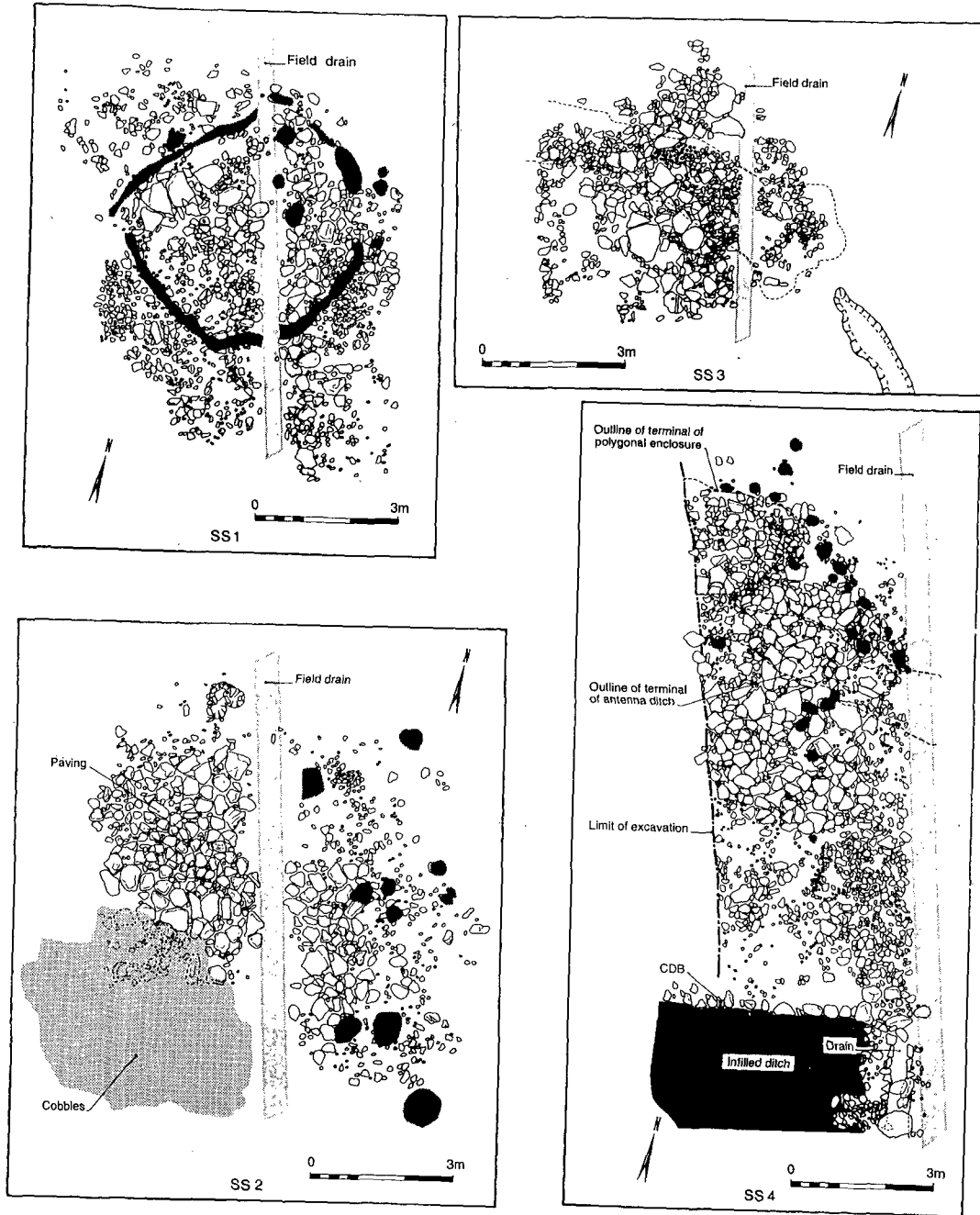
*Stone-paved structure 2 (illus 10, SS2)*

The remains of structure SS2 consisted of a shallow, paved, semicircular scoop, most marked at its east end. Several post-holes were cut into the eastern margin of the scoop; their distribution does not immediately suggest that they formed a single structural element. The floor consisted of alternating layers of pebbles and large flat paving stones, all set within the scoop. The overall plan and shape of the structure were difficult to interpret: the centre was damaged by a modern field drain and its edges were ill-defined, probably due to plough damage. Nonetheless, it appeared to be 6–7 m long east/west by 5–6.5 m wide. The south-western corner of the stone paving was partly overlain by a spread of cobbles covering an area 5 m long east/west by 4 m wide, indicating a potentially larger floor area overall.

Finds from the area of stone paving included sherds of pottery and a bronze spiral finger ring (illus 17, no 518).

*Stone-paved structure 3 (illus 10, SS3)*

Stone-paved structure SS3 consisted of an area of stone paving c 5 m in diameter, comprised of flat stones and cobbles packed with smaller stones. An underlying layer of paving followed the same outline as the upper one. A great deal of care had been taken in the construction of the lower pavement: the larger stones were laid in sand with smaller stones set in the interstices to create an even surface. These paving layers overlay the terminals of a shallow curvilinear slot or trench, a combination of features which suggests that the structure may represent the very fragmentary remains of a ring-ditch house.



ILLUS 10 Plans of stone-paved structures SS1-4 (Phase 5)

The few finds from this structure include a worked flint, three chert fragments and pieces of burnt bone, all recovered from the curvilinear feature beneath the paving.

#### *Stone-paved structure 4 (illus 10, SS4)*

The evidence for structure SS4 indicates a house with successive phases of paved floors and post-holes, all of which were set within a shallow scoop. The full extent of this basal scoop was difficult to discern as it was superimposed on the fills of two earlier ditches: it cut the antennae ditch at its western terminal and the polygonal enclosure ditch at its eastern terminal. A loose brown loam was removed to reveal the extensive area of cobbled and paved flooring. The upper level of paving contained substantial flat stones with interstices packed with small angular stones; it incorporated two quern fragments, one being part of a rotary quern. This upper pavement survived over a sub-rectangular area c 7 m long (NW/SE) by 5 m wide. The lower level of paving consisted of some very large flat stones covering a similar area. An arc of post-holes along the northern and eastern edges of the paving may represent either an associated wall or the wall of an earlier building. Several other pits were sealed by the paving.

Immediately to the south, a spread of smaller cobbles extended as far as the outer kerb of the former defensive bank (Phase 4B) (the kerb appears as CDB on illus 10). This area of cobbling may represent a small yard delineated by the building to the north and the edge of the former defensive ditch to the south. Unfortunately, the area to the east was cut by a modern field drain, while the area to the west remained unexcavated under an access baulk. A stone-lined drain led from the cobbled yard to the infilled defensive ditch, which would have acted as a sump.

#### *Stone-paved structures 5 and 6 (SS5 & SS6)*

The remains of two other structures, SS5 and SS6, were located over the infilled eastern terminal of the Phase 4 defensive ditch, where structure SS5 would have almost completely blocked the former entrance to the Phase 4 defensive earthwork enclosure. Unfortunately, no detailed plans of these features now exist.

The remains of Structure SS5 indicate a circular building. Two arcs of stone walling were separated by a deposit of dark brown soil (the walls appear in the right-hand side of illus 11). These may have been the inner and outer faces of a double wall with a soil core or, alternatively, two phases of a single wall which had been re-faced, as in the stone-walled scooped houses at Broxmouth, East Lothian (Hill 1982b, 174, illus 9). In either case, the walls enclosed a small area of paving, interrupted by gaps revealing post-holes. The surviving portion of the structure sloped down into the top of the infilled ditch, which may explain its preservation. The curvilinear wall remnants can be projected to an overall diameter of roughly 6–8 m.

The remains of structure SS6 abutted the wall of SS5 on its north-east side. Three discrete floor areas were separated by short stone wall remnants. The floor areas consisted of (from north to south) a narrow zone of quartzite pebbles, a wider central area with a sandy loam surface and a spread of paving. The wall forming the southern limit of the quartzite pebble floor incorporated a rotary quern (illus 12). The quern had bun-shaped profile, a conical feed hole in the centre, a hole for a vertical handle and another broken hole for a horizontal handle in the side. This type of quern probably dates to the period between the first century BC and the second century AD (MacKie 1995, 107). Five post-holes were identified; three of these formed an arc concentric with the external wall of structure SS5. Unfortunately, like structure SS5, the remainder of this structure appears to have been destroyed by later ploughing.

Potsherds, a flint scraper and a bronze tweezers (illus 17, no 675) were recovered from the topsoil in this area. Below the topsoil was a layer of brown silty loam with patches of charcoal staining. This overlay the remains of both structures SS5 and SS6 and also the fills of the defensive ditch on which they sat. Within this deposit were numerous artefacts including sherds of coarse ware pottery (illus 15, no 25), flakes of chert and flint (illus 6, nos 712 & 719), a clay mould metalworking fragment (illus 17, no 716), a possible tuyère fragment (illus 17, no 722), two copper-alloy fragments (illus 17, nos 684 & 695) and a fragment of unidentified metal.



ILLUS 11 Stone-edged ditch terminal (Phase 4) with overlying structure SS5 (Phase 5)



ILLUS 12 Stone wall of structure SS6 incorporating a rotary quern

#### PHASE 6: CULTIVATION AND DRAINAGE

Traces of strip divisions or broad rig of the medieval period were found to cover much of the site. These took the form of linear features which ran north/south at approximately 9 m intervals. They could be seen as very slight differences in soil colour visible only in favourable lighting conditions. These discolorations probably marked the bottoms of shallow ditches or furrows which had otherwise been ploughed out by later cultivation.

In the modern period, an extensive drainage system was constructed in the field, comprising a series of ceramic drainage pipes inserted in trenches 0.4 m wide and up to 0.5 m deep. These traversed the site from SSE to NNW at intervals of 5.5 m.

The plough-soil contained many pieces of late 19th- and 20th-century pottery, glass, metal, ash and coal, probably the remnants of midden spread on the fields as fertiliser. In addition to the modern material, quantities of other, unstratified artefacts were recovered from the topsoil and colluvium deposits. These included sherds of later prehistoric, Roman (Samian) and medieval pottery.

### IRON AGE MATERIAL CULTURE

#### POTTERY

This report is based upon the examination of some 230 sherds, fragments and crumbs of later prehistoric pottery with a combined total weight of approximately 11,800 g. Following consolidation and analysis, it was possible to reconstruct a sizeable portion (40%) of only one vessel (no 8). Another 25 vessels represented by rim sherds (nos 9–15, 20–22, 24–28, 31–32), basal sherds (nos 17–19, 23, 30, 33) and body sherds (nos 16, 29) have also been illustrated (illus 13–16). The full catalogue contains an additional 149 entries (nos 34–181, 235), but a further 25 groups of sherds (182–207) were stolen from the site hut. It is possible, therefore, that the total assemblage represents a maximum of about 200 vessels. In reality, this is probably an over-estimate. It is unlikely that every sherd represents a single vessel; however, most of these were difficult to match or assign as they are largely coarse ware body sherds. The recovery of rim and base sherds (as a percentage of the catalogue entries) is estimated at 14% and 6% respectively.

#### *Fabric*

The sherds were examined macroscopically and where possible grouped into fabric types on the basis of their colour, firing and range of inclusions. A minimum of 13 different fabric types is described in the catalogue (below). All are hard sandy fabrics with varying amounts of quartzite (white quartz mixed with black crystals) and other rock inclusions. There is evidence for the limited use of organic temper (perhaps grass) in vessels 27 and 29. Prehistoric pottery, however, especially such coarse ware, can vary greatly in fabric even within individual vessels (PCRG 1992, 9) and the range of fabrics identified, therefore, do not necessarily represent deliberate separate admixtures by the original potters.

#### *Form*

The majority of the pottery represents upright, bucket-shaped vessels with rounded, upright or slightly inturned rims and flat bases. No complete profiles were preserved and little can be said with confidence about the size of these vessels.

Of the examples from Phase 3 contexts, the most complete is vessel 8 which appears to have curved out sharply from a narrow base before curving back to form an inturned rim (200–220 mm in diameter).

Vessel 9 also has an inturned rim, and body sherd no 16 displays a profile expanding from the base to a diameter of 230–240 mm. The rest of the vessels from Phase 3 appear to have had a more upright profile, with inturned rims (nos 10, 11, 12, 13, 14, 15) seeming to be less frequent during this phase. Numbers 17 and 19 suggest a simple flat base with a rounded edge, while no 18 indicates a flattened base with a much sharper basal angle.

The vessels from Phase 4 contexts appear to have relatively straight-sided profiles with only slightly inturned rims (nos 20–22) as does the rim sherd (no 24) from Phase 4/5 (260–280 mm in diameter). The basal sherd of vessel no 23 is pinched-in slightly on the exterior, just above the basal angle.

Phase 5 vessels (nos 25, 26, 27) appear to have more sharply inturned rims. Vessel 25 was 280–300 mm in diameter while vessel 26 was c 300 mm in diameter. It is noticeable that the profiles of the three rim sherds from vessel 25 are so different (sherd no 723 being more sharply inturned than nos 4 and 38), highlighting the problem of variability in form of such coarse hand-made pottery, even within single vessels.

Some of the unphased vessels show similar attributes to those above, such as simple rounded rims (nos 28, 31, 32), but there are also a number of other vessels which stand out from the types which can be phased. Sherd no 29, although of similar body thickness to many of the other sherds, is from a vessel with a smaller body diameter (at least 140 mm). Two basal sherds are not only from smaller vessels (nos 30, 33), with basal diameters of 60 mm and 70 mm respectively, but also appear to be of finer construction.

### *Construction*

Manufacture appears to have been mainly by ring construction. This is readily visible in the form of cracks along the exterior of the large body sherd of vessel 25. Both tongue-and-groove and obliquely bevelled ring-joints are visible on a number of sherds.

### *Surface treatment*

The majority of the sherds do not appear to have been finished particularly well. Indications of oblique wipe marks occur on the exterior of a number of vessels and horizontal ones on the interior. In many cases, inclusions protrude through both the internal and external surfaces, and often cracking has occurred around the areas where grits erupt (eg no 25). In one instance, a fingertip impression is visible on the external surface (no 14).

### *Firing*

The colour of the majority of sherds ranges from orange to brown (oxidised) on the exterior and interior surfaces, with a grey (unoxidized) core suggesting rapid firing in an open fire (Gibson & Woods 1990, 49). Vessel 26 clearly shows well-defined patches of colour change suggestive of irregular firing or restricted oxidation of the clay, perhaps as a result of contact with fuel during firing.

### *Use of vessels*

Many of the sherds are sooted on the external surface (nos 8, 12, 13, 15, 22, 26, 27) from contact with fuel during firing or cooking. The majority of these soot marks are visible on the exterior surfaces below the rim and occur in bands between 20–50 mm high.

### *Breakage, deposition and distribution*

Most of the pottery came from the shallow open ditch of the Phase 3 polygonal enclosure, or from the scooped floor areas of the Phase 5 stone-paved structures. In contrast, fewer sherds of pottery were recovered from the fills of the Phase 4 defensive ditch. It is likely that this was infilled by material slumping from the

defensive bank and that little cultural material from the enclosed occupation area would have been included in this. The worn, abraded and fragmentary nature of the assemblage indicates that the sherds represent vessels which were broken, discarded and distributed across the site over time, either by subsequent settlement activity or by later agriculture. Some sherds which have a bleached grey/white appearance may have been burnt in hearths or even in accidental fires. Some sherds were undoubtedly redeposited in later features, and thus residuality needs to be considered. In general, the recovery pattern does not suggest acts of deliberate, structured deposition.

The one exception may be the sherds of vessel 8, recovered from the conjoined post-pits (GAM, GAN) in the centre of the main Phase 3 ring-groove house (RG3). As some of the sherds were recovered from the basal fill of the larger pit, their presence cannot be attributed to chance incorporation during the life of the building, when a post rotted through at ground level (as observed in the Pimperne round-house at Butser experimental farm: Reynolds 1994, 13). Indeed, the large size and unabraded nature of these sherds suggests that they were deposited shortly after breakage. Perhaps they derive from the occupation of the earlier ring-groove building (RG2) and were incorporated accidentally when RG3 was constructed. This would suggest a short interval between the two houses, given their unabraded condition. Alternatively, they could have been placed in the post-hole as a form of ritual foundation deposit, marking the construction of a new house.

### *Discussion*

The pottery assemblage from St Germain's is typical of the plain, coarse, bucket-shaped vessels recovered from later prehistoric sites throughout southern Scotland. Such coarse wares are often considered to be both culturally and chronologically undiagnostic. However, examination of the assemblage from Broxmouth led to the identification of two basic types of coarse ware which were stratigraphically and possibly chronologically distinct (Cool 1982). Type I consists of large, slightly flared, bucket-shaped vessels with upright or inturned rims. These had rim diameters of 250–350 mm and very thick walls, some more than 20 mm. The clay was tempered with large chunks of stone often more than 10 mm long. Type II was better made with more straight-sided profiles and slightly smaller rim diameters of 180–300 mm. The wall thickness was between 10–20 mm and the clay was tempered with smaller grits generally less than 3 mm. Cool (1982) identified comparable types of pottery on other sites in south-east Scotland. Although the widespread application of these types has yet to be adequately demonstrated, they form the most useful published material with which to compare the St Germain's assemblage at the present time. In general, the pottery from St Germain's can be compared with both types, but perhaps is closer to Broxmouth Type II. None of the St Germain's sherds is as coarsely tempered as the Broxmouth Type I pottery although some sherds are over 20 mm thick.

No clear chronological division between types was evident at St Germain's: both straight-sided and curved-sided forms appear to have been concurrent throughout the Iron Age occupation of the site. Even allowing that some earlier vessels may be represented by sherds redeposited in later features, the evidence seems to suggest an assemblage of mixed fabrics and forms. Cool (1982, 99) suggests that the Broxmouth Type I pottery (associated with stone balls and bone yoke pins) centred on the fourth century (uncal) BC and that the Type II pottery ranged in date from the second century (uncal) BC through to the first century AD. However, a vessel from Myreshead, near Falkirk, which corresponds to the Type I category, came from a pit which produced a radiocarbon date of cal AD 150 ± 60 (Barclay 1983, 60–1). This suggests a longer currency for the type than was indicated at Broxmouth. Given the absence of radiocarbon dates and the lack of any clear-cut division in the pottery types, it is only possible to advance a date



range from the middle of the first millennium BC through to the second century AD for the pottery from St Germain's.

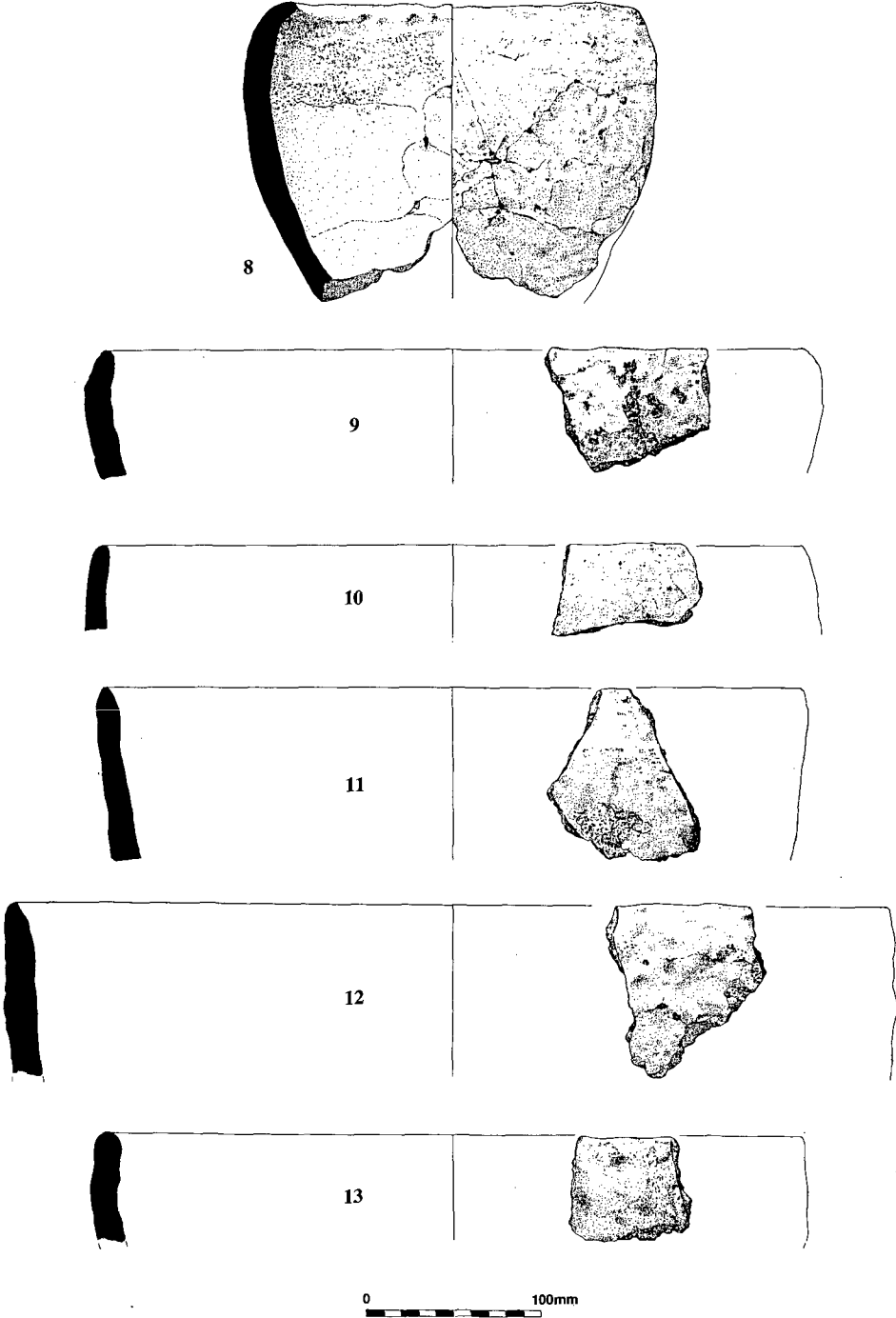
One remarkable feature of the St Germain's assemblage is its size. Although nowhere near the typical size of assemblages from Atlantic Scotland, the maximum number of vessels from St Germain's (< 200) is slightly larger than that from Broxmouth and significantly larger than the assemblage of 12 sherds from Port Seton East or the assemblage of sherds representing eight vessels from Port Seton West (Cowie, forthcoming). The Port Seton sites were also large Iron Age (cropmark) enclosures investigated by open area excavation. Does the difference in size of the pottery assemblages represent differences in function or status? Or were these sites simply more severely truncated than St Germain's? The low recovery of later prehistoric pottery from cropmark excavations in southern Scotland was repeated at Shiels enclosure, near Govan, where only two possible prehistoric potsherds were recovered (Scott 1996, 69). A detailed comparison of the results from both cropmark and upland sites, comparing the size of excavated areas and the numbers of artefacts recovered, might identify other aspects of this pattern.

A full catalogue of the pottery from St Germain's has been deposited with the site archive at the National Monuments Record of Scotland. This includes descriptions of the early prehistoric, Roman and medieval sherds and also lists the sherds stolen from the site. The following abbreviated catalogue describes the illustrated examples of the later prehistoric pottery only. Three-letter codes refer to the stratigraphic context of the sherds; three-number codes refer to the original small finds numbers allocated in the field. Joining sherds are indicated by a plus sign (+).

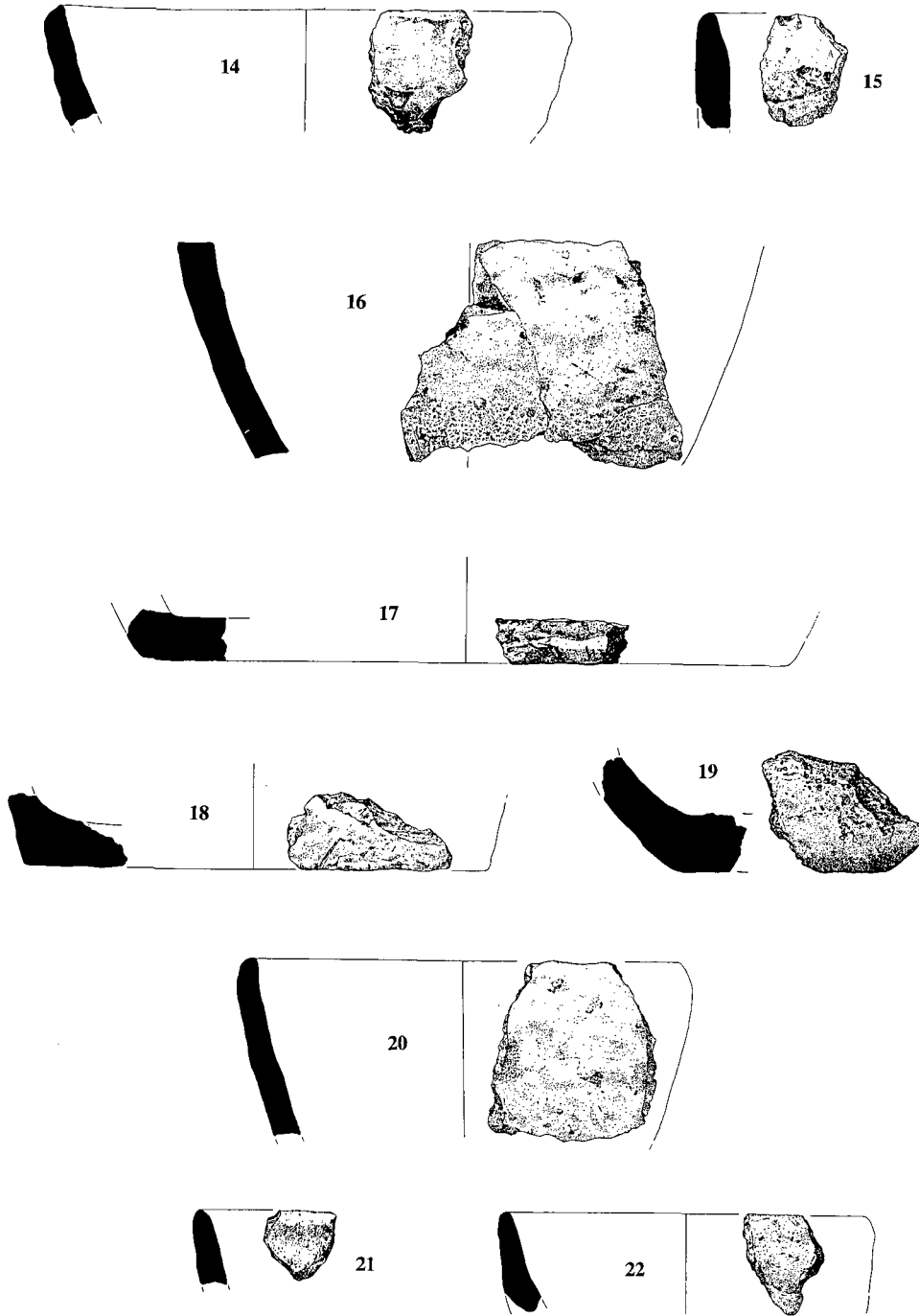
### *Catalogue of later prehistoric pottery*

#### *Phase 3 (illus 13 & 14)*

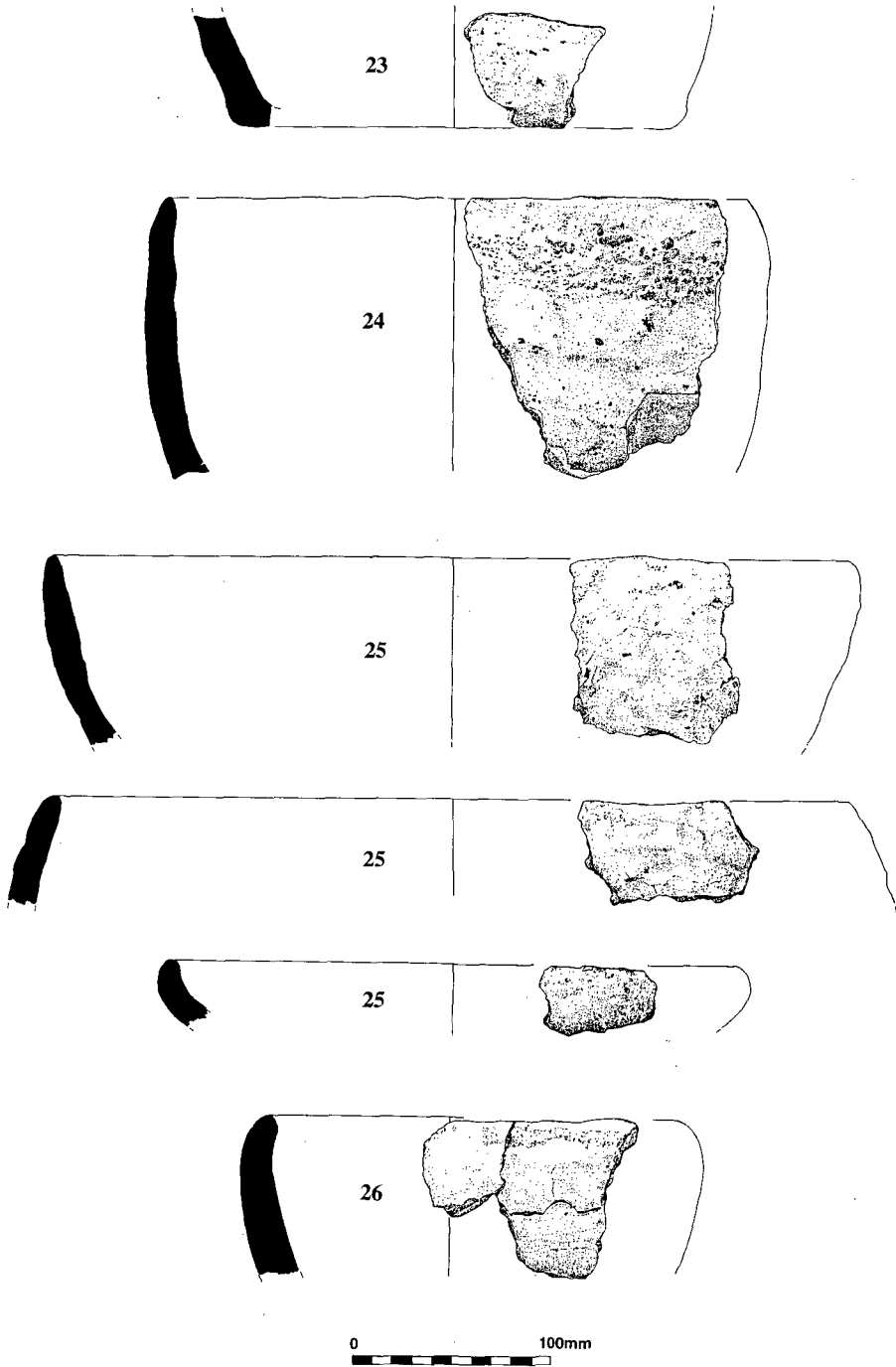
- 8 Two joining rim sherds of a bucket-shaped vessel with inturned rounded rim; medium coarse grey fabric with few inclusions; interior and exterior smoothed with slip; band of sooting on exterior below rim 20 mm wide and some burnt deposits; ring construction; body thickness 15–18 mm, rim diameter 200–220 mm. From the fill of the large central pit in RG3. GAN/130 + GAM/135.
- 9 Rounded, slightly inturned rim. Now lost. From the fill of the antenna ditch. BFJ/374.
- 10 Inturned rim of upright vessel with flattened top; medium fine fabric with moderate small white quartzite inclusions 1–2 mm; ring built; slip on exterior and interior; no sooting deposits; body thickness 11 mm; rim diam unknown. From the fill of the polygonal enclosure ditch to the south of house RG3. KAG/964 (possibly associated with body sherd GHA/311).
- 11 See no 17. From the fill of the outer ditch of the polygonal enclosure west of house RG3.
- 12 Upright pinched rim; coarse and lumpy grey fabric with frequent medium to large (4–14 mm) stone and quartzite inclusions; blackened (sooted) band 50 mm wide on exterior below rim; interior and exterior covered in a thin, uneven slip; obliquely bevelled jointed; body thickness 19 mm. From the fill of the polygonal enclosure ditch. GQX/605.
- 13 One rim sherd of an upright, perhaps slightly out-turned rim with flattened wide top and rounded edges; medium coarse fabric with frequent small inclusions; interior and exterior are slightly smoothed and covered with a slip; sooting covers the exterior surface and part of the rim; estimated rim diameter roughly 200–300 mm; body thickness 18 mm. From the fill of the polygonal enclosure ditch. GQN/538.
- 14 Inturned, rounded, pointed rim; coarse fabric with common (25%) sub-angular rock inclusions; vertical construction joints; dark grey exterior, grey core, brown/grey interior; possible finger print on the exterior surface and some burnt deposit on the rim. From fill of the polygonal enclosure ditch. GQX/606.



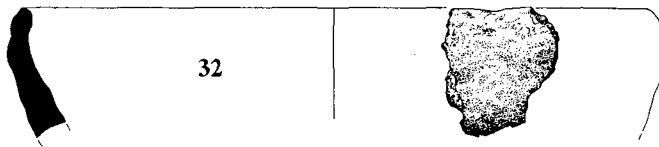
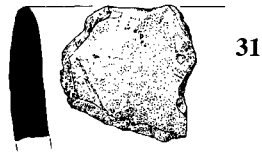
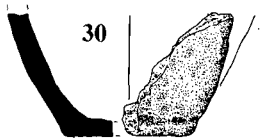
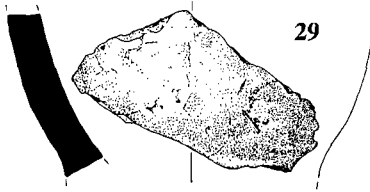
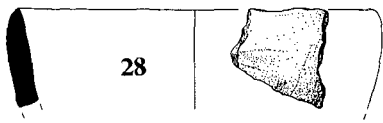
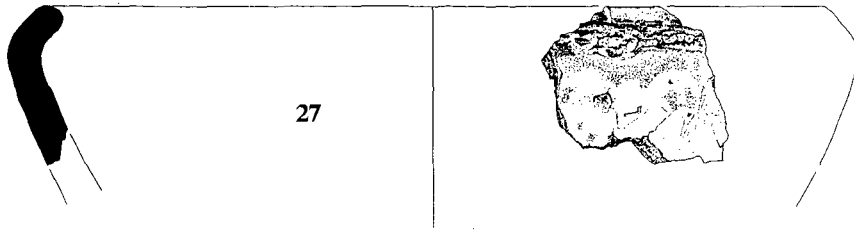
ILLUS 13 Coarse ware



ILLUS 14 Coarse ware



ILLUS 15 Coarse ware



ILLUS 16 Coarse ware

- 15 Rim sherd of an upright sided vessel, with evenly tapered, round topped rim; medium coarse fabric with frequent white stone inclusions up to 8 mm long; band of soot 20 mm wide below rim on exterior; body thickness 19 mm. From fill of the antenna ditch. BVP/981.
- 16 One rim and seven body sherds of a vessel with a round, pointed, slightly inturned rim and upright sides; three joining body sherds; coarse fabric with frequent stone inclusions up to 15 mm; grey/brown fine gritty interior, grey core, smooth dark brown/grey exterior; slip on interior and exterior; ring built; body 230–240 mm in diameter. From fill of polygonal enclosure ditch. GZI/838 + 839; GEG/267 (see No 11); BDT/079; GCT/295; KAB/875; GQV/562; possibly BRC/599.
- 17 One base sherd; flat base, medium coarse fabric with occasional grey stone inclusions; buff/orange exterior, grey core, buff interior; estimated diameter roughly 220–260 mm; base 25 mm thick; body broken off at junction with base. From fill of internal division of polygonal enclosure to south of house RG3. GCQ/237.
- 18 One very worn base sherd; medium coarse fabric with moderate small to medium inclusions; red/orange interior and exterior, grey/orange core; base diameter c 240 mm; base thickness 24 mm. From fill of the polygonal enclosure ditch. GBA/259.
- 19 Two sherds of a very thick flat base sherd; coarse fabric with frequent small white/grey stone inclusions; orange/brown exterior, grey core, grey/brown interior; base 35 mm thick; wall 23 mm thick. From the fill of the polygonal enclosure ditch. GGG/503.

*Phase 4 (illus 14 & 15)*

- 20 Large rim sherd of an upright-sided vessel with a slightly incurved rim; coarse fabric with 25% white quartzite inclusions; grey/brown exterior, grey core, red/orange interior; burnt deposit below rim on exterior; coil junctions visible in section. From the fill of the defensive ditch east of the east terminal. BUP/812.
- 21 Rim sherd of an upright vessel with simple rounded rim; medium coarse fabric; black exterior, grey core, brown/grey interior; body thickness 16 mm; From the inner revetment of the defensive bank. BAQ/671.
- 22 Rim sherd, thinned out, pointed, round topped, slightly inturned rim; grey medium coarse fabric with frequent small quartz inclusions; scorched black soot band on exterior c 30 mm wide below rim; grey core, brown/buff interior; slip on interior and exterior; obliquely bevelled joint; body thickness 16 mm. From the fill of defensive ditch east of the east terminal. BAQ/666.
- 23 Base sherd; medium coarse fabric with frequent small white stone inclusions; orange/buff exterior, grey core, grey/brown interior; body thickness 16 mm, base thickness 18 mm. From the tumbled remains of a possible inner revetment of the defensive bank. BAQ/668.

*Phase 4/5 (illus 15)*

- 24 Rim sherd of upright vessel with slightly inturned, round pointed rim; dark grey, medium coarse fabric with frequent small 2–3 mm quartzite inclusions; sooting and burnt deposit on exterior c 50 mm wide, interior and exterior covered with slip; interior virtually soot free; obliquely bevelled join towards base; body thickness 16 mm; rim diameter 260–280 mm. From the fill of the defensive ditch west of the entrance. CDR/400.

*Phase 5 (illus 15 & 16)*

- 25 Three rim sherds and two body sherds of an upright vessel with a slightly inturned rim; grey, medium coarse fabric with moderate to frequent grey/white quartzite and stone inclusions 3–6 mm long; slip on exterior and interior; ring built, patches of soot and scorching 10–40 mm wide below rim on exterior, some soot patches on interior; interior bright orange and cracked; vessel diameter 280–300

- mm; body thickness 14–16 mm. From brown loam overlying structure SS5. BDG/004; BDG/038; BDG/032; BAB/723.
- 26 Six rim sherds from a pinched, slightly inturned rounded rim, and several detached body sherds; hard, thick, sandy fabric with very few small inclusions; patchy orange interior, light grey core, buff grey exterior; sooting on outside edge of rim; wall thickness 17–22 mm; estimated rim diameter 300 mm. From probable post-hole in structure SS4. GQS/542 + GQS/543 + GQS/545, GQS/544, GQS/546–51, GQS/553, GQS/555, GQS/556; GBS/182; —/347; GEC/241.
- 27 Sharply inturned rim of an upright vessel or the edge and basal angle of a shallow bowl/platter; sooting along the exterior; medium coarse fabric with few inclusions, voids suggest possible organic temper, body thickness 16 mm. From a group of large paving slabs over the fill of the polygonal enclosure ditch. GGD-GIM/411.

#### *Unphased sherds (illus 16)*

- 28 Rim sherd and body sherd of a vessel with an upright, rounded rim, slightly pointed. Now lost. From structure SS4. CDU/362; CDU/361.
- 29 Body sherd broken off just above base; curvature of body is preserved; interior is c 100 mm in diameter, exterior is a minimum of 140 mm in diameter; orange/buff exterior, light-medium grey core, buff/grey interior; voids visible in the core and on the exterior may suggest organic (grass) temper; coarse fabric with common (20%) rock inclusions; smooth exterior and interior surfaces; From structure SS5. BAB/715.
- 30 Base sherd; fine to medium coarse fabric with occasional white stone inclusions up to 7 mm long; black exterior, grey core, grey/brown interior; flat base slightly pinched on exterior where body joins base; base diameter c 60 mm; base thickness c 8 mm. From structure SS1. GPA/513.
- 31 Slightly tapered rim with irregular rounded lip; medium coarse fabric with very common, small-medium quartzite and rock inclusions; buff brown exterior, dark grey core, orange interior; possibly ring built; roughly smoothed interior and exterior with some inclusions protruding through. From topsoil. —/047
- 32 Rim sherd and five body sherds of a vessel with an inturned rounded rim. Possibly from topsoil. Now lost. BDT/074.
- 33 One base sherd, thin, slightly dimpled on inside; medium coarse fabric with frequent small white stone inclusions; brown exterior, grey core, grey interior; base thickness 9 mm, base diameter c 70 mm. From topsoil. BUP/929.

#### SAMIAN WARE

A total of seven pieces of possible Roman pottery were recovered; all but one were sherds of Samian ware. One rim sherd and one body sherd are the only diagnostic pieces (illus 18, nos 211 & 208). The sherds came from mixed or unstratified deposits, apart from no 210 from the upper fill of the defensive enclosure ditch and no 224 from a central post-hole in house RG3. The latter — a buff-coloured rim sherd — is the only non-Samian example; unfortunately, as none of these sherds is now available for examination, its classification as Roman must remain in doubt.

#### SMALL FINDS

##### Fraser Hunter

The following report is something of a strange construct, as it is written without sight of the artefacts. It is a matter for considerable regret that all the small finds from St Germain's have been stolen or misplaced, particularly in view of the relative wealth and importance of the assemblage

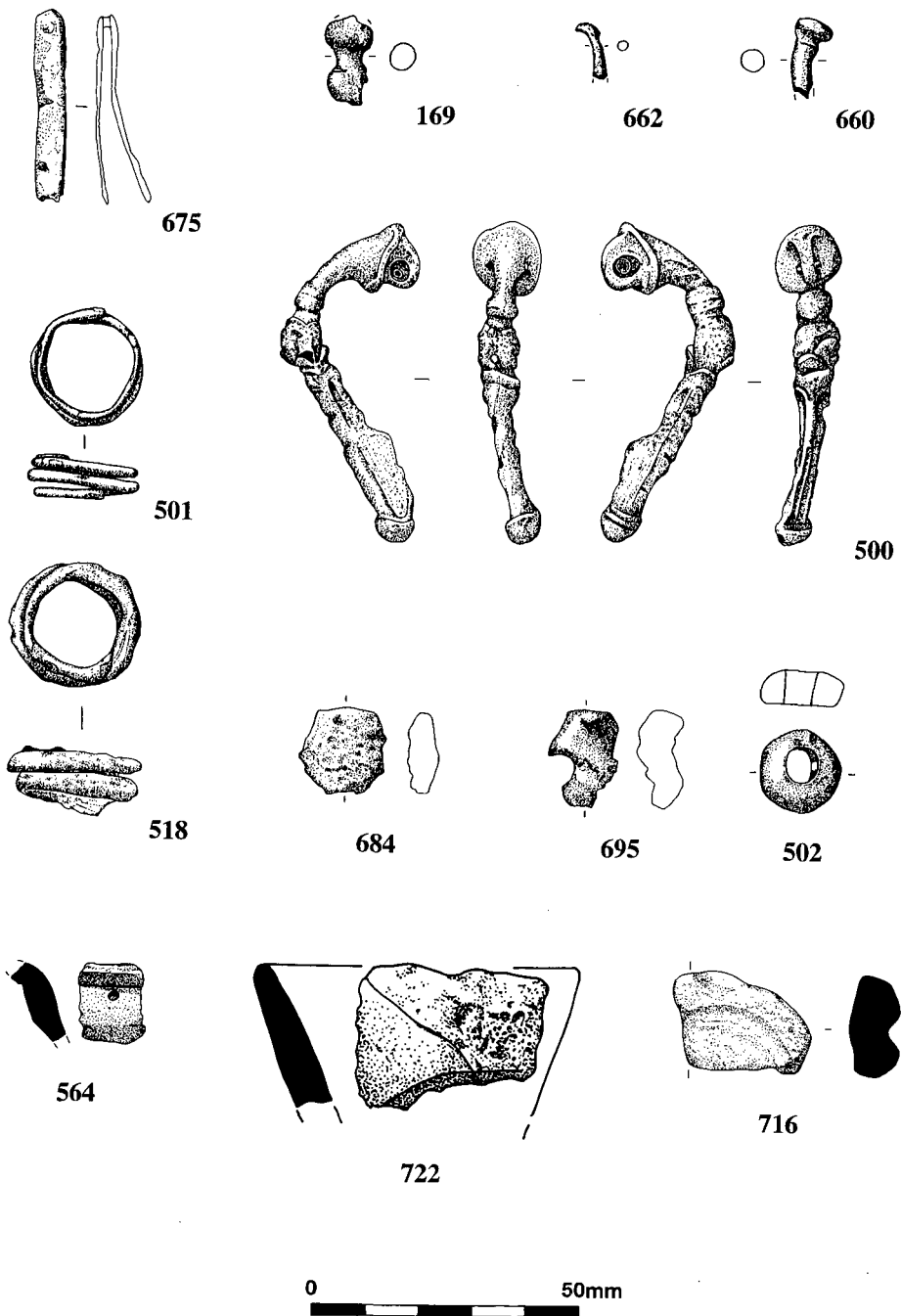
in terms of the Iron Age in Lowland Scotland. While some information can be garnered from illustrations of the finds, this is no substitute for the detail available from first-hand study.

In the following catalogue, descriptions and dimensions are based on drawings and some photographs. Hence there are many points of detail and even of basic identification which cannot be resolved. In addition, only those finds which were illustrated after excavation can be reported here. A full list of finds not illustrated here, including those stolen, has been deposited with the archive of the project records at the National Monuments Record of Scotland. The stratigraphic context of each find is indicated by a three-letter code; other abbreviations are L, length; W, width; H, height; and D, diameter.

*Copper-alloy personal ornaments (illus 17)*

- 169 **Dumb-bell toggle** L 17 mm; D (max) 10 mm. Unphased and unstratified (BDD). The waist is defined by a thin collar at either end; damaged. This is a common Iron Age type, found in bone, jet and glass as well as copper alloy. Examples from Roman sites (eg Bishop & Dore 1988, 175, nos 127–9) show their currency in the Roman Iron Age and, indeed, Henshall (1982, 232, no 62) suggests they are Roman in origin, while MacGregor (1976, 134) postulates a date range in the late first to third century AD. However, the review by Henderson (1994, 236) of the dating of glass examples demonstrates a more extended range — from the second century BC to the sixth/eighth centuries AD — which is likely to apply to those in other materials. They functioned presumably as toggles on clothing or harness straps. For local parallels in copper alloy see examples from Traprain Law (Burley 1956, nos 208–9).
- 500 **Romano-British trumpet brooch** L 59 mm; H 24 mm. Unphased and unstratified (BOA). Trumpet brooch, type R (ii), with the remains of a full acanthus moulding on the bow, although poorly defined on the underside (Collingwood & Richmond 1969, 297). The hinged pin and part of the catchplate are missing, although the hinge axis is present, and the brooch appears generally worn and damaged. No remains of any headloop. Apart from a cylindrical bipartite moulding immediately beyond the acanthus, the head is plain; the remainder of the bow bears some trace of cast ornament, perhaps spiralling ribs. A slight collar defines the knobbed foot. The type dates from the mid first to late second century AD: closer dating of such brooches ought to be possible, but is not yet well established. It is the most frequent Romano-British brooch found in native contexts in Scotland, perhaps because the trumpet style appealed to local tastes (Hunter 1996, 122–3 & illus 6).
- 501 **Spiral finger ring** D 22 mm; H 9 mm; wire D 2–2.5 mm. Unphased and unstratified topsoil (BOZ). It comprises 2.5 turns as it survives, made from approximately circular-sectioned wire. Such rings are a long-lived type common throughout the Iron Age and beyond (Clarke 1971, 25–8).
- 502 **Bead or washer** D 16 mm by 15 mm; H 6 mm. Unphased and unstratified. Irregular cast annular ring with central cylindrical perforation, D 5–6 mm. Probably a bead, washer, or spacer: one face is flatter than the other, and the off-centre perforation lends support to the bead interpretation. Simple rings with a range of functions are common, cf Traprain Law (Burley 1956, nos 161–89), Great Chesters (Allason-Jones 1996, no 35).
- 518 **Spiral finger ring** D 25 mm; H 13 mm; wire 3–3.5 mm by 4–4.5 mm. Phase 5, Structure SS2 (GGC). The drawing suggests the terminals are flattened. For discussion see no 501. The context of this example may date to a period between 200 BC and AD 200.
- 660 **Terminal of penannular brooch** L 15 mm; D (knob) 7 mm; D (hoop) 4 mm. Unphased and unstratified (plough-soil). The terminal is from a penannular brooch of Fowler class A3 (Fowler 1960, 152), with plain knob and collar, broken a little way below the knob. The type has a broad date range in the first to fourth centuries AD. There are several Scottish examples (Fowler 1960, 174–5).
- 675 **Tweezers** L 36 mm; W 6 mm; H 4 mm at head. Unphased and unstratified. The drawing shows the two arms of the tweezers as separate pieces joined at one end, implying repair after breakage: they are typically a single bent strip. On current evidence it appears that tweezers were unknown in Scotland before the Roman period and continued in use after it, with some local variations (such as the massive





ILLUS 17 Metal artefacts and metalworking debris

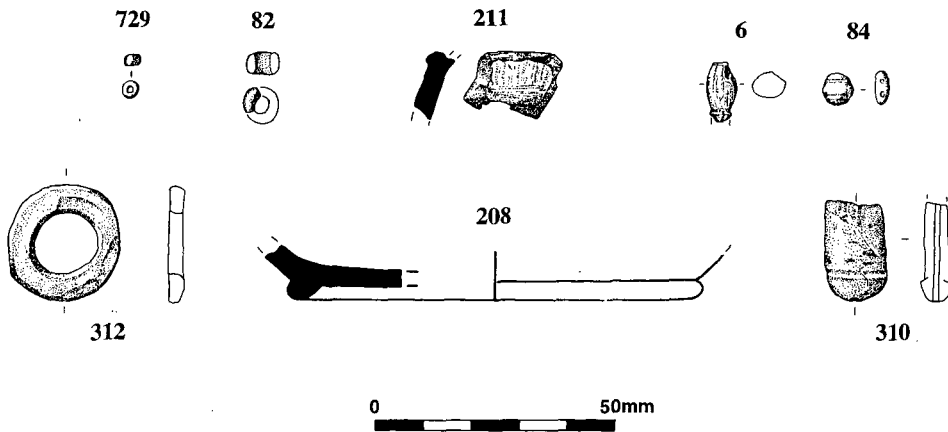
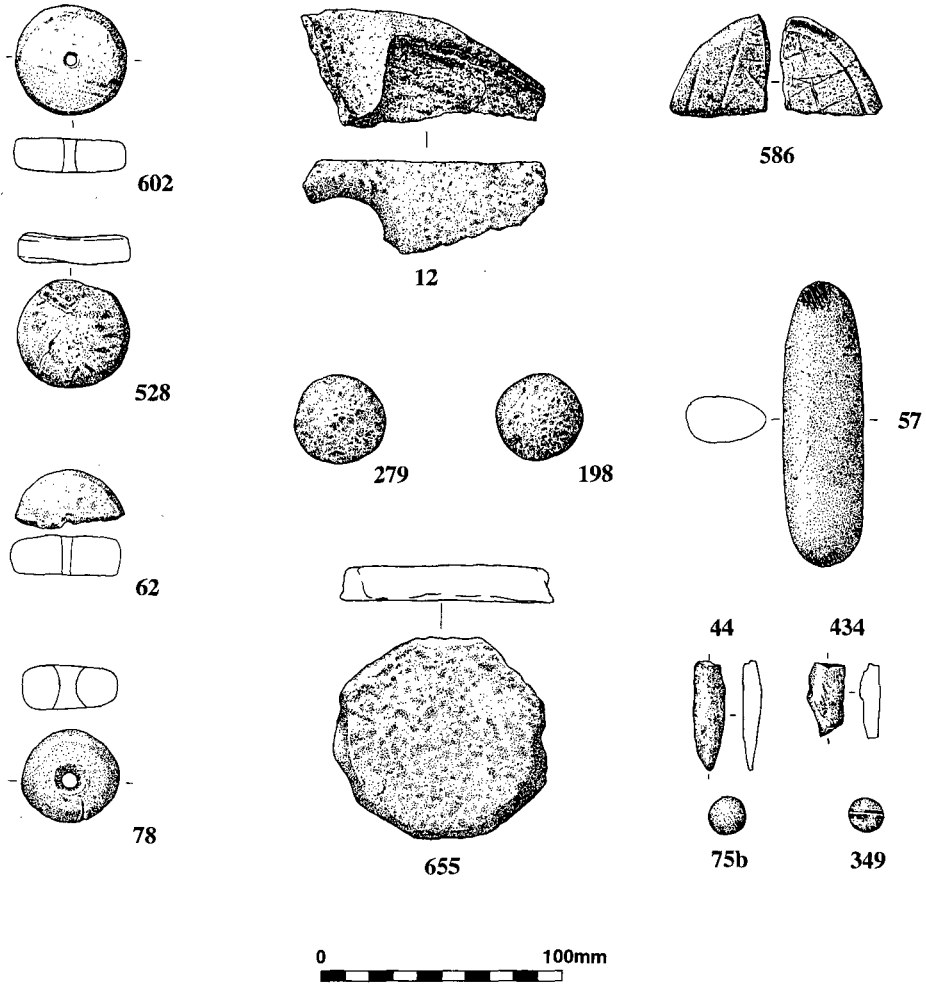
pair from Kettleburn, Caithness, whose decoration suggests a Roman Iron Age date; MacGregor 1976, 143 & no 276). They are rare finds in Scotland and, if not actually Roman imports, certainly seem to reflect Roman influence. The best-dated examples come from Roman-period levels on Traprain Law (Burley 1956, nos 241–6) and at Covesea Cave, Moray (Benton 1931, 196). There are immediately pre-Conquest examples from southern England and Hill (1997) has linked the appearance of such toilet implements with greater concern with personal appearance in the changing society of the later Iron Age.

*Unidentified copper-alloy fragments (illus 17)*

- 662 **Rod fragment** L 11 mm; D 3 mm. Unphased and unstratified (area B). Circular section, curved and pointed at one end, slightly expanded at the other.
- 684 **Sub-square fragment** L 16 mm; W 16 mm; H 6 mm. Phase 5, Structure SS5 (TDA). Unidentified fragment.
- 695 **Irregular fragment** L 18 mm; W 13 mm; H 9 mm. Phase 5, Structure SS5 (TDA). Unidentified fragment. A circular indentation on one side may be the remains of a large rivet hole.

*Stone and amber (illus 18)*

- 12 **Quern fragment** L 102 mm; W 40 mm; H 50 mm. Unphased (BDG). Fragment of worked stone, preserving part of the curved upper surface and the perforation, a minimum of some 30–35 mm in diameter; the original lower surface is lost. Probably from the top surface of the upper stone of a bun-shaped quern (cf Mackie 1995).
- 57 **Whetstone** L 120 mm; W 34 mm; H 20 mm. Phase 5, Structure SS2 (GGC). Coarse stone tool formed from an elongated pebble of irregular oval section with rounded ends. The site records call this a whetstone: in the absence of the original object, this plausible identification is retained.
- 62 **Broken spindle whorl** D 47 mm; H 18 mm. Phase 5, Structure SS2 (GGC). Half a spindle whorl with central cylindrical perforation c 4 mm in diameter.
- 75b **Small stone ball gaming piece** D 16 mm. Unphased. Shaped stone ball, a smaller version of nos 198 and 279.
- 78 **Perforated disc** D 40 mm by 42 mm; H 19 mm. Unphased and unstratified topsoil find (BDO). Slightly irregular disc with waisted perforation, minimum D 6 mm. The perforation is off-centre and the section tapers slightly, which suggests a function as a pendant rather than a whorl, where regularity and symmetry are crucial (cf Crummy 1983, 67).
- 84 **Polished stone** D 7 mm; H 3 mm. Unphased. Circular polished stone, lentoid section. Its character is very unclear from the drawing: the section suggests it has a double perforation, but the plan view indicates the ‘perforations’ crossing the face of the object. It is from an unstratified context and may be modern.
- 198 **Stone ball gaming piece** D 36 mm. Phase 3 ring-groove house (RG3) from fill of wall slot. Shaped stone ball with pecked surface. Such balls represent a well-known artefact category from Iron Age sites in south-east Scotland and are probably gaming pieces, perhaps for a game like boule (Cool 1982, 95–6; Close-Brooks 1983, 222). Cool dates them to c 500 — 200 BC, based largely on the Broxmouth evidence. However, she rather dismisses the large numbers from Traprain, where occupation of this date is exceedingly sparsely represented otherwise (Jobey 1976): this suggests that the dating of stone balls should be extended to the first century BC or even beyond. The Phase 3 dating of this example makes it one of the very rare contexted examples and, although absolute dates are lacking, its position early in the site sequence should fall within Cool’s dating.
- 279 **Stone ball gaming piece** D 38 mm. Unphased (GEP). Shaped stone ball with pecked surface. See no 198 for discussion.
- 310 **Amber bead fragment** Phallic pendant? L 21 mm; W 13 mm; H 7 mm. Unphased and unstratified (plough-soil). Thin, elongated broken amber bead with straight sides and a rounded, enlarged end,



ILLUS 18 Coarse stone artefacts and other finds

defined by a groove on both sides. Single longitudinal perforation. This is unparalleled in the Scottish Iron Age corpus, and indeed elusive in other periods — no good parallels have been found and its context is poor. The shape of the surviving fragment suggests it could have been a phallic amulet, which would point strongly to a Roman period date: phallic emblems are common on Roman sites as amulets to ward off the evil eye (Johns 1982, 62–4 & *illus* 10). Iron Age examples are rare in Scotland, with only two known to the writer — a wooden sickle handle from Blackburn Mill, Berwickshire (Piggott 1953, 47–8), and a bone handle from Sollas, North Uist (Campbell 1991, 158); both are Roman Iron Age in date. The supposed magical qualities of amber would make it an appropriate medium for an amulet. Another possibility is an Early Bronze Age date: although there are no close parallels, this was the period which saw the greatest diversity of amber use in prehistory (cf Beck & Shennan 1991, 71). Both possibilities are feasible given contemporary material from the site, but on balance the former is preferred.

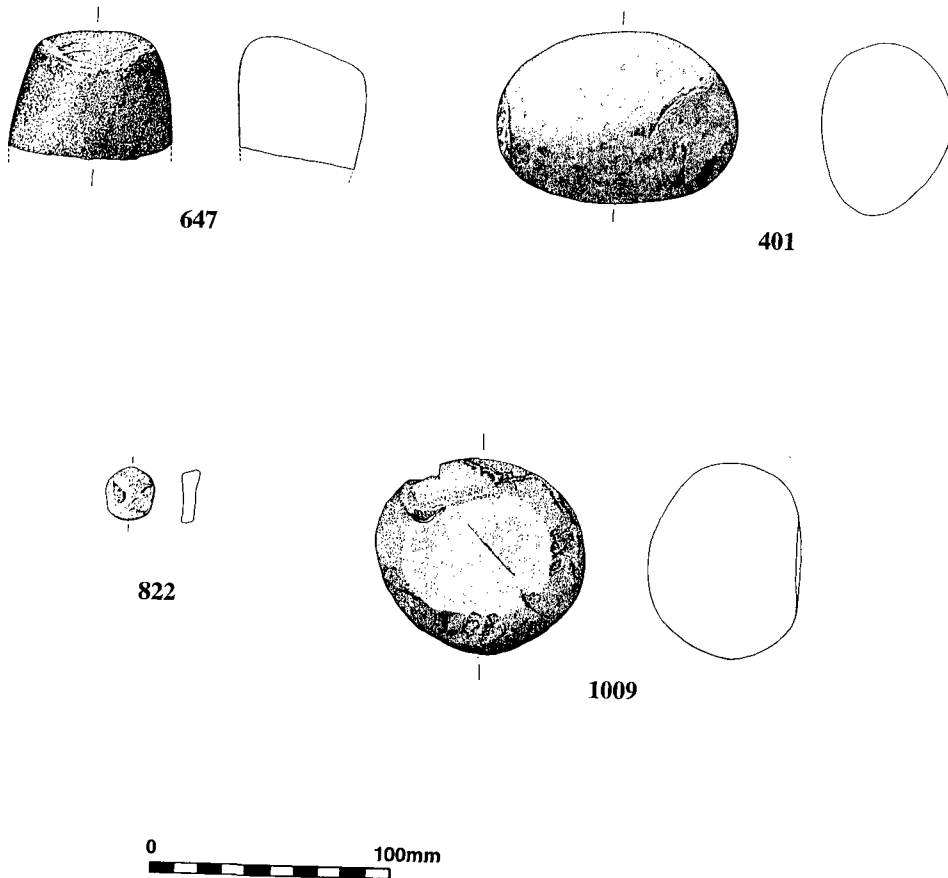
- 312 **Unfinished ring?** D 24 mm; H 4 mm. Unphased and unstratified surface find. Irregular thin stone disc with central perforation, D 12–13 mm. The uneven surface suggests it was unfinished. Such rings could have had a range of ornamental functions, such as finger rings, beads, pendants or hair ornaments: the dimensions are particularly appropriate for the former. They are found in different raw materials (notably jet-like materials) and are a long-lived type, spanning the pre- and post-Roman Iron Age (see examples from Edin's Hall, Berwickshire, where parallels are discussed: Dunwell forthcoming).
- 528 **Gaming counter?** D 47 mm; H 14 mm. Unphased (BOZ). Well-rounded stone disc. While the degree of polish or grinding cannot be assessed, it appears too small for a pot lid or polished disc (cf no 655, below, and Henshall 1982, 233–5) and may be a gaming counter.
- 586 **Inscribed stone** L 40 mm; W 38 mm. Unphased (BOY). Stone fragment with part of the original curving edge and two broken straight edges. On each face there is an incised border round the edge bounding the design. On one face this comprises a latticework decoration. The other is more complex, with one major line having both perpendiculars and diagonals inscribed off it. Inscribed stones are found on occasion on Iron Age sites (eg Ormiston, Fife: Sherriff 1988, 104–5) but there has been no systematic study of them and little attempt to establish their meaning or function.
- 602 **Spindle whorl** D 46 mm; H 15 mm. Phase 3 (polygonal enclosure ditch). Central cylindrical perforation, D 5 mm.
- 655 **Pot lid?** D 88 mm; H 16 mm. Phase 5 Structure SS2 (GGC). Irregularly rounded stone disc, apparently with a pecked surface and flaked edges. Henshall (1982, 233–5) discusses the type: this example would fall into her Group D, with little sign of modification. Use as pot lids is perhaps most likely for this variety (cf examples from Howe: Ballin Smith 1994, 204).

#### *Glass (illus 18)*

- 82 **Globular blue glass bead fragment** D 8 mm; perforation D 3–4 mm; H 5 mm; c 25% survives. Unphased and unstratified (topsoil): The colour cannot be assessed from the surviving drawing, but it falls into Guido Group 7(iv) (1978, 70, 169–72) which has a life extending from the pre-Roman Iron Age to the Norse period.
- 349 **'Marble'** D 15 mm. Unphased (GHG). In the absence of the original object it is difficult to comment, beyond drawing attention to the series of Iron Age glass beads and balls with inlaid decoration, generally swirls or 'eyes' (eg Stevenson 1956, 211 & *illus* 1, 5; Ralston & Inglis 1984, 41). This example appears to have two bands round it, but could be from the same stable. Alternatively, it may be modern.

#### *Bone (illus 18)*

- 6 **Pin head** L 12 mm; D 7 mm by 5 mm. Unphased (BDF). Barrel-shaped fragment, sub-oval in section, with a collar at the base and traces of a shank extending below. Most plausibly the head of a



ILLUS 19 Coarse stone objects

pin. Preservation conditions mean that most bone pins are from the Atlantic province (Stevenson 1955), but there is a close parallel in a late Roman context from Covesea Cave (Benton 1931, illus 18, no 2) which is culturally closer to south-east Scottish material.

- 44 **Sawn bone** L 46 mm; W 14 mm; T 8 mm. Phase 5, Structure SS1 (GGD). The morphology hints that this could be the broken tapering terminal of a point, but the original site records describe it as sawn bone, suggesting it was seen as working debris rather than artefactual.
- 434 **Bone-working debris** L 32 mm; W 18 mm; T 10 mm. Phase 5, Structure SS2 (GGC). Described in the site records simply as 'utilised bone'. Nothing more can be said on present evidence.
- 729 **Bone bead** D 4 mm; H 2.5 mm. Phase 4C (causeway across ditch). Small globular bead. The site records refer to this as 'possibly' bone. Further comment is of little point without a firm identification.

#### *Industrial ceramic objects (illus 17)*

- 716 **Mould fragment** L 25 mm; W 19 mm; H 10 mm. Phase 5, Structure SS5 (TDA). Fragment of a ceramic mould. The surviving portion bears part of a curvilinear item, with no diagnostic features. If it were a ring, its external diameter would be c 30 mm. The interest of this find, and also no 722 from the same structure, is that they provide clear evidence of on-site working of non-ferrous metals. There are parallels from Traprain (Burley 1956, nos 558–60).

- 722 **Crucible fragment or tuyère** L 37 mm; W 28 mm; T 8 mm. Phase 5, Structure SS5 (TDA). Rim fragment of an industrial ceramic object. This is described in the site records as a possible tuyère, although from the drawing it could equally come from a crucible. Without study and analysis of the fabric it is not possible to tell.

### *Discussion*

The finds from St Germain's can be used to tell a number of stories. One is chronological. As so often occurs, the finds in context are rarely of chronological value, while the most diagnostic ones are unstratified. However, the stone ball in Phase 3 does suggest a Middle Iron Age date for this phase, broad though the boundaries are, while the unphased finds indicate activity in the Roman Iron Age. There is also a scatter of general Iron Age material, as would be expected. In turn, the stratification provides some useful dating for material which is rarely found in context, such as the spiral ring from Phase 5 and some of the coarse stone tools. The finds also give some idea of craft or manufacturing activities on the site, with evidence of textile production in the spindle whorls from Phases 3 and 5, and non-ferrous metal-working and apparently bone-working evident in Phase 5. The presence of Roman or Roman-influenced finds (the trumpet brooch, tweezers, Samian pottery and possible Roman glass) indicates some contact with the invaders, which implies a settlement of some standing, given that Roman goods are believed to have functioned as status symbols in native society (Macinnes 1984). In summary, the St Germain's material, for all its problems, is a valuable assemblage which sheds light on the site itself and which improves our understanding of Iron Age material culture in the area.

### COARSE STONE

Abigail C Gleeson

In addition to the coarse stone objects described from photographs alone (see above) a small assemblage of other coarse stone objects was available for examination at first hand, as described by the following catalogue. As above, three-letter codes refer to the stratigraphic context of each find.

### *Catalogue of coarse stone objects (illus 19)*

#### *Phase 3*

- 647 **Faceted grinder (illus 19)** Found in a slot within the arc of the Phase 3 ring-groove house (GOF). Broken quartzite cobble. Flat, slightly concave base with extensive wear damage around the circumference. Evidence for grinding along its lateral sides in the form of pitting.
- 822 **Stone disc (illus 19)** From fill of polygonal enclosure ditch (GZD). D 23 mm; H 4 mm. This was made on a micaceous stone with slightly uneven surface. Its sides, however, have been ground to a smooth finish. The disc is too small to have been a pot lid and it seems more likely that it was a gaming counter.

#### *Phase 4-5*

- 521 **Faceted grinder/polisher** (BOD) D 90 mm; H 77 mm. This quartzite cobble tool has a flat base and a domed upper surface. One side of the domed surface has a smooth concave area probably used for smoothing/grinding fine materials. A gloss residue remains on the surface of the tool. The

corresponding surface on the other side of the dome has a less localized pecked region indicating harsher pounding. It is possible that the two sides of the stone served different functions.

- 710 **Worn polisher/rubbing stone** (BAM/BAD) L 78 mm; Th 57 mm. The shape has been altered by use forming two adjacent sides worn flat by polishing. A gloss remains on the cobble. Pottery burnishing or smoothing bone tools are possible uses for such stones.

### *Phase 5*

- 401 **Faceted cobble tool (illus 19)** From loam layer in Structure SS5/6 (GLA). L 110 mm; W 73 mm. Quartzite cobble tool with area of localized grinding on one end which has worn away an area of the surface of the stone. Some scratching over the entire face of the stone.

### *Unphased*

- 172 **Quern fragment** (BDO) L 117 mm; W 68 mm. Saddle quern fragment with flat ground surface.
- 607 **Hone/whetstone** Found between the defensive ditch and polygonal enclosure ditch (GQQ). The flat surface of this stone has random striations suggesting that it was used for sharpening metal implements.
- 749 **Burnishing stone** Fill of a shallow slot part of lower stone feature TCJ. L 42; W 20 mm. Base of the stone has been worn flat with diagonal striations. Possibly used for burnishing pottery.
- 801 **Stone disc** Stray find. D 83 mm; Th 16 mm. A broken limestone disc. Edges have been chipped to create the circular shape, and has been flattened. This may have been a stopper for a storage vessel; this type of pot lid is common on Iron Age sites.
- 828 **Faceted hammerstone** From the lowest levels of cobbles in Area B. L 75 mm; W 65 mm. The broadest end of this cobble has been fractured by use as a hammerstone. The other end is faceted, perhaps from grinding wear.
- 936 **Incised stone** From colluvium under the plough-soil (PDB). D 27 mm. Discoid pebble with a single line deeply incised. The incision is the only evidence of working and may simply be a natural cleft. Like no 822 this object might have been used as a gaming piece.
- 958 **Used pebble** Stone-packed pit (BYR). L 61 mm; W 27 mm. One end of the stone shows surface damage.
- 973 **Polisher** From colluvium (PBG). L 62 mm; W 43 mm. Base of this stone has been worn flat and smooth by rubbing.
- 999 **Quern fragment** (BQR) L 190 mm; W 64 mm. Fragment of a saddle-quern. Plano-concave surface, smoothed by grinding.
- 1004 **Grinder/hammerstone** From dark brown soil outside enclosure entrance. L 86 mm; W 70. This cobble has a fractured end and striations on the face suggesting use as a hammerstone. There are two concave areas near the fracture that display heavy grinding, and evidence of light pitting on the surface. A gloss remains on the surface of the tool.
- 1009 **Grinder/pounder (illus 19)** Surface find. D 90 mm; H 70 mm. The base of this cobble has been worked flat by grinding/ rubbing. Other areas on the surface of the dome show heavy pecking and even breakage, suggesting that the tool was multi-purpose (see also no 521).
- 1010 **Smoothed stone** Barstone from quern? Row of stones (BBN).

### *Discussion*

This assemblage numbers 17 stone tools of which nine are cobble tools. Unfortunately, many of these cannot be ascribed to any particular phase of the site. Residuality on a multi-occupational site such as this — where stones are reused over a lengthy period of time and for diverse

purposes — prevents accurate dating of the artefacts. Thus, little more than broad functional comments can be offered here.

Two artefacts (nos 647 & 822) are assigned to the Phase 3 Iron Age polygonal enclosure. The grinder (no 647) was found in the curving wall slot of ring-groove house RG3. The location and nature of this find supports the conclusion that this was a domestic site where food processing and perhaps pottery manufacture took place. A possible gaming piece (no 822) also supports this interpretation. Another grinder (no 401), from stone-paved structure SS4 (Phase 5), may also represent food processing or mineral processing for pottery manufacture within the structure. Two saddle quern fragments (nos 999 & 172) were not assigned to contexts but were certainly associated with on-site food or mineral processing. Although a stone disc (no 801) is interpreted as a possible pot lid, all of the surviving pottery vessels for which rim diameters can be estimated are too large. The number of hammerstones recovered suggests that — even in later prehistory — flint, quartz and chert knapping was still common practice, although they could have fulfilled a variety of other functions.

#### ANIMAL BONE

Jennifer Thoms

Very few contexts contained identifiable bone. Of the bone which was identifiable to element, none could be positively identified to species. Many of the bone fragments were burnt. None was identified as human.

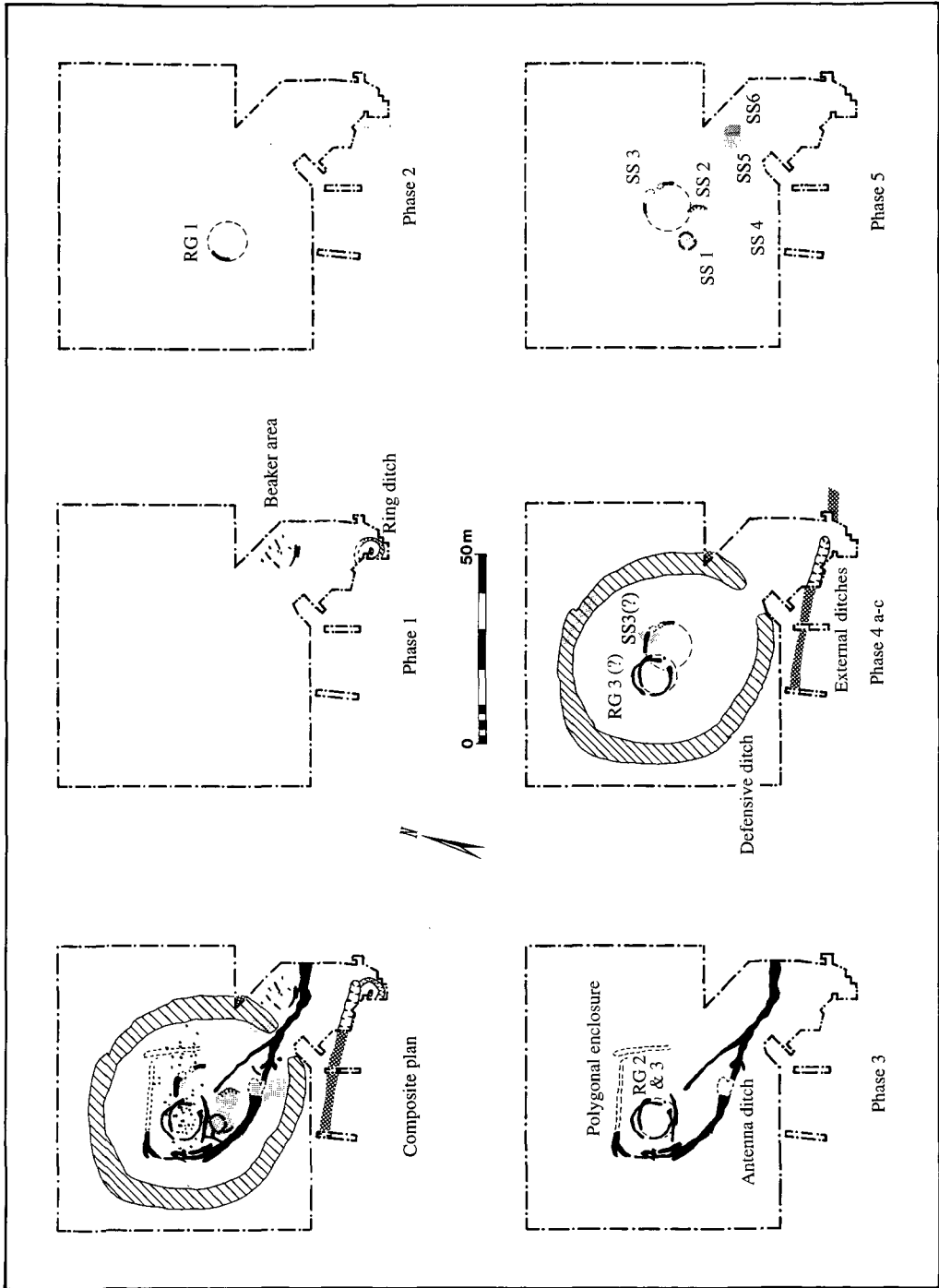
Thirteen contexts contained fragments of teeth which could be identified as being either from cattle or red deer, but no complete teeth were present in the assemblage. Five fragments came from the fill of the Phase 3 polygonal enclosure ditch, two from the fill of the Phase 4 defensive ditch and one from Phase 5 structures SS1 and SS2. The rest were from unphased contexts. Structure SS1 also contained a fragment of vertebra from a small mammal or bird. Seven rib fragments were retrieved from the fill of the second cut of the defensive ditch but, again, were not identifiable to species. It was apparent from their size, however, that they came from an animal smaller than cattle/red deer, such as sheep/goat/roe deer/pig. Two fragments of bone identifiable as sheep/goat/roe deer were retrieved. The ditch fill also included a fragment of long bone, a fragment of astragalus, a fragment of bird bone, a tarso-metatarsus, and a piece of mammal tooth. Fragments which could be recognized as teeth, but were not identifiable to species, were also retrieved from the fill of the defensive ditch and Phase 5 structure SS4.

#### DISCUSSION

##### PHASING

The construction of the site sequence (illus 20) was based on a combination of limited stratigraphic evidence and artefactual remains. Phase 1 is defined by the presence of Early Bronze Age artefacts and also by the similarity of the ring-ditch feature to other excavated examples (eg Newmill: Watkins & Shepherd 1980). Given its small diameter, the ring-ditch is quite unlikely to represent a 'substantial house' (Hingley 1992) of Late Bronze Age/Early Iron Age type. The fragment of the Phase 2 ring-groove house was heavily truncated and was indisputably earlier than the polygonal enclosure. The duration of Phase 3 occupation remains unknown but the central ring-groove appears to have been rebuilt at least once and a later or secondary internal division of the polygonal enclosure appears to respect the southern side of this structure. The





ILLUS 20 Summary plans of Phases 1-5

perceived time-depth of this phase is supported by evidence for re-cutting of the polygonal enclosure ditch and antennae ditches. In Phase 4, at least two sub-phases of ditch construction are visible, with a third phase visible in the north-eastern section of the perimeter where a new entrance causeway was built. However, as with many enclosure sites, especially those which have been heavily truncated by ploughing, it is difficult to relate the structures in the interior to the various phases of the surrounding defences, in this instance represented by the ditch and stone-kerbed bank. It is possible, therefore, that ring-groove house RG3 continued in use in Phase 4 and that some of the stone-paved structures (particularly SS3) in the interior were initially constructed during this phase. Finally, it is clear from their stratigraphic relationships that the remains of stone-paved structure SS5 and the yard associated with structure SS4 both post-date the infilling of the defensive ditch.

#### EARLY BRONZE AGE

Evidence for Early Bronze Age activity in the surrounding area is dominated by the scatters of material from the sands at Hedderwick, and closer at Archerfield (Gibson 1982, 98–100, 213–14). Brief fieldwalking of another cropmark enclosure at Seton Mains (illus 1, no 3), presumably of Iron Age date, also produced a spread of flint and chert artefacts from the topsoil, one a scraper (Alexander 1994), while the excavation of a later prehistoric cropmark site at Myrehead, Falkirk, produced a single sherd of Beaker pottery suggesting activity on the site in the early second millennium BC (Barclay 1983, 67). These finds suggest that the Early Bronze Age artefacts recovered at St Germain's (mainly from plough-soil) are not isolated and it is likely that there are other, as yet undiscovered early prehistoric remains in the vicinity. Despite this, none of the excavated features could be readily identified as the structural remains of a settlement of this period. The range of Early Bronze Age artefacts recovered (including Beaker sherds, a jet fusiform bead and barbed-and-tanged arrowheads) is consistent with the types of material remains commonly found in burial deposits of this period. It is possible, therefore, that this material is derived from a ploughed-out cairn or cist burial and the proximity of the ring-ditch — despite the absence of human remains — provides tentative support for this interpretation.

The interpretation of the small ring-ditch with its central pit as the remains of a Beaker burial is necessarily tentative as neither bone nor artefacts were recovered from the central pit. This proposal is based mainly on the similarity of these features to the penannular ring-ditch and central pit containing a Beaker burial at Newmill, Perthshire (Watkins & Shepherd 1980, illus 1, 33), but also on the adjacent scatter of Early Bronze Age artefacts. It is unlikely to be fortuitous that the external ditch (Phase 4) terminates adjacent to the ring-ditch, suggesting that the latter feature was still upstanding in the Iron Age and was recognized, if not respected, as a man-made structure in the landscape.

#### IRON AGE

Due to the general lack of charcoal on the site, probably as a result of the use of coal as a fuel, no radiocarbon dates were obtained. Dating of the site sequence was based, therefore, on the limited diagnostic artefactual remains, the stratigraphic relationships between the major features and comparison with other excavated sites. Although the majority of the evidence suggests that St Germain's was occupied in the second half of the first millennium BC, it is possible that the unenclosed ring-groove house — a type of known longevity — was erected during the Late Bronze Age. Otherwise, there is no evidence for occupation in this period.

*Phase 2: unenclosed settlement*

The earliest traces of occupation are the fragmentary remains of the unenclosed ring-groove house RG1. At the time of the excavation few later prehistoric unenclosed settlements had been excavated in the area. The site at Dryburn Bridge, near Dunbar, revealed a palisaded enclosure which was replaced by an unenclosed settlement of ring-ditch houses in the middle of the first half of the first millennium BC (Triscott 1982). More recently, two unenclosed ring-groove houses were excavated in advance of development at Castlesteads on the north side of the River Esk near Dalkeith (Rees 1995, 56). Another poorly preserved example was recorded during trial-trenching at Wedderburn House, Inveresk (Dunwell 1995, 49–50) and an unenclosed Iron Age settlement and possible associated burials was also excavated at Monktonhall, near Inveresk (Hanson nd). A smaller ring-groove structure (6 m in diameter) was exposed, further to the east, on the north side of the A1 road at Haddington (Terry 1995, 51). Excavation at Melville Nurseries, near Dalkeith, located an unenclosed ring-groove house; oak charcoal from the fill of the wall slot provided a radiocarbon date of 2450 BP (GU-2888) (Raisen & Rees 1996). None of the other excavations has produced dates and defining the date range of unenclosed but presumptively later prehistoric settlements in the eastern part of the Lothian plain must remain an objective for future fieldwork. Further to the west, excavation at Myrehead, near Falkirk, revealed that a small palisaded enclosure was preceded by an open settlement of three houses which were dated to the Late Bronze Age, in the late second or early/mid first millennium BC (Barclay 1983, 68).

*Phase 3: polygonal enclosure*

The polygonal enclosure of Phase 3 contained a single ring-groove house (rebuilt once); its plan was reasonably complete (illus 4). Although it is difficult to disentangle which post-holes in the interior are associated with ring-groove house RG2 and which with the replacement RG3, a number of features of its construction are readily comparable with other sites. The central roof support post-hole can be compared to that from House II at Broxmouth (Hill 1982b, 170–2), which also had a similar wide entrance. The size of the double post-holes on either side of the entrance and the evidence for a porch in front suggest that the entrance to this structure may have been substantial, even monumental. The recurrence of such substantial entrances in round-houses of the first millennium BC and their possible cosmological significance has been recently discussed (Parker-Pearson 1996, 119). The entrance to Broxmouth House II was in the SSE; the entrance to house RG3 at St Germain's lay in the ESE. It is possible that such entrances were aligned to sunrise, with the circularity of the house representing the cycle of day and night, light and dark, which revolved around the structure (Fitzpatrick 1994, 72). The small doorway in the north-west arc of the ring-groove is more difficult to parallel directly. The function of this doorway is unknown, but numerous sherds of pottery and other artefactual remains were recovered from the western ditch of the enclosure. The uneven distribution of small finds from ditch fills in southern Britain has attracted considerable attention (eg Hill 1994) and it is conceivable that the position of the smaller door in house RG3, approximately opposite this concentration of finds, may be significant.

The presence of only a single structure within the enclosure suggests that the resident social group may have been no larger than an extended family. Comparable sites have been recognized and excavated in Fife at Green Craig and Scotstarvit (Bersu 1950a & 1950b), the latter containing a much more substantial house, but more excavation on similar sites in the Lothians is needed before generalization will become possible.

The ditch and, by implication, the bank of the polygonal enclosure (illus 4) were small in scale; the ditch, where it is least truncated, was 1.5 m wide and less than 0.5 m deep. There is

plentiful evidence of re-cutting and also good evidence that the ditch lay open: for a time at least it was allowed to accumulate plant growth, as demonstrated by the concentration of root holes in the base of the ditch (Watkins 1983). Given its scale, the function of this enclosure was, therefore, clearly not defensive. The slight ditch and possible upcast bank, perhaps surmounted by fencing, may have been constructed to protect the house from animals and would have acted as a slight windbreak. There is no evidence as to which side the upcast material had been displaced, but the proximity of the east/west internal division to the south wall of house RG3 suggests that it was on the exterior: if so, then the ditching may also have facilitated drainage.

The function of the antennae ditches, and their associated banks, appears to have been to direct access towards the entrance of the polygonal enclosure, perhaps to control stock movements. The scale and irregular nature of the ditch suggests it may have been a less substantial forerunner of the later external ditches in Phase 4. Excavation at Monktonhall revealed an alignment of irregularly shaped elongated pits, which may have acted as a form of land division, but no dating evidence was recovered from these features (Hanson nd).

#### *Phase 4: defensive enclosure*

The successors to the early enclosure, that is the main defensive ditch and its rampart, were constructed on a much grander scale. The ditch was about 6 m wide and up to 2 m deep. The base of the bank was 4–5 m wide with a drystone kerb, sometimes amounting to a low revetment wall. The amount of reveting masonry increased around the entrance. The terminals of the ditch (illus 11) were also reveted and can be compared to the stone reveted outer ditch terminal at Fisher's Road East (Haselgrove & McCullagh 1996, 9). It is likely that these stone revetments were as much for display as to prevent erosion of the bank and ditch sides here at the most actively used part of the defensive circuit. The gateway itself was represented in the ground as a square, four-post setting.

It has already been indicated that these defences, similar in scale to examples surviving in more upland locations on conventional hillforts, underwent several phases of construction, decay and reconstruction. The last of these was the building of a new entrance in the north-east of the enclosure which appears to have been constructed after the second cut of the main defensive ditch had partly silted up. This newly modelled entranceway was approached by a paved causeway across the old ditch and was flanked by a few metres of small-scale bank-and-ditch constructed on either side.

The defensive ditch at St Germain's, like that examined at Broxmouth, provides good evidence that a rigid distinction between upland hillforts (often still defined by upstanding earthworks) and lowland enclosures (normally now cropmark sites) is as much a function of subsequent land-use histories as of their original scale. The reasons for enclosure on Iron Age sites has been re-examined in recent years, with Hingley (1990 & 1992) stressing the symbolic nature of boundaries and, more recently, Collis (1996) re-emphasizing a diverse range of possible aims including defence, display, social status and delineation of areas dedicated to different activities or communities. The monumental size of the earthworks at St Germain's is at odds with the small scale of the settlement area enclosed, which was not much larger than that of the previous polygonal enclosure. It is likely that a number of the functions described above may have motivated its construction. It would have been an asset both for defensive purposes and for display in the gently undulating surrounding landscape and may have functioned as a symbolic division between the occupants and the outside world, even after it had partly silted up. In this respect the re-cutting of short lengths of ditch on either side of the new entrance causeway in the

north-east (Phase 4C) may be significant, since this remodelling clearly did not effect a complete defensive circuit.

Colin Richards (1996) was commenting on Neolithic henges when he suggested that one function of a large encircling ditch may have been to hold standing water at particular times of year. This observation may also be relevant in the present case. The earthworks at St Germain's were cut down into a thick layer of fine clay and, during the excavation, the main defensive ditch was prone to flooding. Perhaps one purpose of this ditch was to enclose the settlement with water for symbolic as well as defensive reasons. The ditch on a comparable site at Shiels, near Glasgow, though it was only 2 m wide and 1 m deep, also flooded due to its proximity to the water table (Scott 1996, 65). The recovery of two wooden daggers from the waterlogged ditches at Over Rig, in Annandale & Eskdale, may support the view that such boundary contexts were symbolic and could be used for ritual deposition (Hingley 1992, 38).

It remains difficult to say which structures in the interior were contemporary with the defensive ditch. The truncated remains of structure SS3 lay to the east of ring-groove house RG3 near the centre of the defensive enclosure. It consisted of an irregular area of paving, below which lay an arc of ditch and a few post-holes, together accounting perhaps for a quadrant of a circular building. Although the centre and north-east of the enclosure were heavily truncated, it is difficult to believe that similar traces of the rest of the structure had been completely destroyed. Thus, it appears possible that the surviving features were remnants of an asymmetrical arrangement, perhaps a large circular timber-framed house with a floor which was only partly paved with stone. The purpose of the ditch segment in its foundations remains unclear. It is impossible to be positive in assigning this fragmentary building to any of the four phases of the settlement, but it quite possibly belongs in Phase 4: it is unlike the remains of the other stone-paved houses of Phase 5 and is extremely unlikely to have been contemporary with the ring-groove house (RG2/3) assigned to Phase 3, since their ground plans would have overlapped.

The construction of the defensive earthworks could not be dated more precisely than to some time in the second half of the first millennium BC, perhaps continuing into the first century AD. Waterlogged alder in the ditch at Shiels enclosure produced radiocarbon dates of  $1930 \pm 140$  BP (SRR-576) and  $1640 \pm 80$  BP (SRR-577), suggesting occupation in the Roman and post-Roman Iron Age (Scott 1996, 69). Secure evidence for fortified earthworks in the late first millennium BC is relatively rare in eastern Scotland (Alcock 1987; Ralston 1996, 137), a fact that may, in part, simply reflect the absence of a substantial wooden component — and thus suitable radiocarbon samples — in the enclosing works.

#### *Phase 5: unenclosed settlement*

The unenclosed 'village settlement' of stone-paved structures may have originated during the occupation of the defensive enclosure, but two examples of the surviving buildings clearly post-date the infilled defensive ditch. These structures were badly disturbed by ploughing and no complete floor plan survives to indicate their overall shape or dimensions. None of these houses had recognizable hearths or other internal features and in most cases neither doorways nor porches have been identified (apart from SS1), largely because the perimeters of the houses did not survive.

It is tempting to compare them to the scooped, stone-built houses excavated at Broxmouth which, in their first phase, consisted of a composite build of stone walls with timber posts for roof supports (Hill 1982b, 171). There, the floors were later paved and the walls re-faced, reducing the area available for occupation. This construction sequence of paved floors sealing post-holes

below is apparent at St Germain's in structures SS1, SS2 and SS4. It is also possible that the arc of double walling in structure SS5 (illus 11) represents a primary wall and subsequent re-facing, similar to that of House 4 at Broxmouth (*ibid*, 174, illus 9). Hill has termed similar, small, stone-built structures, often associated with sunken yards, as 'Votadinian' houses. These are often associated with finds assemblages of the first to second centuries AD, although radiocarbon dates from a number of sites indicate that structures of this type were occupied in the first and second centuries BC (Hill 1982a, 8, 40). At St Germain's, none of the Roman pottery nor the datable metal artefacts were recovered from sealed contexts within these structures. There may be some correspondence here with Hill's observation that objects of the first or second centuries AD often occur in superficial contexts on such sites. Though Roman period artefacts suggest that the final phase of occupation of these structures was in the late second or early third century AD (*ibid*, 10), it is conceivable that this style of building emerged at St Germain's some time before the Flavian Conquest, as Hill has argued for other examples. The archaeological evidence from St Germain's tends to support the view that the unenclosed village extended piecemeal from the defended enclosure, and that it was only at a mature stage of Phase 5 that the Roman contacts occurred. It is conceivable that final abandonment occurred due to unrest in the area during the centuries following the withdrawal of the Roman army, but there is no a priori reason either to correlate the decay of the fortifications or the abandonment of the settlement with recognizable Roman horizons. The nature of the Roman contact and its cultural impact needs to be re-examined carefully. It is clear that in the later phases of occupation at St Germain's Roman goods, notably Samian, were used on the site. They may have been exchanged for goods at the nearby Roman fort and civilian settlement at Inveresk. Alternative explanations, for example that they could have been redistributed from a native settlement such as Traprain Law, are equally possible. It is now believed that the Roman interludes in Scotland may have impacted on the development of native societies less than was previously thought (Armit & Ralston 1997, 174).

While it is important to emphasize the continuity of occupation between Phases 4 and 5 there is also one interesting element of discontinuity. From Phase 3 and through to Phase 4 there was a route out of the settlement leading to the south-east and presumably into the lands on which the settlement depended or perhaps towards other associated settlements (eg the cropmark sites around Greendykes Farm in illus 1). In Phase 5, however, the roughly paved access to the Phase 4 gateway was overlaid by a substantial building (structure SS5 extended westwards from the infilled eastern terminal of the defensive ditch). Around this structure were signs that the midden material which had accumulated in the upper part of the old infilled antenna ditch continued to be deposited and numerous pieces of metal-working waste were recovered from its vicinity. The building itself would have effectively blocked the route, and the presence of midden and waste thrown nearby reinforces the view that not much traffic made its way past the building. In short, the old access from the settlement to its lands was not maintained, implying a change in the relationship between the much modified-settlement and the neighbouring land. In this respect, the re-cutting of the defensive ditch in Phase 4C and the construction of a new entrance across a stone-built causeway from the north-east may also be significant, suggesting that the focus of the agricultural land worked from the settlement now lay in that direction or perhaps indicating a stronger link with the sea.

#### ECONOMY

No palaeoenvironmental samples from St Germain's were processed and, therefore, any information on the surrounding environment and the farming practices of the occupants, in its

various phases, must rely on more recent work. For example, initial examination of the botanical remains from the excavation of two enclosures at Fisher's Road, Port Seton (Haselgrove & McCullagh 1996), has produced carbonized cereal grains (hulled barley and emmer wheat) and small bone assemblages including evidence for sheep/goat, cattle, pig and horse. It is likely that the community at St Germain's practised a mixed-farming economy similar to that adduced for other Iron Age sites in south-east Scotland (Barneston 1982). The very limited bone material from the site comprises mainly animal teeth, probably of cattle. The artefacts provide additional, if indirect, evidence for the economic practices. Spindle whorls indicate that wool was being turned into thread, probably for weaving, although there is no direct evidence for the latter activity on site and it is conceivable that initial processing of fleeces and garment-making may have been located on different sites. Both saddle and rotary querns testify to the processing of grain on the site, while the coarse pottery may have been used for both storage and cooking. Despite the relative proximity of the sea, there is no evidence for the exploitation of marine resources: none of the pottery is shell tempered, nor are cetacean bones or shellfish represented in the assemblage. Very little wood charcoal was found, but the occurrence of quantities of burnt coal on site is intriguing and is supported by the results from Fisher's Road West (Haselgrove & McCullagh 1996, 7) where wood charcoal was also lacking. This represents the earliest sure identification of the employment of this fossil fuel in Scotland. It appears likely that coal was either being collected as surface finds, mixed in with the soil, or from outcrops along the sides of burns or on the shoreline. No hearths were located, however, which is especially surprising given the sealed floors of the Phase 5 structures.

#### MATERIAL CULTURE

Although the assemblage of artefacts present on the site was not large, in comparison to other excavated later prehistoric settlement sites in eastern Scotland south of the Mounth it appears relatively wealthy.

Occupation evidence from the Phase 5 stone structures suggests a range of activities including metal-working (in or around structure SS5). This evidently consisted of copper alloy—rather than iron-working, for the manufacture of small items such as ornamental pieces. Evidence for small-scale metal-working, particularly of copper alloy, is present on a number of other sites in the vicinity: a bowl furnace and putative casting pit were recorded in Phase II at Broxmouth (Hill 1982b, 151) and limited evidence was recovered for metal-working at both the Fisher's Road enclosures, with crucible fragments from the east site (Haselgrove & McCullagh 1996, 10). As is often the case on Scottish Iron Age settlements, soil conditions preclude any secure assessment of the extent to which iron itself was in use, although the presence of possible whetstones — no 57 from structure SS2 and no 607 from the area between the defensive ditch and the polygonal enclosure — suggests that iron tools were being sharpened. Small concentrations of slag, including iron slag, indicate that iron-working was also being undertaken, although the majority of this material was recovered from mixed colluvium deposits and is therefore unphased. As elsewhere in eastern Scotland, there is nothing to indicate an upsurge in iron production in the last few centuries BC, as can be noted on some sites further south in Britain and on the nearer European Mainland.

On the basis of the form and fabric of the pottery assemblage it is likely that the majority of the vessels were made locally to satisfy purely local needs. The only sure indication of exchange — if they were not, for example, gleaned from abandoned Roman establishments — is the small number of Roman Samian sherds tentatively attributed to the final phases of the settlement.

Despite the indications from the metal artefacts that occupation continued into the Flavian and Antonine centuries, and the relative proximity of Inveresk, other Roman ceramic materials (cf Thomas 1988) were wholly lacking. This selectivity towards high-status ceramics has been identified on other native sites (Robertson 1970, 200) and has been interpreted in southern Scotland as a result of direct contact with Roman installations (*ibid*, 210).

#### SOCIAL DEVELOPMENT

The sequence of activity identified at St Germain's is of considerable interest. Its development from unenclosed house, through small enclosure, to large defensive settlement, and back to an unenclosed village settlement represents an important excavated sequence of settlement development in the area. It would be ideal if this sequence could have been refined by a series of radiocarbon dates in order to compare it with the evidence from other excavated sites in East Lothian. The nature of settlement development and the relationship between enclosed and unenclosed sites continues to be one of the major research topics which dominates the study of later prehistoric settlement in southern Scotland. For many years the Hownam sequence provided an evolutionary model for the development of Iron Age settlement types. This sequence consisted of a progression from unenclosed settlement to palisaded enclosure to univallate fort to multivallate fort and finally to unenclosed settlement again (Piggott 194; Armit & Ralston 1997, 176–8). Although the results from Broxmouth have suggested that the situation in the eastern Lowlands is more complex than this simple evolutionary model devised for the central Borders suggests, the evidence from St Germain's does not contradict the general trend towards enclosing works of increasingly enhanced solidity through time.

Do the observable changes, from unenclosed to enclosed site and back to open settlement, and from single large house to multiple smaller houses, represent a significant change in the structure of Iron Age society? Construction of the defensive earthworks would have been a major undertaking, given the small size of the social group encircled by this enclosure. The fortifications extend over 150 m, each metre requiring the extraction of roughly 6 cu m of material from the ditch and the formation of a dump-constructed rampart reveted, at least in places, by drystone walling. Yet at the stage of first construction only a single house existed within this enclosure. Would the construction of these earthworks have involved simply the occupants of the site or would outside help have been provided or enforced? The archaeological evidence from St Germain's supplies no direct answer to this question, not least because there is no evidence for the duration over which construction progressed.

Although one may ask to what extent the inhabitants were able to man these defences, it may also be appropriate to ask if this was actually required. It has been suggested that similar problems posed by hillfort fortifications relative to the apparent paucity of inhabitants might be explained in terms of the forts having been, intermittently, communal refuges for the local populations. The construction of the enclosing works might thus have involved a wider community than the permanent occupants; alternatively, hillforts might have been tribal centres of strength, again being constructed by a wider community than the occupants alone. Either of these views presupposes the existence of a number of rural, and probably unenclosed settlements, which — although a number have been excavated elsewhere — remain undetected in the cropmark record or from surface finds within the immediate vicinity of St Germain's. It seems likely that such open or lightly closed settlements may have been located in the vicinity of St Germain's, but further research is necessary to identify them.



St Germain's started life as an unenclosed house, representing perhaps the lowest level of rural settlement, but became first an enclosed site and then a defended site with monumental earthworks. The problem of defining unenclosed settlements as low-status sites is highlighted at Newmains, Whitekirk, East Lothian, where a small hoard of Iron Age bronze objects, including a beaded torc and spiral bracelet, were found close to what appears to have been a stone-paved settlement of the second century AD (Stevenson 1966; Clarke 1969). On the other hand, on the basis of the high concentration of other large, ditched enclosures in the area, it could be that (leaving to one side the artefacts assemblage) the defensive enclosure at St Germain's enjoyed no higher status than many other enclosed sites in the settlement hierarchy. In general, more work needs to be undertaken, especially in seeking better dated sequences, before the complex picture of the Iron Age settlement patterns of East Lothian can be unravelled and a general model of both settlement and social development can be constructed.

The foregoing discussion is based on the assumption that the sequence detected at St Germain's represents uninterrupted development by a community established on the site around the middle of the first millennium BC, with unbroken occupancy and remodelling of the site continuing until perhaps the Antonine period. A radical alternative should also be considered, before concluding. It is equally possible to recast the sequence at St Germain's in terms of discontinuous or episodic recourse to this location for settlement, not least because of the lack of isotopic dates and closely datable material culture. This proposal does not revert to the view that the Iron Age of Scotland was characterized by socio-political instability or substantial population movements involving, for example, inward migrations of Celtic warriors and their retinues (Powell 1962, 118–22). There may have been purely local and mundane reasons for periodic relocation including, for example, infestations by vermin or animal or plant pests, or the interior of the enclosure being reduced by human and animal passage to a sea of mud and faeces. Given such factors, combined with ageing buildings and increasingly unserviceable enclosing works, it may sometimes have been preferable to relocate rather than to rebuild.

## ARCHIVE

The full project archive, comprising all context sheets, finds lists, inked drawings, photographs and slides, has been deposited with the National Monuments Record of Scotland. The surviving coarse pottery and coarse stone tools have been deposited with the National Museums of Scotland.

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