

Excavation of an Anglo-Saxon settlement and of prehistoric features at Shotton, Northumberland

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SUMMARY

A previously unknown Anglo-Saxon settlement was excavated 300 m to the south of the village of Shotton in south-eastern Northumberland, in advance of surface mining. Prehistoric activity — a pit alignment and an isolated round house — was succeeded by an unenclosed cluster of three halls and another structure of uncertain type, for which construction dates in the mid- to later-sixth century AD seem likely. These buildings were replaced by a more extensive enclosed settlement, with halls, sunken-featured and other buildings, pens and fenced areas, all located within a row of seven ditched enclosures. This settlement appears to have been established no earlier than the mid-seventh century AD and to have gone out of use in the ninth or tenth century AD. Its site was incorporated into the field system of the medieval village to the north. The small assemblage of finds included pottery, loomweights and a polychrome glass bead. Because of the adverse soil conditions, no animal bone survived, but charred macrofossils provided valuable information about diet and the crop husbandry and palaeoenvironment of the settlement.

CIRCUMSTANCES OF THE EXCAVATIONS (figs. 1–4)

EXTENSIVE SURFACE COAL MINING has been in progress for many years in south-east Northumberland and since the later 1990s has been preceded by archaeological excavations of areas far larger than have previously been investigated in north-east England. The area affected by mining at Shotton exceeded 300 ha (fig. 1), though parts of it had previously been stripped for shallower surface mining. A desk-top assessment (AC Archaeology 2002) and an evaluation (AC Archaeology 2006) identified three sites that required excavation: the Shotton North-East prehistoric site (Site 2) which is now fully published (Hodgson *et al.* 2013, 97–103), the abandoned eastern part of Shotton medieval village (Site 1; TWM Archaeology forthcoming) and the site (Site 3) reported on here (figs. 2 and 3). The excavation, 250 m by 70 m in area, was undertaken between September 2009 and March 2010. Although the evaluation had identified a site of archaeological interest, the absence of finds or other diagnostic features meant that it was not until its excavation that the site was identified as an Anglo-Saxon settlement. The archaeological features lay directly under the modern plough-soil. Only the bases of the postholes survived, which indicates that cultivation had probably removed the subsoil to a depth of at least 0.3–0.4 m. This estimate is based on the likelihood that the postholes were originally no less than one and a half to two times as deep as they were wide. (The ratio of width to depth of the only posthole on the site that survived to its full depth was 1:1.5, see fig. 22, SFB P, 7486.) The excavation was undertaken over the winter, which was unfortunately marked by heavy rain and prolonged periods of snow. In the

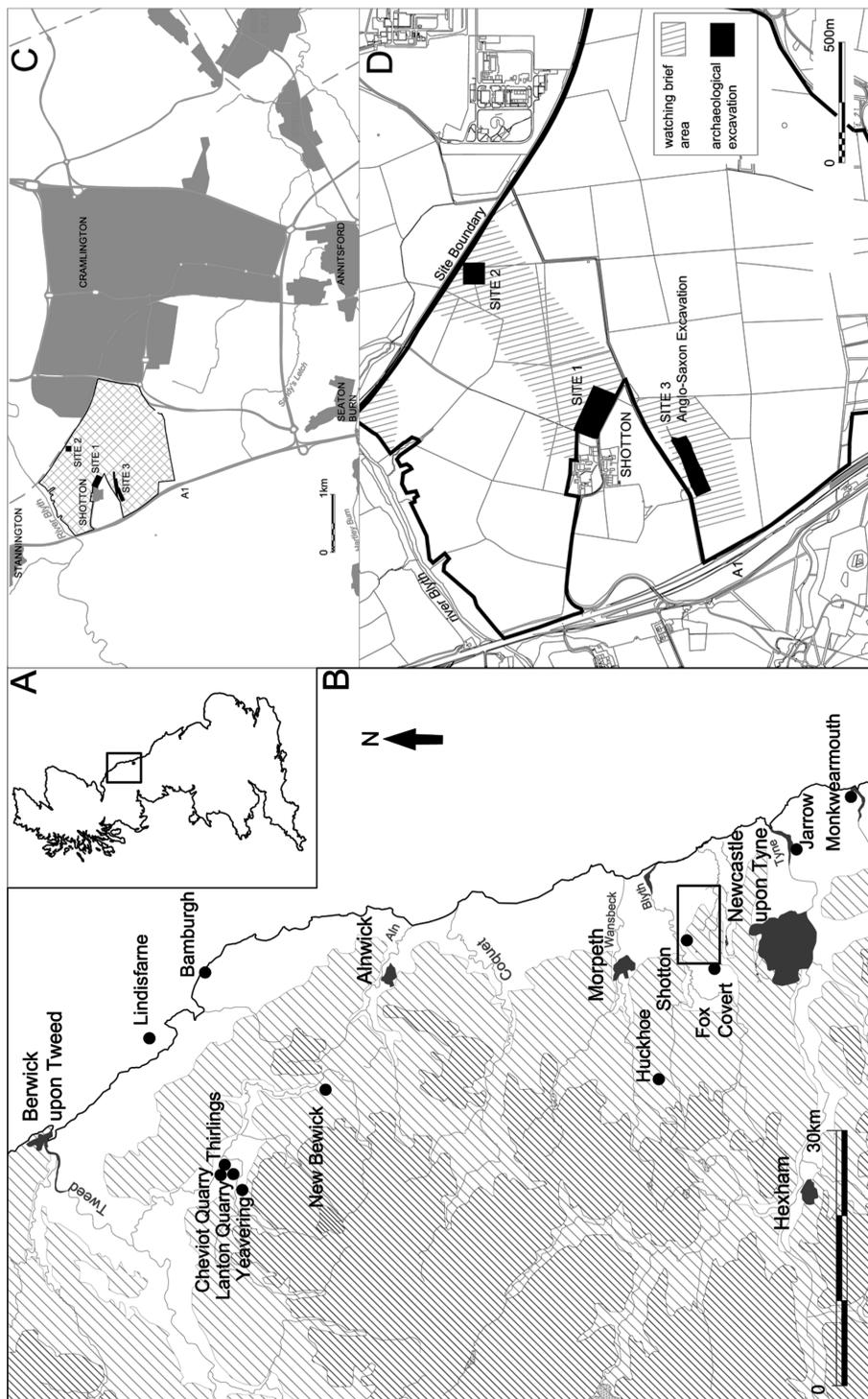


Fig. 1 General location of the site and of other places mentioned in the text.



Fig. 2 The Anglo-Saxon settlements and other excavated sites at Shotton.



Fig. 3 Aerial photograph, looking east, of the excavations (centre left), A1 in the foreground, the village of Shotton to left, and surface mining in progress at the top of the picture.
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excavation area the features were sample-excavated, though halls and other structures were excavated in their entirety. Further remains of the Anglo-Saxon settlement were revealed in a subsequent watching brief, undertaken between June and August 2010 (fig. 4), which extended in a 150m radius from the site, excluding areas unaffected by development or from which coal had previously been extracted.

TOPOGRAPHY AND GEOLOGY (figs. 1–3)

The Anglo-Saxon settlement (NZ 224 776) was focused on a locally-pronounced east-west ridge (77.6m AOD), facing a hill (83 m AOD) to the north upon which the present village of Shotton is situated (figs. 1–3). The ridge was bisected by a palaeo-channel forming a hollow running from north-west to south-east which was used to form part of a boundary within the settlement. The River Blyth runs within a steep wooded dene, 1.1 km to the north, and closer to hand a spring rises 200m to the north in the low-lying area between the ridge and Shotton village. The surface geology consists of boulder clay with sandstone of the Pennine Middle Coal Measures Formation exposed in localised areas beneath the plough soil at the eastern and western ends of the ridge. An outcrop of the sandstone, forming the hill upon which Shotton village is sited, has been quarried locally.

THE PREHISTORIC PERIOD

THE PIT ALIGNMENT AND ROUNDHOUSE (figs. 4–6)

This account presents a background summary of the prehistoric features encountered during the excavation; a full report is published elsewhere (Hodgson *et al.* 2013, 97–103).

The heavily truncated remains of a pit alignment were recorded running north-west to south-east at the eastern limit of the watching brief. Eight pits were recorded in the main group and another three in a second group further to the north (figs. 4–5). The pits were spaced at intervals of up to 0.96 m; they were rectangular in shape, up to 2.2 m by 0.75 m in area, and 0.3 m in depth. As with other recently excavated examples in the local area, there were no traces of post-settings, the evidence suggesting that they were open features that had gradually silted up.

A large roundhouse was located 320 m to the west of the pit alignment on slightly sloping ground at the western limit of the ridge subsequently occupied by the Anglo-Saxon settlement (figs. 4 and 6). The roundhouse was defined by a vertically-sided wall-slot (7611), 0.15 m in width and 12 m in diameter, which was cut into bedrock for much of its length. The entrance, which faced to the east, was defined by two postholes (7625 and 7631) spaced 1.9 m apart. Truncation by medieval and post-medieval ploughing meant that only a faint vestige of a drainage gully (7525) on the northern side of the roundhouse survived. The only surviving internal feature was a small posthole (7647). A series of tool-marks were visible, mainly on the base of the rock-cut wall-slot and posthole (7625). They were mainly narrow impressions, the best preserved being 40 mm by 5 mm by 4 mm in depth, perhaps indicating the use of a narrow-bladed implement such as a chisel.

DATING EVIDENCE

Roundhouse: posthole 7631, fill 7632, hazel charcoal from the fill of the northern door posthole, radiocarbon dating of 400–200 cal. BC (SUERC-30834).

DISCUSSION

The pit alignment represents one of four such boundary features in the local area, another of which was within the Shotton surface-mine zone (fig. 2); they are discussed in detail elsewhere (Hodgson *et al.* 2013, 107–13). Three of these alignments, dated by Optically Stimulated Luminescence (OSL), all originated in the late Bronze Age or early Iron Age and probably remained visible throughout the Iron Age as partly silted-up hollows. The pit alignment at the present site might have been orientated on two areas of locally-raised ground, to the north-west on the hill on which the present village of Shotton is situated and to the south-east on Down Hill, the highest vantage point for some distance.

The roundhouse was situated by itself on the western limit of the ridge. Truncated remains of a pair of roundhouses were recorded 0.5 km north of the site beneath the medieval village of Shotton and a further cluster of roundhouses was located 2 km to the north-east (fig. 2: Hodgson *et al.* 2013, 97–104, 207–9). This emerging pattern of isolated or small groupings of roundhouses indicates the presence of a tier of small-scale settlement alongside the larger-scale enclosed settlements such as Blagdon Hall 2 at Delhi Opencast Mining Site 1 km to the south-west of Shotton, where nearby there was also a small group of roundhouses (Blagdon Park 1).

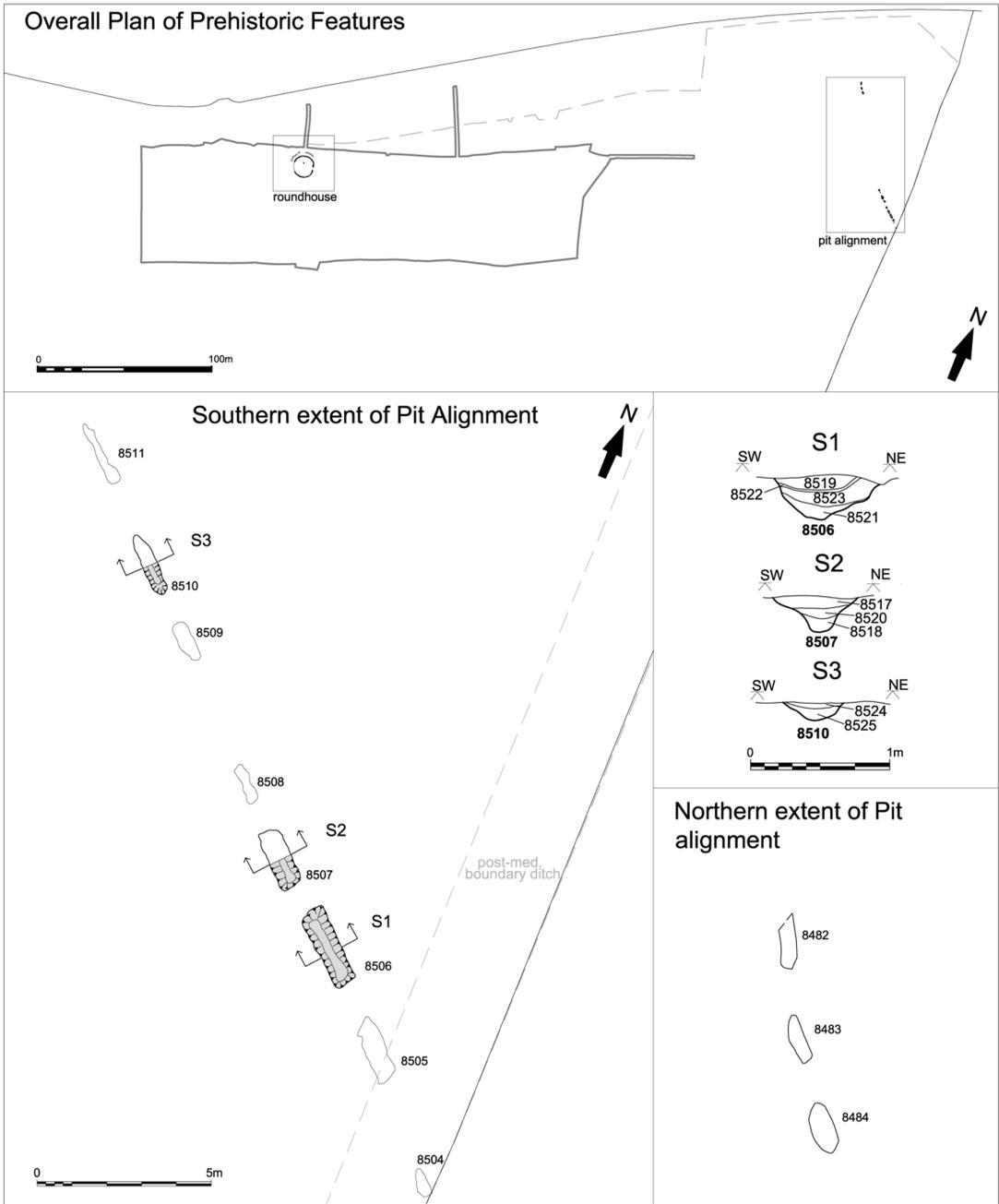


Fig. 5 Overall plan of prehistoric features with detailed plans and sections of pit alignment. Various scales as indicated.

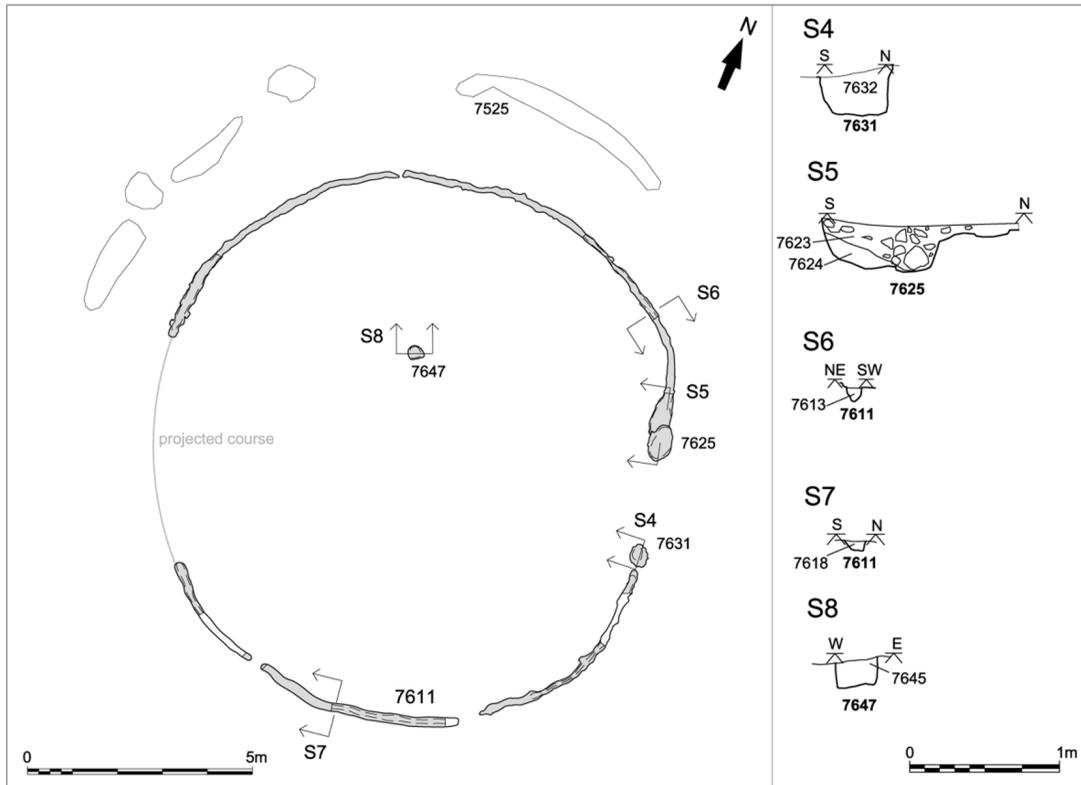


Fig. 6 Iron Age roundhouse (for location, see figs. 4 and 5).

THE EARLY ANGLO-SAXON UNENCLOSED SETTLEMENT (figs. 7–11)

Three halls (B, C and D) and a smaller structure or pen (post-built structure K) belonged to an early Anglo-Saxon settlement preceding the enclosed settlement to the north (fig. 7). These halls were located in the southern portion of the excavation area, a short distance south of the ridge. The halls were oriented with their long axes east-west and they faced south. They were evenly spaced with Halls B and D arranged roughly in line and 69m apart, and Hall C lying to the south spaced roughly midway between them. Halls B and D showed no signs of rebuilding but many of the postholes of Hall C had been recut, indicating that it had been at least partly rebuilt.

Hall B was situated at the western end of the settlement and at 9.1 m by 4 m was one of the smallest halls at the site (fig. 8; note that posthole-spacings and building dimensions are measured in relation to posthole centres). Most of the postholes in the longitudinal walls were arranged in opposing pairs, spaced at intervals of 0.6 m–1 m, with postholes varying between 0.29 m and 0.35 m in diameter and surviving up to 0.13 m in depth. The entrance was marked by a gap 1.7 m in width to the east of the centre of the southern wall. Posthole 7784, located 0.75 m east of the line of the eastern gable and in line with the southern wall, may represent a reinforcement of the south-eastern corner of the hall.

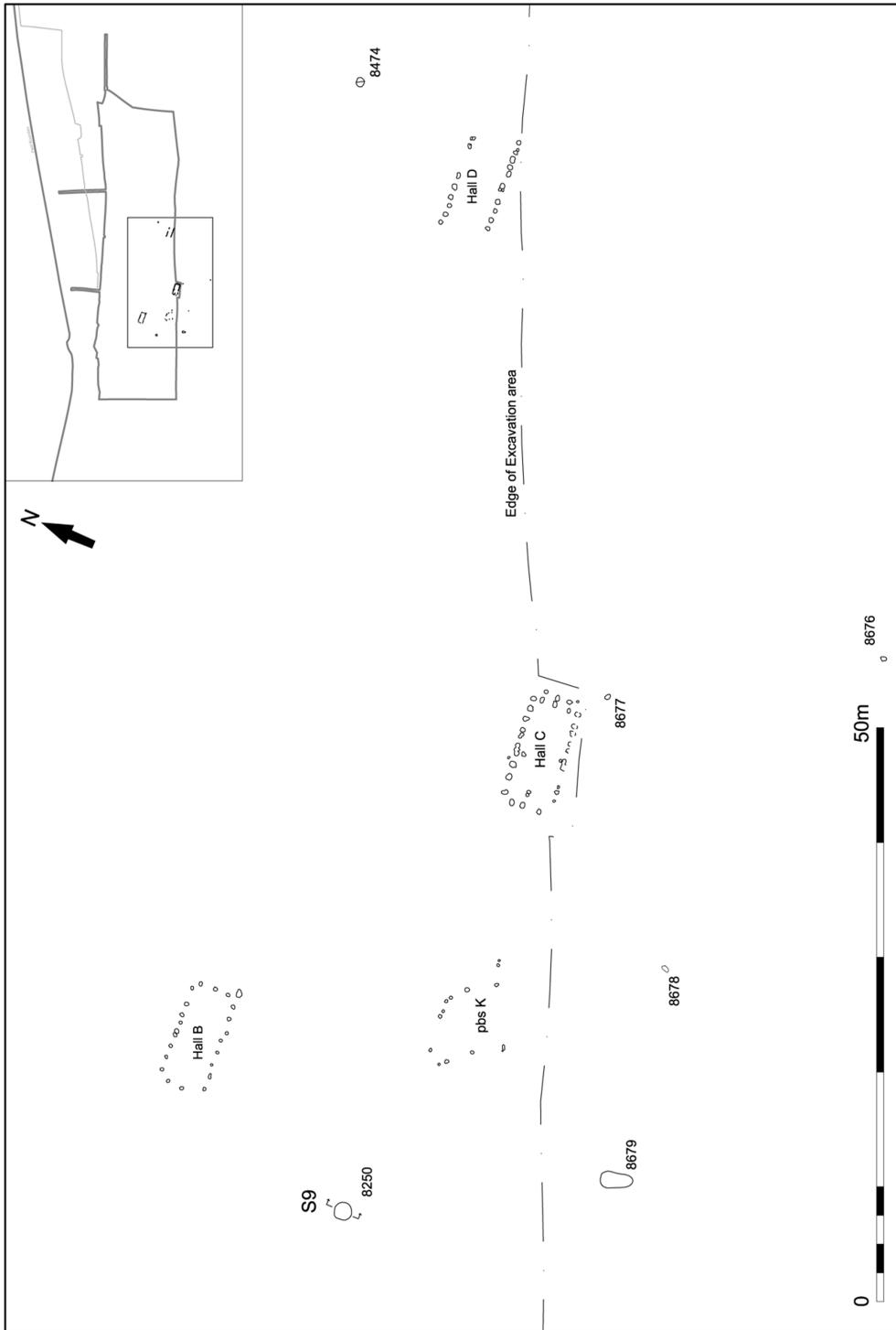


Fig. 7 The unenclosed Anglo-Saxon settlement.

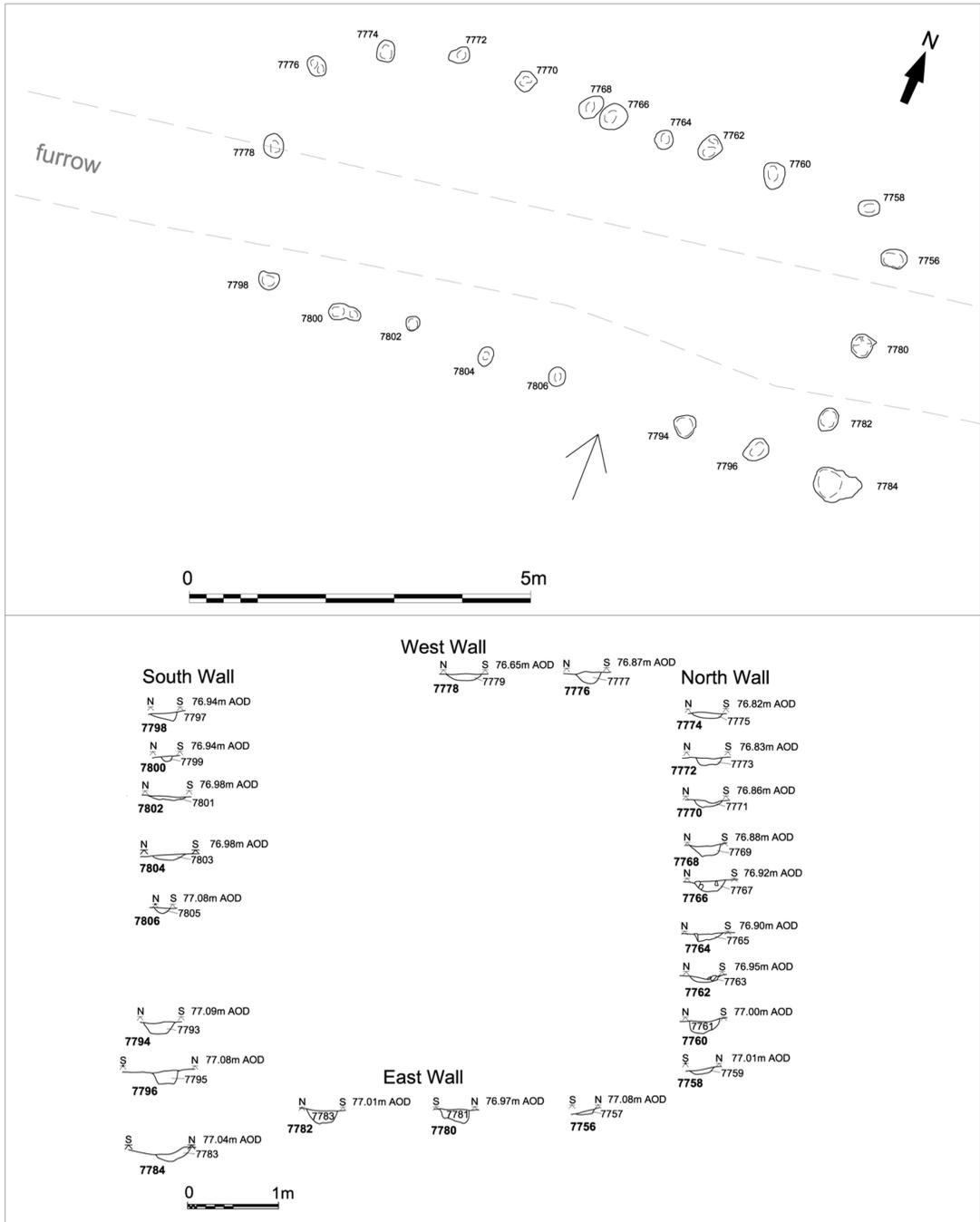


Fig. 8 Hall B. Plan and posthole sections. The arrow marks the entrance.

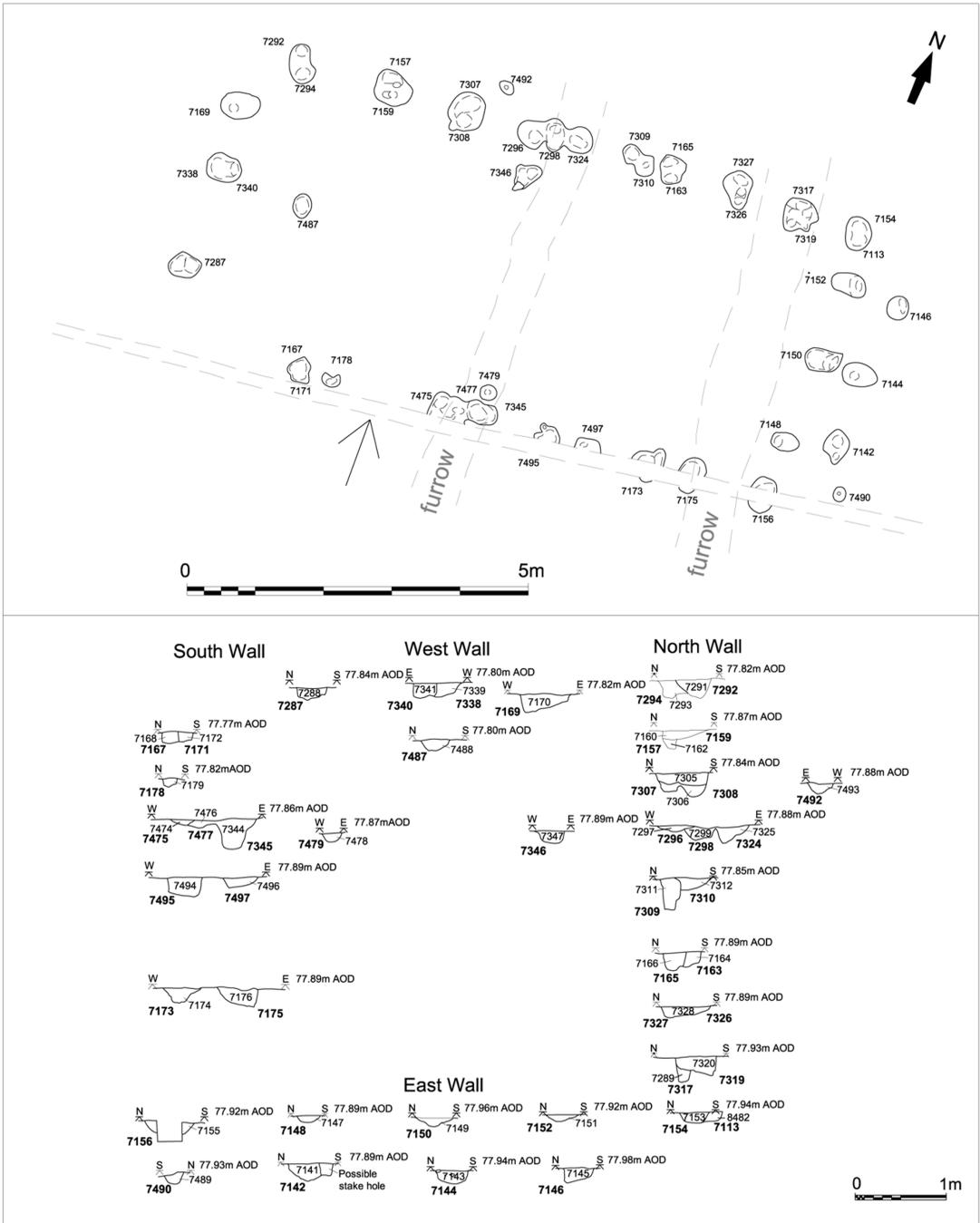


Fig. 9 Hall C. Plan and posthole sections. The arrow marks the entrance.

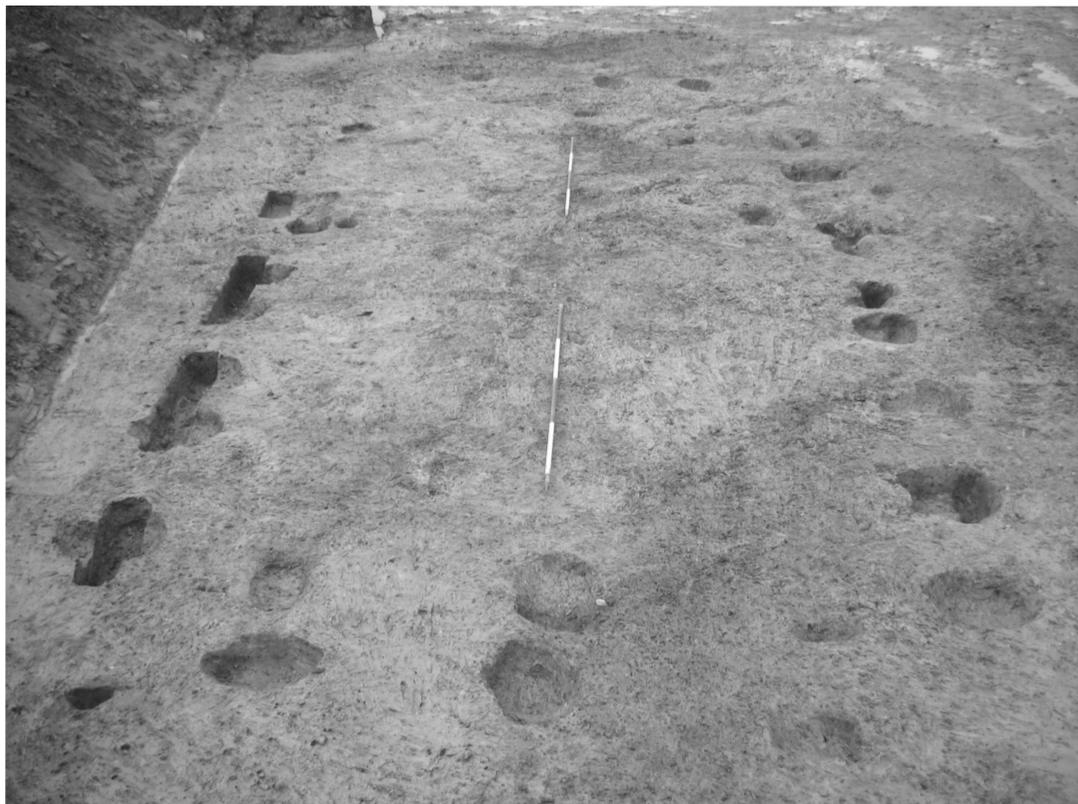


Fig. 10 Hall C looking west. The postholes on the left have been cut by a field-drain which has been only partly excavated. 2 m scales.

The postholes of Hall C, which was 10.07 m by 4.45 m in size, survived to a greater depth than at the other halls, although unfortunately the southern wall was poorly preserved because it had been cut by a post-medieval field drain running along its length (figs. 9–10). The postholes in the longitudinal walls were arranged in opposing pairs at intervals of between 0.8 m to 1 m. The individual postholes ranged between 0.25 and 0.35 m in diameter and survived up to a depth of 0.22 m. A rectangular post-pipe, 0.19 m by 0.16 m, at the base of posthole 7157 indicates the likely dimensions of timbers used in the building. The entrance was marked by a gap 1.35 m wide between postholes 7178 and 7475/7477, and was located to the west of centre of the southern wall. Two postholes (7346 and 7479) inset from the lines of the side walls immediately to the east of the entrance to the hall may mark the line of a central partition. Posthole 7487 was situated alongside the central axis of the hall close to the western gable. To the north of the northern wall a shallow posthole (7492) may have represented a raking timber; unless a series of similarly shallow postholes had been ploughed out, this posthole was presumably an isolated reinforcement of the north wall. A number of postholes on the north wall, south wall and western gable wall contained two post-settings. The majority were clearly recut when the timbers were replaced: west wall — 7338/recut 7340; north wall — 7294/recut 7292; 7157/recut 7159; 7928/recut 7926; 7310/recut 7309; 7317/recut

7319; 7113/recut 7154; south wall — 7167/recut 7171; 7477/recut 7475. In other examples where the fills could not be differentiated, they possibly represented double timber settings (postholes 7307/7308; 7326/7327). The high proportion of recut postholes suggests a rebuilding of the hall rather than a series of repairs. The inner line of postholes at the east end of the hall (7146, 7150 and 7152) was originally interpreted as a partition, but one of the post-settings (7150) was only 0.4 m from another (7144) of the outer line. The space between the two lines of postholes seems too narrow to have been a useable space, and the inner line was almost certainly for a new gable wall which was presumably part of the rebuilding indicated by the recut postholes elsewhere.

Located 13 m to the west of Hall C was a scatter of postholes (pbs K) which seems to have consisted of three elements (fig. 7): two pairs of larger postholes (8264, 8266, 8268 and 8270) 5.5 m apart; two postholes east of the eastern pair; and seven postholes to the north in an asymmetrical arrangement. The spacing of the two pairs of postholes was far too wide to have supported a roof, unless intervening postholes of shallower depth had been removed by cultivation, but the curving arrangement to the north probably formed a pen rather than a building.

Hall D, situated at the southern limit of the excavation area, was a minimum of 9 m by 4 m in size and was poorly preserved with no evidence of either the eastern or western gable walls surviving (fig. 11). The location of the entrance was uncertain although it could have been on either side of posthole 7269 in the centre of the southern wall where the neighbouring postholes were spaced up to 1.1 m apart. The other postholes of the southern and northern walls, which were spaced between 0.64 m and 0.9 m apart, ranged between 0.34 m and 0.45 m in diameter and survived to a depth of 0.1 m.

Several pits (8250, 8676, 8677, 8678, 8679 and 8474) of varying sizes scattered through the southern portion of the excavation area are likely to belong to the unenclosed settlement (figs. 7 and 13).

FINDS FROM THE UNENCLOSED SETTLEMENT

Fill of posthole 8289, pbs K: metallurgical debris: non-diagnostic slag, 8290, SF 734.

DATING EVIDENCE

Radiocarbon determinations were as follows:

Hall C, posthole 7178, fill 7179: cal. AD 420–600 (SUERC-30840)

Hall D, posthole 7271, fill 7270: 7.5% cal. AD 430–490, 87.9% cal. AD 530–640 (SUERC-32905)

Hall D, postholes 7245, 7247, 7479, fills 7244, 7246, 7248: 790–500 cal. BC (SUERC-26689).

The position of the halls (B, C and D) and their style of construction (see below) suggested that they belonged to a separate phase from the enclosed settlement and its halls to the north. The radiocarbon dates indicate, as might be expected, that the unenclosed settlement was the earlier settlement. Two samples from postholes of Hall D produced one relevant determination (SUERC 32905; 7.5% cal. AD 430–490 / 87.9% cal. AD 530–640); the other (SUERC 26689) was presumably derived from early Iron Age occupation in the vicinity. Two samples from postholes of Hall C produced only one radiocarbon determination (SUERC 30840; cal. AD 420–600); the other failed. The two relevant determinations at their greatest degrees of probability overlap during the period from cal. AD 530 to 600. The later determination provides a

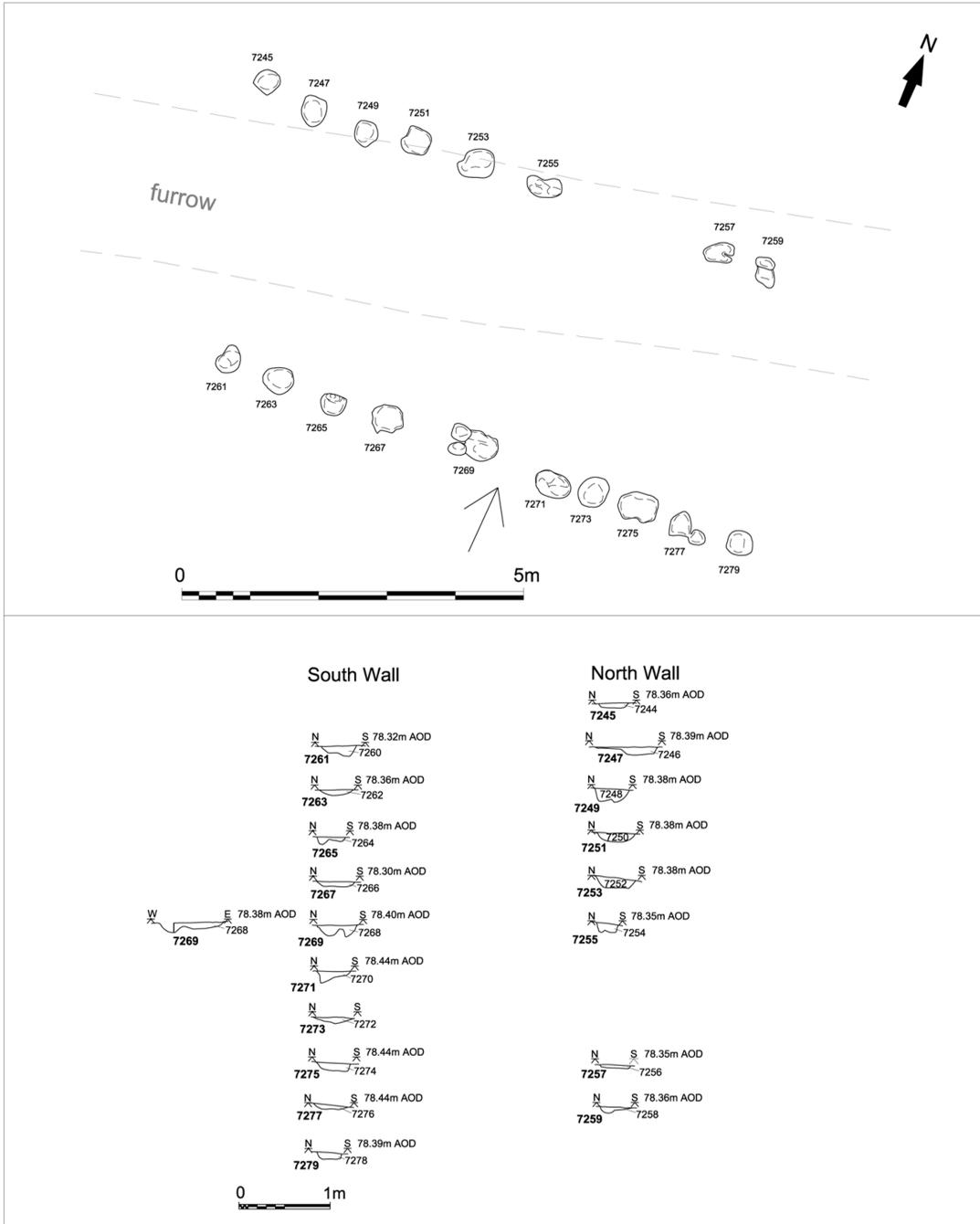


Fig. 11 Hall D. Plan and posthole sections. The arrow marks the entrance.

terminus post quem of cal. AD 530, and the two taken together would allow a construction date for the halls in the second half of the sixth century AD. This would depend on two assumptions: first, that the two samples were associated with the construction of the halls and were not introduced incidentally when the posts were inserted or even perhaps when they were pulled out during demolition; secondly, that the two halls were built at the same time. The two samples were of cherry charcoal (Hall C, SUERC 30840) and hazel charcoal (Hall D, SUERC 32905). Neither would be an obvious choice for the main structural timbers of the halls, where oak or ash might be expected (see Environmental Evidence, below), though hazel is particularly suitable for weaving wattle panels. It is likely therefore that the samples were incorporated incidentally in the fillings of the postholes, probably as part of the packing around the posts, but this does not necessarily mean that they are significantly earlier than the buildings: it is likely that the activities from which they resulted were the preparation of the site for the halls or short-term occupation which preceded their construction. We can be reasonably confident that they were not introduced during the demolition of the buildings because of their position near the bottoms of the postholes. (See the paragraph on the Circumstances of the Excavations, above, for an estimate of the depth of natural subsoil that has been removed by ploughing.)

The second assumption, that the halls were built at the same time, is reasonable enough. The enclosed settlement consisted of a number of households, and that is what might be expected of its preceding settlement. Also, if the latter was indeed a single household, it would have been easier to rebuild its hall on the same site or one immediately adjacent, avoiding the transport of reusable timbers and other building materials, rather than on a succession of different sites which presumably would have involved re-arrangement of the surrounding agricultural plots.

Use of the two radiocarbon determinations to establish a *terminus post quem* of AD 530 for the unenclosed settlement is therefore justifiable if the assumptions on which it rests are borne in mind. Material for further determinations was not present in the relevant contexts.

THE ANGLO-SAXON ENCLOSED SETTLEMENT (figs. 12–31)

THE OVERALL PLAN OF THE SETTLEMENT

The unenclosed settlement was succeeded by a row of seven enclosures (Enclosures 1–5 and 7–8) extending for 300 m along the upper edge of a small ridge (figs. 2 and 12). Three halls and a number of smaller structures were sited within four of the enclosures, and it is likely that in the other enclosures there were originally halls also. The enclosures were defined by a series of small ditches or gullies. If they were anything more than boundary markers, they were presumably associated with small banks into which were set hedges or fences. The positions of some features inside the enclosures possibly respect the lines of these banks. In places, the ditches also defined trackways between the enclosures. The general absence of features within Enclosures 1 and 7 and the limited number within Enclosure 2 may reflect severe truncation in these areas, where later plough furrows were particularly pronounced; there was also an outcrop of bedrock in the south end of Enclosure 7. The full extent of Enclosures 4, 5, 7 and 8 lay beyond the limits of excavation and watching brief (fig. 12). The presence of post-built structure M within extension trench 1 at the north end of Enclosure 4 demonstrates that other structures and possibly halls may lie beyond the edge of excavation within Enclosures 4, 5, 7 and 8.

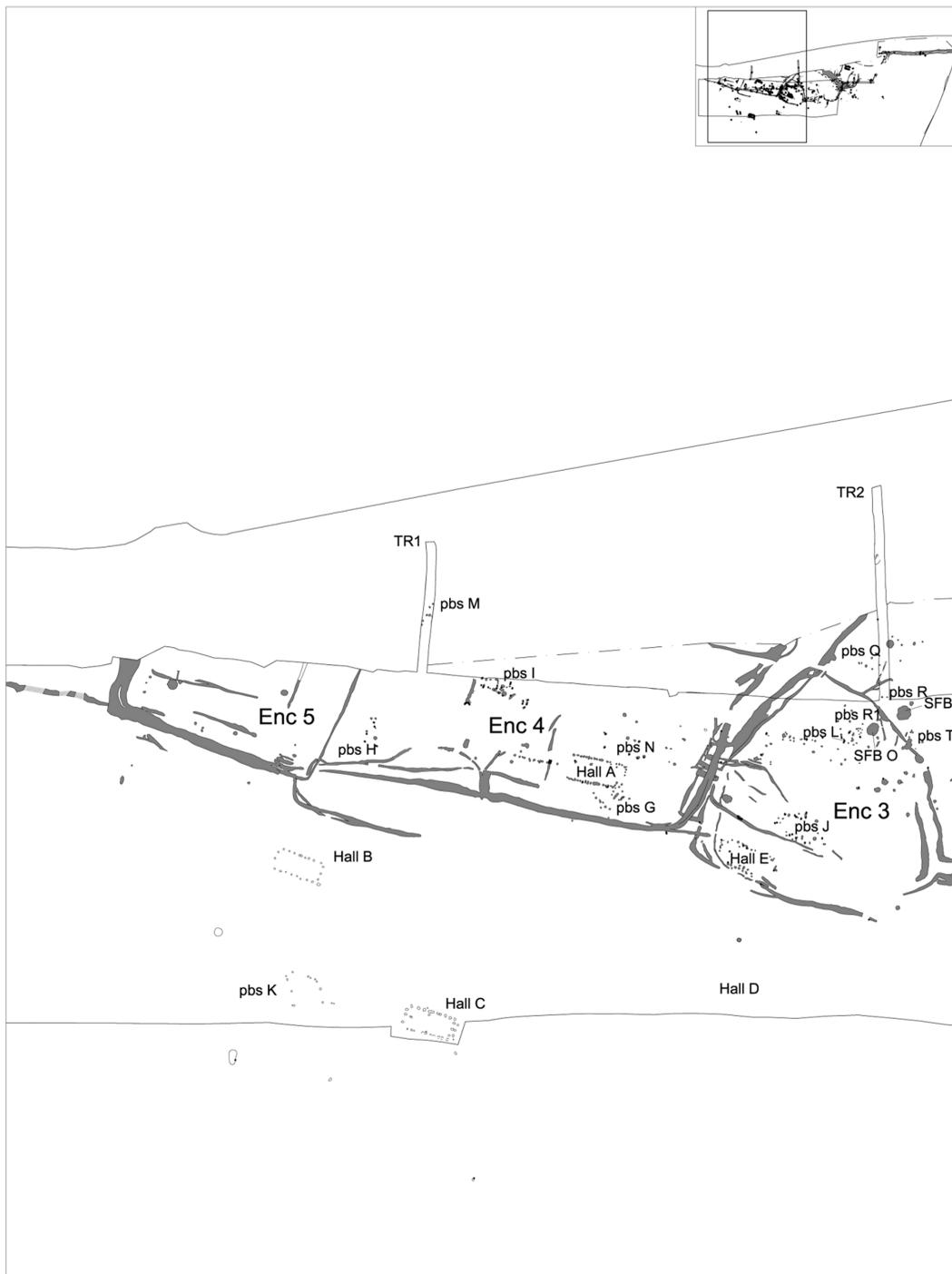


Fig. 12 The unenclosed and enclosed Anglo-Saxon settlements (west). (Continued on page 93.)

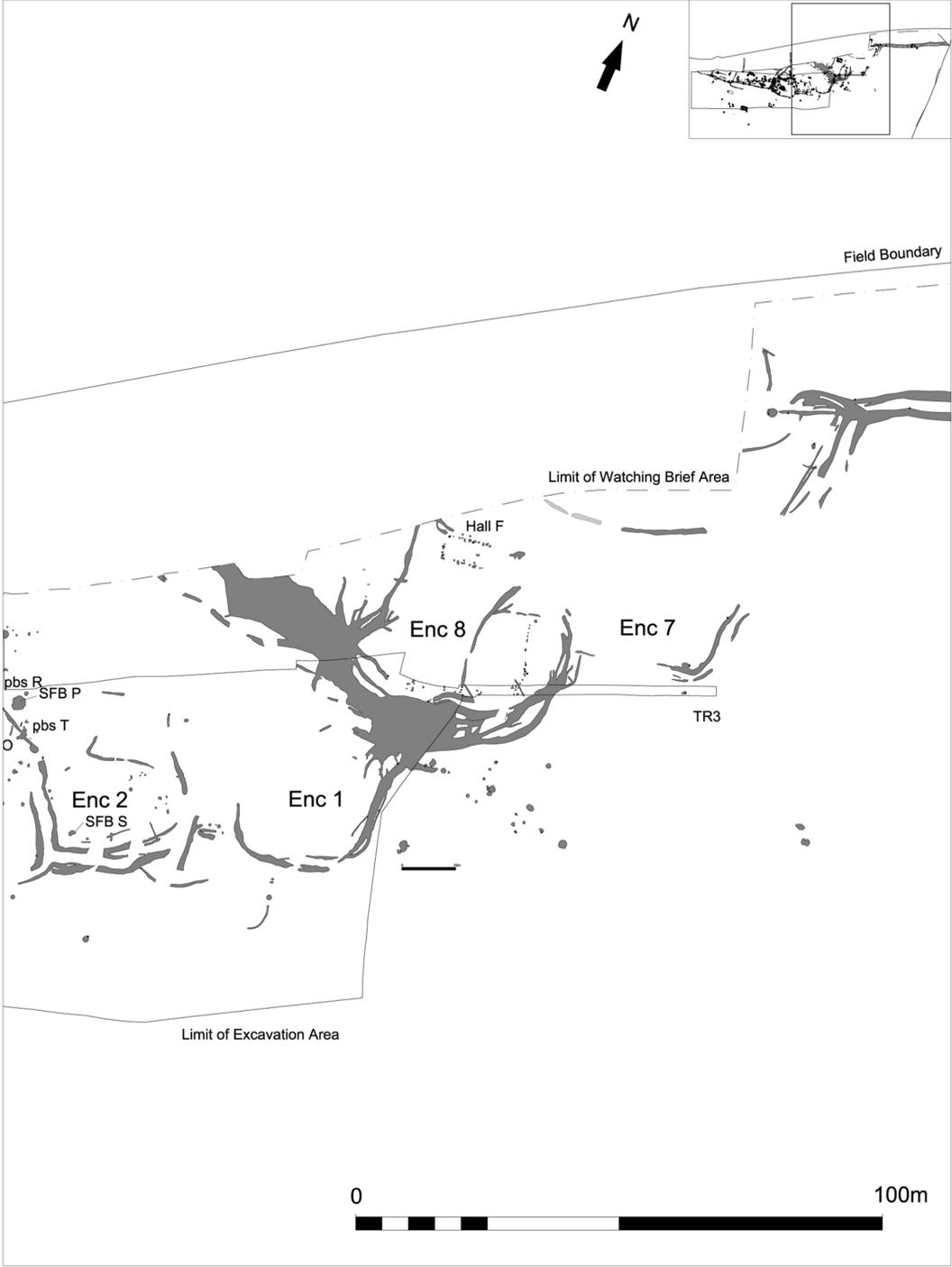


Fig. 12 The unenclosed and enclosed Anglo-Saxon settlements (east). (Continued on page 92.)

The extensive area examined by the excavation and watching brief has enabled the southern and eastern limits of the settlement to be defined. To the north the settlement is unlikely to have extended beyond the edge of the ridge at Enclosures 4, 3, 2, and 1. The settlement was linked to the wider landscape by two ditches that extended from the eastern limit of the settlement and presumably formed a territorial marker of the land associated with the settlement.

Each of the ditched enclosures had been redefined several times, indicating that they were long-lived and that, once established, their layouts remained fairly static, suggesting a high degree of security of tenure. The only possible change to the boundaries was on the north-east side of Enclosure 3 where at some stage the ditch was filled and activities seem to have spread into the adjacent Enclosure 2. In the absence of closely datable artefacts, the radiocarbon dating programme suggests that the enclosures were broadly contemporary. The halls, ancillary buildings, fence-lines and subdividing gullies within the interior of the enclosures, respect the enclosure gullies, and clearly belong to the same period of activity. The one exception to this was to the north of Enclosure 3 where activity originally contained within the enclosure appears to have spread north-east beyond the line of the earliest boundary gully. There was only limited evidence to indicate zoning of activity across the site, with no evidence of individual enclosures having different functions. Rather, the evidence suggests that most, if not all, of the enclosures were associated with individual households. This is most clearly evident in the best preserved enclosures (3 and 4), each of which contained a combination of hall, ancillary buildings and fenced areas. At both there was clear evidence to indicate the subdivision of the enclosures into different areas that are likely to relate to different functional uses. Many of the enclosure ditches were recut on a number of occasions, making it difficult to determine the order in which the enclosures were laid out, though it seems likely that the curvilinear eastern enclosures, or at least the three on the west side of the hollow (Enclosures 1–3), were established as one entity. Enclosure 4 was mainly defined by a later ditch (7500) associated with its remodelling: fragmentary lengths of gully found within the enclosure raise the possibility that originally curvilinear enclosures like those to the east continued along the length of the settlement. The enclosures are described from west to east for ease of reference.

ENCLOSURE 5 (fig. 13)

Enclosure 5, which was 39 m in width, was situated on gently sloping ground at the western edge of the ridge with only the southern portion lying within the excavated area. The enclosure was defined by a series of shallow gullies and ditches up to 2 m in width, with several phases evident on the southern and western sides (8276) and one to the east (7680). The southernmost of the ditch recuts along the southern boundary (8276) was larger than the others and terminated (cut 8257) close to the south-east corner of the enclosure. This probably marked the position of an entrance relating to one phase of usage, its eastern side perhaps formed by the north-south gully (8308) which turned east and extended south of Enclosure 4. Two other short lengths of ditch (8284 and 8281) extended across the line of the possible entrance. The sequence of all these ditches could not be ascertained, although it seems most likely that ditch 8257 and gully 8308 represent the earliest arrangement. The south-western corner of Enclosure 5 was cut by ditch 8192 which clearly post-dated the boundary ditches (8276), though unfortunately its relationship with the recuts at the eastern corner is unknown. The relatively deep, north-south gully 7681 along the edge of the eastern boundary may have been associated with drainage at the entranceway.

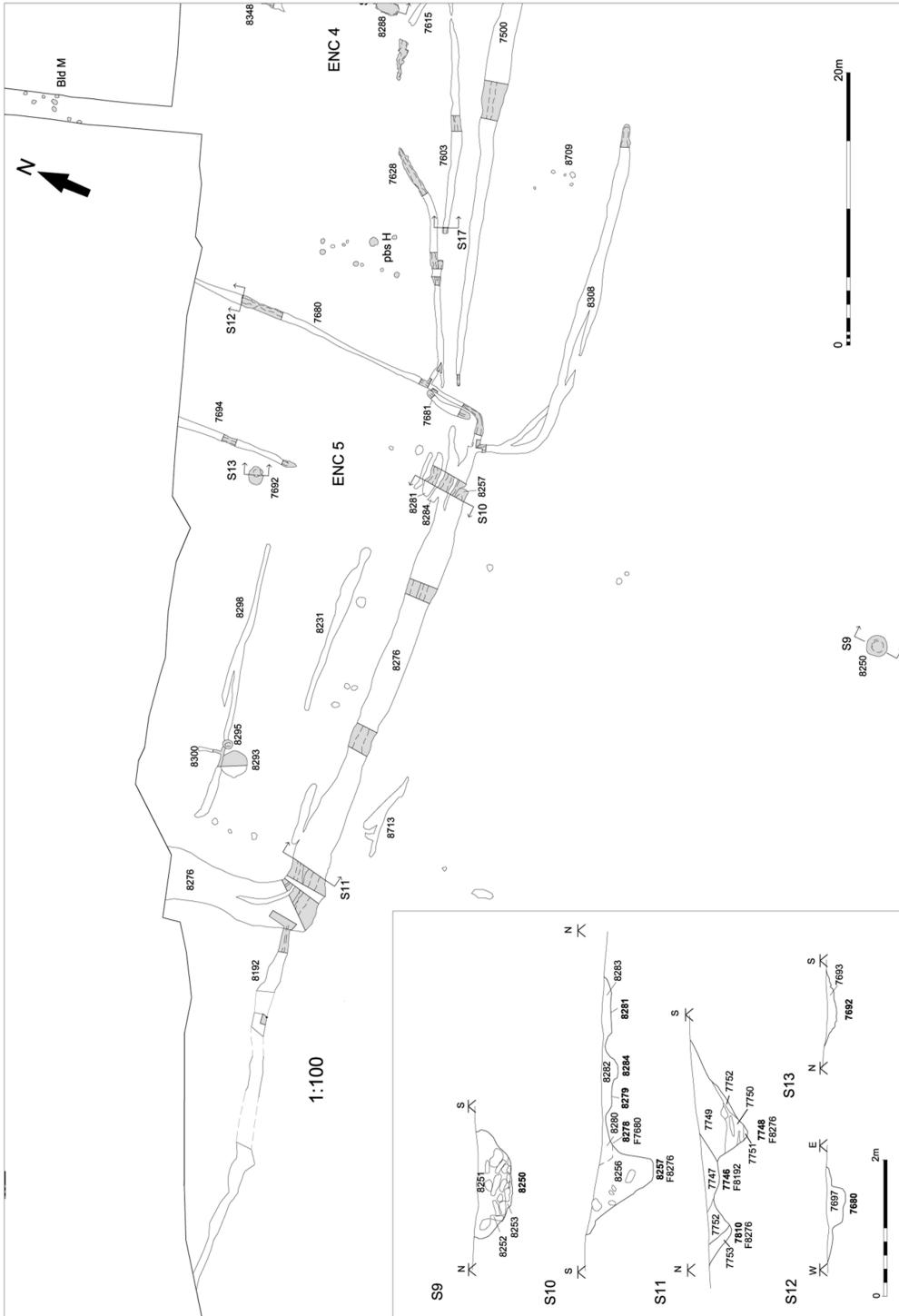


Fig. 13 Enclosure 5.

No evidence of buildings survived within the interior, although there were three internal gullies parallel to the sides of the enclosure. Two of these gullies (8231 and 8298) ran east-west 6 m apart. The northernmost gully (8298) cut a large shallow pit (8293) and was in turn cut by a small pit (8295). The gully ended 2.5 m east of the western enclosure ditch, possibly because of the intervening presence of a bank; it is also possible that the southern gully 8231, running parallel to the southern enclosure ditch, marked the inner edge of a bank which would have been up to 3 m in width. To the north a small gully (8300) joined gully 8298. The third dividing gully (7694) ran north-south 10 m from the eastern side of the enclosure. A large pit (7692) lay to the west of this gully and a number of other pits lay around the perimeter of the enclosure. The limited surviving evidence means that it is not possible to relate the sub-divisions in Enclosure 5 to different functional areas. It was notable that the entranceway in the southeast corner of the enclosure was not permanently maintained; another may have lain beyond the excavation to the north along with perhaps the main focus of occupation.

ENCLOSURE 4 (figs. 14–17)

The enclosure was 67 m in width and extended north beyond the limit of excavation, its boundary probably defined by the northern edge of the ridge which was followed at the eastern end by gully 8682. Elsewhere the enclosure was defined by the eastern boundary gully of Enclosure 5, to the south and east by ditch 7500, and by the western boundary of Enclosure 3 (fig. 14). Gullies 8109/8105, on the eastern boundary, and gully 7408/8061, on the west side of Enclosure 3, lay parallel to one another approximately 3 m apart, and the gap may represent an access route or track between the enclosures leading beyond their confines towards the base of the ridge to the north (see below). The northern portion of this probable trackway was defined by ditches 8681/8680 and 8088/8061. The southern portion was cut by a series of east-west gullies (7967, 8032, 8035, 8042, 8052), two of which (7967, 8032) were deeper than the north-south gullies and may represent attempts to provide drainage. The east-west gullies, with the exception of gully 7991 which belonged to Enclosure 3, were cut by ditch 7500. This suggests that Enclosure 4 had an earlier southern boundary, which was probably ditch 8308; presumably much of its eastern length was removed by ploughing. Ditch 7500, together with the narrow gully 7409 to the east, seems to have re-defined the access route between Enclosures 3 and 4. Gully 7822 cut across the southern end of the gap and merged to the west with 7500; it also cut gully 7408 which was part of the earlier boundary of Enclosure 3.

An entrance on the eastern side of Enclosure 4 was defined by the square-ended terminal of ditch 7500. To the north of the terminal it was unclear whether ditches 8681 and 8680 were contemporary. Ditch 8088 was an extension of ditch 7500 and ran broadly parallel to ditches 8681 and 8680, perhaps marking an access route from the bottom of the ridge to the main entrance way defined by ditch 7500. The latter was recut (7968) near its south-east corner to form a smaller ditch which contained burnt material in its fill, which produced a radiocarbon date of cal. AD 770–980 (SUERC-30843).

The south-eastern quadrant of the enclosure, containing the hall and a possible ancillary building, appears to have been the main focus of habitation. Hall A measured 10.44 m by 4.66 m and was constructed using closely-set postholes only 0.5 m apart (figs. 15–16). There were slight traces of an intrusion on the line of the north wall between postholes 7578 and 7508, which was probably the base of a furrow rather than a post-trench. The postholes



Fig. 14 Enclosure 4.

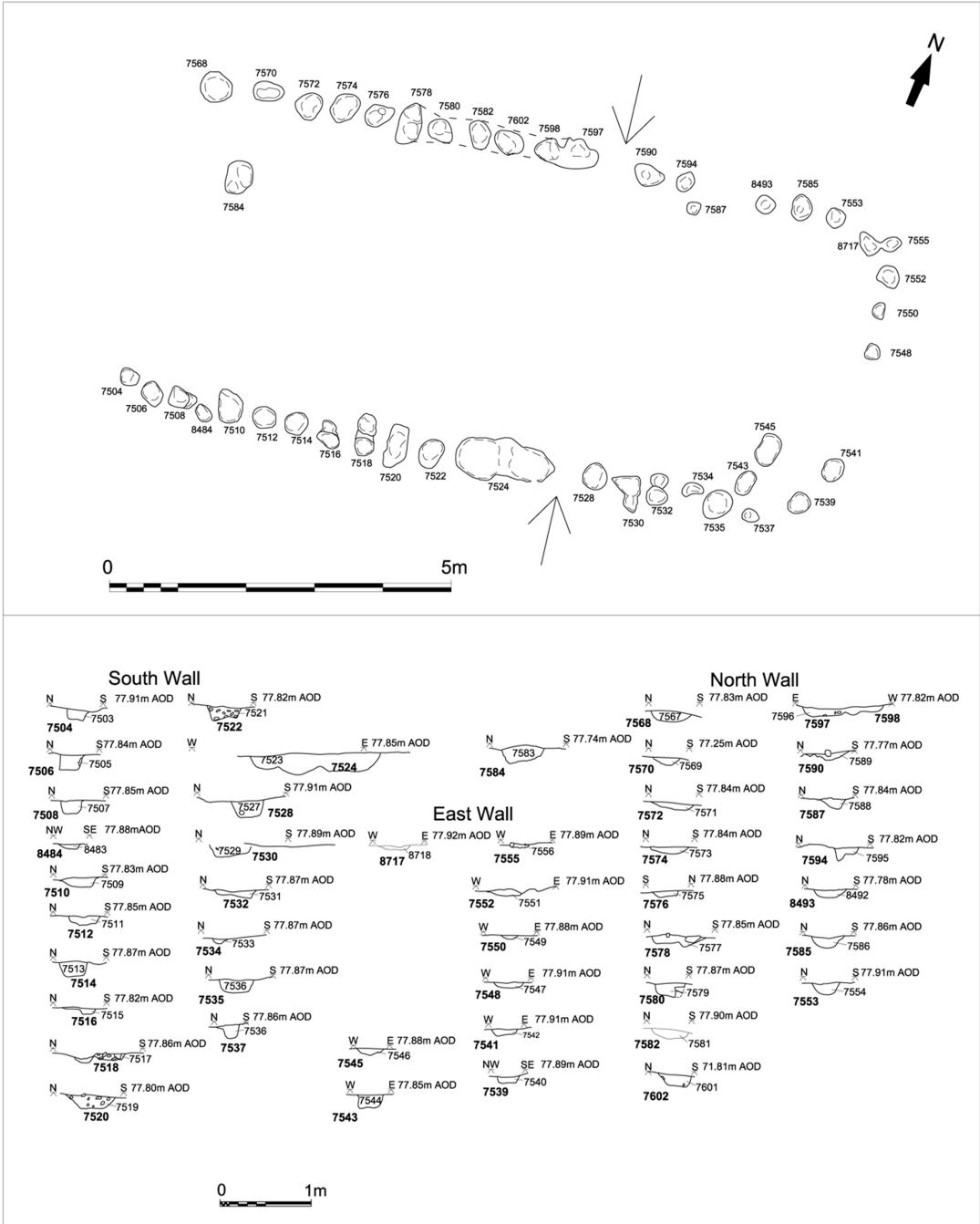


Fig. 15 Hall A. Plan and posthole sections. The arrows mark the entrances.



Fig. 16 Hall A looking west. 2 m scales.

marking the eastern gable wall were less substantial than those on the longitudinal walls; no postholes at the western gable-end survived because of deeper truncation in that area. Two postholes (7543 and 7545), 1 m from the eastern end of the building probably mark the position of another phase of end wall rather than a partition line. Rebuilding is suggested by the curve that the two postholes describe which is reminiscent of the 'weak' corners of an end wall; a partition might be expected to have cut straight across the width of the building. The only surviving internal feature was a sub-circular pit or posthole (7584). A small posthole (7587) was slightly offset from the northern wall. Entrances located on opposite sides of the hall were marked by a 1 m gap just to the east of the centre line of the building between postholes 7528 and 7524 to the south and 7597 and 7590 to the north. Three postholes (7518, 7520 and 7532) on the southern wall and one (7578) on the northern wall contained two post settings indicating either double timber settings or replacements.

South of the hall, just beyond the probable entrance, were concentrations of postholes which seem to have been fence-lines (8487 and post-built structure (pbs) G) running south-east toward the enclosure boundary (figs. 14 and 17). Two rows of postholes (pbs N) ran parallel to the hall on its northern side. Their western ends (8417 and 8413/8411) lay perpendicular to the hall in line with the western side of the entrance (figs. 14 and 17). A further scatter of pits and cut features of uncertain purpose lay to the north of the fence-lines, and



Fig. 17 Enclosure 4, post-built structures (M, G, I1, I2, N, H) and fence-line 8487.

there was also a pit at the eastern end of the southern fence-line. To the west of Hall A was a line of postholes (7600), 8.6 m in length and aligned with the central axis of the hall; they were spaced much farther apart and more irregularly than those of the hall, and they surely represent a fence-line rather than the fragment of a building. It was uncertain whether a north-south gully (8485) that ran across the eastern end of the fence-line and a further gully (8486) to the north were contemporary with the fence or hall. Another gully (7635) ran parallel to the fence on its south side.

West of the fence was a rectangular pit (8288), flat-based and vertical-sided, which was cut into the bedrock (fig. 14). The pit measured 1.63 m by 1 m in area and 0.22 m in depth and had red scorch marks on the centre of its base and on its eastern and western sides. It was filled with brown loamy silt (8287) containing charcoal flecks and red ash from which two fragments of lead from molten rivulets (SF735-6) were recovered. This feature may represent a fire pit, although the fill contained no fragments of fire-cracked stones which were often the result of cooking in such pits. Similar features have been found at other Anglo-Saxon sites and

are thought to have been used for roasting food at celebrations or festivals (Powlesland 1997, 109; Losco-Bradley and Kinsley 2002, 32). The pit was carefully positioned in a prominent position within the enclosure, aligned on the central axis of the hall to the east.

A number of gullies (7628, 7603, 8480, 7615 and 7635) were located in the central southern area and south-western corner of the enclosure. Several of the gullies (7615, 7635 and 8480) converged towards the same point before draining into the southern enclosure ditch (7500). An entranceway was located towards the western end of gully 7603, its line being cut by the later gully 7628. Gullies 7628 and 7603 were either internal divisions within Enclosure 4 or belonged to an earlier arrangement of the southern enclosure boundary. A cluster of post-holes, many of which were cut through bedrock, were perhaps part of a structure (pbs H) or possibly two successive fence-lines located in the south-western corner of the enclosure, close to the entrance through gully 7603 (fig. 17).

Several clusters of postholes possibly representing fragmentary remains of buildings (pbs I1 and I2 and Building M) were located in the north-west quadrant of the enclosure (fig. 17). It was not possible to determine the form of post-built structure I1 but its southern wall was probably marked by an east-west alignment of postholes 9.5 m in length and by cut features with two pairs of intercutting postholes extending to the north. These postholes were more substantial in size and depth than many associated with the halls. Three rows of smaller individual postholes may relate to a different phase or layout of this building (pbs I2). A north-south gully (8348) was located immediately to the west of post-built structures I1 and I2. Partially exposed in Trench 1 were two alignments of postholes arranged approximately at right angles, which together with a scatter of postholes to the north probably represent remains of a further building (M) on the northern edge of the enclosure.

ENCLOSURE 3, WESTERN PART (figs. 18–23)

Enclosure 3 was roughly triangular in shape, each side being 45 m in length (fig. 18). It had the best-preserved internal layout of all the enclosures, probably representing a single household focused on Hall E with a series of ancillary structures and fences, and with an open area or yard to the north and east of the hall. Entrances lay in its south-eastern corner and on its eastern side. The eastern boundary was defined by two shallow gullies (7402 and 7351) with a gap forming an entrance 1.8 m in width. A probable trackway 2 m in width ran between gullies 7402 and 7404 from the entrance at the south-east corner of the enclosure where it forked east into Enclosure 2. The entrance was cut across by gully 7599 which may have been the eastern continuation of gully 7409 at the western end of the enclosure. The southern boundary was formed by successive phases of gullies: 7599 and 7408 were probably superseded by gully 7409 (already noted), a sequence suggested by the relationship of the latter with the east-west gully 7822, associated with the southern boundary of Enclosure 4, which respected 7409 but cut across gully 7408. The western boundary was formed by a number of ditches and smaller gullies that together formed a broad hollow dividing Enclosures 3 and 4 and perhaps served as an access route between them (see the description of Enclosure 4). The earliest phase was represented by gullies 8109/8105 and gully 7408, already noted above. In a later phase, the access route was redefined by the replacement ditches 7500 and 8088. Gully 7409 ran parallel to the east and may have been contemporary with 7500. The latest Enclosure 4 boundary was gully 7968. To the west of Hall E gully 7822 drained west into a larger gully associated with Enclosure 4.

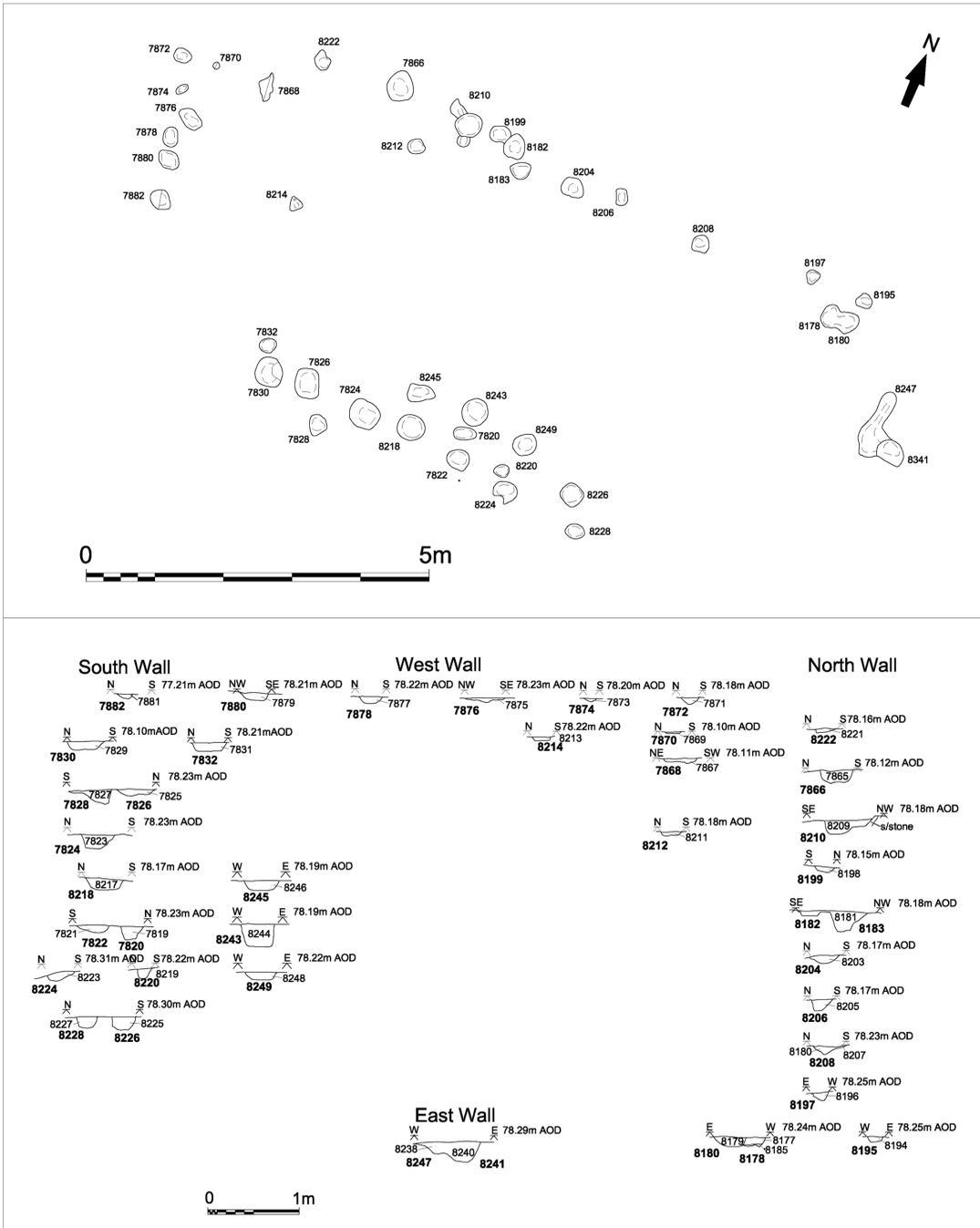


Fig. 19 Hall E. Plan and posthole sections.

Several different zones were identified within the enclosure. An east-west gully (7991) delimited an area in the south-west corner of the enclosure containing the principal building, Hall E. Although the largest hall at Shotton, measuring 11.3 m by 4.5 m, it was the most poorly preserved (fig. 19). The postholes along the southern wall were slightly larger than in the north wall, measuring between 0.34 m and 0.4 m in diameter by up to 0.19 m in depth. They were closely spaced with their centres 0.7 m to 0.9 m apart. The presence of a number of rows of postholes on the southern wall and intercutting postholes on the northern wall strongly suggested that there was more than one phase of building on the same footprint. The position of the entrance was uncertain. No gap was present along the better surviving mid-portion of the southern wall where entrances were located in the majority of halls. The eastern gable was represented only by two intercutting features, a short slot (8247), and a posthole (8341). Three small internal postholes (7868, 8212 and 8214) survived in the western half of the structure but as with the other halls it was not possible to reconstruct the internal arrangements. The south-west corner of the hall was truncated by a shallow furrow. One of the later phases of the enclosure boundary (gully 7409) cut across the projected corner of the hall indicating that it was subsequent to at least one of the phases of the building. A length of gully (8710) overlapped the estimated position of the south-eastern corner of the hall, but it is uncertain whether it was earlier or later than the building.

North of the zone containing Hall E was a second area defined to the south by gully 7991. Two gullies (7405, 8052) extended westwards to the enclosure gully (8109). The stratigraphic relationships at the western end of gully 8052 were complex: two phases of the gully were cut by boundary gullies (8061 and 7500) suggesting it was contemporary with either gully 8108 or 8109. A group of postholes (pbs J) lay immediately north of gully 7991 and probably represented an ancillary building associated with Hall E, 5 m to the south-west (fig. 23). It is difficult to establish the form of the building with confidence from the scatter of postholes that survived, but it seems most likely that it was a rectangular building *c.* 7.5 m by 3 m in size. At least two lines of postholes extended along most of the surviving lengths of the walls, suggesting either raking timbers or more than one phase of construction. One larger feature (8455) within the footprint of the building probably represented a pit rather than a posthole and was filled with a charcoal-rich loamy fill (8449, 8450) which was probably derived from occupation deposits. A large pit (8004) was positioned at the western corner of gully 7991. A second smaller pit (7999) to the east was later than the gully 7991.

A large number of postholes were recorded to the north of gully 8052 in rough alignments; some probably represented successive fence-lines perhaps partly enclosing a yard, while the others possibly belonged to small buildings. The southernmost grouping of postholes formed an L-shape extending 6.6 m north before turning to continue 17 m to the east where a further group of postholes to the north formed a return of what was presumably a run of fencing. Many of these postholes to the north also formed rough east-west and north-west alignments, some of which might represent structures or pens (pbs L, figs. 20 and 23). The northern limit of these postholes respected the southern end of pit 7350, a possible sunken-featured building (SFB O), suggesting that the fence and building were contemporary (figs. 20 and 22).

ENCLOSURE 3, EASTERN PART AND BEYOND (figs. 18, 20–22)

To the north-east of the yard area, extending up to and across the line of the eastern enclosure ditch, was a dense concentration of features including two sunken-featured buildings, a

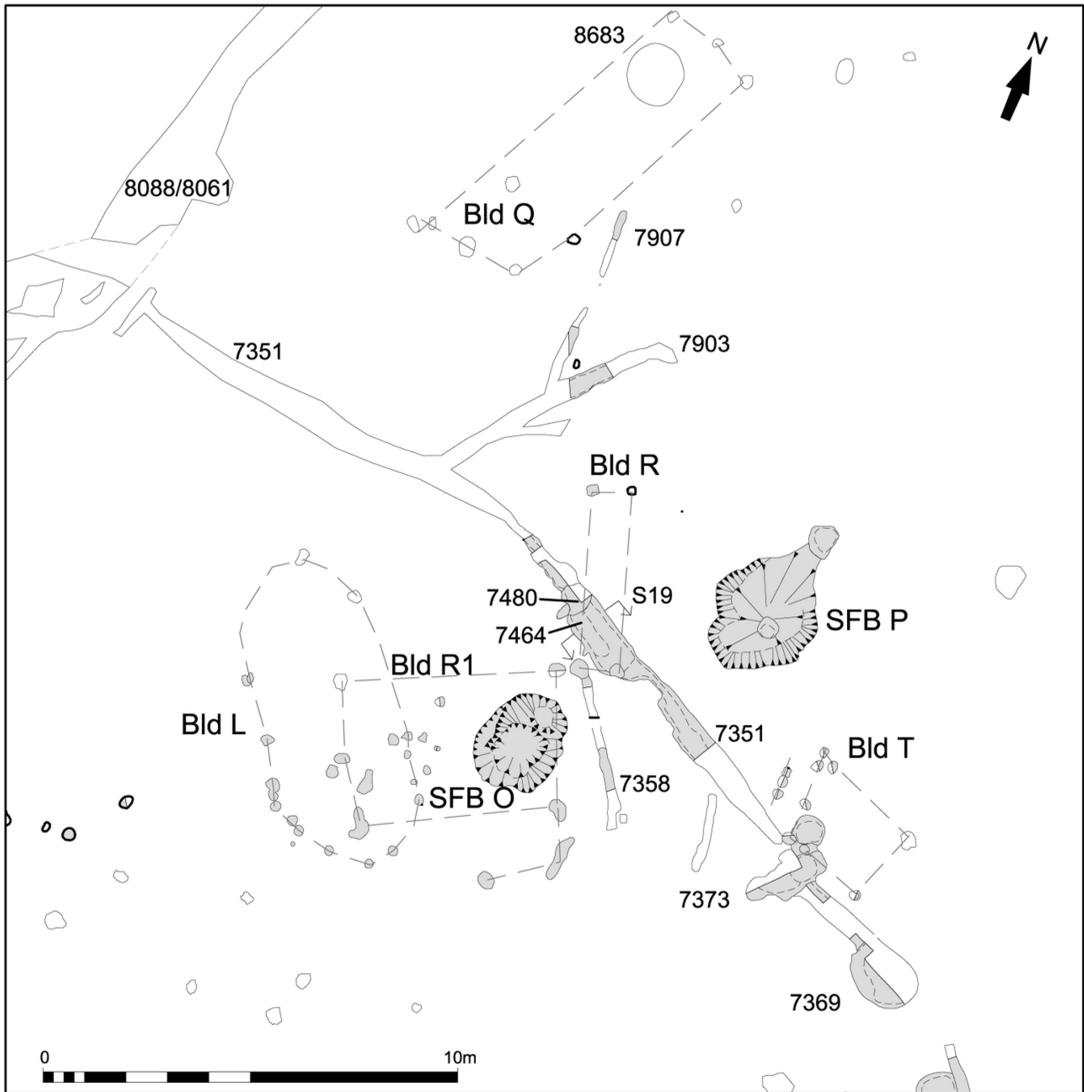


Fig. 20 Detailed plan of northern area of Enclosure 3.

number of possible structures and a group of pits. This grouping of features produced the greatest density of artefactual material from the site.

Two large pits (7350, 7348), situated 4 m apart on either side of the eastern boundary gully (7351), were the truncated remains of what were probably sunken-featured buildings (SFB O and P respectively, figs. 20–21). The pits differed from the typical shape and plan of such buildings, which are rectangular with postholes at either end. The shape and limited space at the base of the pits indicates that, in common with the majority of excavated examples of sunken-featured buildings, the bases had not served as floor surfaces during the lifetime of the building. With the exception of a posthole at the northern end of pit 7350 (SFB P) there



Fig. 21 Sunken-featured building SFB P looking south-east. 2 m scales.

was no evidence of a supporting structure around the edge of the pits. Pit 7350 (SFB O), was sub-rectangular in plan with rounded ends and measured 2.23 m by 2.02 m by 0.62 m in depth. It had an uneven base with a distinct step on its western side and a less pronounced one on the east. The base consisted of two elements that may represent two cuts (7934 and 7935), with the northernmost (7934) possibly representing a recut. A large sandstone fragment (7425) situated on the step on the western side of the pit may have served as a timber support. Further supports outside the pit could have been removed by erosion from ploughing. The pit was filled with a succession of layers of silty clay (7385, 7386, 7367, 7356); two sherds of Anglo-Saxon pottery (nos. 8–9) were recovered from the upper fill (7356). There were a number of postholes in the vicinity but none was clearly associated with this feature.

Pit 7348 (SFB P) measured 4.24 m by 2.7 m by 0.6 m in depth; postholes (7486 and 7462) were cut into its base and northern end (figs. 18, 20–22). It lay beyond the eastern boundary gully of Enclosure 3 and probably belonged to a period when activity had spread beyond the limits of the enclosure. The boundary gully (7351) narrowed where it passed between the SFBs, suggesting a crossing point. The pit (7348) had gently sloping sides with a concave base. A posthole (7486) cut through its base and measured 0.50 m in diameter and depth. It contained a packing stone and could have held a substantial post perhaps to support a roof or a suspended floor. A larger posthole (7642), 0.83 m by 0.64 m and 0.24 m in depth, was located

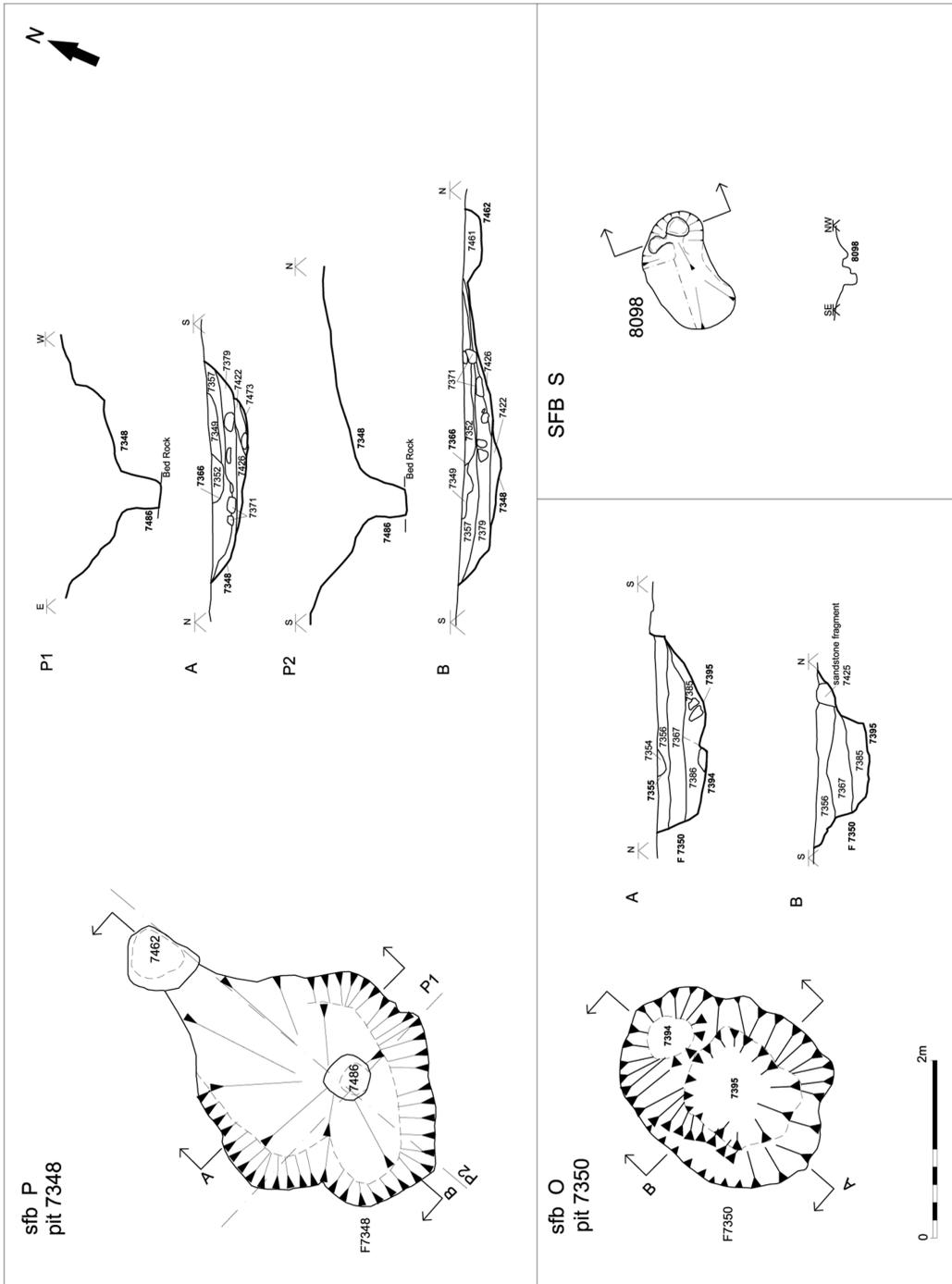


Fig. 22 Sunken-featured buildings, SFB P, O and S.

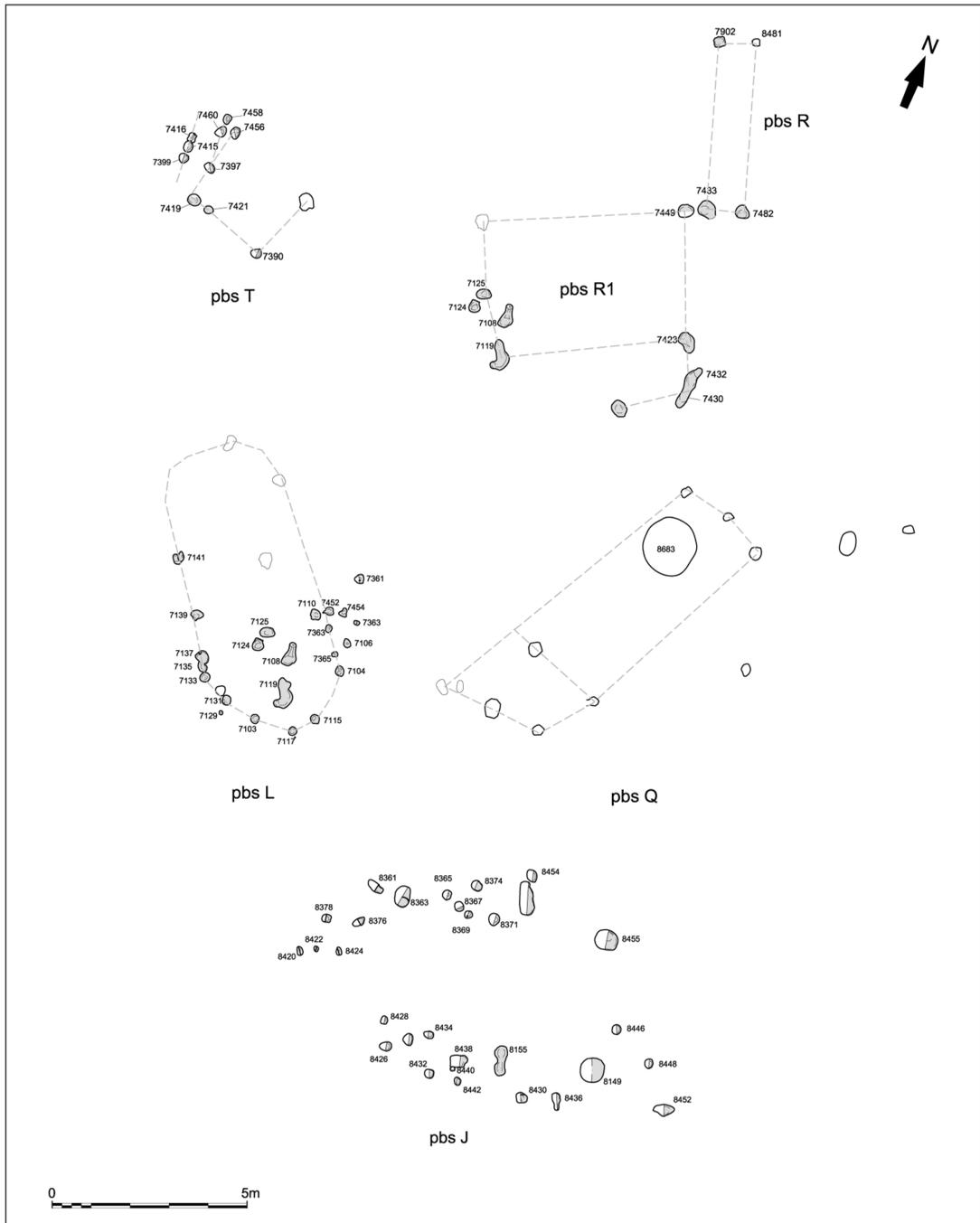


Fig. 23 Post-built structures J, L, Q, R, R1, and T.

at the northern end of the pit. After the abandonment of the pit as a sunken-featured building, it was partly filled. Grey sandy clay fill (7473) filling posthole 7486 spread onto the base of the pit (7348) and was overlain by deposits of grey silty clay (7422) and sand (7426), the latter merging with the fill (7641) of the posthole (7642) at the northern end of the pit. Over deposit 7426 was a patchy surface of small stones (7427) and above that were larger sandstone fragments (7371). The stone was covered by an accumulation of silt (7379) into which was cut a small ash-filled hollow (7387), perhaps the remains of a hearth set within the shelter of the abandoned pit. A layer of silty clay (7357/7352) sealed the ash and was in turn cut by the remains of another possible hearth (7366) containing reddish ash (7349). The cut for the hearth (7366) was sub-oval shaped in plan and was steep-sided on its western side and gently inclined elsewhere.

It seems likely that the eastern enclosure boundary gully (7351) was filled at some point during the use of Enclosure 3 and that activity spread across its line. Several pits (7369, 7373, 7464, 7484 and 7480) were cut through the filling of the gully (7351). To the east of the gully were two rows of postholes which, with two isolated postholes farther to the south-east, might have formed a pen or building (pbs T; figs. 18 and 20).

Two parallel pairs of postholes (pbs R), 4.3 m apart, lay to the west of SFB P; they straddled the enclosure gully 7351 and one of the postholes (7482) cut pit 7464 which was later than the gully. A shallow linear feature (7358) extended south-east for a short distance from the south-west posthole. A group of three east-west rows of postholes (pbs Q) with a maximum length of 2.8 m lay to the north of gully 7351 and 7903 (fig. 18); another three postholes east of the main group formed no coherent plan. It is uncertain whether the posthole rows represent a structure. A large pit (8683) 1.5 m in diameter lay to the south of the northern row of postholes. A shallow discontinuous gully (7907) that joined gully 7903 at its southern end ran towards the pit.

ENCLOSURE 2 (figs. 24 and 26)

Enclosure 2 was 25 m in width, its northern extent being uncertain (fig. 24). Its eastern boundary was poorly defined by short stretches of ditches (7407). Its western side was formed by ditch 7402 which also defined the eastern boundary of Enclosure 3; at the south-west corner of Enclosure 2 this ditch turned east to run parallel with ditch 7401 forming a probable trackway 2 m wide. Both of these ditches (7401 and 7402) had been recut on a number of occasions. A short length of gully (8699) to the north may represent a remnant of a northern enclosure boundary. A curvilinear steep-sided gully or slot (7186) extended east from the southern side of the trackway.

The only clearly-defined entrance lay along the western boundary leading to Enclosure 3. The probable trackway which ran along the southern boundary of Enclosure 2 seems to have led to another entranceway in the gap between Enclosures 1 and 2. Only a limited number of features were found within Enclosure 2, although a scatter of small pits and postholes suggest the former presence of structures. Much of the area was more deeply truncated than elsewhere by ridge-and-furrow agriculture of medieval and post-medieval date. A gully (7406) with a right-angled corner partially demarcated an east-west area toward the centre of the enclosure. A slight spur on the western side of ditch 7407 may represent a continuation of this gully (7406). To the south of this was a scatter of pits and postholes which did not fall into any recognizable pattern. In the south-west corner of the enclosure was a shallow feature (8098),

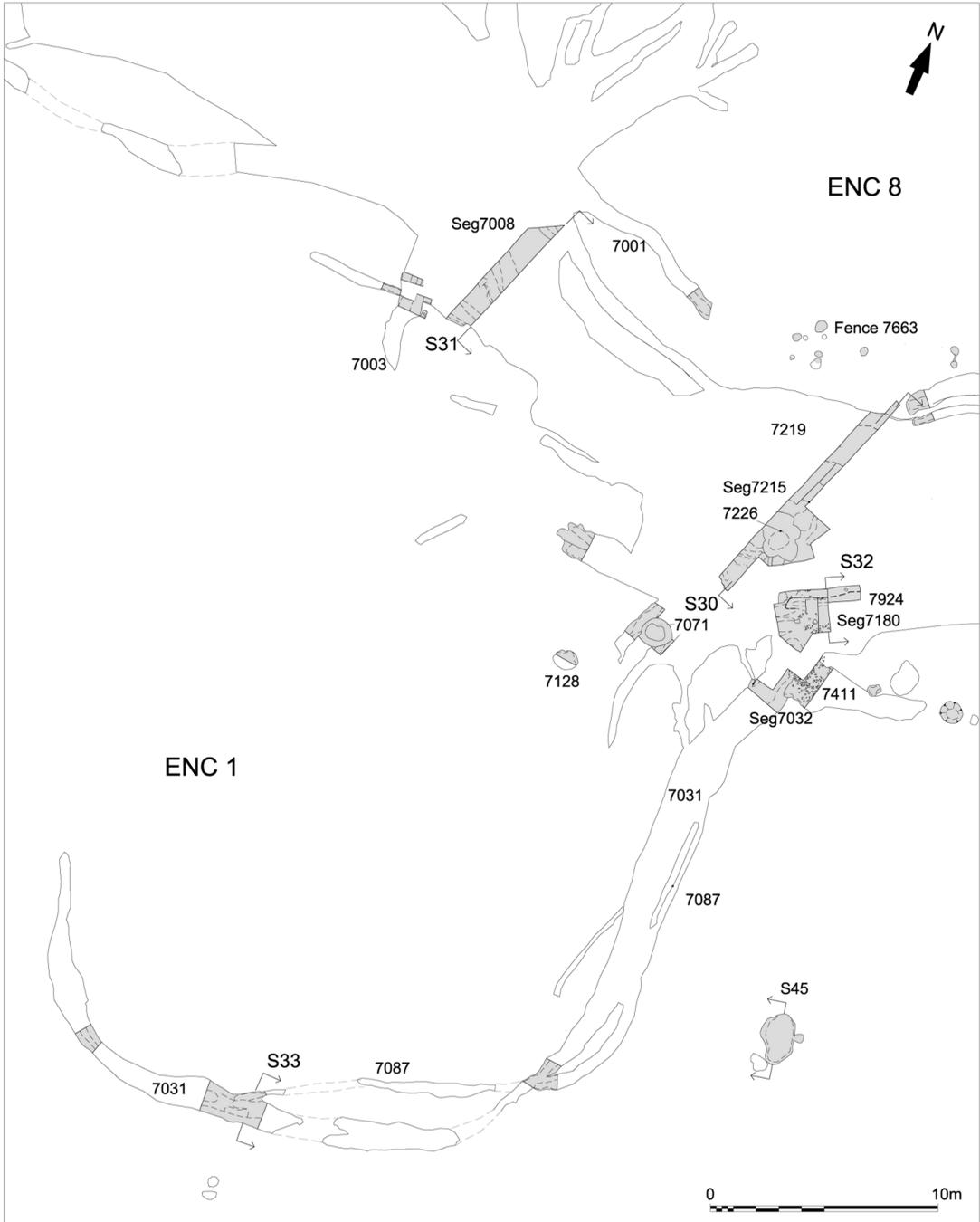


Fig. 25 Enclosure 1.

1.34 m by 0.74 m in size, with a posthole at its eastern end. The purpose of this feature remains uncertain although it may represent the heavily truncated remains of a sunken feature building (SFB S, fig. 22). To the east of this feature were a pit (8135) and a number of narrow linear features (8698, 8700 and 8701).

ENCLOSURE 1 (figs. 25–26)

Enclosure 1, which was 30 m by 22 m in area, was bounded to the north by a natural hollow along which ran a succession of ditches, gullies and a later metalled track (fig. 25). The eastern and southern limits of the enclosure were initially defined by a gully (7087) which was later replaced by a small ditch (7031). The northern arm of the latter extended north to issue into an east-west ditch (7924) within the natural hollow. The only features within the interior of the enclosure were two pits (7128 and 7071) in its north-east corner, with a third (7226) located within the hollow (see below). It is possible that the enclosure was accessed from the south through an entranceway in the gap between Enclosures 1 and 2. Two short lengths of truncated gullies (8703 and 8702 on fig. 24) survived across this gap and may relate to an early arrangement in which Enclosures 1 and 2 were conjoined, the southern boundary gully 7087 possibly having originally extended further to the west.

A possible fence-line (8494) extended south from Enclosure 1 and may be associated with the probable entranceway between Enclosures 1 and 2 (fig. 24). The fence-line consisted of a curvilinear slot (8489), a pit (8469) and two postholes. The southern end of the slot lay on roughly the same alignment as that of three pits (8131, 8474 and 8250) located on open ground to the south of Enclosures 2, 3 and 5, the purpose of which remains obscure (figs. 12, 13 and 24).

The natural hollow forming the boundary between Enclosures 1 and 8 (figs. 25–27)

A complex sequence of features was recorded within the hollow running north-west to south-east which subdivided the eastern end of the ridge line and formed a division between Enclosures 1 and 8. A series of gullies associated with the boundary of Enclosure 8 ran into the hollow from the east joining a succession of ditches and gullies that ran along the hollow. Two early soil horizons (7232 and 7063) lying along the base of the hollow were cut by one of the principal ditches (7219). A complex sequence of ditches and gullies was located within trenches excavated across the hollow, including a large pit (7226) with a gully (7315) leading into it from the south. A metalled track (7043) running north-west to south-east between two ditches (7040 and 7044) was identified in the northernmost trench (7008). A later track (7411) investigated within segments 7215, 7180 and 7032 (fig. 25) extended along the southern edge of the hollow, overlying the earlier features including enclosure ditch 7031.

ENCLOSURE 8 (figs. 27–28)

Enclosure 8 lay immediately to the north-east of the hollow, its eastern side being defined by a succession of gullies (including 7924 and 8684) which ran into the hollow (fig. 26). The western boundary was formed by gully 8691 which extended beyond the northern limit of excavation and to the south was joined by a complex succession of gullies. Gully 8692, which ran across the interior of the enclosure, was probably a sub-division of the enclosure.

Hall F was located towards the north of the enclosure, on ground sloping slightly to the north-east and immediately west of a more level area where the bedrock lay immediately

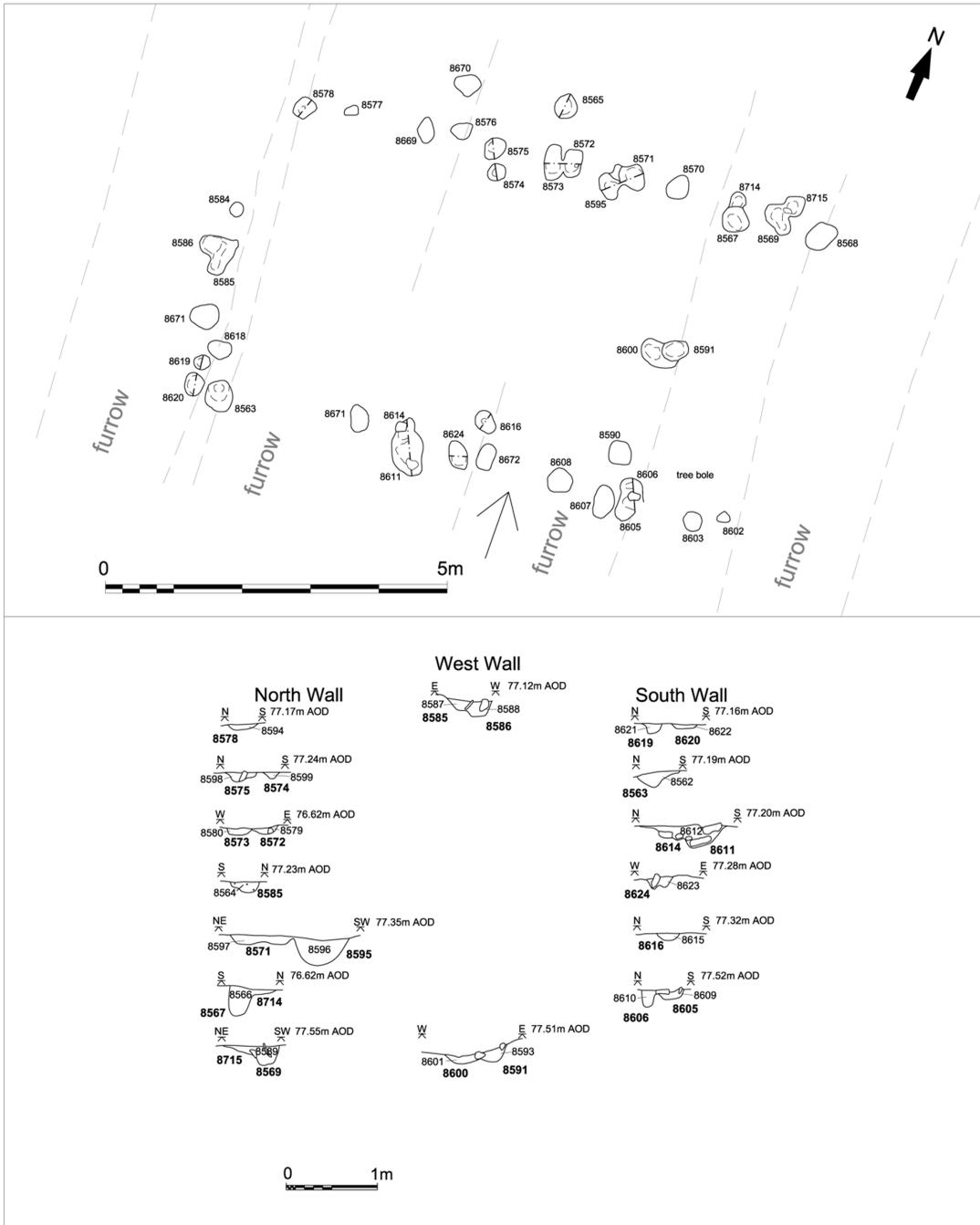


Fig. 28 Hall F. Plan and posthole sections. The arrow marks a possible entrance.

below the topsoil (and thus perhaps had been deliberately avoided by some of the later ploughing). The hall measured approximately 8.6m by 4.7m in size, its exact length being uncertain because a furrow had removed its eastern end (fig. 28). With the exception of a number of intercutting or double examples (8572/8573, 8571/8595, 8569/8715 and 8567/8714), the postholes in the longitudinal walls were arranged in opposing pairs with an average spacing of 0.7m. A gap 1.1m wide just to the east of the centre of the southern wall may represent the position of an entrance through the southern wall. A partition represented by postholes (8591/8600) and 8590 was located approximately 2m west of the probable line of the eastern gable of the hall. Two postholes (8565, 8670) 0.7m north of the line of the northern wall might have held raking timbers.

Two lengths of gully (8693), north-west of the hall, extended north-west beyond the limit of excavation. Two alignments of postholes (8685 and 7663) represented fence-lines running parallel to the southern and eastern boundary gullies. An east-west gully (8706) lay at the northern end of fence-line 8685. Two parallel steep-sided features (7928 and 7941) running from north-west to south-east crossed the lines of the fences.

ENCLOSURE 7 (fig. 29)

Enclosure 7 lay at the eastern limit of the settlement, much of it on ground sloping steeply to the north-northwest; its northern end lay toward the base of the ridge. There were very few features within the enclosure and its boundary gullies survived only intermittently. The south-east corner was defined by two gullies (8537 and 8687), the innermost of which had been cut by a pit (8559), and the north-east corner by a sequence of gullies (8687, 8537, 8688). The two gullies (8537 and 8687) were probably contemporary and it seems likely there was a bank between them surmounted by a hedge or fence. The eastern boundary intersected boundary ditch 8528 (see below). A large pit (8540), 1.9m in diameter by 0.5m in depth, was located at the north end of the enclosure with a gully (8539) immediately to the east draining into the boundary gully. The pit was steep-sided except on its western side which sloped moderately, perhaps to allow access. It was probably slightly too small to have represented a sunken-featured building and the provision of a gully presumably to drain liquids utilised in the pit also militates against this interpretation. A shallow pit (8550) lay south-east of the large pit. The purpose of two curvilinear gullies (8688 and 8689) located within the enclosure was unclear; perhaps they represent sub-divisions of the enclosure. Another remnant of a gully (8690) was traced to the north of the enclosure.

BOUNDARY DITCHES (fig. 30)

Two parallel ditches (8528 and 8529) set 1.4m apart were traced for a distance of 125m eastwards from the north-east corner of Enclosure 7, extending along the foot of the slope beyond the watching brief area (fig. 30). The northern ditch (8528) was 2.74m wide and 0.64m deep; the southern ditch (8529), 2.15m wide and 0.5m deep, was slightly smaller. Although it is not certain that the two ditches were contemporary, their parallel alignment and the presence of two shallow overflow channels that linked them suggests that, even if they were not open at the same time, one of the ditches was visible as an earthwork and still partially functioning when the second one was laid out. If the two ditches were open at the same time, a bank between them might have been thrown up from their upcast, making the boundary

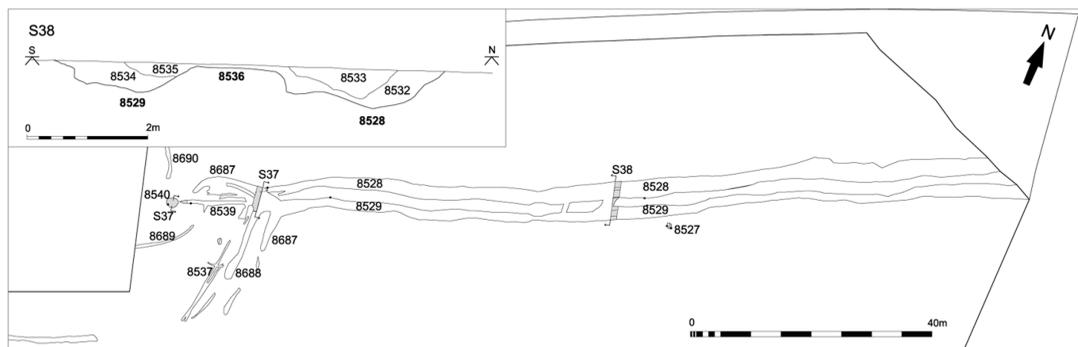


Fig. 30 Boundary ditches at the eastern end of the settlement.

stock-proof and a highly-visible territorial marker. The two overflow channels would have been dug through the bank at some stage.

The ditches ended against the eastern side of Enclosure 7. It is likely that a radiocarbon date of eleventh- to twelfth-century date acquired from gully 8359, draining into boundary ditch 8529 at its western end, probably came from later intrusive material.

FEATURES TO THE SOUTH OF THE ENCLOSURES (fig. 31)

Twenty-three pits of varying sizes and shapes were recorded alongside the eastern end of the natural hollow that extended into the area of the watching brief to the south of Enclosure 8 (fig. 31A). Some of the smaller features may represent postholes rather than pits, and lie in rows suggesting fence-lines. The fills of the pits were generally uninformative. A fragment of stone (no. 8; fig. 38.2), incised with straight lines, was recovered from the fill of pit 8639. At a distance of 44 m farther to the east was a second smaller group of outlying pits (fig. 31B, 8558, 8557 and an unexcavated pit).

FINDS FROM THE ENCLOSED SETTLEMENT

Deposits filling SFB P 7348, Enclosure 2: pottery: no. 2, rim sherd from bowl or jar, 7473, SF 715; nos 3-4, 6, three body sherds, 7422, SF 709, 711-12; no. 5, body sherd, 7357, SF 721; vitrified ceramic slag, 7422, SF 710, and 7473 (upper fill of post-pit 7486 at base of SFB P, presumably accumulated after removal of post), SF 718; fired clay, 7473 (as just described), SF 717 and 718.

Fill of posthole 7415, Building (pbs) T, Enclosure 2: pottery: no. 7, rim sherd from bowl or jar, 7414, SF 705.

Fill of posthole 8210, Hall E, Enclosure 3: glass bead, no. 4, seventh century AD, 8209, SF 743.

Deposit filling SFB O, 7350, Enclosure 3: pottery: nos 8-9, body sherds from same vessel, 7356, SF 703-4.

Deposit filling fire pit 8288, Enclosure 3: lead: no. 5, two pieces of lead waste, 8287, SF 735-6.

Fill of boundary gully 7351, Enclosure 3: fired clay: nos 1-2, fragments of loomweights, 7465, SF 706-7.

Fill of pit 7999, Enclosure 3: fired clay: no. 3, fragment of loomweight (?), 7998, SF 738; stone: no. 6, disc, 7998, SF 728.

Fill of posthole 8163 midway along fence-line defining 'yard area' in northern end of Enclosure 3: non-diagnostic slag, 8164, SF 727.

Fill of gully 7838, Enclosure 5: non-diagnostic slag, 7839, SF 729.

Fill of posthole 7280, Enclosure 8: non-diagnostic slag, 7281, SF 702.

Fill of gully 7032 across track 7411, between Enclosures 1 and 8: stone: no. 7, whetstone, 7033, SF 701.

Fill of ditch 7221 (recut of ditch 7219), hollow between Enclosures 1 and 8: pottery: no. 1, rim sherd with drilled hole, probably from jar, 7222, SF 700.

Fill of pit 7226, hollow between Enclosures 1 and 8: non-diagnostic slag, 7303, SF 739.

Pit 8645 to the south of Enclosure 8: stone: no. 8, incised stone, 8643, SF 740.

DATING EVIDENCE

The radiocarbon determinations are shown in Table 2.

Halls

Four samples analysed from Halls A and E (SUERC 30838, 30839; SUERC 32901, 32906, respectively) produced the same calibrated date range (cal. AD 650–780). They were all from separate postholes and consisted of birch or alder and willow or poplar charcoal and charred wheat and barley grain (Table 2). The samples provide a remarkably consistent terminus post quem of the mid-seventh century AD for the construction of the halls, subject to the same assumptions which apply to the determinations from the unenclosed settlement (see above). Also to be noted is a glass bead of seventh-century date (no. 4) from a posthole (8209, fill of 8210) in Hall E.

Sunken-Featured Building P

One sample of hazel charcoal analysed from the upper fill of the post pit at the base of the SFB produced a date earlier than those from the halls (SUERC 30848; cal. AD 560–660). It fits better with the determinations from the unenclosed settlement, but there is no reason to think that the feature from which it came was earlier than the enclosed settlement. The sample is probably a stray from activities associated with the earlier settlement.

Enclosure ditches

Two samples of charred barley grain and hazel or birch charcoal from the ash-rich upper fills of the latest ditch recuts of Enclosures 2 and 4 provided a wide date range (SUERC 30842, cal. AD 680–900; SUERC 30843, cal. AD 770–980). Although there was a considerable overlap between these dates, it was notable that the Enclosure 4 recut was potentially the later of the two and may therefore have remained open for longer. Another sample taken from the homogeneous fill of the southern ditch of Enclosure 5 (SUERC 30844; cal. AD 670–880) produced a date similar to that of the Enclosure 2 sample.

Ditched boundary

One sample was analysed from a gully associated with the two ditched boundary. The sample produced a late date and is likely to be intrusive (SUERC 32900; cal. AD 1020–1170).

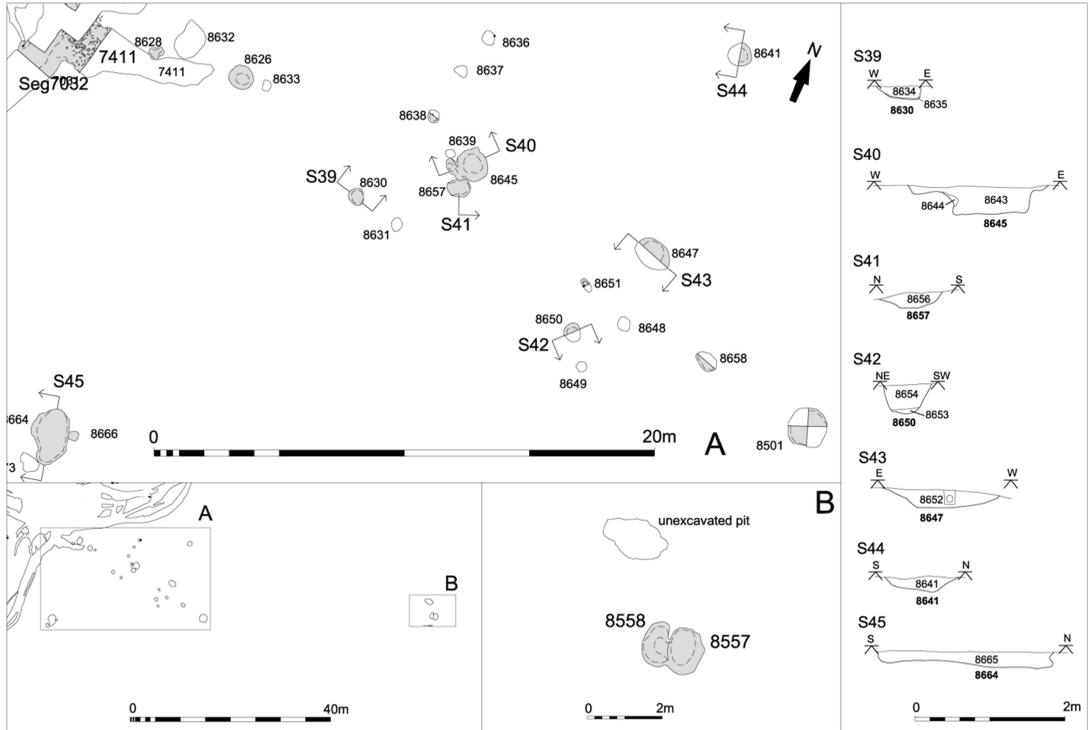


Fig. 31 Pits south of Enclosure 8.

Building N/fence-line

One sample from a posthole pit provided a medieval date and is likely to be intrusive (SUERC 30841; cal. AD 1290–1420). The four samples from the halls provide a *terminus post quem* of the mid-seventh century AD for the beginning of the enclosed settlement, though their upper range includes most of the eighth century. Both samples from the enclosure ditches overlap for the whole of the eighth century and the four samples from the halls all run down to cal. AD 780. We can be confident that the settlement was occupied in the eighth century and that it might have been established as early as the mid-seventh century. This would allow about a century for the occupation of the unenclosed settlement, assuming that it was immediately replaced by the enclosed settlement. The date at which the enclosed settlement was abandoned is uncertain. The sample from the recut of a ditch of Enclosure 4 has a range extending to the end of the tenth century, and that would give the enclosed settlement a life of perhaps as much as three centuries, but equally possible is a shorter span of occupation ending in the late eighth or early ninth centuries.



Fig. 32 Ridge and furrow, ditch 7850 and post-medieval gully 7363.

THE SITE IN THE MEDIEVAL AND POST-MEDIEVAL PERIODS (fig. 32)

The double boundary ditches (8528, 8529) which extended eastwards from the settlement were filled probably by levelling a bank between them. This was presumably connected with a reorganisation of the landscape. A north-south ditch (7850) which presumably functioned as a boundary was recorded immediately west of the former Anglo-Saxon settlement (fig. 32), clearly post-dating the gully (8192) running westwards from Enclosure 5 (fig. 13). The ditch (7850) extended north beyond the limit of the excavation and southwards to a point where it was obscured by a ridge-and-furrow system running on the same alignment. There were two such systems overlying the enclosed settlement and extending across the surrounding watching-brief area. Both were laid out with wavelengths of 6.5 to 7.5 m. An east-west system ran across most of the area of the enclosed settlement, with north-south alignments to either side and to the south. Several gullies (7863, 7861 and 7859) recorded along the base of a north-south furrow (fig. 32, S48, 8712) can perhaps be associated with a boundary depicted on a survey of 1763–84 (Northumberland Archives ZRI/49/1, Blagdon and Plessey estate survey). If so, the ridge and furrow that survived was of recent date. An east-west gully (7353) running along the northern limit of the excavation area post-dated the ridge-and-furrow system in this area.

THE ANGLO-SAXON STRUCTURES: DISCUSSION

THE HALLS (figs. 33–4)

The size of the halls

Six rectangular post-built timber structures were recorded across the site (Halls A–F). Following the traditional nomenclature for sites of this period, the term hall is used to differentiate this class of building from other structures. Halls typically represented the principal accommodation for an extended family unit or household and the focal point for a farmstead. They form part of a recognisable tradition and even though there is variety in details of construction, there is a remarkable similarity in the ground plans of halls throughout England, particularly during the early Anglo-Saxon period. At Shotton, ploughing had removed shallow postholes and cut features as well as any possible traces of floors or hearths. Their absence has been noted at many other sites including some such as West Heslerton in North Yorkshire, where truncation of the contemporary levels was demonstrably minimal; this has been interpreted as indicating the use of suspended timber floors (Powlesland 1997, 108).

The halls at Shotton can be sub-divided into two groups; Halls B, C and D belonging to the earlier unenclosed settlement, and Halls A, E and F which were associated with the enclosed settlement. Halls B, C and D were smaller than those of the enclosed settlement, with the exception of Hall F which appeared to have been smaller than the earlier Hall C, though the overall length of the former could be only determined approximately (see Table 1). The sizes of all the halls at Shotton ranged between 36.0 and 50.85 sq.m. At Cheviot Quarry in north Northumberland, Buildings 2 and 3 were similar in size to the earlier Shotton halls (B, C, D), though Building 1 was considerably smaller (Johnson and Waddington 2009). The Phase 1 halls (A5–8, D6) at Yeavinger (Hope-Taylor 1977) and the post-built structures at Thirlings (Buildings H, G, I, F, E and R; O'Brien and Miket 1991) were also similar in size to the Shotton halls. The buildings at Lanton Quarry were all considerably smaller and comparable in size to Building 1 at Cheviot Quarry (Stafford 2007; Waddington 2009). The wide range in the sizes

Table 1 Dimensions of halls (from centre of postholes)

Hall/building	SHOTTON						THIRLINGS		CHEVIOT QUARRY		LANTON QUARRY	YEAVINGING	
	B	C	D	A	E	F	I	C (annex)	1	2	1	A6	A4
Length (m)	9.10	10.07	9.00	10.44	11.30	8.60	9.52	14.88 (4.00)	6.90	9.00	6.00	9.00	25.00
Width (m)	4.00	4.45	4.00	4.66	4.50	4.70	4.20	6.80 (4.08)	3.40	4.47	3.68	4.50	11.25
Area (m ²)	36.40	44.81	36.00	48.65	50.85	40.42	39.98	96.69 (15.60)	23.46	40.23	22.08	40.50	281.00

of halls in the north-east is typical of England generally during the sixth century AD (Hamerow 2012, 30). At Shotton, however, there are none of the much larger halls such as those at Yeavinging and Thirlings.

Construction techniques

All of the halls at Shotton used earthfast timbers set within postholes rather than the post-in-trench technique of construction. Only in rare instances was there evidence for the position of the wall timbers within the postholes. Angular impressions, 0.18 m by 0.18 m in size, in the sides of some postholes at Hall A may indicate the position of posts. A rectangular timber impression, 0.19 m by 0.16 m, was recorded in a Hall C posthole (7157). These scant findings suggest that the timbers were at least roughly squared prior to use. There was no evidence for the presence of single or double planks in the postholes, as at Thirlings (fig. 34; O'Brien and Miket 1991, buildings G, H and I) or at West Heslerton (Powlesland 1999, 3.6.1.2). At Shotton, the postholes of the longitudinal walls were regularly spaced in opposing pairs across the width of the halls. The unenclosed halls were constructed using postholes spaced an average of 1 m apart, whereas in the later buildings postholes were more closely spaced, 0.5 m apart in Hall A, and 0.25 m to 0.35 m in Hall F. This use of closely-spaced posts is paralleled in the post-built buildings at Hartlepool (fig. 34: Daniels 1988) and the earliest phase of buildings (A5–8) at Yeavinging (Hope-Taylor 1977). In the buildings excavated at Cheviot Quarry (Johnson and Waddington 2008) and Lanton Quarry (Stafford 2007) the construction techniques were similar to those of the earlier halls at Shotton, with postholes slightly more widely spaced at an average of 1.2 m to 1.27 m apart. At Thirlings (O'Brien and Miket 1991) the postholes of buildings I and F were spaced 1 m apart, with similar spacing also evident at West Heslerton (Powlesland 1997).

It is impossible to be certain whether the spacing of postholes has any general chronological significance because of the broad dating of these sites. Equally, although the use of wall-trenches seems only to have begun at the end of the sixth century or in the seventh century AD (Hamerow 2012, 30), it did not entirely replace posthole construction, and the exclusive use of the latter technique at Shotton is of no help in dating the two phases of the settlement. The differences in the spacing of the postholes probably indicates two different methods of setting the roof frameworks on the tops of the walls. The careful arrangement of



Fig. 33 The Anglo-Saxon halls at Shotton (arrows indicate the probable positions of entrances).

paired, symmetrically-opposed posts in the unenclosed halls suggests that they might have supported tie-beams resting directly on the wall-timbers. The use of tie-beams to carry the main load of the roof through to the walls has been proposed as a structural technique for Anglo-Saxon structures at a wide variety of sites including West Heslerton (Powlesland 1999, 108), Cheviot Quarry (Johnson and Waddington 2008, 254), and Catholme (Losco-Bradley and Kinsley 2002, 99). The more closely-set wall posts of the later halls (A, E, F) perhaps directly supported wall-plates that had tie-beams then placed on them at convenient intervals.

Anglo-Saxon halls frequently had 'weak' gable walls with rounded rather than right-angled corners, often with postholes that were less substantial than those on the longitudinal walls, as, for example, at Cheviot Quarry and West Heslerton. The end walls of Halls B, F and C at Shotton had rounded corners but the postholes were as substantial as those forming the longitudinal walls. The gable-end postholes of Hall C and B (allowing for one posthole removed by truncation on the western wall of Hall B) were arranged symmetrically, with a central post and posts to either side, equidistant from the side walls.

Repairs and double postholes

With the exception of Halls B and D, the walls had several double or intercutting postholes along their lines. The majority contained similar fills making it uncertain whether the features represented timber replacements or contemporary double postholes. In the case of Hall C, most of the postholes along the longitudinal and west walls had probably been recut suggesting that the structure underwent wholesale replacement and rebuilding; Building 2 at West Stow displayed similar evidence for rebuilding (fig. 34; West 1985). There were several double postholes along the south wall of Hall A which probably represented the replacement or reinforcement of original posts. As will be seen below, it is likely that the eastern gable-walls of Halls A and C were also rebuilt or possibly reinforced. The central portion of the southern wall of Hall E had three lines of postholes suggesting a repair or more than one phase of building. Hall F also contained several double postholes on the north and south side walls which probably also represented repairs. It has been observed that, in general, early Anglo-Saxon timber buildings show few signs of rebuilding, and that there is more evidence of wholesale rebuilding on the same footprint or repairs to buildings in later periods (Hamerow 2012, 34–5).

Possible partitions or rebuilt end walls, and other internal features

Hall F almost certainly had a partition running across its width, at least 2 m from the estimated position of its missing east end, where two intercutting postholes (8600 and 8591) were recorded on the central axis of the building with another to the south (8590). The gable walls at the eastern ends of Halls A and C were marked by two rows of postholes respectively 0.8 to 1.0 m and 0.4 to 0.8 m apart. In Hall C, as noted above, the gap between the two rows is too narrow for the inner row to have been a partition, and it almost certainly marked the position of a new gable wall which was part of the rebuilding of the hall. In Hall A only two postholes of the inner row (7543 and 7545) survived, but they followed the curving line of the gable wall; a partition might be expected, as in Hall F, to have cut straight across the width of the building. In a preliminary review of the West Heslerton excavations, Powlesland suggested at least some of features identified as partitions may have been associated with a stairwell for

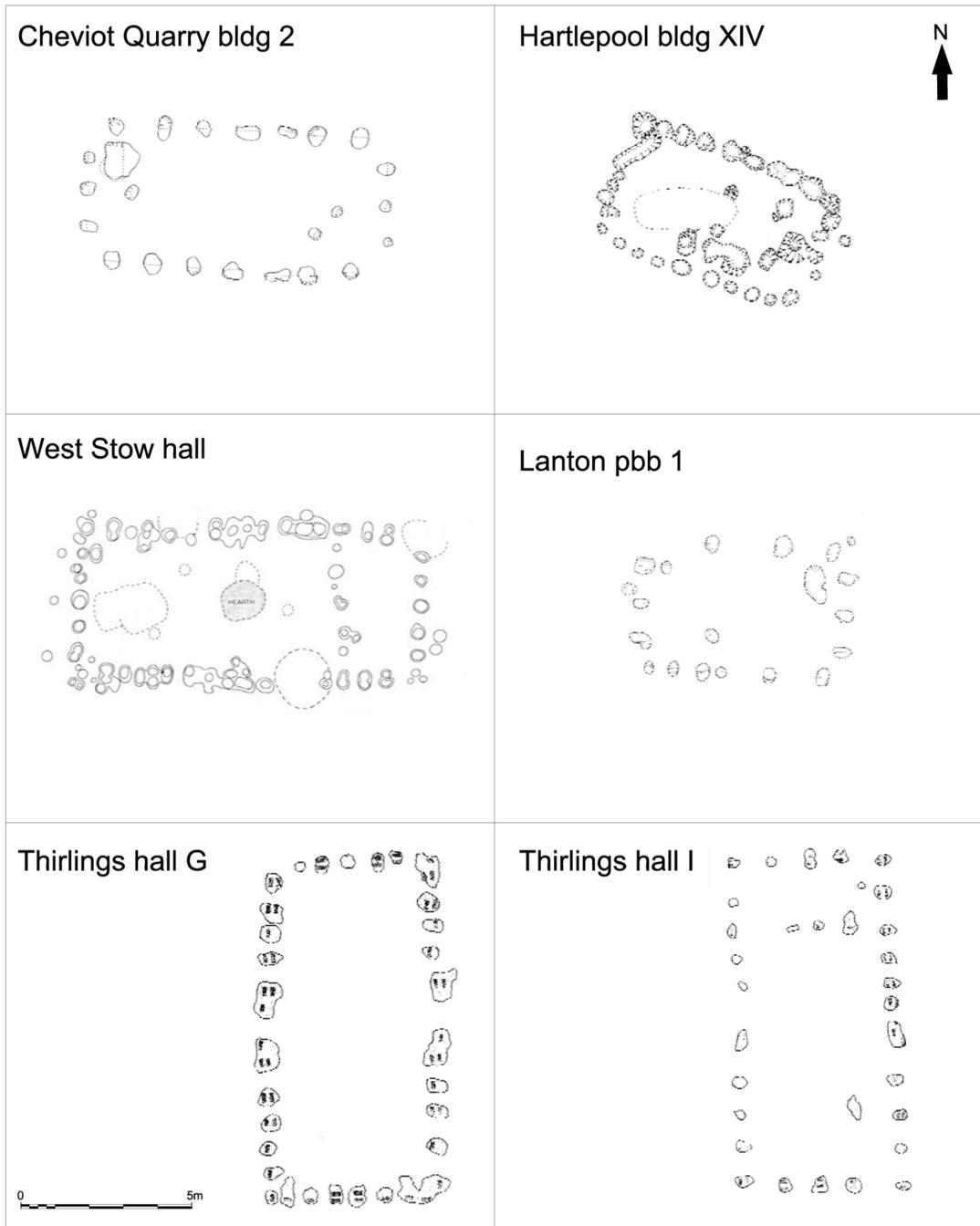


Fig. 34 Examples of halls from other Anglo-Saxon settlements.

an upper storey (Powlesland 1997; 1998, 3.6.1.4). That might perhaps explain why in Hall A at Shotton the inner row followed the curve of the gable wall, the spacing between the two rows having been determined by the uniform width of the stair treads, but it is just as likely that the inner row was simply a replacement of the gable wall. There was evidence of other repairs to Hall A, though less extensive than those made to Hall C.

Internal rows of postholes have been recorded in a number of Anglo-Saxon buildings and are usually interpreted as partitions; they occur in roughly one-quarter of the halls that date between the fifth and seventh centuries (Hamerow 2002, 47). The widths of the areas separated from the main bodies of the halls varies. Where they are very narrow, Hamerow (1993, 10) has suggested that the spaces were used for storage or holding small animals. It has also been noted that partition walls were usually at the eastern end of buildings which were aligned east-west (Marshall and Marshall 1993, 399), and the internal partition in Hall F at Shotton conforms to this common pattern.

Entrances

These were visible in the south walls of Halls B and C and were located off-centre to the east and west respectively. The position of the entrance in Hall D was less certain; its western side was probably indicated by a multiple post setting (7269) midway along the south side. Hall A had opposite entrances in the longitudinal walls, a common characteristic of Anglo-Saxon halls.

OTHER POST-BUILT STRUCTURES

At least 12 concentrations of postholes were found which were neither obviously halls nor straight fence-lines. None yielded an intelligible building plan, but in the structural report they are termed post-built structures (pbs). In pbs J (Enclosure 3, fig. 23) and pbs K (west of Hall C, fig. 7), some of the postholes followed a curving course which might suggest that their posts formed pens for livestock. In both instances, there were other adjacent postholes in rectangular arrangements which might have been part of shelters attached to the pens, though this is far from certain. Pbs I1–2 (Enclosure 4, fig. 17) was a particularly dense concentration of postholes, some of which were more substantial than those of the halls, but their arrangement entirely defies analysis. Pbs J (Enclosure 3, fig. 23) was the most extensive concentration and had a roughly elliptical shape; it covered about the same area as a hall, but the irregular distribution of postholes favours its interpretation as a pen, perhaps of more than one period of construction and incorporating one or more shelters. It hardly needs to be added that many other interpretations are possible for these structures, including other agricultural uses as well as craft and domestic uses.

SUNKEN-FEATURED BUILDINGS (SFBS)

Sunken-Featured (or Sunken-Floored) Buildings (SFBs), or *Grubenhäuser*, occur commonly at Anglo-Saxon settlements, including most of those in north-east England which have been extensively excavated. These buildings typically take the form of a flat-bottomed, roughly rectangular pit with slightly rounded corners; posts at the ends probably supported a ridge beam for a roof, the lower edges of which rested on the ground on either side of the pit. At

Shotton, there were two large pits on the edge of Enclosure 3 (SFB O and P, figs. 20–22) which can probably be classified as SFBs; a smaller and less certain example (SFB S, figs. 20 and 22) was found in Enclosure 2. SFB O measured 2.23 m by 2.02 m and was 0.62 m in depth; SFB P, less steep-sided than SFB O, was 4.24 m by 2.7 m and 0.6 m in depth. SFB S was in an area where the original surface had been deeply truncated and survived as little more than a shallow scoop 0.2 m deep and with an area of 1.3 m by 0.7 m. SFBs vary widely in size, and the two better-preserved examples at Shotton are towards the bottom of the range; at West Heslerton, where 130 examples were found, they measured between 1.65 m and 6.59 m in length and 1.01 m to 5.4 m in width (Powlesland 1998; Tipper 2004).

The postholes which presumably supported the roofs of SFBs were often located just inside the pits at the junctions of their sides and bases, although a small number lay just outside the pits (Tipper 2004, 192). Two postholes were associated with SFB P, one immediately to its north (7642) and the other in the centre (7486). Central postholes find parallels in SFBs at Catterick where one contained a possible stone post-pad near its centre and another a central posthole in this position (Wilson *et al.* 1996, 16, 26). The absence of postholes associated with SFB O probably reflects the relatively small size of the pit; the ledges along its sides could have supported a superstructure which covered the pit. A rectangular sandstone block recorded on the edge of the western ledge may have formed a post-pad, though there were no signs of a corresponding setting on the eastern side. At West Heslerton over half of the SFBs had no postholes (Tipper 2004, 72). There was no occupation material on the bases of the SFB pits at Shotton, which suggests that they had timber floors which in SFB O could have been suspended on the ledges along its sides. The widespread occurrence of suspended floors was suggested by an extensive study of numerous SFBs excavated at West Stow, Mucking, and West Heslerton, which highlighted the absence of worn surfaces on the bases of the pits (Tipper 2004). The substantial posthole at the base of SFB P might have held a post supporting either a roof or a floor.

Few finds came from the Shotton excavations, but of the nine sherds of pottery from the entire site, eight came from layers filling SFBs O and P or from features nearby; the same area produced two loomweights, the only definite examples found on the site. None of these finds was necessarily connected with the use of the SFBs, but they show that weaving, and presumably the preparation and storage of food, took place at least in their vicinity, if not in the SFBs themselves. Such buildings have frequently been interpreted as being associated with weaving (Losco-Bradley and Kinsley 2003), and loom weights have been recovered in association with them at a number of sites, including Lanton Quarry (Stafford 2007; Waddington 2007).

THE POTTERY (fig. 35)

A. Croom and P. Bidwell

The excavations produced nine sherds of pottery from six contexts across four different locations. The sherds were small, with the whole assemblage weighing only 67 gm. They represent at least five vessels.

Enclosure 1

1. Rim sherd with hole. Fill of ditch 7221, 7222, SF700. Fig. 35. Black fabric, partially oxidised on exterior. Sooting on interior and on the exterior of the rim.

Enclosure 2, filling of SFB P

The five sherds from this building come from at least three different vessels.

2. Rim sherd (B: 9 mm). Fill of SFB P, 7473, SF715. Fig. 35. Plain rounded rim with quartz and mica inclusions giving the fabric a glittery appearance. Not enough of the rim survives to say whether the sherd came from a bowl or jar.
3. Body sherd (B: 10 mm). Fill of pit of SFB P, 7422, SF712. Small, featureless body sherd in black fabric with visible angular temper up to 2 mm across. Possibly same vessel as no. 2.
4. Body sherd (B: 7 mm). Fill of pit of SFB P, 7422, SF709. Small featureless body sherd, with fully oxidised exterior and quartz, sandstone and haematite inclusions. There are grass/straw and a possible chaff impression on the exterior.
5. Body sherd (B: 9 mm). Fill of pit of SFB P, 7357, SF721. Small featureless body sherd, with fully oxidised exterior marked with organic impressions. Coil-made. This is likely to come from the same vessel as no. 4.
6. Body sherd (B: 15 mm). Fill of pit of SFB P, 7422, SF711. Small, featureless body sherd in a black fabric with plentiful, sub-angular white and pink quartz temper up to 3 mm across and an oxidised exterior surface.

Enclosures 2-3

7. Rim sherd (B: 6 mm). Fill of post-hole 7415, 7414, SF705. Fig. 35. Plain rounded rim, distorted. Not enough survives to say whether this comes from a bowl or a jar. Fine black micaceous fabric, with few visible inclusions.

Enclosure 3

- 8-9. Body sherds. Upper fill of pit of SFB O, 7356, SF703, SF704. Two body sherds from same vessel. Black micaceous fabric with a range of inclusions, some of them rounded quartz, that generally appear black. The exterior surface is slightly lighter in parts.

Despite the size of the site excavated, all but one sherd came from one small area, in the fillings of SFB O and P or from nearby. The sherds are small and worn but were presumably associated with activities that took place in or near the sunken-featured buildings. The largest

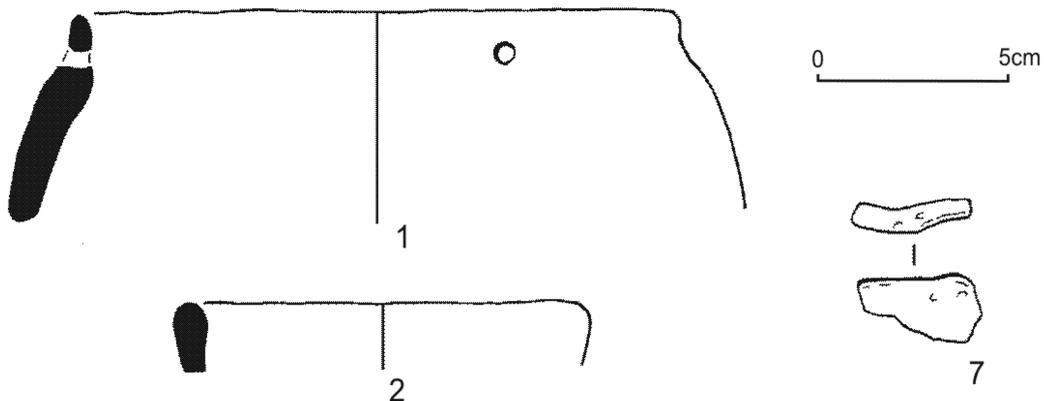


Fig. 35 Anglo-Saxon pottery. Scale 1:2.

sherd (no. 1) probably comes from a jar, but the other two rims could come from either bowls or jars similar to the examples found at the Anglo-Saxon settlement at Lanton Quarry, Northumberland, which produced a much larger assemblage of pottery: 63 sherds from approximately 40 vessels (Vince and Steane 2008, figs. 3–10). The forms there are simple, consisting of plain-rimmed bowls and jars with simple everted rims, but they were made in a range of sizes. On other Anglo-Saxon sites in the region, pottery appears to have been at least as scarce as at Shotton, though there are difficulties at the forts of South Shields, at Wallsend, and in Newcastle in distinguishing between the fabrics and forms of local traditional ('native') wares of the Roman period (Bidwell and Croom 2002, 169–70) and wares possibly of Anglo-Saxon date. The fabrics of nos. 1–3 and 6–9 at Shotton are similar to the range of the local traditional wares, but that may signify nothing more than the use by potters working locally of similar clays and temper suitable for handmade vessels fired at a low temperature. There is no reason to suggest any continuity of the local pottery tradition of the Roman period into Anglo-Saxon times. The organic impressions on the exteriors of nos. 4–5 are not found on the earlier local traditional wares at the Tyneside forts, though two sherds of pottery from an Anglo-Saxon ground surface at Jarrow identified as 'native Roman' appeared to have been straw-tempered (Burke and Mills 2006) and were perhaps actually of Anglo-Saxon date.

FIRED CLAY (fig. 36)

A. Croom

1. Loom weight (D: c. 85 mm; B: 49 mm). 7465, fill of boundary gully 7351, Enclosure 3, SF706. Fig. 36.1. Incomplete fired clay loomweight. One face is slightly flatter than the other, making the cross-section wide at the bottom and narrow at the top. On the flatter face the central hole is small (D: c. 20 mm), but flares out towards the other face.
2. Loom weight (D: in region of 80 mm; B: 51 mm). 7465, fill of boundary gully 7351, Enclosure 3, SF707. Fig. 36.2. Incomplete fired clay loomweight with similar profile to no. 1 above (wide at the bottom and narrow at the top), but in this case the central hole is wider at the bottom than the top.
3. Loom weight? (W: 34 mm). 7998, fill of pit 7999, Enclosure 3, SF738. Fragment of fired clay, probably from the wide 'lower' surface of a loomweight, with traces of the outer edge and the central hole. Dark grey fabric with oxidised surfaces.

These are of the 'intermediate' type of loom weight, which starts to appear during the sixth century AD but which becomes more common in the seventh century and continues into the

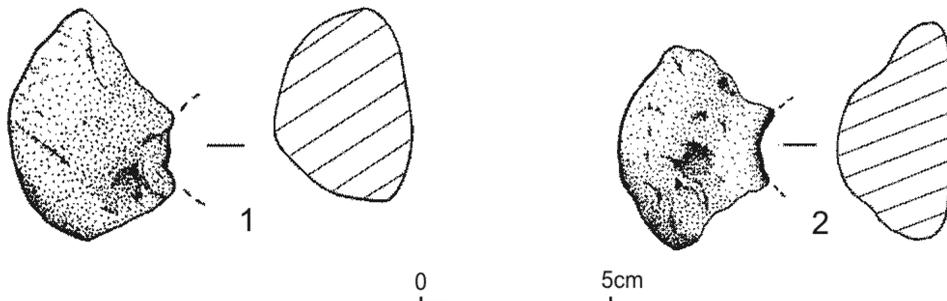


Fig. 36 Fragments of clay loomweights. Scale 1:2.



Fig. 37 Bead. Scale 1:1.

late Anglo-Saxon period (Walton Rogers 2007, 30; Walton Rogers 1997, 1753; cf. fig. 813, no. 6586, tenth-century context). Anglo-Saxon loomweights are classified according to the size of the central hole as annular, intermediate or bun-shaped, with the annular being the early type and bun-shaped the late type. However, it is clear that the intermediate type was in use alongside the other types, so the different shapes may instead relate to the production of different types of fabric (Walton Rogers 2009, 294). Although relatively small in diameter, the height of the Shotton examples would have made them, when complete, in the region of 400–500g, which is towards the upper range of the typical weight of Anglo-Saxon loomweights (between 150 and 500g: Walton Rogers 2009, 293). This could perhaps indicate the production of comparatively heavyweight cloth.

GLASS (fig. 37)

S. Sherlock

4. Bead (D: c. 30mm; H: 14 mm; hole D: c. 9mm). 8209, fill of posthole 8210, Hall E, SF743. Fig. 37. An Annular Twist green glass polychrome bead with an applied vertical white trail. This is a fragment, comprising 25% of the total. A similar bead has been excavated from grave 62 at Street House, Yorkshire (Sherlock 2012, 37, 55–6, pl. 3.14). There are 19 examples of Annular Twist beads listed in a recent survey of beads in Anglo-Saxon England (Brugmann 2004, 76), with a general distribution in East Anglia and the South, and one bead from Sheffield Hill, Lincolnshire (Scunthorpe Museum). These beads are considered to date from the seventh century AD with one example, from a bed burial at Swallowcliffe Down, Wiltshire (Speake 1989, 50), dating from around AD 650.

LEAD AND STONE (fig. 38)

A. Croom

5. Lead waste (A: max. L: 50mm; B: max. L: 16mm). 8287, deposit filling fire pit 8288, Enclosure 3, SF735–6. Not illustrated. Both pieces are rivulets created when the metal was molten, rather than objects.

6. Stone disc (D: c. 110mm; B: 14mm). 7998, fill of pit 7999, Enclosure 3, SF728. Fig. 38. Fragment of a sandstone disc, possibly used as a pot lid. A second, non-joining fragment (B: 12mm), is heavily burnt on one face.

7. Whetstone (L: 100mm; W (max): 33mm, (min): 21mm; B: 37mm). 7033, fill of gully 7032 across track 7411, between Enclosures 1 and 8, SF701. Curved whetstone of medium sand quartz arenite, with rectangular cross section. There are two dished faces, one of which has a deep groove created when sharpening the points of tools such as needles, awls or hooks (Wastling 2009, 236).

8. Incised stone (L: 180mm; W: 125mm; B: 110mm). 8643, pit 8645 to the south of Enclosure 8, SF740. Fig. 38. Fragment of sandstone with one smooth face, apparently the only original face surviving. This has two deeply incised straight lines with a fainter third line.



Fig. 38 Stone objects 6 and 8. Scale 1:2.



METALLURGICAL DEBRIS

R. Doonan, D. Pitman, and B. Harris

Non-diagnostic slag

130g of friable, magnetic slag with no features diagnostic of a particular process: 7281, fill of posthole 7280, Enclosure 8, SF 702; 8164, fill of posthole 8163 midway along fence-line defining 'yard area' in northern end of enclosure 3, SF 727; 7839, fill of gully 7838, Enclosure 5, SF 729; 8290, fill of posthole 8289, pbs K, unenclosed settlement, SF 734; 7303, fill of pit 7226, hollow between Enclosures 1 and 8, SF 739.

Table 2 Radiocarbon dating results.
 *Salicaceae (willow / poplar), **Maloideae (hawthorn, whitebeams, apple, pear),
 P=Prehistoric U=Unenclosed settlement E=Enclosed settlement

CONTEXT	FEATURE	PHASE	MATERIAL	$\delta^{13}\text{C}$ RELATIVE TO VPDB	RADIOCARBON AGE (BP)	95.4% (2σ) CAL AGE RANGE	
SUERC-26689	7244, 7246, 7248	Hall D	U	Cherry charcoal	-26.4 ‰	2500 ± 35	94.2% cal BC 1.2% 440-420 cal BC
SUERC-30834	7632	RH 1, entrance Hall C	P	Hazel charcoal	-26.6 ‰	2240 ± 35	27.1% cal BC 28.3% 330-200 cal BC
SUERC-30840	7179	Hall C	U	Cherry charcoal	-25.3 ‰	1540 ± 35	cal AD 420-600
SUERC-32905	7270	Hall D	U	Hazel charcoal	-24.2 ‰	1500 ± 30	87.9% cal AD 530-640 7.5% cal AD 430-490
SUERC-30848	7473	SFB P	E	Hazel charcoal	-25.6 ‰	1435 ± 35	cal AD 560-660
SUERC-30838	7544, 7546	Hall A	E	Charred barley grain	-23.3 ‰	1310 ± 35	cal AD 650-780
SUERC-30839	7538, 7540, 7542	Hall A	E	*Salicaceae charcoal	-25.0 ‰	1295 ± 35	cal AD 650-780
SUERC-32901	8217	Hall E	E	Charred wheat grain	-20.8 ‰	1305 ± 30	cal AD 650-780
SUERC-32906	8177	Hall E	E	Birch/alder charcoal	-26.5 ‰	1315 ± 30	cal AD 650-780
SUERC-30844	8256	Enclosure 5, ditch	E	Charred hazel nutshell	-26.0 ‰	1250 ± 35	cal AD 670-880
SUERC-30842	8095	Enclosure 2, ditch recut	E	Charred barley grain	-23.4 ‰	1215 ± 35	cal AD 680-900
SUERC-30843	7963	Enclosure 3/4, ditch recut	E	Hazel/birch charcoal	-26.6 ‰	1145 ± 35	cal AD 770-980
SUERC-32900	8548	Double ditch boundary	-	Charred wheat grain	-21.6 ‰	930 ± 30	cal AD 1020-1170
SUERC-30841	8406	Building N	E	**Maloideae charcoal	-25.8 ‰	580 ± 35	cal AD 1290-1420

Vitrified ceramic

67 g of heavily fired clay with a glassy appearance: 7422, layer near base of SFB P (7348), SF 710; 7473, upper fill of post-pit 7486 at base of SFB P, presumably accumulated after removal of post, SF 718.

Fired clay

226 g of amorphous fired clay that does not display evidence for particularly high temperature activity: 7473, upper fill of post-pit 7486 at base of SFB P, presumably accumulated after removal of post, SF 717 and 718; 8304, from the fill of a feature, probably a furrow, post-dating the enclosed settlement, SF 730.

Only a small amount of metallurgical debris (0.4 kg) was recovered from the site. Based on the small quantity of the slag and the microstructural characteristics, the material most likely relates to small-scale iron smithing. It is unlikely that metallurgy was encountered and therefore impossible to fully characterise the practices taking place. The assemblage, with small quantities of slag disassociated from its original contexts, appears typical for the Anglo-Saxon period (Bayley et al. 2008).

RADIOCARBON DATING

Fifteen samples were submitted for radiocarbon dating by Accelerator Mass Spectrometry (AMS) by the Scottish Universities Environmental Research Centre (SUERC). The detailed individual results are included in Table 2. Only fourteen of the samples were successfully analysed; one of the samples from Hall C failed and could not produce a radiocarbon result. The aim of the radiocarbon programme was to establish a chronology for the structures and enclosures on the site. In the absence of closely datable artefacts from the site, this programme provided the only means possible of dating the occupation of the settlement. The samples were generally small; a scarcity of suitable material and the absence of bone meant that charred seeds or charcoal were used, increasing the chances that samples were residual or derived from post-depositional disturbance. Thus, two of the samples (SUERC 32900, 30841) produced a later date than expected, and one a considerably earlier date (SUERC 26689). The individual radiocarbon dates are discussed in the excavation report above.

ENVIRONMENTAL EVIDENCE

Lorne Elliott

Even though there was only a small assemblage of charred macrofossils, the rarity of Anglo-Saxon sites such as Shotton ensures that it still provides a valuable, albeit tentative, insight into the diet, crop husbandry practices and paleoenvironment of rural settlements in Northumberland during this period. This section is a summary of the complete report which has been included in the site archive (Elliott 2011).

An assessment of 63 bulk samples, and subsequent analysis of 6 samples, all from the enclosed settlement, indicated that hulled barley and oats were the more common cereals, with cf. bread wheat and rye also represented. This is consistent with the very limited evidence for the early medieval period in northern England (Huntley and Stallibrass 1995). Some, if not all, of the oats are bristle oats (*Avena strigosa*). A cf. bread wheat grain from Hall

E and a barley grain from Hall A provided the same radiocarbon date range in the late seventh to eighth century (cal. AD 650 to AD 780) confirming the use of these crops at the time. Other than cereals, few plants likely to have been used for food or other domestic purposes were recorded at Shotton. A few seeds of flax were noted from the fire pit (context 8287) and from a posthole fill from Hall A. Flax occurs in Anglo-Saxon features at a number of sites and may have been cultivated for linseed oil for food, preservative or medicinal purposes, and the fibres may have been extracted to provide linen for clothing, sacking or ropes. There were also a few fragments of charred hazel nutshell in the five samples analysed. Charred heather twigs were relatively common, reflecting the usefulness of heather for fodder, fuel, thatch or flooring.

Even though the site lies *c.* 10 km from the sea, fragments of brown seaweed (Phaeophyceae) were recovered from eight contexts across the enclosed settlement. Seaweed was also recovered from sunken buildings at Brougham, in Cumbria (Huntley 1992), which lies 50 km away from the coast. Seaweed could be used for a variety of purposes, including salt production, fodder, manure, packing, food preservation, and as a source of soda for glass-making.

Oak and ash appear to have been used as construction materials for the buildings, with branchwood of hazel, Maloideae, birch, and Salicaceae (most likely willow) possibly used as wattle. The fill of the fire pit (8287) included a mixed charcoal assemblage including hazel, willow/poplar, oak, birch, and alder, indicating a random selection of fuelwood. Small fragments of indeterminate tooth enamel (?cattle) occurred in three contexts, 7848, 7349, and particularly so in the fire pit sample (8287).

The common occurrence of charred heather twigs suggests the presence of lowland heath within the vicinity of the site; indeed, Plessey Moor is named on the first-edition Ordnance Survey map *c.* 600 m to the south. Heathland would probably have been considerably more extensive and there was evidence for the use of turves either as fuel or perhaps as walling. Turves may have been used as a building material for the sunken-featured buildings.

THE SITE IN ITS CONTEXT: SOUTH NORTHUMBERLAND FROM THE SECOND TO SEVENTH CENTURIES AD

The extensive investigations of pit alignments and Iron Age settlements at Shotton and elsewhere on the coastal plain in south-eastern Northumberland demonstrate that until the second century AD the landscape was highly organised and densely settled (Hodgson *et al.* 2013). There is no evidence for occupation of these settlements beyond *c.* AD 200 (Hodgson *et al.* 2013, 213–20). At the increasing number of sites which have radiocarbon determinations, their date of abandonment ‘falls between *c.* 120 and *c.* 175, with the near absence of Roman objects favouring an earlier rather than a later date in that scale, probably between *c.* 120 and *c.* 140’ (Hodgson *et al.* 2013, 214). An immediate cause of this abandonment was probably the creation of an exclusion zone by the Roman authorities, removing most of the population from an area extending approximately 10 miles north of Hadrian’s Wall. More generally, a decline of traditional Iron Age society during the second century is also apparent in the upland areas of Northumberland and as far north as the coastal plain in East Lothian, where far fewer sites were occupied after AD 200 (Hodgson *et al.* 2013, 214–16).

How this largely depopulated landscape was exploited during the remainder of the Roman period is uncertain. One possibility is that it was used for grazing livestock over wide areas and that south-eastern Northumberland (and perhaps adjacent areas to the west and north) were divided into huge ranches which supplied meat and livestock for various purposes to

the large population along Hadrian's Wall and to its south. Management of the stock would require itinerant herdsmen and perhaps a few centres where animals could be corralled before being driven south to the Wall and to the country beyond it. There are of course other possibilities, including the creation of a landscape where there were scarcely any farming activities. Whatever changes there were ought to be apparent in pollen records for the area. The absence of such records is regrettable, as has long been recognised (Huntley 1999, 52). Turning to the wider region, the most recent discussion of the picture in the later Roman and early post-Roman period concluded that there was a 'general background of continuity in landscape exploitation', whilst acknowledging that from the fourth century onwards there was some reduction in agricultural activity (Collins 2012, 134–7). Whether that is true of south-eastern Northumberland is quite uncertain, and there might have been at least some woodland regeneration, instances of which appear in a few of the pollen diagrams listed by Collins for the wider region.

Many attempts have been made to find continuities of population and settlement patterns in the transition from late-Roman northern Britain to Anglo-Saxon Northumbria, some more compelling than others. The settlement at Shotton was entirely new, and for all we know was carved out of *terra nullius*. The Iron Age roundhouse which underlies it had been abandoned seven or eight centuries earlier. There were no signs of human activity during the intervening period on the site, or later than the second century AD at any of the prehistoric settlements excavated nearby or elsewhere in south-eastern Northumberland. It is only at the forts of the Wall-system — at South Shields, Wallsend, Newcastle, and Benwell — where there was possibly some degree of continuity between the Roman and Anglo-Saxon period and, if not, certainly a resumption of occupation in the later sixth or seventh centuries (Collins 2012, 130–2). There is only one possible remnant of the Roman occupation which, it can be suggested, might have been of importance to the settlement at Shotton, and that is a Roman road which might have run north from Newcastle to join the Devil's Causeway, 38 km to the north, at Longframlington. Its existence was first proposed by Hafemann (1956, 150), and, although there are no obvious indications of its line (information from J. Poulter), it would have served an important purpose, particularly in the period before the building of Hadrian's Wall (Bidwell and Snape 2012, 257–9). The Great North Road, replaced on a slightly different line by the modern A1, lies only 400 m west of the settlement at Shotton. This was 'the great royal road', wayleave from which was granted to John de Plessey in 1246/1256; it was also called 'the king's great highway' (Hodgson 1832, 283). If the course of a Roman road had been followed by this important medieval route, at least in part, the occupants of the settlement at Shotton would have had easy access to the lower Tyne valley some 12 km to the south, which was one of the two heartlands of Bernicia, the other being in north Northumberland (Rollason 2003, 48–51; cf. Roberts 2010).

There is a wide range of views on the date and character of Anglo-Saxon settlement in north-east England. The traditional date for its inception is AD 547, when Ida, from whom the Northumbrian royal house traced its origins, began his reign (Bede, *HE*, v, 24). Anglo-Saxon brooches and pottery from the eastern end of the Wall are of sixth- and early seventh-century date. The earliest relevant radiocarbon dates from Shotton are of this period and, more specifically, suggest that the halls in the unenclosed settlement were probably built after cal. AD 530 and probably in the second half of the sixth century. Radiocarbon dates from two of the three halls at Cheviot Quarry — their construction techniques closely resembling those of the earliest Shotton halls — were taken to indicate that they were built in the fifth or early

sixth century cal. AD (Johnson and Waddington 2008, 174, 254, illus. 29), but the full range of the dates surely admits the possibility that their construction date, as with the Shotton halls, might have fallen in the mid to late sixth century AD.

PARALLELS TO THE SHOTTON SETTLEMENTS

A model for the hierarchy of Anglo-Saxon settlement has been developed on the basis of the extensive evidence from north Northumberland (Loveluck 2002, 136). At the top was probably the fortified site at Bamburgh, with a similar site at Dunbar in East Lothian to the north. The best known example of a site of lesser but still considerable status was the *villa regia* or 'king's estate' of Yeavering; other high status sites visible as cropmarks include Milfield which was probably a successor to Yeavering (Loveluck 2002, 140). The lowest rung of settlement was probably formed by small hamlets, which are scarcely represented in the archaeological record; Lanton Quarry is a possible candidate, as is Cheviot Quarry. If this model is of wider application, it is uncertain how the Shotton settlements might sit within it. The unenclosed settlement might be regarded as a hamlet dependent on an estate centre. Its successor, with its halls set in large enclosures, was much more substantial, but it does not bear close comparison with Thirlings, apparently a minor estate centre, where the halls were much more closely spaced and some were twice as large as those at Shotton (O'Brien and Miket 1991). The layout of the enclosed settlement, however, says something about its social organisation. The row of enclosures defined by multi-phased ditches suggested longevity and probably continuity of tenure, perhaps by individual households, with each enclosure representing a farmstead. Although only three halls were visible, presumably representing three households, there was a minimum of seven enclosures suggesting that there were perhaps as many as seven households. Not all were necessarily of equal status. The plan and prominent position of the remodelled Enclosure 4, including the careful arrangement of Hall A with its associated fence-lines, possible ancillary buildings and fire pit, suggests that its household was of higher status than those in the other enclosures. Throughout the seventh and eighth centuries AD, Anglo-Saxon settlements were often contained within systems of ditched enclosures, and the enclosed settlement at Shotton, though without clear parallels in north-east England, fits within a wider pattern observed throughout the rest of eastern England (discussed in depth most recently in Hamerow 2012). It has been suggested that these enclosures were necessary so that animals could be kept for some of the time within the settlements, which were also associated with droveways. At Shotton, probable tracks or droveways ran along the edge of Enclosure 2 and possibly between Enclosures 3 and 4; a track of several phases was also found along the length of the hollow between Enclosures 1 and 8.

THE END OF THE SETTLEMENT

Radiocarbon determinations provide a possible date range from the late eighth or early ninth century to the end of the tenth century for the abandonment of the settlement. The eastern end of the medieval village, some 250m to the north, has been partly excavated and was shown to have originated as a planned settlement of two rows separated by a wide green (TWM Archaeology, forthcoming). There was nothing to indicate that this part of the village was earlier than the twelfth century AD. Most of the village remains unexplored, however, and might well conceal a later Anglo-Saxon nucleus which succeeded the enclosed settlement

to the south. It is also possible that there was a period of two or three centuries before the medieval village was laid out, when the Shotton lands were farmed from elsewhere and the Anglo-Saxon settlement had disappeared from sight and memory. Equally, tenurial arrangements during the post-Conquest period may shed some light on the earlier pattern of landholdings at Shotton. Groupings, typically of three townships, are characteristic of many Northumberland tenurial holdings (Halcrow 1956, 59; Lomas 1996, 23), and it has been suggested these may relate to an earlier pre-Conquest tenure of thanage forming a component of a multiple estate or shire (O'Brien 2002). The medieval landholdings associated with Shotton follow this pattern: during much of this period the township of Shotton (in association with Plessey) was held together with Blagdon and North Weetslade by the Plessey family for one knight's fee (TWM forthcoming; Wrathmell 1975, 468; Hodgson 1832, 279). This contiguous block of land lay on the south side of the river Blyth and represented the southern half of the parish of Stannington. The manorial centre of these holdings was at Plessey, a manorial demesne 1 km to the north-east of Shotton village (at the current site of Plessey Hall Farm), with Shotton and Plessey representing joint townships. It is possible that there was a pre-Conquest predecessor on the site of the later medieval manor at Plessey. If this pattern of tenure extended back to the middle or even early Anglo-Saxon period, the settlement at Shotton might have been subordinate to a minor estate-centre at nearby Plessey or perhaps was itself an estate centre.

The Shotton excavations have brought sharply into focus the fact that in north-east England we know far more about the forms that early Anglo-Saxon settlements took than those of the mid- to later Anglo-Saxon periods. The remaining parts of the medieval village are now occupied by a farm and a few houses; the possible presence of a late Anglo-Saxon core could be tested by a research excavation.

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