

The excavation of two later Iron Age fortified homesteads at Aldclune, Blair Atholl, Perth & Kinross

R Hingley*, H L Moore†, J E Triscott‡ & G Wilson†
with contributions by P J Ashmore, H E M Cool, D Dixon,
D Lehane, I D Máté, F McCormick, R P J McCullagh, K McSweeney
& R M Spearman

ABSTRACT

Two small 'forts', probably large round houses, occupying a natural eminence and further defended by banks and ditches at Aldclune, by Blair Atholl (NGR: NN 894 642), were excavated in advance of road building. Construction began at Site 2 between the first and second centuries BC and at Site 1 between the second and third centuries AD. Two major phases of occupation were found at each site. The excavation was funded by the former SDD/Historic Buildings and Monuments Directorate with subsequent post-excavation and publication work funded by Historic Scotland.

INTRODUCTION

In 1978 the Scottish Development Department (Ancient Monuments) instigated arrangements for excavation when it became known that the planned re-routing of the A9 trunk road was likely to destroy two small 'forts' at Aldclune, by Blair Atholl (NGR: NN 894 642). A preliminary programme of trial trenching began in April 1980, revealing that substantial areas of the structures and their defences survived. In view of the fact that both sites were of high archaeological potential and would be almost completely obliterated by the road building, it was decided to proceed with full-scale excavation. This work was carried out under the direction of Jon Triscott between May and November 1980. A limited portion of the southern part of Site 1's outer defences survived road construction and remain *in situ*.

The conditions under which field work was carried out were far from ideal. The project was extended at the eleventh hour on several occasions when it became clear that further work was required, resulting in an ongoing rescue programme which made it difficult to maintain continuity. The limited resources available meant that neither site was entirely excavated. In addition, the site was heavily wooded and had to be cleared by the excavators prior to work starting. Both sites had been damaged by forestry plantation and difficulties with interpretation were further

* Historic Scotland, Longmore House, Salisbury Place, Edinburgh EH9 1SH

† Environmental and Archaeological Services, Edinburgh, Unit 8 Abbeymount Techbase, 2 Easter Road, Edinburgh EH7 5AN

‡ 13A Lamer Street, Dunbar, East Lothian EH42 1HJ

compounded by the hilltop location: many of the archaeological deposits were truncated by erosion, and continuous stratigraphy was scarce.

A draft report of the results was prepared and several categories of specialist work were completed when, in 1995, EASE took over the management of the project. Further specialist analyses were commissioned and additional radiocarbon dates acquired. The description of the excavation has been drawn from the site records and draft versions of the report. Site phasing and phase plans largely represent the excavator's original conclusions, but alternative interpretations are also offered. A general discussion considers various aspects of the archaeology of the structures within the tradition of house building in later prehistoric Scotland. Funding for this work was provided by Historic Scotland.

HISTORY OF THE ALDCLUNE SITES

'... two castles, nearly round, on the top of a pretty high ridge, above a gun-shot from the highway (sic), a few paces from each other having double, and in some places triple, ditches. Before the gates stand several obelisks, in a zigzag position; probably for the protection of champions, that defended the entries, and to obstruct the enemies' access. These seem to be of a later date than the other round castles' (Stat Acct, vol 2, 474).

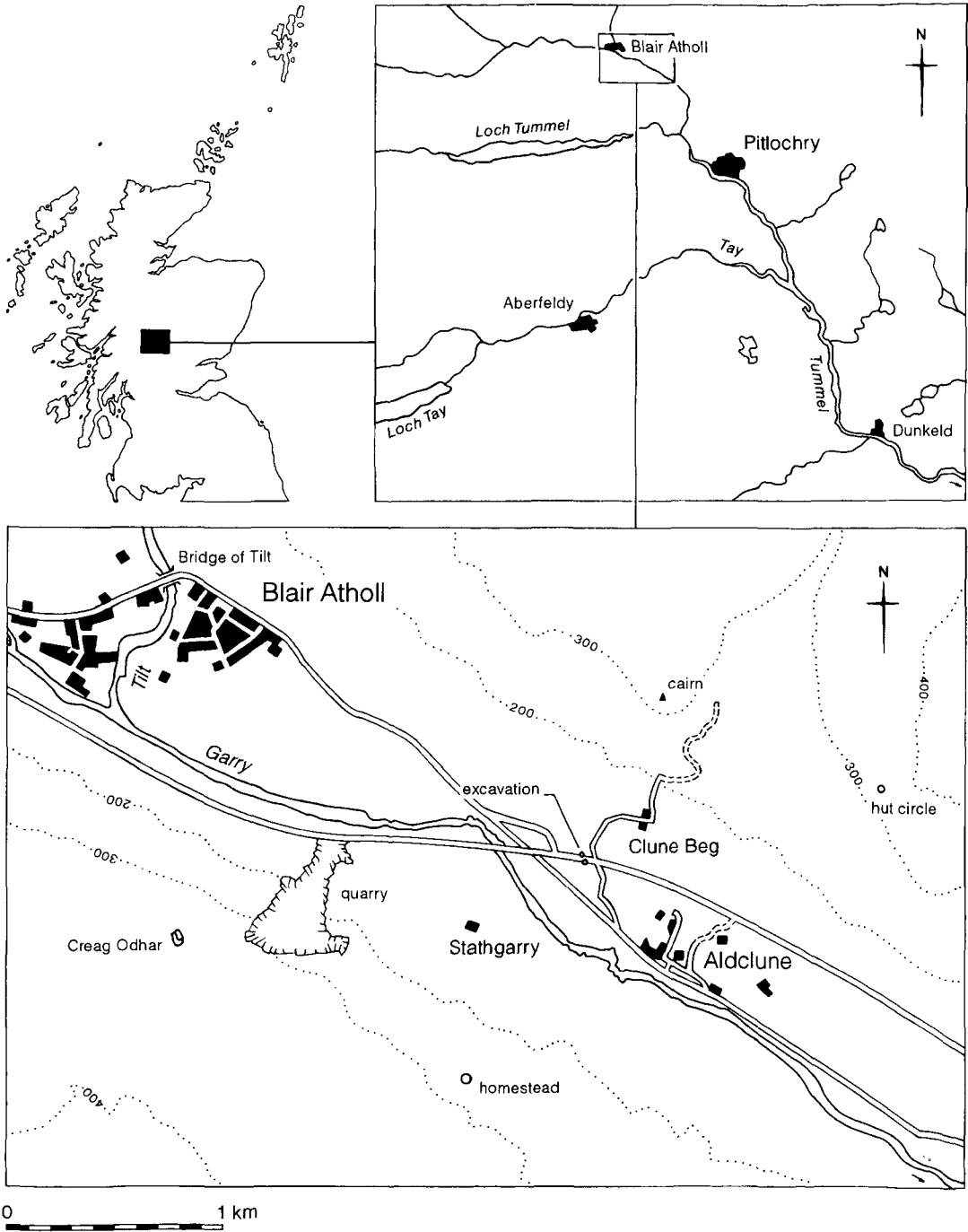
This is the earliest reference to the Aldclune sites, and, indeed, the most informative description for the next 150 years. This account suggests that the author of the *Statistical Account* for Blair Atholl and Struan saw them as being of a different type to the homesteads encountered elsewhere in the area, and that the two sites were in a similar state of preservation at the time; the appearance of Site 2 appears to have deteriorated after this description, since in later descriptions its condition seems to have been such as to prevent identification except by the experienced eye.

It was the Scouting movement which prompted the next mention of the sites; Hugh Mitchell, a Pitlochry resident and Fellow of the Society of Antiquaries of Scotland, published a series of lectures in 1911 as an aid to gaining the Pathfinder badge. Only one fort is mentioned in Mitchell's account; this is referred to as an 'earthen fortification'. No mention is made of ditches and it is difficult to assess what is actually being described. Again, the author considered that the fort was unlike others and suggested that it might be of Neolithic date since it guarded the approach to the cairn at Strathgray.

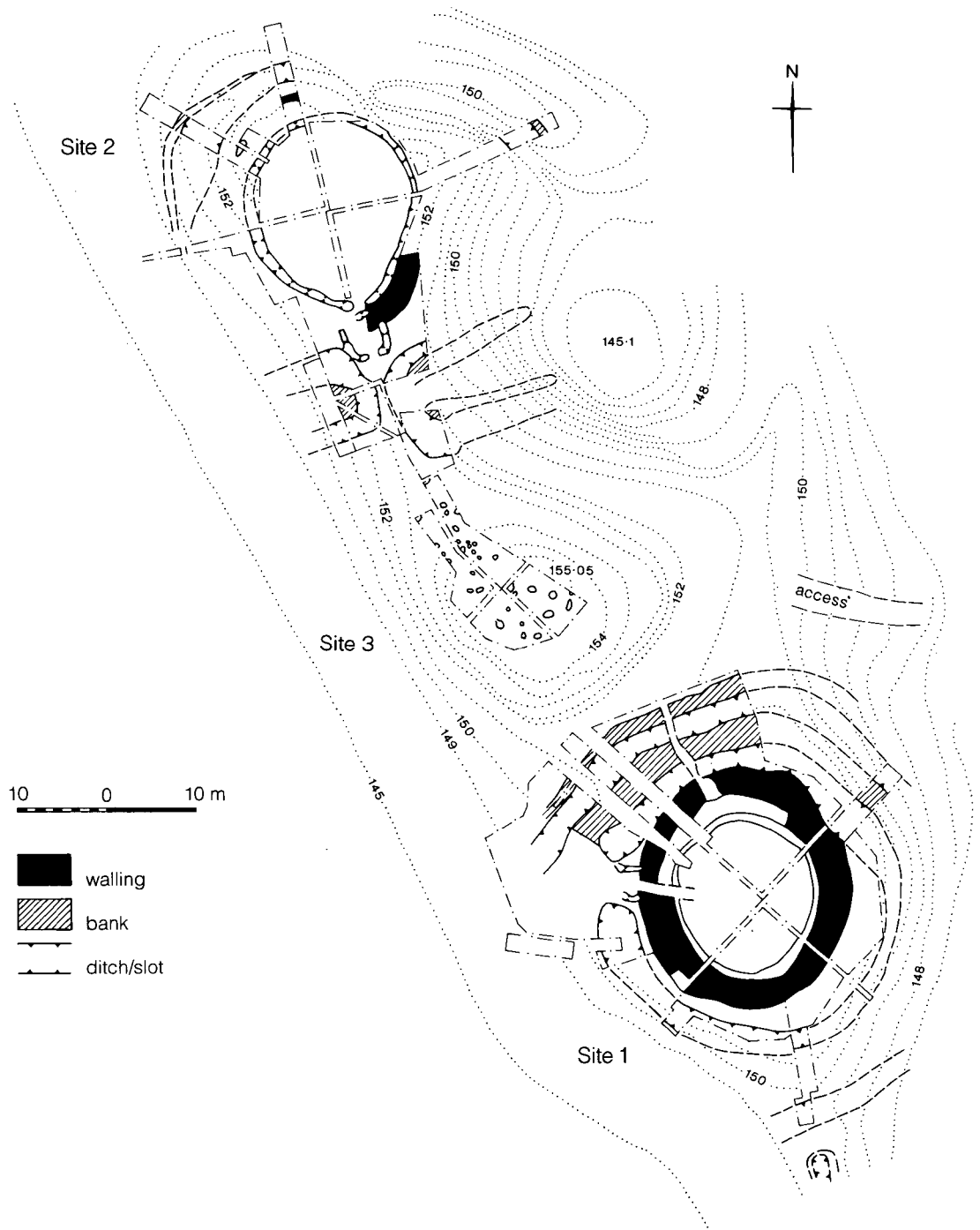
Subsequently, Watson (1913) referred to the sites as having been mentioned in the *Statistical Account*, but did not make a visit. A detailed but confused description of the southern site and its environs was published in a further guide to the area for Scouts (Dixon 1925). A photograph of the fort included in this publication shows it to have been in much the same condition as it was immediately prior to excavation. This author now described the fort as being the hunting lodge of a Pictish king, a vantage point from which horse racing could be viewed, the fields below being identified as *Dail an Aonuich* or 'the plain of the galloping horses'. (Plain of the 'fair' or 'gathering' might be an alternative.)

Childe & Graham (1943) noted the sites as being two of five not marked on Ordnance Survey maps, and published a sketch of the causeway defences of the northern site, suggesting that it might be the earlier of the two, since it appeared the more dilapidated.

In 1958 the forts and their immediate surroundings were surveyed by the Royal Commission on the Ancient and Historical Monuments of Scotland and the accompanying description (RCAHMS 1958) suggested that the northern might represent a motte, and the southern a dun



ILLUS 1 Location plans (Based on the Ordnance Survey © Crown copyright)



ILLUS 2 Aldclune: Sites 1, 2 and 3

or similar structure. The sites were surveyed at 1 : 10,000 by the Ordnance Survey in 1968. In 1970 the two sites were added to the schedule of protected sites by the Inspectorate of Ancient Monuments.

SITE LOCATION AND ARCHAEOLOGICAL BACKGROUND

The Aldclune sites were situated almost at the mid point of the stretch of the river Garry between the river Tilt and Allt Girnaig (illus 1). They occupied an elevated position on two prominences above a pocket of level, fertile ground, surrounded by upland grazing. Commanding good views along the valley, they presented highly visible features within this landscape and their substantial outworks and stone-built entrances must have appeared impressive and well defended (illus 2). Sites 1 and 2 lay 60 m apart, separated by a knoll (Site 3), which prevented them from being intervisible. Their entrances were opposed, each facing a natural approach: Site 1 looked westward, towards the level ground below; Site 2 faced a south-east route, which led from the upland area, over the central knoll. The steep nature of the surrounding terrain, together with the outworks of each site, effectively confined access to these two approaches. No other archaeological features are known in the immediate area. This may be due to differential survival above and below a head dyke upslope (Stevenson 1975), although it might be expected that other, similar, sites would exist on the glacial dumps running along the valley bottom which have not been agriculturally exploited.

In the wider surrounding area archaeological remains are restricted to the land above the 200 m contour, with the exception of cairns and a standing stone at Killiecrankie. To the north, above the 300 m contour, are a number of groups of unenclosed hut circles with associated field systems. Similar groups lie to the south of the river Garry, but more importantly a concentration of homesteads is also to be found in this area (illus 23). These stone-walled homesteads closely compare in size to the Aldclune sites and have been interpreted as the dwellings of cattle or sheep farmers. Whilst these have been extensively surveyed and plotted (Watson 1913 & 1915; Stewart 1969; Taylor 1990), only three have been excavated (Watson 1915; Taylor 1990). These may have been similar in structure and broadly contemporary with Aldclune. A single example exists at Caisteal Dubh (NMRS NN97 SW1) but another may have existed just to the north of Bridge of Tilt (*Stat Acct*, vol 2, 473). This distribution appears to reflect a real lack of these monuments to the north of the river Garry and may indicate the presence of a political or social boundary along this water.

NATURAL TOPOGRAPHY AND LANDUSE

I D Máté

The prominences occupied by Sites 1 and 2 were joined by a saddle, forming part of a 'kame terrace' which runs north/south along the eastern side of the valley of the river Garry, at c 150 m OD. To the west the ground slopes steeply to a broad terrace, some 5 m below, and then steeply again to the flood plain of the river. To the east the ground slopes more gently to meet the lower pasture. To the north and south of this ramp are two depressions, classic examples of kettle-holes as described by Read & Watson (1962, 99). The kame terrace is situated in an area of mixed farming centred on Blair Atholl but has not been interfered with by agricultural activity. It was, however, enclosed at some stage and planted with deciduous trees in the mid-18th century and again, in 1960, with pine and larch. The interior of the southern fort (Site 1) and the top of the saddle connecting the two had not been planted but was colonized by self-seeding birch.

The underlying rocks are those of the Argyll group (Easedale sub-group); Killiecrankie schist. These rocks are predominantly limestone and other calcareous stone. Lying mainly to the north of the site, the boulder clay draped on the hillsides should be calcareous as it is often clearly related to the nature of the underlying rocks (Greig 1971, 98). An examination of the soils in the kettle-holes found land snails present, indicating the calcareous nature of the tills, which were poorly drained. The soils which had developed on the fluvio-glacial gravels of the sites were freely drained iron podzols, apparently more acid and probably belong to the Corby Series and Association (as described by Glentworth 1966). Palynological analysis was not carried out since pollen would not survive in the calcareous soils and elsewhere the soils were very free draining.

THE EXCAVATION

H Moore & G Wilson
from an interim report by J Triscott

SITE 1

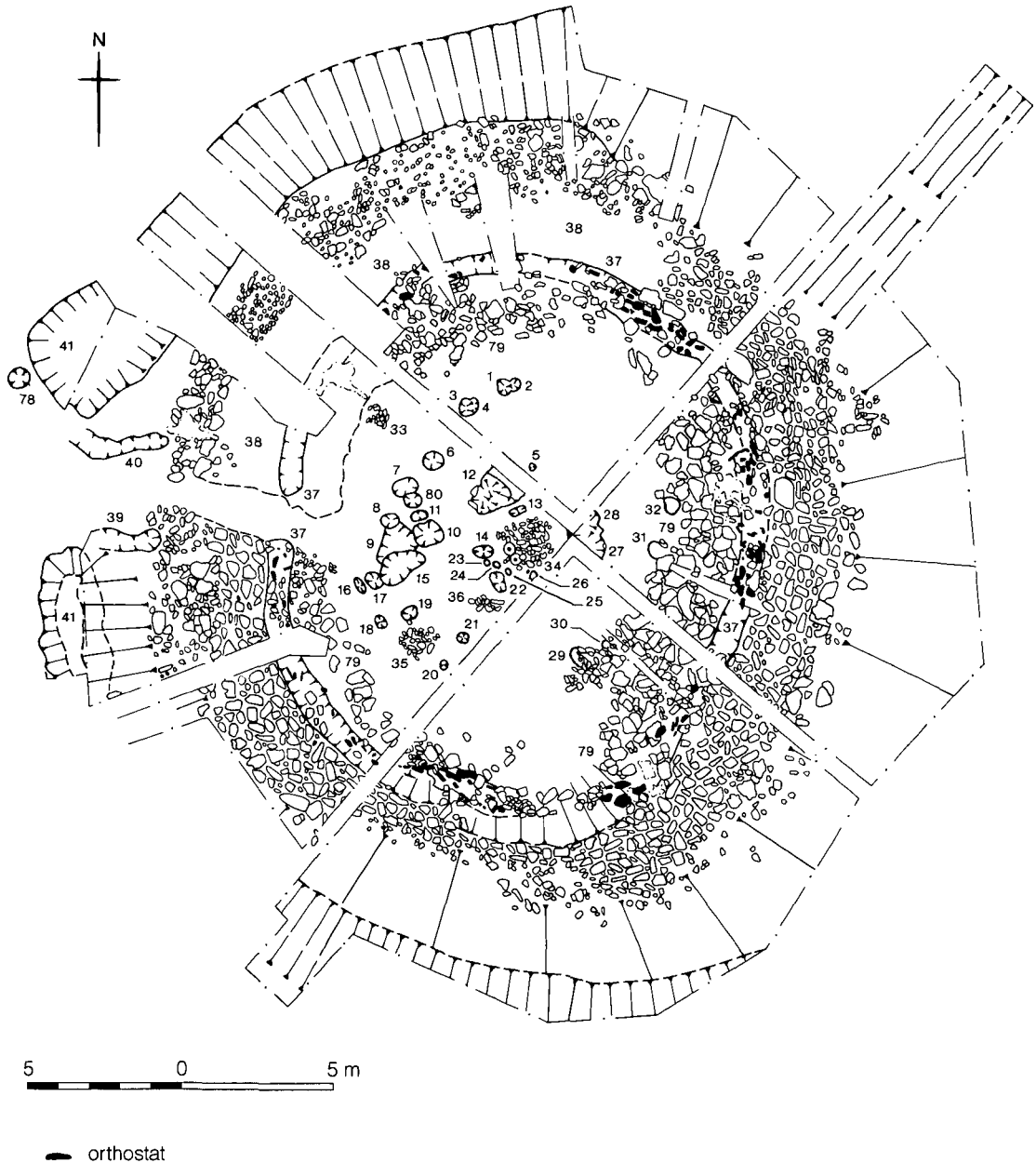
Excavation indicated two major phases of activity at Site 1. Phase 1 represents primary construction and occupation; Phase 2 saw structural refurbishment and continued occupation. After this period the site appears to have been largely abandoned, with later episodes of activity consisting of isolated and sporadic events (Phase 3).

Phase 1 (illus 3 & 6)

Site 1 covered a roughly level, sub-rectangular plateau measuring some 37.5 m from north to south and 25 m from east to west, with outer 'defences' constructed on the sloping ground below. The structure comprised an inner wall of closely set timbers (referred to in the interim report as a 'palisade', this feature appears to have also formed the main house wall), and outer stone wall, surrounded by a double series of ditches and banks. A single entrance passage on the west side gave access through the defences into the central structure. Inside, a ring of posts provided roof supports. Directly inside the entrance lay a complex of pits. Further into the structure was found a number of hearths: one central and three smaller hearths were later replaced by four peripheral hearths.

Access to the complex was gained via a pathway leading uphill from the plain to the west of the site. Outwith the central structure a series of bank and ditch defences to the north, east and west sides, combined with the natural steep slope of the hillside to the south side, restricted access to a causeway leading directly up to the outer wall of the structure. A door probably closed this gap, although no traces of any post-holes were found in this area. Having gained access through this point, a visitor could either turn left to enter the narrow corridor (38) which ran between the palisade (37) and outer wall on its northern side, or proceed directly through a door in the palisade into the interior of the structure.

Two parallel slots (39 & 40), set at a distance of 2.5 m apart, extended between the inner bank and the outer wall face. Their inner ends lay beneath the outer wall but their outer ends were not found and were thought to have eroded away. A pit (78) located on the lip of the northern inner ditch terminal may indicate, however, the original limit of the slot on this side. These slots contained stone packing for upright timbers, probably forming an entrance porch. This structure would have restricted movement into the central structure as well as preventing access between the inner ditch and outer wall face area. From the inner ditch to the palisade doorway, the surface of the entrance porch was roughly paved with thin schist slabs. Since the slots lay partly beneath the outer wall, it was suggested that some of the porch timbers had been enclosed



ILLUS 3 Site 1, Phase I

within the body of the wall and that it therefore represented a contemporary feature. A re-examination of the relationships between the outer wall and surrounding features has suggested that this may not be the case (see General Conclusion below).

The outer wall, for the greater part of its circuit, comprised a gravel core, laid over a slab base faced to the exterior with schist blocks and retained to the rear by the timbers of the palisade. On average, it survived up



ILLUS 4 Site 1, from north

to 0.4 m high and was up to 4 m wide. Outwith the entrance area, it appears to have been constructed as cladding for the timber palisade rather than as a free-standing wall. The arc of walling around the entrance, which was the most visible aspect of the structure from the approach route, was free-standing and more substantially built. On the north side of the entrance, the outer face of the wall was built on a lip cut in the top of the inner ditch and did not abut the palisade; being separated here by a corridor, 2 m in width, which extended for 18.5 m. Where it fronted the corridor, the outer wall narrowed to 1.5 m in width and was stone revetted to both front and rear. This portion of the wall was more solidly built and survived to a height of 0.8 m. The corridor terminated to the north-east side of the structure where two large schist blocks were found *in situ* against the outer face of the palisade. The ragged nature of the rear face of the outer wall at this point suggested that further large stones had been removed and that originally there may have been a structure, possibly a stairwell, built into the wall.

The ‘palisade’ was defined by a continuous penannular slot, behind the outer wall, some 0.5–0.6 m wide and up to 0.8 m deep. Stone packing extended to the base of the slot and indicated that it had held a wall of closely set vertical timbers. This structure served a dual role as defensive palisade and the main house wall which supported the roof. Two post-settings, found at the entrance terminals of the palisade slot, may have supported door posts. Packing indicated that a squared post (0.25 m wide) had been housed in the northern pit and a smaller, circular post in the southern pit.

The interior of the structure was a sub-circular area which extended for 17 m from north to south and 14 m from east to west. The natural subsoil surface inside was found to be up to 0.3 m lower than that to the

exterior of the palisade. Since at least part of the floor was paved and, therefore, less vulnerable to erosion, the difference in soil levels may testify to artificial scarping in order to produce a level floor surface.

Paving (79) abutted the internal face of the palisade. To the east of the entrance, this surface was formed by large, closely set slabs which lay directly against the packing of the palisade slot. A lower rotary quern stone (cat no 34) was incorporated in the paving in this area. Elsewhere, this surface was constructed from smaller and more loosely set stone. This paving was constructed, in the main, over sterile subsoil with only a small spread of anthropogenic material being sealed by it. This deposit lay beneath an upper rotary quernstone (cat no 23, illus 17) which had been reused as levelling for the slabbed path, and appeared to have been 'scuffed up' against the packing of the palisade. It most likely relates to activity contemporary with the construction of the palisade. A sample of charcoal from this deposit produced a radiocarbon determination of cal 340 BC–AD 220 (GU-1543, two sigma).

A **post-ring** of 17 pits (1–4, 6, 7, 16–21, 29–32 & 80) was cut into the central floor area, and arranged roughly concentric to the palisade, situated at an average distance of 3 m from it. The post-ring was incomplete, there being a break to the north-east side. One of the post-holes (6) was sealed by an upper rotary quern stone which had an enlarged hopper (cat no 21). Since this pit was replaced during the second phase, the use of the quern stone in this location may indicate the replacement of a single timber at an intermediate period.

A complex of irregularly shaped pits (8–11 & 15), cut immediately inside the entrance, appeared to have been refilled rapidly since their sides had not slumped or eroded prior to backfilling. The fill of pit 9 contained a few sherds of coarse pottery (cat no 16).

A **large hearth** (34) was situated at the centre of the structure. Roughly circular in shape, it had a diameter of 2 m and was constructed from levelled cobbles and schist slabs laid over natural gravel. An unfinished upper rotary quernstone (cat no 25), a lower rotary quernstone (cat no 37, illus 19), and a possible pivot stone (not catalogued) had been incorporated into it. To the north and east sides, the central hearth was flanked by large pits (12, 27 & 28); these were filled with soil containing burnt hearth debris but may originally have been cooking pits. Three smaller pits (13, 14 & 22) and five stake-holes (5, 23–6) located around the hearth may have supported a screen or cooking apparatus. Of the other three hearths, one (35), located to the south-east of the entrance, was the most complete. Constructed from cobbles and schist fragments laid over natural gravel, it had been partly disturbed by the insertion of a later pit (19, Phase 2). Another hearth (36) lay inside the central post-ring to the south side of the structure and consisted of two heat-damaged slabs laid over natural gravel. A tree stump obscured part of a fourth hearth (33) which was situated close to the palisade on the north side of the entrance. Limited excavation of this feature indicated that it was probably of rectangular shape and constructed from schist slabs laid over natural gravel. Unlike the other hearths ascribed to Phase 1, this was not sealed by later floor deposits and may have continued in use into the second phase of occupation.

The ditch and bank defences did not form a continuous circuit around the plateau; whereas they were well defined on the north, east and west sides, they apparently gradually faded out to the south-east, where the natural slope was greatest and artificial defences may have been deemed unnecessary.

The innermost ditch, a V-shaped cut, was adjacent to the outer wall. It was most extensive on the relatively level ground to the west side of the site, where it was up to 3 m wide and 1 m deep, but dwindled away to the south-east. It was filled with clean gravel and silt deposits which most likely represent a gradual weathering of the sides of the cut, but a quantity of stone was found in the upper fill on the north and west sides, presumably derived from collapsed material from the outer wall. A discreet spread of anthropogenic material, sealed in the base of the cut and thought to have been deposited soon after its construction produced a radiocarbon date of cal AD 70–330 (GU-4375; two sigma).

The inner bank lay to the immediate exterior of the inner ditch, where it survived to a maximum height of 0.4 m. It was constructed from rubble and gravel, presumably redeposited from the ditch, which was laid over rough slabs. The slab base sealed an old ground surface and a discreet spread of charcoal-rich soil, interpreted as relating to scrub clearance activity predating the construction of the bank. A sample of this material produced a radiocarbon date of cal AD 60–320 (GU-4372; two sigma).

The outer ditch was defined only on the northern side of the complex. It had probably originally been a V-shaped cut but appeared during excavation to be U-shaped with a deeper channel to its base. It was up to 2.9 m wide and 1.2 m deep and was filled with clean silts and gravels, suggestive of the gradual weathering away of its sides. Limited excavation at the base of the plateau to the south indicated the presence of further stretches of ditch cut across a narrow neck of land; they did not appear to be extensive. The outer bank, constructed immediately in front of the outer ditch, was found in a very diminished state, surviving to a maximum height of 0.25 m.

Phase 2 (illus 5 & 6)

The second phase of occupation in Site 1 was marked by the construction of an internal wall against the palisade. This reduced the internal area to 14 m north/south and 12.5 m east/west. Further refurbishment included the replacement of the post-ring, the recutting of pits at the entrance and the construction of four new hearths. Access to the complex remained as before; the only addition being the renewal of the stone surface immediately in front of the palisade entrance and the addition of a small pit (64) of unknown function to the east of the entrance.

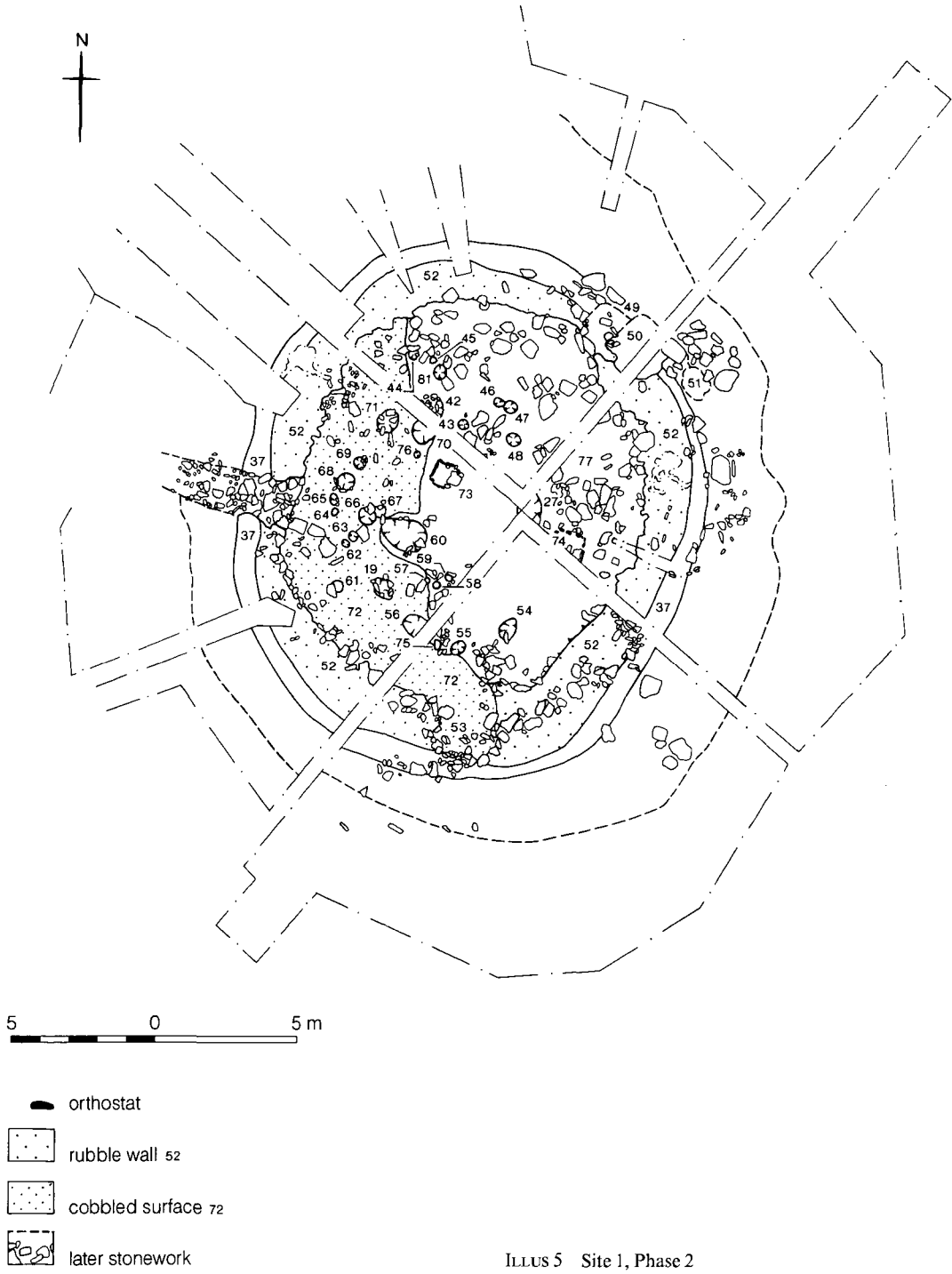
An internal wall (52) was constructed over the earlier paved surface (79, Phase 1) and was retained to the rear by the palisade. It survived to a maximum height of 0.5 m and was up to 2 m wide. The main body of the wall was formed from angular rubble with a gravel and soil matrix, however, a variation in the construction method was seen at the entrance and at several points around its circuit. The entrance terminals of the wall were formed from a core of small rounded stones with a slab facing and further discreet areas of rounded stone were found within the rubble wall elsewhere around the circuit. The portions built from rounded stones were of better construction.

New stone surfaces were laid in two areas of the interior: cobbling (72) extended along the western side and into a recess (53) in the inner wall; paving slabs (75/77) were laid on the eastern side. The primary central hearth (34, Phase 1) and its associated features had by now been sealed by a deposit of compact soil, which covered the central floor area. It was not established whether this deposit resulted from gradual accumulation or whether it had been imported as part of Phase 2 refurbishments.

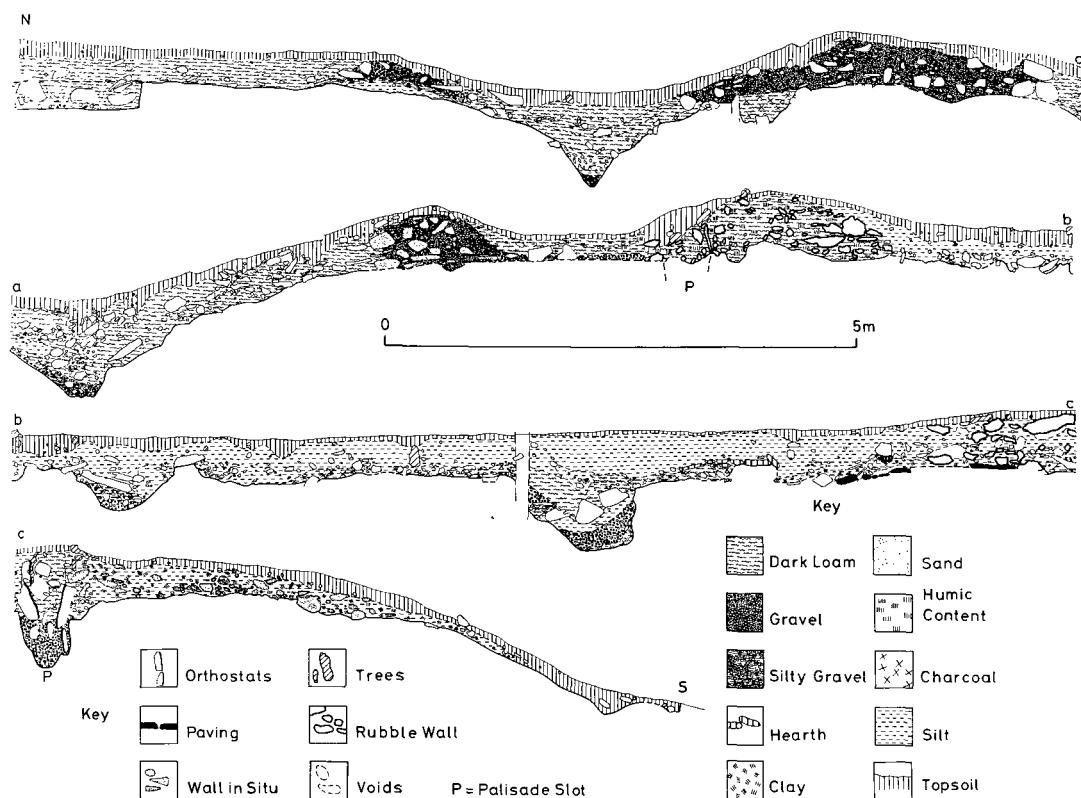
A recess (53), hollowed into the southern side of the inner wall, was revetted to the rear and to either side with roughly set stone. It partly overlay the palisade slot, indicating that by this time the palisade must have been in a state of some disrepair. The cobbled surface (72) formed the floor of this feature.

Seventeen new pits (42–4, 46–8, 54–6, 62, 63, 65, 68–71 & 81) replaced the Phase 1 post-ring, with all but one (19, Phase 1) of the original pits being abandoned and sealed beneath the earthen floor. At the entrance, two new pits (60 & 66) were cut in a similar location to the earlier complex of pits. These also appear to have been quickly backfilled. A group of three stake-holes (57, 58 & 59), cut into the floor at the western side of the interior, may have housed some form of internal furniture.

The central hearth was replaced by two off-centre rectangular hearths (73 & 74). Hearth 73 was constructed over a shallow pit (12, Phase 1) which had been backfilled with slabs. It survived in an almost complete



ILLUS 5 Site 1, Phase 2



ILLUS 6 Site 1: north/south section through outer wall and defences

condition and measured 1 m x 0.75 m. It was surrounded on three sides by a kerb formed from small orthostats and was adjoined by a shallow pit (70) and a stake-hole (76). The pit may have been used for cooking and was later filled with hearth debris. Hearth 74 overlay a soil deposit which had accumulated over the early paving (43, Phase 1), to the south-east of the earlier central hearth. It was not completely excavated since it partly underlay a baulk. Two sides of it were seen, surrounded by small orthostats; its minimum dimensions were 1 m by 1.75 m. Adjacent to it was a probable cooking pit (27), from the upper fill of which was recovered a stone spindle whorl (cat no 45, illus 20), also fragments of burnt and unburnt bone. Two other possible hearths (67, 45), indicated by small circular areas of blackened cobbles with fragments of burnt bone, were located to the north and east of the entrance area. Both were constructed over earlier features.

Phase 3 (illus 4)

Following the abandonment of the complex at the close of Phase 2, the site was not rebuilt and there is no evidence to suggest continued occupation of any duration over the ruins. Sporadic, unconnected, later activities included metalworking. A single human burial was recorded in the interior.

A **temporary shelter** was built in the interior at some period following the abandonment of the complex as a settlement. This was indicated by the construction of a rubble and soil ramp, built over the earlier defences

and entrance at a time when the outer wall and palisade were already ruinous. Finds recovered from the ramp material included burnt bone, slag (cat nos 1183, 184, 189–92) and a flint tool (cat no 118), some of which must have been re-deposited from earlier phases. The ramp led directly into the interior, which was not resurfaced. The construction of this ramp may be associated with industrial activity. This is suggested by the recovery from post-occupation soil build-up of the vast majority of metalworking debris found on the site (cat nos 155–59, 161–82). Also found in post-occupational deposits were an iron knife (cat no 8, illus 14), a strike-a-light (cat no 10, illus 14), a sherd of coarse pottery (cat no 19), a spindle whorl (cat no 44, illus 20), a small fragment of perforated shale (cat no 80, illus 20), and a few fragments of animal bone and teeth. It was not possible to date this activity, however, and no physical evidence of smelting was detected at any level of excavation.

Other finds recovered from post-occupation deposits may include later accidental losses, while some may derive from the disturbance of earlier occupation layers. A penannular brooch (cat no 1, illus 15), dated stylistically to around the ninth century AD (Stevenson 1985), came from the detritus overlying the decayed inner wall, while a quern fragment (cat no 40), two worked stones (cat no 57, illus 20 and cat no 65) and a few fragments of animal bone were recovered from deposits within the ruins of the inner wall. Post-occupation deposits produced fragments of flint and quartz, most of which were waste flakes (cat nos 97–100, 102–4, 106–8, 111, 114–17 & 121), a perforated stone (cat no 51, illus 20), a hone (cat no 59) and a fragment of a shale bracelet (cat no 79, illus 20).

An isolated burial was represented by a shallow sub-circular pit (50), cut into the inner wall, on the east side, which contained partly articulated human remains. The cut penetrated the underlying paved surface and subsoil which lay below the palisade trench, indicating that the palisade was no longer in place at this time. Further fragments of disarticulated human bone, found some 4 m to the south, indicated that the burial had been disturbed (49/51). Analysis of the bone indicated the presence of a single individual (McSweeney, below). No grave goods were found in direct association with this burial, although it may be that one or more of the items recorded as isolated finds (cat nos 1: penannular brooch, 8: iron knife, 10: strike-a-light) were originally deposited in the grave but later dispersed.

Miscellaneous other late features included two pits cut into the silted up outer ditch terminal. The fills produced a large quantity of charcoal but no evidence of burning having taken place within them. Their function and date remains unknown. Late post-occupation activity was also represented by a sherd of late medieval pottery (cat no 15) recovered from the upper fill of the palisade trench and a bronze ring brooch (cat no 2, illus 16) of 18th-century date, recovered from deposits within the ruins of the inner wall. More recently, part of the defensive banks to the north of the site had been slighted to form a low causeway over the ditches and into the depression formed over the corridor, while the outer wall and the banks had been pushed down into the ditches on the western side. That this activity was of recent origin and possibly related to forestry planting was indicated by the numerous sherds of modern crockery and fragments of saws and buckets found in association with the disturbed areas.

SITE 1: INTERPRETATION

The excavator interpreted the palisade, porch, outer wall and double series of bank and ditch defences as contemporary, primary features. This, however, bears further scrutiny. A reappraisal of the stratigraphic evidence indicates that the primary Site 1 structure comprised a wooden palisade with porch, surrounded by bank-and-ditch defences. After an interval, of unknown duration, a stone wall was added to the exterior of the palisade.

Several factors point toward the outer wall as a secondary, rather than primary, feature. Firstly, the outer wall face was built into a lip cut into the inner ditch side; the ditch profiles indicate that some erosion had already taken place prior to the insertion of the wall. This can be taken as an indication that some time had elapsed between the construction of the ditch and the construction of the wall. Secondly, it is more likely that the porch, the inner ends of whose foundation slots lay beneath the outer wall, pre-dated the wall and was superseded by it. The excavator suggested that the timbers of the porch were partly encased by the wall, but this is perhaps an unnecessarily complex resolution of the facts. Finally, the outer wall was built over the palisade trench and for most of its circuit was retained to the rear by the palisade timbers, demonstrating that it was stratigraphically of later construction. Thus, it is possible to see the wall as a secondary addition which afforded some protection to the palisade and added emphasis to the defensive character of the site.

The inner wall can confidently be interpreted as a secondary feature since it sealed occupation deposits within the interior. It was not a free-standing wall but rather a revetted stony bank built against the palisade. It would have strengthened the base of the palisade timbers and may have provided an alternative base for roof supports. There was no evidence to indicate that the inner and outer stone walls were built at the same time, although both represent secondary additions to the timber palisade, reflecting a change in building technique which is also seen on Site 2.

The paucity of silt deposits, sealed beneath a layer of stone which derived from the crumbling outer wall, was taken by the excavator to suggest that the ditches had filled at an early stage; seeing the outer wall as a primary feature, he inferred that infilling had taken place quickly, during the first phase of occupation. Thus, he concluded that the site was less fortified during the later period of occupation. With the wall viewed as a secondary, rather than primary feature, it is possible to see both wall collapse and ditch infilling as occurring at a late stage in the site's occupation, or as a post-abandonment event. The presence of the outer wall may even have stabilized the upper ground surface, thus slowing the infilling of the inner ditch. In any event, it is arguable that the ditches remained a prominent part of the site at least until its abandonment.

The Phase 1 structure was originally reconstructed by the excavator as partly roofed; this envisaged a group of buildings, up to 4 m in depth, encircling an open central courtyard. A single entirely roofed structure was rejected on the grounds that the internal ring of post-holes was not complete and that not all of the post-holes were situated at the same distance from the palisade. In addition, the excavator felt that a complete roof would not have been viable, given the exposed hilltop location. In this reconstruction, the insertion of an internal wall in Phase 2 signalled major structural reorganization. The purported peripheral buildings would now have been almost completely obscured by the new internal wall. To account for this, the excavator argued that the building was now entirely roofed; the roof being supported by the central post-ring and 'buttresses' within the internal wall.

It is now argued that the interior functioned as a single space and was entirely roofed, as evidenced by the presence of a central hearth, lack of any structural divisions in the interior, or differentiation in the survival of deposits between central and peripheral areas. The post-ring was at least three-quarters complete and, although not totally concentric to the palisade, was sufficiently regular to constitute the central roof support. With the eaves resting initially upon the palisade, and possibly later upon the inner wall, this roof could have covered the entire structure. The replacement of posts, which maintained the original arrangement even after the insertion of the inner wall, argues for the continuity of a complete roof, rather than a major reorganization, as suggested by the excavator.

SITE 2

Two main phases of activity appear to have taken place at Site 2: primary construction and occupation, followed by structural refurbishment and continued occupation.

Phase 1 (illus 7 & 9)

The central structure at Site 2 was situated on a sub-circular plateau which measured some 32 m north/south and 20 m east/west. The plateau was surrounded on three sides by steep slopes; on the more gradual slope to the southern side a series of banks and ditches defended the entrance. The structure comprised a timber wall (referred to as a palisade although it also functioned as the main house wall), an outer stone wall and an entrance porch. A ring of posts, with a further arc of posts inside, provided central roof supports. The interior was paved in the vicinity of the entrance while two shallow depressions in the floor surface abutted the palisade on the north and west sides. One central and two peripheral hearths were later replaced by four peripheral hearths.

The entrance was in the south, where a series of banks and ditches defined a narrow causeway leading to a porch set into the outer wall. To the eastern side of the causeway two linear banks were constructed from rubble and gravel over a roughly slabbed base. The banks were up to 2 m wide and were situated 2.5 m apart, gradually splaying further apart as they ran east, downslope towards a kettlehole. A continuous ditch surrounded the banks, curving around their western terminals. The ditch, which varied in width from 2 m to 4 m, was a U-shaped cut up to 1.5 m deep. A similar bank and ditch arrangement to the western side was situated 6 m further to the north and comprised a single 4 m wide bank, again surrounded on three sides by a substantial ditch cut. The ditches were filled with natural deposits of silt and gravel, consistent with the gradual erosion of their sides. Outwith the entrance area, excavation was limited but served to indicate that further, less substantial and probably discontinuous ditches had been cut to the north-west and east sides of the complex.

Where it ran between the bank and ditch defences, the causeway was 1–1.5 m wide and extended for 10 m. At the northern end, the causeway led to a timber entrance porch, founded in two L-shaped slots. The western slot (136) contained stone packing but the eastern slot (135) appeared to have been deliberately slighted and none of its original packing survived. The northern terminal of the eastern slot continued beneath the outer wall. The western slot terminated at a distance of some 2.5 m from the palisade. The floor of the porch was roughly paved with schist slabs (133) which incorporated two upper rotary quern fragment (cat nos 29 & 31) and a cup marked stone (cat no 73).

The outer wall (132), identified as a Phase 1 structure by the excavator, survived only on the east side of the entrance. Here it stood to a maximum height of 1.5 m and up to 3 m wide and comprised an inner and outer face of large schist blocks with a rubble core between. Excavation indicated that the wall continued in this form eastward for up to 6 m before degenerating into a low gravel embankment. It remains unclear whether or not the wall ever formed a complete circuit around the palisade, and, as with Site 1, it appears to have formed an impressive entrance façade rather than an integral part of the structure. Wall remnants were indicated by a quantity of rubble to the west side of the hilltop, found in an exploratory trench, and a 2 m wide area of rough slabbing to the north and east, from which an iron spear head (cat no 7, illus 14) was recovered. No traces were found to the north-west side or at the west side of the entrance.

A palisade slot at the inner side of the wall, packed with stone, indicated a substantial wall of vertical timbers. This structure, in common with that found at Site 1, appears to have functioned as both palisade and main house wall. The slot was 0.8 m wide and deep and was cut slightly below the break in slope, possibly to



ILLUS 7 Site 2, Phase 1

maximize the level ground area available for the internal floor area. This rendered the cut more vulnerable to erosion, as was seen on the north and north-eastern part of its circuit, where scant traces of it survived. A massive slab, found adjacent to the slot on the north-west side, may have been positioned to protect the palisade from erosion. The palisade entrance, on the south, was 1.5 m wide. Packing indicated that the western terminal held a squared timber 0.3 m in diameter, and the eastern terminal a circular timber of 0.2 m diameter. A linear slot (138) ran in front of the palisade entrance and a pit (134), which may have held a door post, lay adjacent to the western palisade terminal. A sample of carbonized wood found in the vicinity of this pit produced a radiocarbon determination of cal 100 BC–AD 150 (GU-1545; two sigma).

A paved area (133) inside the entrance abutted the inner face of the palisade to the east and may have originally extended across to the western side where a remnant stone surface (171) was found beneath a later

wall. A charcoal-rich deposit sealed beneath the primary paving returned a radiocarbon determination of cal 200 BC–AD 50 (GU-4373; two sigma). Deposits which built up over the eastern paved area were sealed by a further layer of paving during the first phase of occupation and later by an internal wall. A broken upper rotary quernstone (cat no 24, illus 18) was recovered from the secondary paving. A sample of the underlying deposit returned a radiocarbon determination of cal 330 BC–AD 70 (GU-1544; two sigma), which may be regarded as a *terminus ante quem* for the primary phase of occupation.

A **post-ring** towards the centre of the interior was (103, 104, 119–22, 127, 128 & 129) was arranged concentrically with the northern arc of the palisade. A perforated stone disc (cat no 47, illus 20) was recovered from the fill of pit 119; the others contained small quantities of burnt bone, slag (cat no 186, pit 120) and flint (cat no 113, pit 112). Within the post-ring, a further six pits (101, 102, 112, 113, 115 & 117) were arranged in an arc and may also have held roof supports, although this arrangement appears to have been partly abandoned during the first phase of occupation when two of the pits (112 & 113) were covered by a hearth (172).

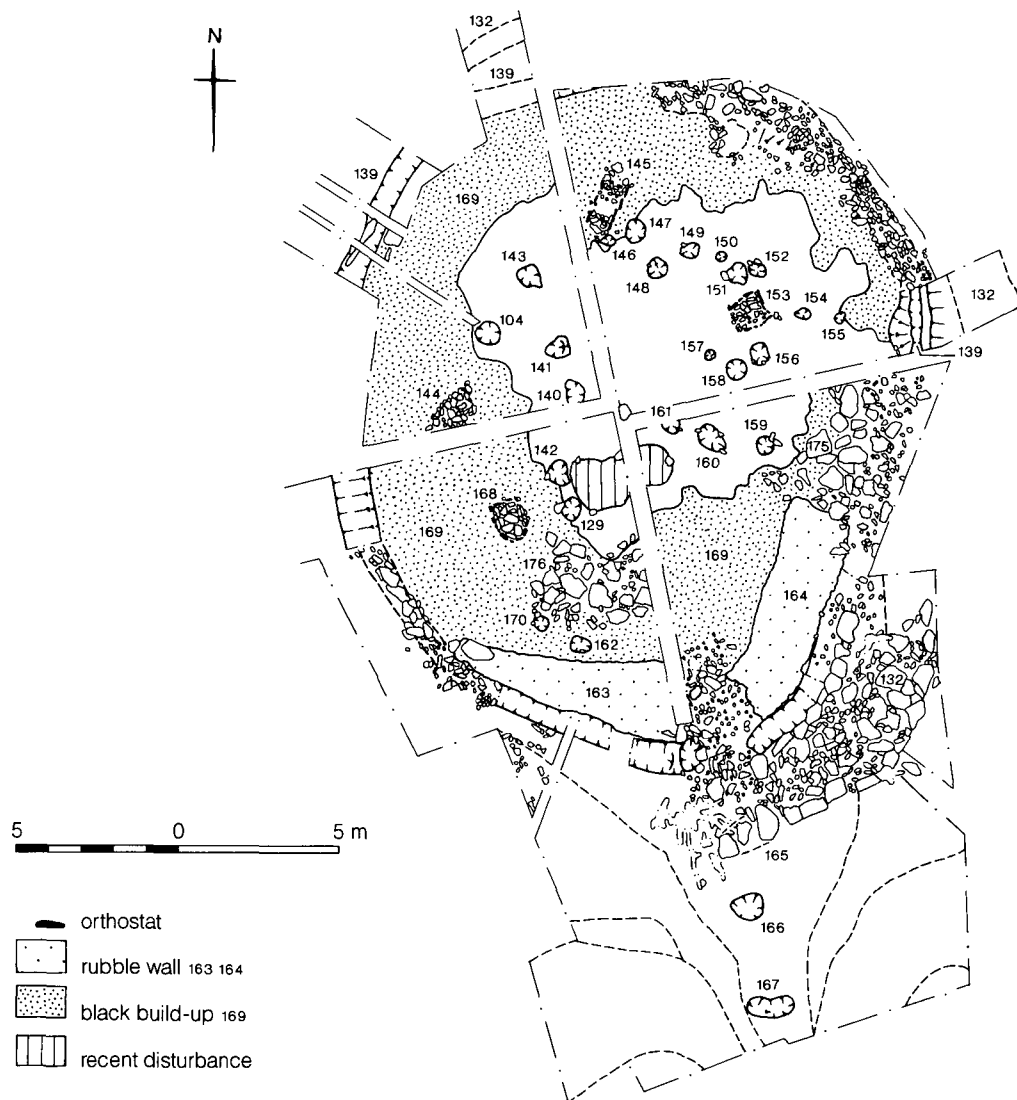
The floor level against the internal face of the palisade had been artificially lowered on the north and west sides of the interior, producing two dished depressions in the underlying natural gravel. The northern depression (3 m wide by 13 m long) contained a deposit consisting of scorched or burnt clay and carbonized twigs. A sample of this material returned a radiocarbon determination of cal 350 BC–AD 80 (GU-4374; two sigma). A fragment of a rotary quern stone (cat no 39) and a perforated stone (cat no 50) were recovered from the floor surface. A hearth (107) lay to the centre of the area, surrounded by two pits (109 & 110) which may have been used for cooking or housing cooking apparatus. The western depression, which was not fully excavated, consisted of a U-shaped cut 4 m in width and 10 m in length. Midway along its length it diverged from the line of the palisade, terminating in a butt-end to the south. A deposit of burnt clay and carbonized twigs was found to the northern end and a pit (105) had been cut into the north-western lip of this area.

A **central hearth** (111) was constructed from roughly laid schist slabs. Three pits adjacent to this hearth (100, 114 & 116) appear to have been associated with its use. It was replaced during the first phase of occupation by a sunken hearth with surrounding stone kerb (172), which also sealed two pits of the central post arc and pit 114. The secondary hearth was filled with an ashy deposit containing burnt bone and was finally covered with large stones prior to abandonment. It did not continue in use beyond the first phase, being sealed by later floor deposits. A third hearth (118) lay to the eastern side of the interior, just beyond the line of the post-ring; it was constructed from flat slabs.

Phase 2 (illus 8 & 9)

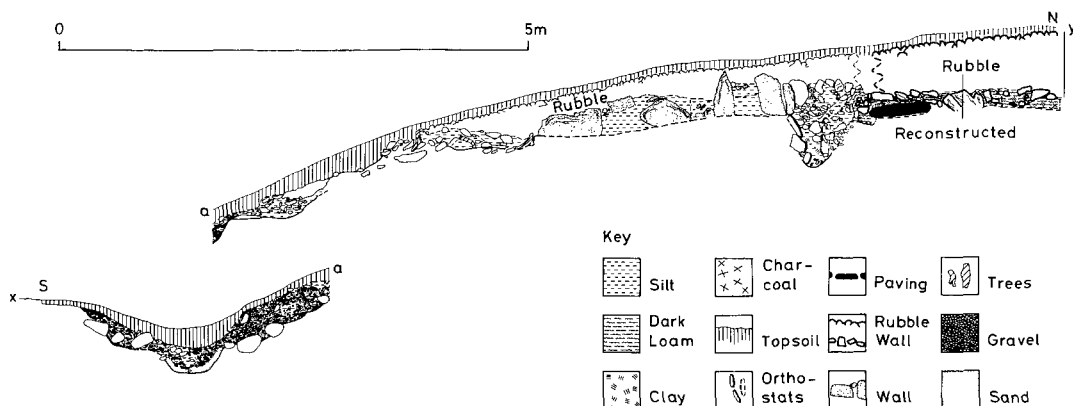
Secondary refurbishments within the structure include the construction of an inner wall at the entrance (163 & 164), the replacement of hearths and pits, the insertion of new paved surfaces and alterations to the entrance passage.

Outwith the entrance, a linear slot (167) was cut at the upper end of the causeway, at a distance of 4.5 m from the outer wall. It ran for 1.5 m, leaving an access gap c. 0.5 m. This slot was filled with stone packing and appears to have held upright timbers. A large pit (166) of unknown function lay between the slot and the secondary porch wall. The timber porch was now replaced by a short narrow wall (165), erected in front of the palisade entrance. It abutted the outer face of the western outer wall terminal and ran westward for 1.4 m forming an L-shaped entrance passage.



ILLUS 8 Site 2, Phase 2

Arcs of walling were built at either side of the entrance, at the inner face of the palisade. The new wall at the east side was 6 m long and 2 m wide and was constructed from small rounded stones, retained to the rear by the palisade timbers. It sealed a deposit containing burnt clay and charcoal, which in turn sealed an earlier paved surface (133, Phase 1). Although it survived in a very depleted state, this structure is unlikely to have ever formed more than a low embankment, considering the nature of the materials used in its construction. A polishing stone (cat no 68), a cup-marked stone (cat no 77) and nine sherds of coarse pottery (cat no 18) were recovered from the body of this wall. In a similar position on the western side of the entrance a new wall (163), was constructed from schist blocks and horizontally laid slabs over a span of 7.25 m. The entrance terminal was constructed from rounded boulders and was 2.5 m wide; beyond this point the wall narrowed to a minimum width of 0.75 m at its western extremity. A lower rotary quern stone (cat no 33) was recovered from the fabric of the wall and a sherd of samian pottery (cat no 14) was found within the



ILLUS 9 Site 2: main north/south section

entrance terminal, although this may represent a later intrusion given the loosely constructed nature of the terminal. A pit (173) located adjacent to this terminal may have housed a post for a door.

The post-ring was replaced by a new series of pits. Only two of the original pits (104 & 129, Phase 1) appear to have remained in use, while new ones (143 & 159) were direct replacements for earlier pits (103 & 127, Phase 1). Together with a series of 16 new pits (104, 129, 140–2, 146–52, 156 & 158), these formed a tightly spaced post ring of central roof supports. The fill of pit 146 contained a stone hone (cat no 61), and pit 147 contained slag (cat no 187).

A paved surface was laid at the entrance. A broken perforated stone (cat no 52), an unfinished perforated stone (cat no 54) and a cup-marked stone (cat no 74), possibly associated with a door in the palisade, were recovered from this surface. Further, discreet paved surfaces to the east (175) and west (174) of the interior sealed deposits containing charcoal and burnt clay. Two pits of unknown function (162 & 170), were located between the western paved area and the inner wall. Outwith these paved areas, the secondary floor surface consisted of a compacted soil layer which sealed the primary hearths and pits. Numerous finds, particularly of metal, were recovered from this surface, including a small bronze boss (cat no 3, illus 16), a fragment of bronze sheet (cat no 5), an iron ring (cat no 11, illus 14), an iron blade fragment (cat no 12, illus 14), an upper rotary quern stone (cat no 36, illus 19) and a lump of slag (cat no 188). The depressed floor areas were now levelled out with deposits containing frequent charcoal and burnt bone, possibly derived from domestic refuse.

Four new hearths were constructed to the periphery of the central floor area. To the north-east, hearth 153 had a sunken slab-lined base and a reverted kerb. It sealed an earlier pit (120, Phase 1). Several small burnt bone fragments were recovered from the base, while a rubbing stone (cat no 63) had been reused in the kerb. Over the filled in northern depression, a hearth (145) was constructed from flat slabs and had a reverted kerb. To the west of the entrance, hearth 168 had a slab-lined base and kerb of small orthostats. Unlike the other hearths of this phase, this had a rounded end. A discreet area of heat damaged stone (144), which lay to the west, may also have been used as a hearth.

SITE 2: INTERPRETATION

As originally interpreted, by the excavator, Site 2 saw two phases of activity: a palisade, outer wall, porch and defences were erected in the first phase; later, an internal wall was built and the

timber entrance porch was replaced by a stretch of walling. In both phases the structure was thought to have been partly roofed with a range of buildings centred on an open forecourt. These interpretations are disputed, however, since it is by no means apparent that the outer wall, palisade and defences were contemporary, that an outer wall ever existed on the west side of the entrance or that the two internal walls were constructed at the same time.

In the first instance, the timber porch and outer wall could not have been contemporary. The eastern porch foundation slot, sealed beneath the outer wall, had been slighted and its packing had been removed. These alterations could only have occurred prior to the construction of the wall. It is concluded, therefore, that the primary phase entrance comprised a timber porch and palisade and that the outer wall was a secondary construction.

The existence of an outer wall to the west side of the entrance is also disputed. The excavator suggested that this wall stood in the 2.5 m wide gap situated between the palisade and the end of the porch slot. No traces of this wall were ever found during excavation. It was argued that the wall may have completely eroded away, but this seems unlikely given that traces of walling were found to the north and east sides of the hilltop, where erosion was at least as severe. Following the construction of the outer wall, a short stretch of additional walling was built in front of the entrance. This barrier blocked direct access into the building, forming a corner turn on the west side of the entrance. Had a wall ever existed to the west side of the entrance, as originally suggested, it could not have functioned at the same time as this new barrier, since the combination of the two walls would have entirely blocked off the entrance.

Two stretches of walling to the inside of the entrance were previously seen as secondary constructions of contemporary build. The wall to the east of the entrance was poorly built and sealed a substantial build-up of occupation deposits and a paved surface; the western internal wall was more solidly built, covering a thin occupation deposit. This disparity is now taken to indicate that they may not, in fact, be contemporary but consecutive, with the western wall being earlier. It is worthy of note that immediately behind, and following the curve of this wall, a depressed floor area was located. Under the original interpretation, the depression was thought to have been completely filled in prior to the construction of the wall and the close contiguity of wall and depression was seen as merely coincidental. It is now suggested that the western internal wall and depression were in fact contemporary, although not necessarily primary, and that both pre-dated the construction of the eastern internal wall.

If the external eastern wall and internal western wall were contemporary, the entrance would have comprised two offset wallheads, producing an elongated entrance passage. This pattern may be mirrored in the arrangement of the ditches which also display offset terminals (illus 2).

Contrary to the original hypothesis, it is argued here that Site 2 was wholly roofed. The incomplete and unevenly spaced nature of the central post-hole ring caused the excavator to doubt whether a complete roof would have been possible and thence to postulate that there had been an open paved forecourt area with a range of roofed buildings to its rear. As in Site 1, the central post-ring, while not complete, is now considered sufficient to have supported a roof over the entire structure. In addition, features such as the central hearth, depressed floor areas and paved surfaces more likely reflect subdivision of space within a single structure.

The central ring of posts was replaced during the occupation of the site, indicating a continuity in form. An arc of post-holes, situated inside the central ring, appears to have functioned for a limited period only; the pits were backfilled prior to the deposition of the later floor surface and one pit was sealed by an early hearth. These posts may have added support to

the roof, which had to span an elliptical rather than circular area, or alternatively, may have housed scaffolds, used in the construction of the roof.

As with Site 1, the roof probably rested on the palisade. The depressed floor areas to the north and west of the interior appear to have been cut rather than worn into the natural ground surface, presumably to provide more space beneath the eaves of the building. These areas must have been in regular use, since a hearth was constructed in the base of the northern depression. The fills within both depressions contained frequent deposits of burnt clay and carbonized wood, possibly derived from wattle and daub screening. Further internal screening may have existed around the paved area to the south of the interior, where similar burnt deposits were found. This may indicate that the structure was divided into a central space with screened off peripheral zones.

In summary, the revised sequence at Site 2 starts with a roofed structure comprising a wooden palisade, central ring of roof supports and a porch. Depressions in the floor, to the periphery of the building, indicate areas of concentrated activity and suggest that the building may have had internal subdivisions. After an interval, of unknown duration, the central post-ring was replaced and the entrance was modified by the addition of a wall to the eastern side of the exterior, and another to the western side of the interior. An apparent similarity in the arrangement of the ditches suggests that these were designed to complement the modified entrance and were, therefore, also secondary features. The floor depressions, inside the building, probably remained in use for some time after these modifications. At a later stage, by which time the floor depressions had been filled with debris, a crudely built wall was added on the eastern side of the interior.

SITE 3 (ILLUS 10)

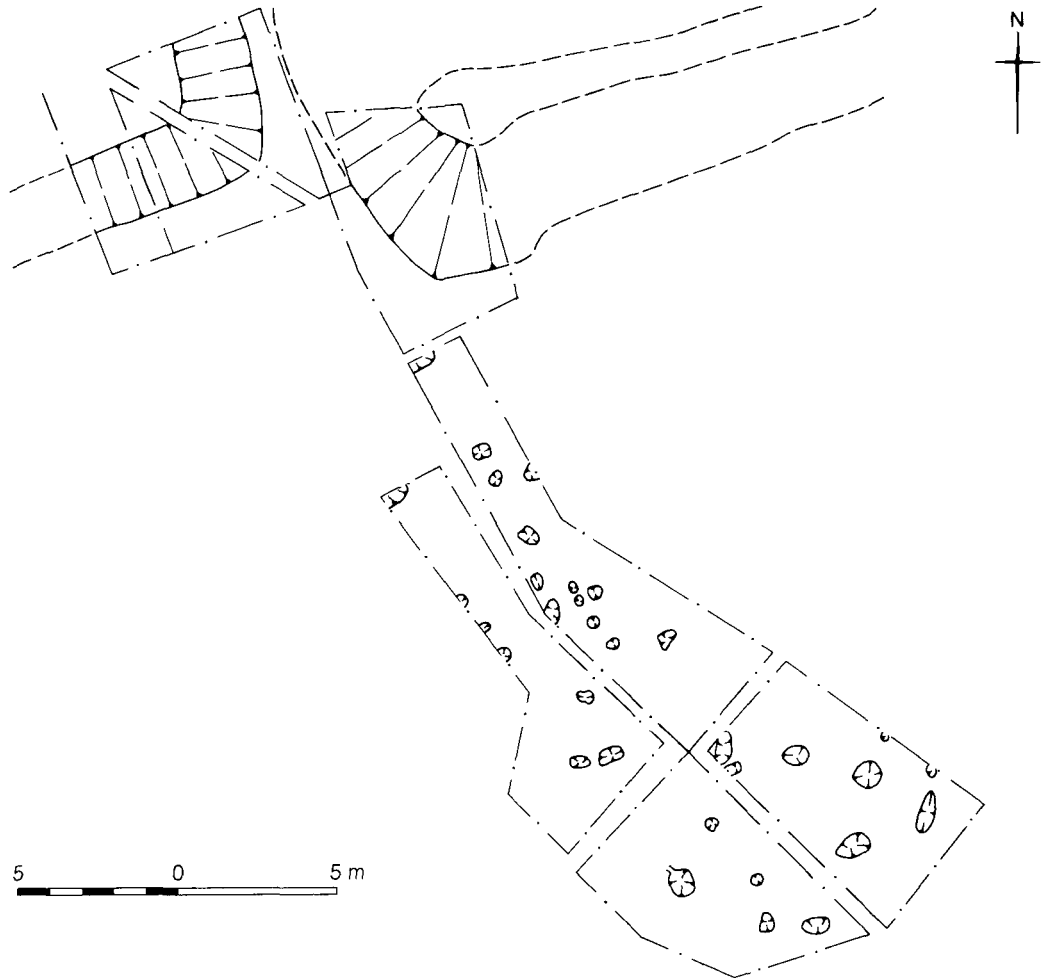
This was located on a knoll of high ground between Sites 1 and 2. Excavation in this area revealed a rough stony subsoil, probably formed by glacial activity, and several shallow pits, concentrated to the highest point of the knoll, with two discrete alignments leading towards the outer ditch of Site 2. All were filled with loose humic soil of apparently recent origin. The function of these pits remains unclear; they may have held small stones or timber posts, although no trace of stone packing survived.

Sites 1 and 2 were not intervisible, but could both be seen from Site 3, and the access route to Site 2 crossed through the centre of this area. It is inferred that such a strategic position may have been used as a look-out post between the sites and possibly as a check, guarding the access to Site 2.

SITES 1 & 2: GENERAL CONCLUSIONS

In reappraising the two sites with the advantage of a series of new dates, it is possible to look afresh at their development and interrelationships. The dating evidence points to the primary phase on Site 2 being earlier than Site 1, although their occupation may have overlapped. The alternative phasing and reconstructions given above (illus 12 & 13) point to both sites having had a more protracted sequence than was originally envisaged. Site 2, the earlier of the two sites, appears to have been altered more frequently and developed more organically than Site 1.

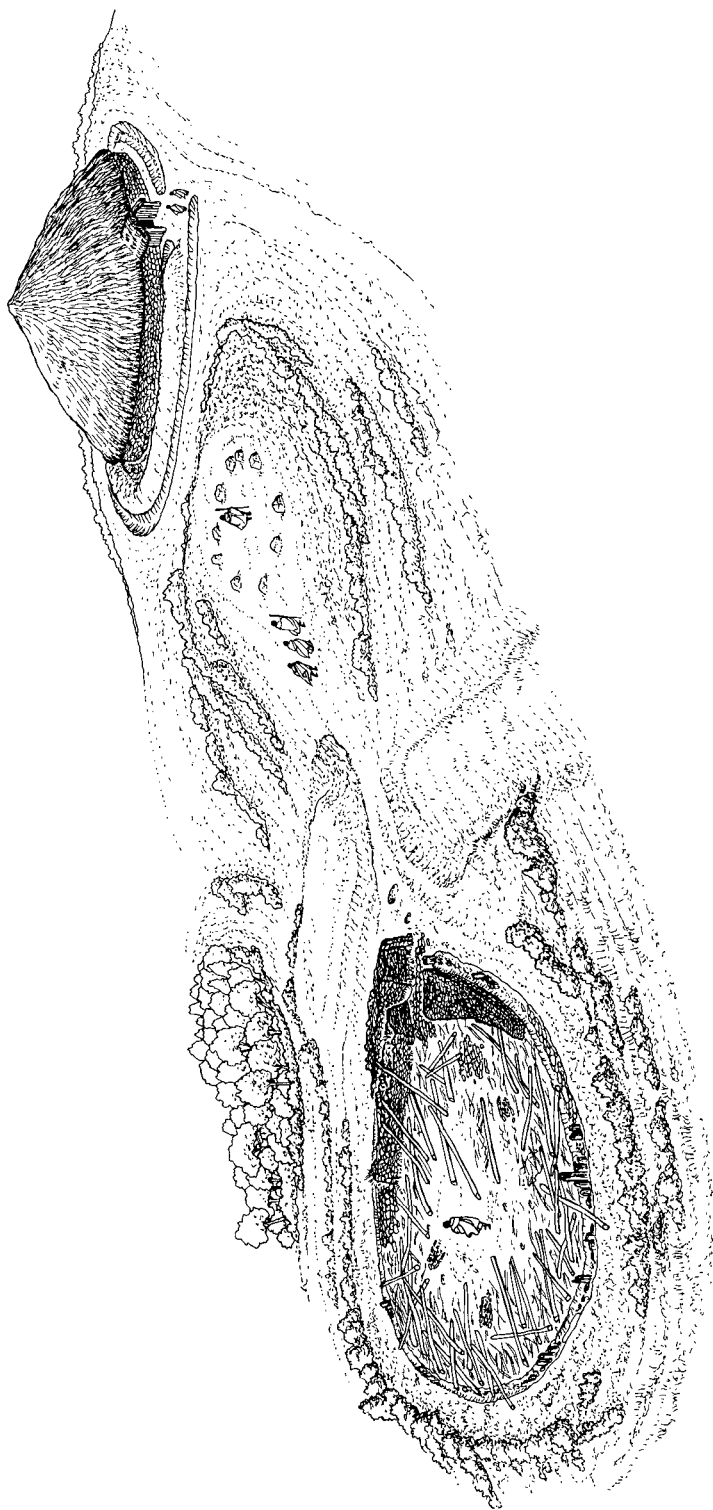
The two sites exhibit many structural similarities, though some of the early features of Site 2 were not copied on Site 1. The lack of an additional arc of posts within the central post-ring and the absence of the depressed floor areas suggests that the roof design of the later site was slightly different and possibly higher. Whereas the palisade at Site 2 was cut into the break in slope, its



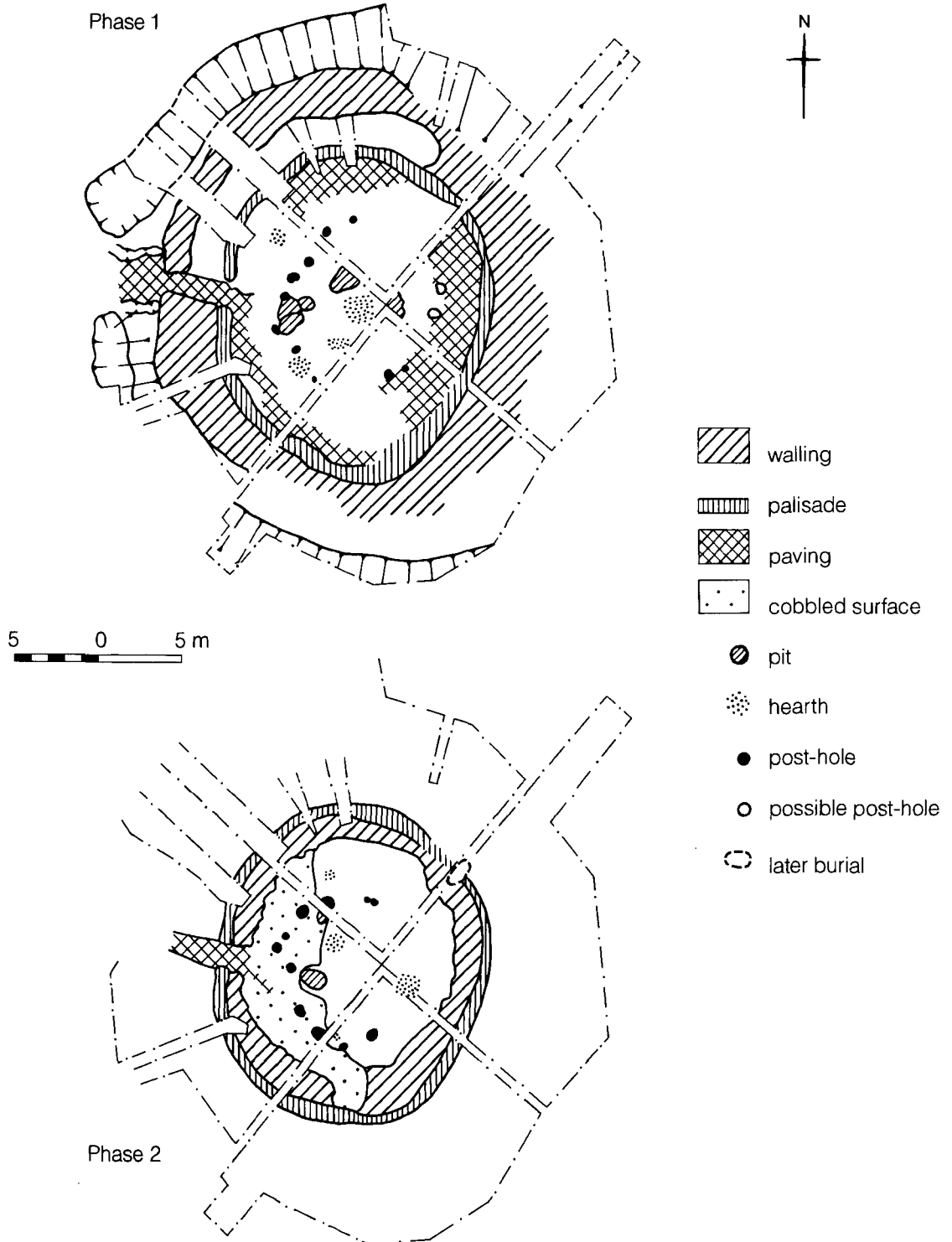
ILLUS 10 Site 3 (showing part of the outer defences of Site 2)

counterpart on Site 1 was located on level ground, making it less vulnerable to erosion. The outer banks and ditches, a primary feature at Site 1, appear to have been secondary additions at Site 2. The outworks and external wall at the earlier site were never as extensive as those on Site 1.

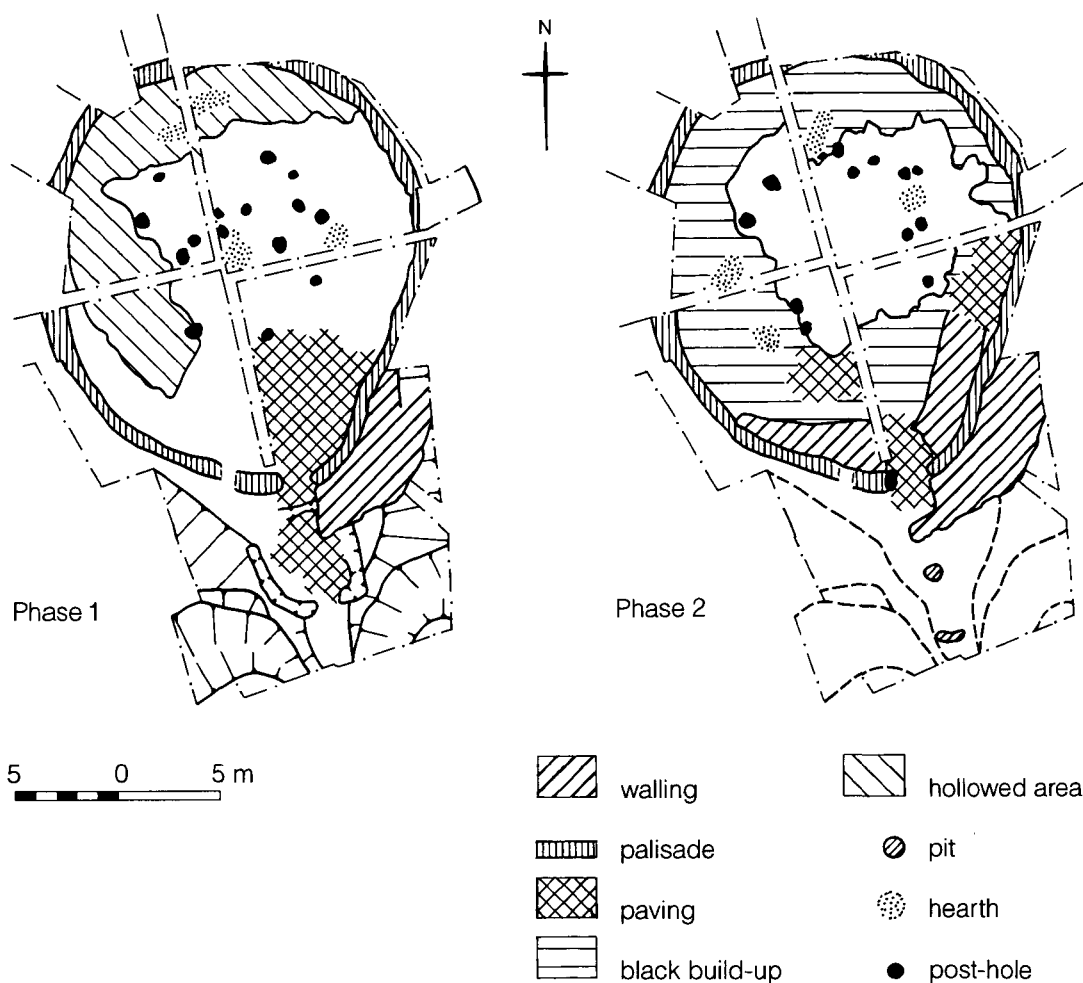
That the palisade forms a major structural feature on both sites is indicative of a shared building tradition. The addition of defences and an outer wall at Site 2 points to an increasing desire for fortification or at least aggrandizement. While the area covered by Site 1 and its outworks was far greater than that of Site 2, the interior was actually slightly smaller. The effort put into the construction of the later site suggests that it was planned from the outset to appear as an impressive fortification, when viewed from outside. The addition of walling at both sites reflects a trend towards the use of stone: by its latter stage, the palisade at Site 1 was almost completely encased in stone.



ILLUS 11 Reconstruction drawing of the Aldclune sites viewed from the north-west: Site 2 abandoned (foreground), Site 1 at Phase 2 stage (background)



ILLUS 12 Site 1 phasing, simplified



ILLUS 13 Site 2 phasing, simplified

SPECIALIST REPORTS

CHARCOAL IDENTIFICATION

R McCullagh

When first commissioned, in 1981, the analysis of the charcoal was designed to produce a list of samples that could be submitted as radiocarbon date sources. A total of 21 samples were examined, but only three satisfied the then minimum weight criterion of 50 g. The postponed publication of the site report has allowed a review of this earlier work with the intention of obtaining a more extensive radiocarbon chronology for the site. The remaining samples have been examined and, where possible, the charcoal has been identified to species.

Method All samples were processed using a simple flotation array to remove the mineral soil and hand sorted to remove any modern vegetation debris. The floated fraction was screened through 1 mm and 300

micron sieves and 25% sub-samples were examined from both sieved fractions. The specimens were examined using a stereo microscope, adapted to provide a magnification of $\times 80$. The samples were identified according to Schweingruber's key (1982) and identifications were checked against AOC (Scotland) Ltd's wood thin-section reference collection.

Results A total of five species was present to varying degree in the sample assemblage. None of these was exotic to Scotland and as the site was located at the edge of the flood plain within a relatively sheltered glen, it is probable that all were present within the locality. No deductions can be drawn from either the species list or from their relative abundance that would assist the reconstruction of an exploitation strategy for the site. Nor can any meaningful ecological inferences be drawn.

In general the charcoal came mostly from small (<10 mm) diameter and medium (10–50 mm) diameter roundwood, but a few exceptional cases indicated more substantial timber had been burnt. The assemblage was too fragmented to attempt any identification of converted timber, with only small diameter roundwood being identified with any surety. However that fragmentation, which was demonstrably not entirely the result of the sample processing, did indicate that almost all of the samples had experienced little post-depositional disturbance. The pieces of charcoal were, in general, unabraded.

The charcoal was examined for any evidence that might suggest that the dating sequence was affected by 'old wood', that is charcoal derived from wood or timber which was already ancient when burnt or was derived from the inner wood of ancient trees. None of the dated samples represents very mature wood and there is no indication of any sources of an 'old wood' effect. The dates, therefore, ought to be accepted at face value.

Other forms of carbonized macroplant remains were rare. No pre-processing scanning was undertaken but as, in general, the finest fraction of each sample contained only highly comminuted wood charcoal, this absence of weed seeds is unlikely to be an artefact of the sample treatment. It may, however, have resulted from the on-site sample collection which was not routine.

RADIOCARBON DATES

P J Ashmore

Seven samples were dated from contexts in two sites at Aldclune. The three samples with numbers GU-1543–5 have previously been circulated without corrections for $\delta^{13}C$. The figures in Table 1 incorporate those corrections.

There are question marks attached to the taphonomy of all the samples from Aldclune (Waterbolk 1983). For instance, what were the circumstances in which a thick soil spread with abundant fresh charcoal (see GU-4372) was placed over the old ground surface and immediately under the medial bank on Site 1? Was the charcoal perhaps from clearance of the site? Or was it shovelled up within a pre-existing soil and charcoal layer? Even if the charcoal was old at the time of deposition, it provides a *terminus post quem* for settlement on Site 1. Site 1 is almost certainly truly later than Site 2, so if there is a true difference between the dates of the two sites any extra age in this sample will not exaggerate that difference.

Interpretation

The archaeological relationship between the dates is probably too loosely defined for Bayesian procedures like those used by Buck *et al* (1992) at Danebury to add much information. The rules advocated by Ward & Wilson (1978), supplemented but not superseded by those of Waterbolk (1971; 1983), provide the most reliable guidelines for combining and comparing dates. Long & Rippeteau (1974) recommended systematic removal of extreme dates from statistically incoherent

TABLE 1:
Radiocarbon dates (yrs BP)

Lab code	Context/sample material	yrs BP	$\delta^{13}\text{C}$ ‰
GU-1543	From site 1, angular fragments of medium diameter <i>Corylus</i> in material recovered from beneath Phase 1 paving in the entrance area.	2020 \pm 90	-26.4
GU-1544	From site 2, angular fragments of small round-wood <i>Salix</i> in material associated with Phase 1 collapse, sealed beneath later walling S16 and lying on paving XBE.	2075 \pm 60	-25.6
GU-1545	From site 2, angular fragments of medium diameter <i>Salix</i> from material on the top of Phase 1 paving in the entrance area.	1975 \pm 60	-25.9
GU-4372	From site 1, angular cleanly broken unabraded fragments of small round-wood <i>Betula</i> , <i>Quercus</i> and <i>Salix</i> in a thick continuous spread of soil over an old ground surface and underlying a platform of schist slabs at the base of the medial bank (F1).	1870 \pm 50	-25.9
GU-4373	From site 2, angular fragments of c 5 cm diameter <i>Quercus</i> without any of those characteristics one might expect were it from the heartwood of a tree more than 30 cm in diameter, from a deposit of burnt clay sealed beneath Phase 1 paving near the entrance.	2080 \pm 50	-24.9
GU-4374	From site 2, angular fragments of small round-wood <i>Salix</i> with burnt clay associated with a phase of collapse or destruction within one of the hollows on the north part of the interior associated with Phase 1.	2080 \pm 70	-26.1
GU-4375	From site 1, Charcoal rich lens containing angular fragments of small to medium diameter <i>Alnus</i> , <i>Corylus</i> , <i>Quercus</i> and <i>Salix</i> , forming a primary fill of the northern terminal of the inner ditch.	1850 \pm 50	-25.9

groups (such as all seven dates taken together; see hypothesis 3 below) until the remaining dates form a statistically coherent group. Their procedure is useful in showing up those dates which do not go with the rest, but all too often archaeologists (though this is no fault of Long & Rippeteau), seem to interpret the residual group of dates as corresponding to a tightly packed group of events. This is often a nonsense, since the events being grouped together may in truth, given the usual precision of the radiocarbon method, be separated by several decades and their weighted mean will usually correspond to no real event, except by chance. Creating archaeologically based hypotheses and testing the grouping(s) of dates relevant to each hypothesis is a more satisfactory approach.

Occupation at Site 1

Hypothesis 1 is that the dates from Site 1 form a statistically coherent group. A Chi-squared test on its coherence produced a T-value of 2.8. If the dates had been securely different (19 chances out of 20), the test would have produced a T-value of more than 6.0. Thus the hypothesis

survives: so far as pure numbers are concerned, the three dates from Site 1 could even represent simultaneous events (that is, simultaneous deaths of the charcoal sources), and cannot be used to suggest a long period of occupation at Site 1. It should be noted that this does not actually preclude there having been a long period of occupation at Site 1 since there is no reason to suppose that the samples taken represent charcoal-producing activities covering the full period of occupation of this site.

Occupation at Site 2

Hypothesis 2 is that the dates from Site 2 form a statistically coherent group. A Chi-squared test on its coherence produced a T-value of 2.3. If the dates had been securely different (19 chances out of 20), the test would have produced a T-value of more than 7.8. Thus the hypothesis survives; the four dates from Site 2 cannot be distinguished reliably from each other, could even represent simultaneous events, and cannot be used to suggest a long period of occupation at Site 2. Again this does not actually preclude there having been a long period of occupation at Site 2.

Sites 1 and 2 considered together

Hypothesis 3 is that the dates from Site 1 and Site 2 together form a statistically coherent group. Its testing produced a T-value of 20.34, while the value above which there is a poorer than 19 out of 20 likelihood that it is a coherent group is only 12.6. Thus the hypothesis must be rejected. There is a small chance (well under 1 in 200) that the seven dates from Sites 1 and 2 taken together form a single coherent group.

The likeliest explanation for the observed difference is that Phase 1 at Site 1 is sufficiently later than Phase 1 at site 2 and that the radiocarbon dated material reflects this difference. In other words, the difference is detectable because there is a true difference in date, despite inclusion of fairly early material (GU-1543) at the hypothetically later Site 1, and despite a fairly late date from a lump of charcoal (above Phase 1 paving but probably pre-dating Phase 2) at the hypothetically earlier Site 2 (GU-1545).

Relative dates of occupation at each site

To create a testable hypothesis about the relative dates of initial occupation at each site, the information about the context and nature of the samples must first be recast to allow concentration on their relevance to this particular problem. For convenience, the samples will be identified here by the lab codes for the resultant dates.

GU-1543 (Site 1) may pre-date site construction and does not post-date the end of Phase 1.

GU-4375 (Site 1) may pre-date site construction, since it may have weathered into the primary deposits of the ditch. Alternatively, if the ditch was cleaned out regularly for some indeterminate proportion of the period of occupation of site 1, it may belong with almost any phase of its use.

GU-4372 (Site 1) if it can be interpreted as from scrub clearance immediately before construction of the site, should provide the most archaeologically most acceptable date for the start of Phase 1 at the hypothetically later site 1.

GU-4373 (Site 2) was oak charcoal sealed by primary paving and, since there is no more relevant information, archaeological evidence does not exclude the possibility that the charcoal may be significantly earlier than the start of Phase 1 here.

GU-4374 (Site 2) may date to any time before the start of Phase 2; these willow twigs may even pre-date Phase 1 if the scoop in which they lay was not formed during occupation of Phase 1.

GU-1544 (Site 2) was on top of paving and under a Phase 2 wall; it consisted of willow and its context seems to belong firmly in Phase 1 occupation.

GU-1545 (Site 2) is also willow (but medium diameter) and has a similar stratigraphic status to that of sample GU-1544, except that it was less well sealed.

The neatest available test thus seems to be whether the stratigraphically early sample GU-4372 from the first phase of the hypothetically later site 1, and Sample GU-1544, firmly from the first phase occupation at site 2 are significantly different. I have for the moment excluded sample GU-1545, from the hypothetically earlier Site 2, because it is described as medium-sized lumps of charcoal, rather than small roundwood, and thus has a greater chance than sample GU-1544 of being material older than its deposition date and may bias the test unfairly.

Hypothesis 4a is that the material in GU-4372 from the scrub clearance under the first phase paving on the hypothetically later Site 1 is indistinguishable in date from the firmly Phase 1 material on Site 2, represented by Site 2 Sample GU-1544. This hypothesis fails, with the T-value of 6.89 being much higher than the value of 3.8 below which the hypothesis would have been acceptable. However, although the description of sample GU-1545 from Site 2 meant that it should be excluded from the test, it in fact produced a younger date (for this hypothetically older site) than GU-1544. It therefore, after all, seems unfair to exclude it. A new hypothesis (4b), therefore, is needed to test whether inclusion of this sample produces a coherent group of three dates. However, this also fails (just), with T at 6.98 where to succeed it should have had a value below 6.0.

It is therefore likely that those activities which left charcoal behind them at the start of Phase 1 at Site 1 are significantly later than charcoal-producing activities during Phase 1 at Site 2.

The first phases on Sites 1 & 2

The difference between GU-4372 from Site 1 and GU-1544 from Site 2 is 205 ± 80 radiocarbon years, and the true gap is therefore very unlikely to be below about 100 radiocarbon years (the difference in dates between GU-4372 and GU-1545 from Site 2 is 105 ± 80 radiocarbon years and the true gap is very unlikely to be less than 5 years). At this period radiocarbon years are on average about the same length as chronological years, so there is a fairly strong impression that the first phases (of charcoal-producing activity) at the two sites were several generations apart.

Absolute dates

There are two competing calibration curves. They differ in places by about 16 years. This difference is not very important in calibrating dates from the Iron Age. Here I shall use the

TABLE 2:
Calibrated dates

Lab Code	Site	yrs BP	Intercept of mean	1 Sigma	2 Sigma
GU-1543	Site 1	2020 ± 90	1 cal BC	cal BC 110–AD 80	cal BC 340–AD 220
GU-4372	Site 1	1870 ± 50	cal AD 140	cal AD 80–AD 230	cal AD 60–AD 320
GU-4375	Site 1	1850 ± 50	cal AD 150, 190	cal AD 120–AD 240	cal AD 70–AD 330
GU-4373	Site 2	2080 ± 50	60 cal BC	cal BC 170–BC 10	cal BC 200–AD 50
GU-4374	Site 2	2080 ± 70	60 cal BC	cal BC 180–AD 10	cal BC 350–AD 80
GU-1544	Site 2	2075 ± 60	50 cal BC	cal BC 170–AD 1	cal BC 330–AD 70
GU-1545	Site 2	1975 ± 60	cal AD 30, 60	cal BC 30–AD 110	cal BC 100–AD 150

intercept method of the 1993 program Calib 3.0.3 (Stuiver & Reimer 1993) and the calibration file Intcal93.14C. The data used by the program comes from Stuiver & Pearson (1993). As recommended in the notes accompanying the program, the calibrated ages and ranges in the table below are rounded to the nearest 10 years for all these samples:

Conclusion

The vagaries of the calibration curve mean that Phase 1 at Site 2 could quite easily have started any time between the third century BC and the mid-first century AD. The sample represented by GU-1545 was from on top of Phase 1 paving and could have been deposited after Phase 1. Most likely, looking at all the dates from Site 2, it was built some time in the second or first century BC.

On Site 1 it seems most probable that either the sample represented by GU-1543 (of angular fragments of medium diameter hazel) was made up of wood which was old at the time it was sealed by Phase 1 paving in the entrance area or that by chance the random fluctuations in radiocarbon emissions have allowed this measurement to settle at a date fairly far from the true date of the sample. This is, admittedly, largely interpretation, going beyond what the statistical tests can prove. However, it will be recalled that on purely archaeological grounds the best estimate for the date of the start of Site 1 is provided by the sample for GU-4372 which consisted of small round-wood birch, oak and willow, interpreted as remains of brush wood cleared from the site between AD 60 and AD 320. Taking this and the date from the primary ditch fill (GU-4375), and supposing that the pieces of wood charcoal were on average one to three decades old at death, it is most likely that Site 1 was built some time in the second half of the first century AD or first half of the third century AD.

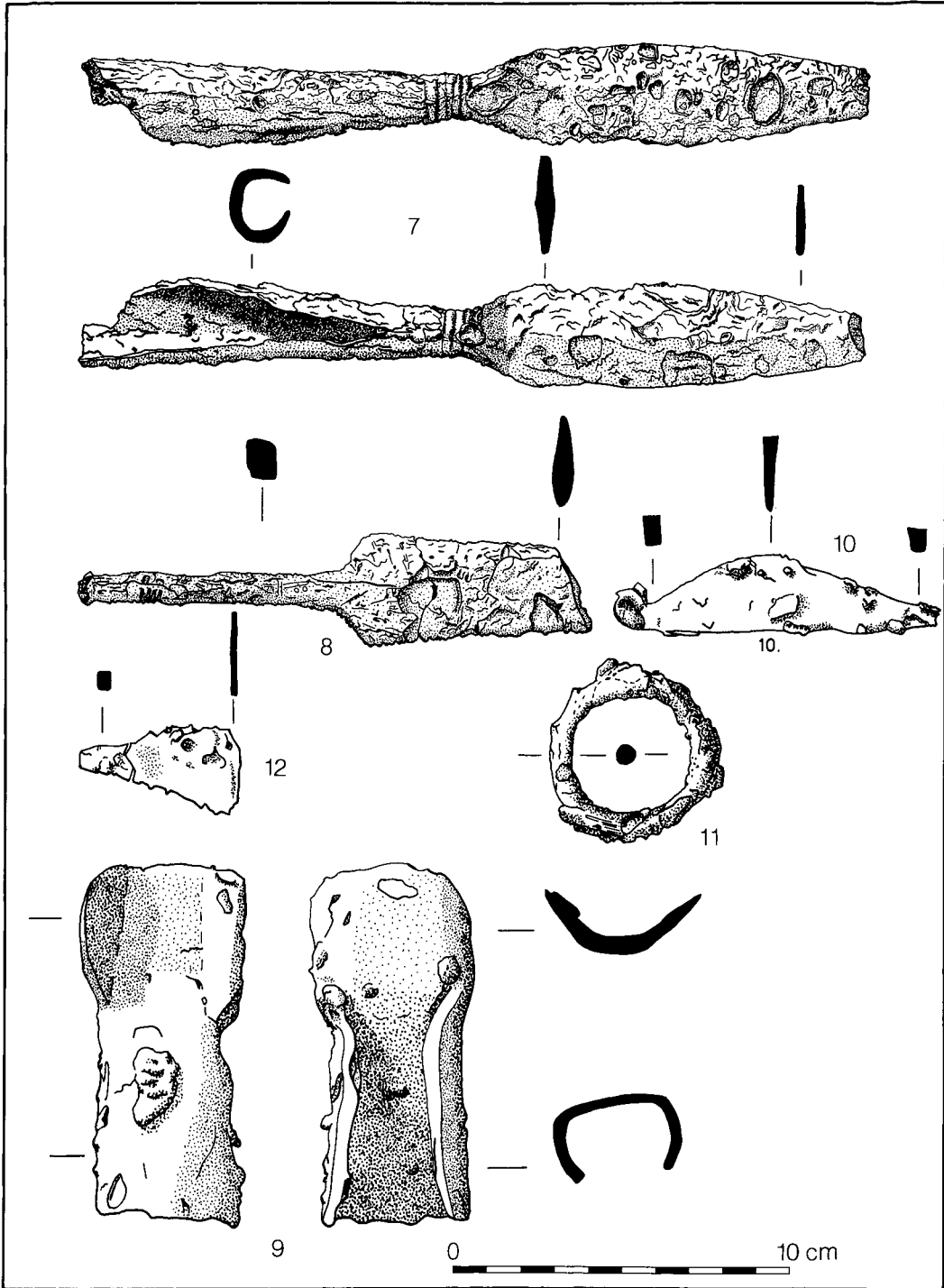
METALWORK

H E M Cool

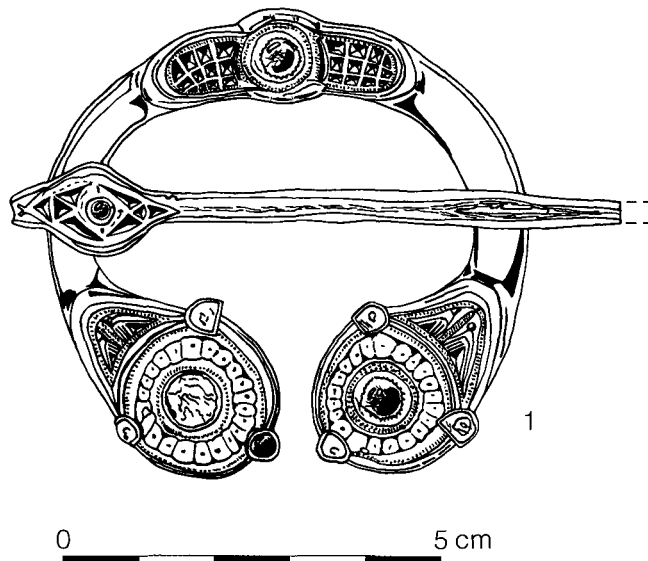
The following summarizes a more detailed report and catalogue which has been deposited with the archive of the project records at the National Monuments Record of Scotland (RCAHMS).

The metalwork from Aldclune is in good condition and though only a small number of pieces were recovered, a high proportion of them are recognizable artefacts. This is especially the case amongst the ironwork which includes a spear-head, a knife, a strike-a-light and a hoe.

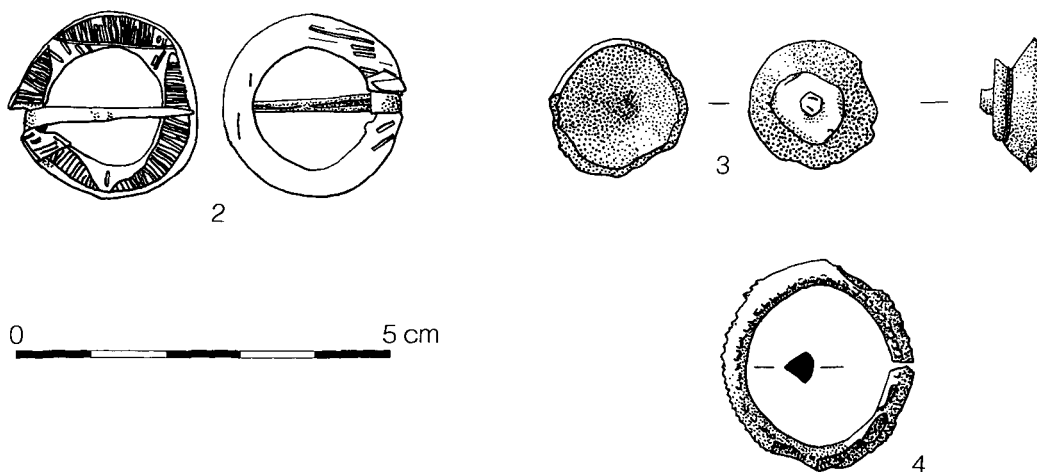
The knife (cat no 8, illus 14) has a single cutting edge and a handle that would have been short in proportion to the original length of the blade. The handle could not have been used as a tang to be driven into a longer handle of wood or bone because of the domed finial at its end. The socketed tool (cat no 9, illus 14) is probably a hoe or weeding tool. The majority of those of Roman or later date have flared blades but ones



ILLUS 14 Iron objects



ILLUS 15 The ninth-century penannular brooch



ILLUS 16 Copper alloy objects

with curved blades do sometimes occur (Rees 1979, 331). Alexander Fenton (pers comm) has observed that tools similar in shape to this are still used today for weeding.

The penannular brooch (cat no 1, illus 15) is of early ninth-century type. It has been fully described elsewhere by Stevenson (1985). Apart from this, three other metal artefacts may be independently dated. The spear-head (cat no 7, illus 14) has a split socket and this feature is generally found on spear-heads of Anglo-Saxon and Dark Age date (cf. Swanton 1973, 46ff), but as Birley has pointed out (1956, 202), split socketed spearheads do occasionally occur earlier in Roman contexts. Therefore, though this example is probably of Dark Age date, an earlier date cannot be entirely ruled out.

Symmetrical strike-a-lights with a coil at each narrow end are often found in Anglo-Saxon graves of the fifth and sixth centuries, for example at Mitcham, Surrey (Brown 1915, pl XCIV/4; Meaney 1964, 244).

One was found in early seventh-century context at Yeavinger (Hope-Taylor 1977, fig 89/8) and the two from Garryduff in Ireland also came from seventh-century contexts (O'Kelly 1964, fig 7 7/297 and 381). The strike-a-light from Aldclune (cat no 10, illus 14) may have had a second coil but even if it did not the similarities with the Anglo-Saxon ones are sufficient to suggest that it was contemporary with them.

The ring brooch (cat no 2, illus 16) may be dated to a much later period than nos 7 and 10 and must be a casual loss unconnected with the primary occupation of the site. Ring brooches were in use in Britain from the 15th to the 18th century (Evans 1953, 57) and this example must belong to the later part of this long lifespan. It is very closely paralleled by one found at Eadarloch (Ritchie 1942, fig 19) which was made in precisely the same way and which had a very similar, though not identical, scheme of decoration. The crannog at Eadarloch was occupied in the 16th and 17th centuries (*ibid*, 71) and the context in which the brooch was found suggested that it might have been lost after the occupation of Aldclune had ceased. An 18th-century date for both the Aldclune and Eadarloch brooches might thus be appropriate.

The copper-alloy assemblage also included a penannular ring (cat no 4, illus 16) and an oval boss (cat no 3, illus 16) from Site 2, phase 2.

CERAMICS

H E M Cool

The remains of six pottery vessels were recovered at Aldclune. For only two of these (cat nos 14 & 15) can an independent date be suggested. The remaining vessels are represented by fragments of native pottery that are not chronologically sensitive.

The size and the shape of the samian rim sherd (cat no 14) and the remains of the barbotined decoration it carries suggests that it may have come from a bowl of Dragendorff form 36. It is thus likely to have been of second century date (Oswald & Pryce, 1920, 193). The wheel-thrown sherd (cat no 15) is likely to be of late medieval date.

The rest of the pottery comes from hand-made vessels fired under reducing conditions. Two fabric types may be identified: a thickly gritted fabric with a laminated appearance (cat nos 16 & 17) and a more even and finely gritted fabric (cat nos 18 and possibly 19). No bases or rim sherds were recovered nor are there any body sherds large enough to suggest the original form of the vessels. Three sherds were decorated with oval indentations (cat no 16) but again the sherds were too small to give any indication of the original pattern in which they were arranged.

A detailed catalogue of the ceramic material has been deposited with the archive of the project records at the National Monuments Record of Scotland (RCAHMS).

QUERNS AND WORKED STONE

H E M Cool

Twenty-three rotary querns consisting of 12 upper stones, seven lower stones and four undifferentiated pieces were found at Aldclune. They ranged from complete stones (eg cat no 20, illus 17 and cat no 21) to small fragments (eg cat nos 28 & 40). Stratigraphically it cannot be shown whether or not they were all of broadly contemporary date because they were found reused as packing and paving stones, but the overall similarities between them suggest that they could have been contemporary. Most of the stones show evidence, in the form of a band of high polish around the edge of the grinding face, that they had been in use for some time before they were discarded. One (cat no 24, illus 18) however, had obviously been discarded in an unfinished state as neither the handle socket nor the grinding face had been dressed to shape and the peck marks on the sides of the hopper were very fresh and unworn. The quernstones are made of a locally

available micaceous schist, which continued to be used in the area for quernstones into the medieval period.

Two different types of upper stone may be distinguished. The commonest (represented by cat nos 20–4) has an oval outline with one of the shorter ends tapering markedly to a rounded point. The grinding faces on these stones are either flat or shallowly concave. The upper faces may be either gently domed (eg 20 & 21) or flatter and parallel to the grinding face (22 & 23, *illus 17*); but whether domes or flat the overall thickness of the stones is similar. All of these stones have upright, cylindrical handle sockets placed in the rounded points. These handle sockets have rounded bases and often show a high degree of polish on their sides. The polish was produced by the use of a loose handle that could move inside the socket as the quern was rotated. On some of the stones there were clear indications that the rounded point that contained the handle socket, which may be termed the handle extension, projected over the lower stone. This is best seen in 20, where the grinding face is not consonant with the edge of the stone beneath the handle extension and where the area of the grinding face beyond the ground area projects downwards. The convexity on the grinding face below the handle extension on 22 would also indicate that this area projected over the lower stone. It would appear that when in use these querns may have been surrounded by some form of barrier. This is suggested by the wear seen on the edge of the handle extensions of 20 and 22 for they have a polished appearance as if they were continually brushing against something as the quernstone was rotated.

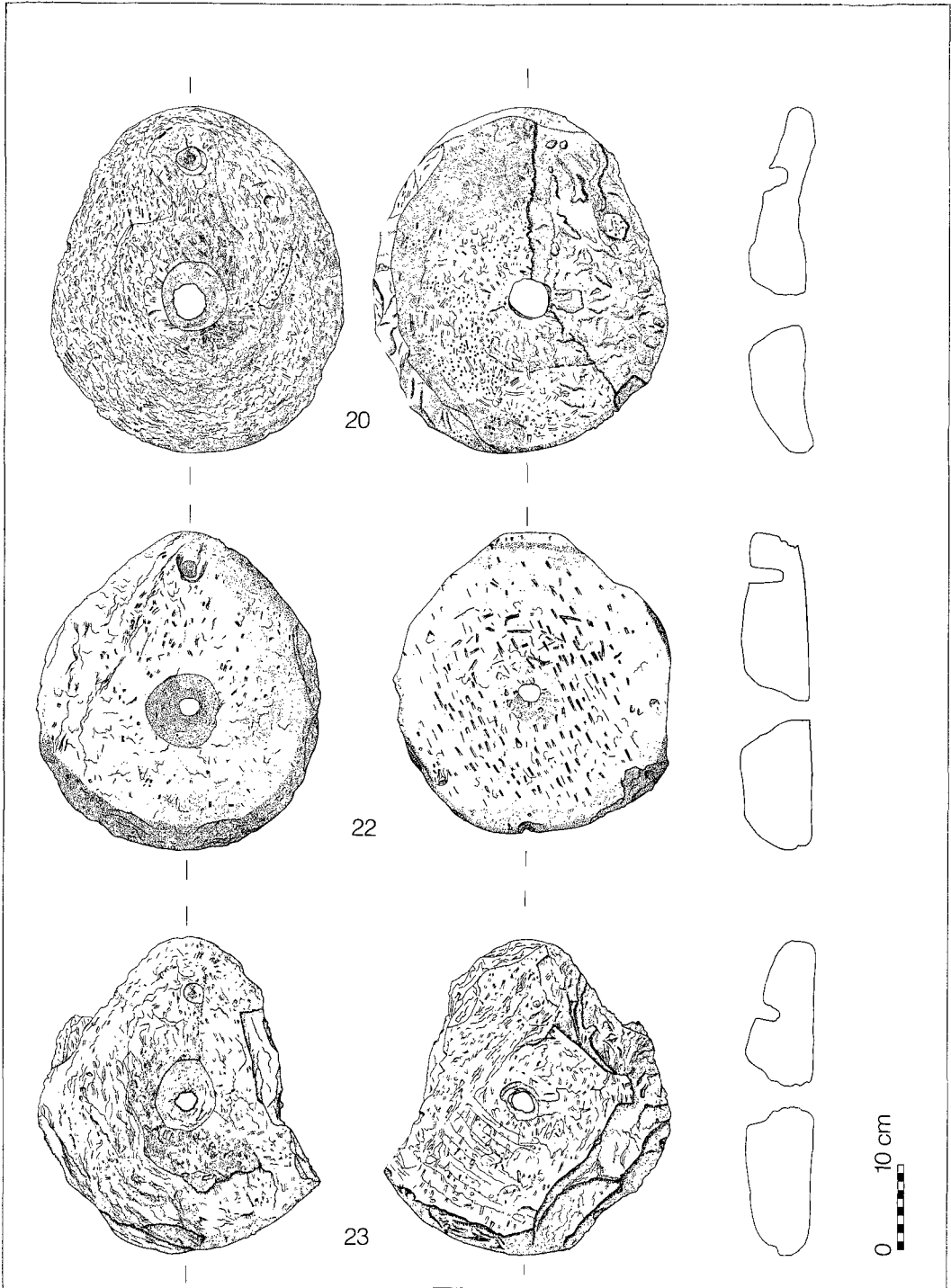
The other type of upper stone is only represented by 26 (*illus 18*). It is of approximately circular outline with a level upper surface and a grinding face that slopes up from the hopper to the edge more markedly than on any of the oval stones with handle extensions. It is also somewhat thinner than those stones. It has a conical upright handle socket placed midway between the hopper and the edge, and the hopper is surrounded by a low rim, a feature that is also seen on 21.

Apart from 31 which was probably not of circular form originally, the remaining upper stones are fragmentary and give no indication of their original shape. In all fragments where there is an extant handle socket it is for an upright loose handle.

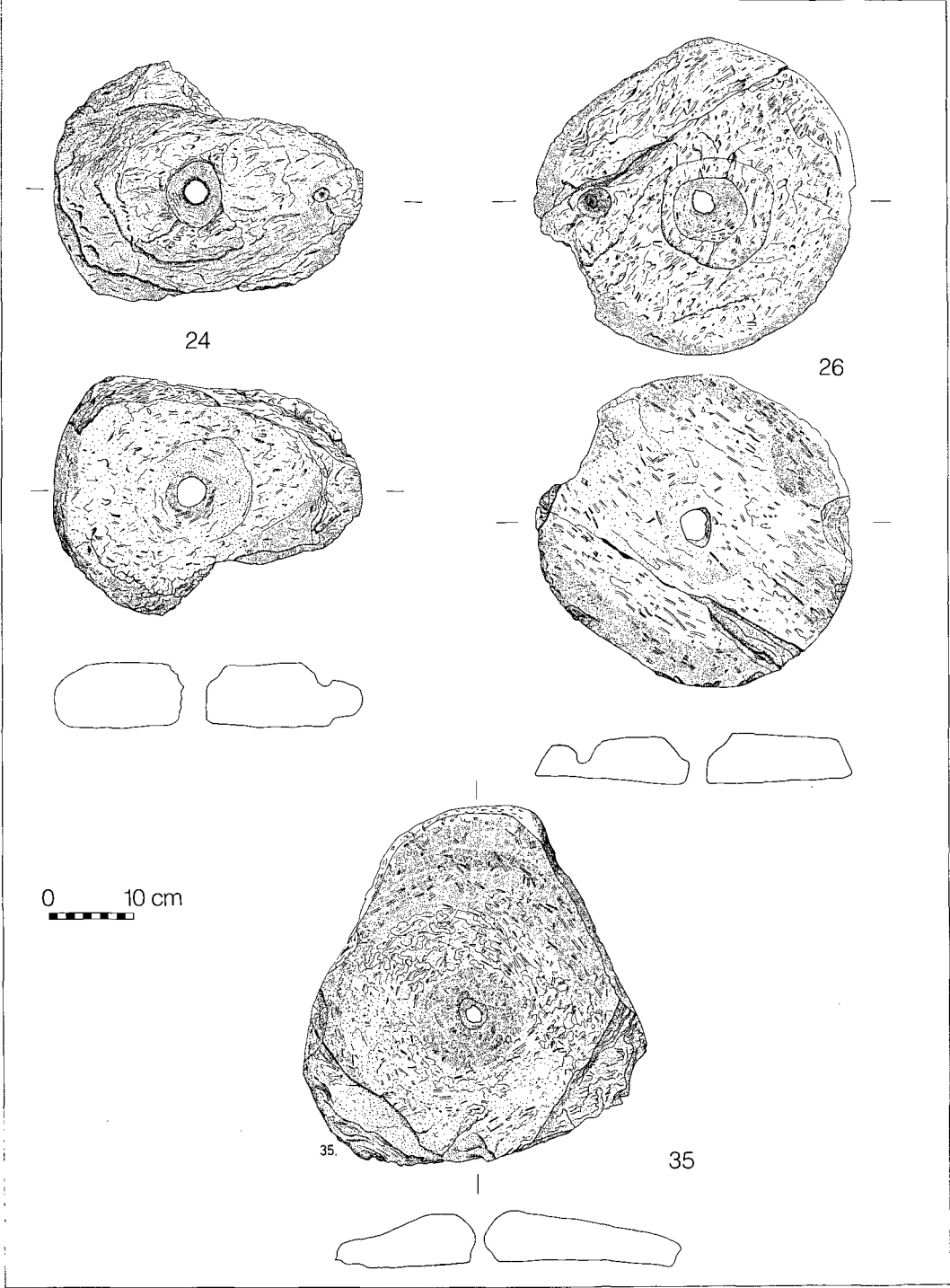
No 31, although it has been included amongst the upper stones, poses some problems. Most of the upper stones have a hopper that consists of a concave or diagonally sloped sided basin leading to a central, cylindrical feed pipe. In 31 the feed pipe is not placed centrally and instead of being cylindrical, flares out markedly onto a lower face that gives no evidence of ever having been used for grinding. It may be, therefore, that 31 is either a quernstone that was discarded in the process of manufacture or an artefact with a different use.

Most of the lower stones are circular and disc-like with grinding faces that are shallowly concave or level and which are consonant with the edge of the stone. Some minor exceptions may be noted such as 35 (*illus 18*) which is sub-triangular in outline and which has a grinding face that is not consonant with the edge at one unbroken angle. All of the lower stones have a spindle hole that is a complete perforation of the stone. A spindle hole like this usually indicates that the distance between the upper and lower stone could be adjusted to vary the size of the meal. This is effected by having a spindle with a rynd on top, on which the upper stone rests, passing through the spindle hole in the lower stone to a device below it which allows the distance between the upper and lower stones to be altered (Curwen 1937, *fig 39*). In such circumstances one might expect a rynd-chase on the upper stone so that it could be securely seated on the rynd. None of the upper stones from Aldclune shows a rynd-chase so it must be assumed that the rynd was merely wedged into the feed pipe cylinder.

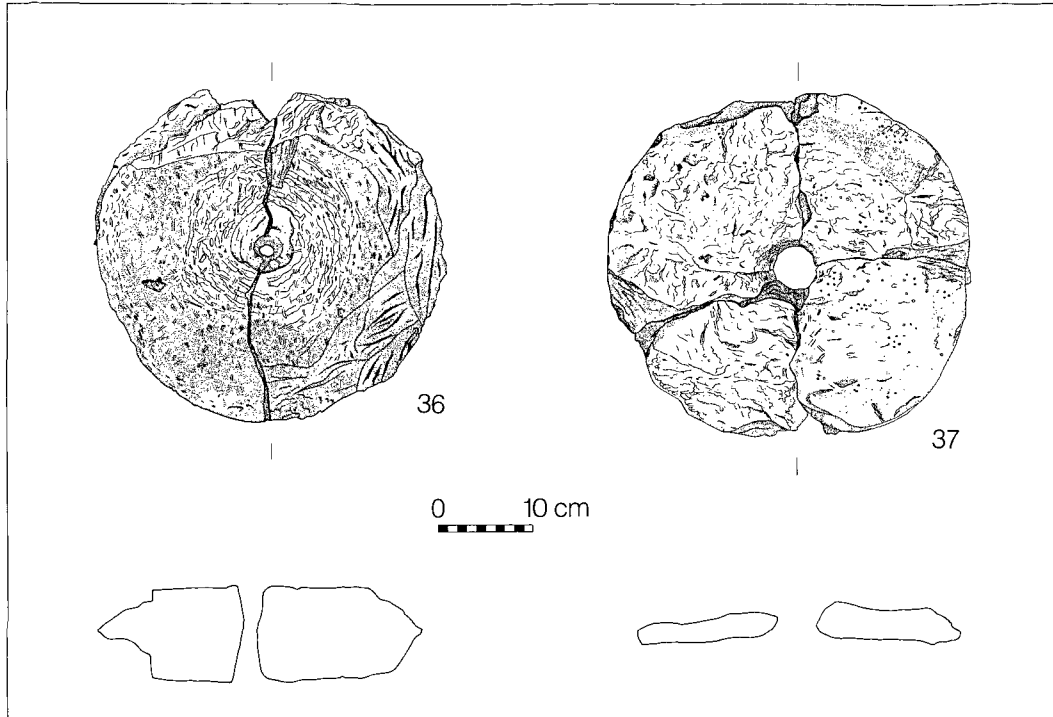
The Aldclune querns with their upright handle sockets are closely related to the western type of quern that was in use from about the first century BC (MacKie 1972, 144). These are normally of circular outline like 26, but oval ones do also occur, for example at Dun Mor Vaul, Tiree (*ibid*, *fig 1d*), the Broch of Cusdale, Caithness (NMA GA 330) and the Broch of Cinn Trolla, Kintradwell (NMA GL 93 & 98). Sometimes the handle sockets of these stones are complete perforations as occurs on the stones from the latter two sites. Oval stones with handle extensions very similar to 20 and 25 have been found at Dunadd, Argyll (Christison *et al* 1905, *fig 29*) and at Rhiroy Semibroch, Wester Ross (MacKie 1972, *fig 1e*). Sadly, two other very similar stones in the National Museums of Scotland, Edinburgh (NMA BG 130 & BB 70), are unprovenanced. At present it is not possible to date the type of quern found at Aldclune with any accuracy.



ILLUS 17 Quernstones



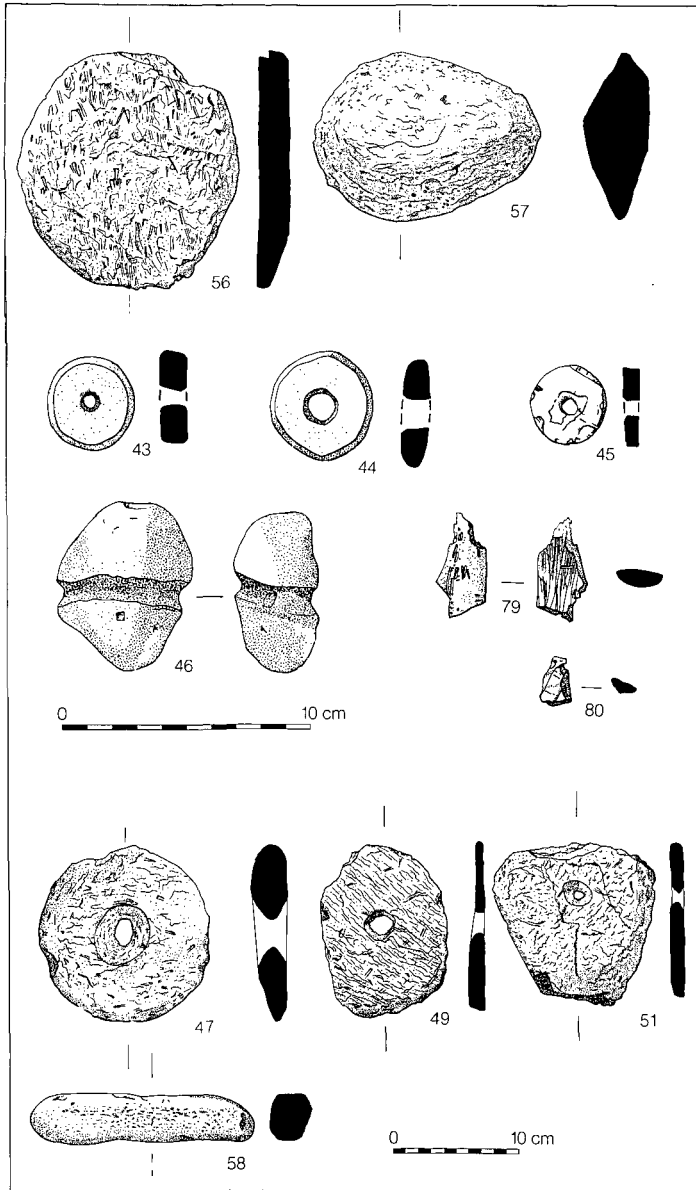
ILLUS 18 Quernstones



ILLUS 19 Quernstones

The oval quern from Dun Mor Vaul came from a pre-Broch phase that is thought to belong to the second century BC or earlier (MacKie 1974, 92). The contexts of the querns from Dunadd were not recorded but the majority of the metalwork and pottery was dated to the sixth to eighth centuries AD (Alcock, 1979, 138) so it is possible that the querns too might be of that date. At Aldclune querns were found in primary contexts which have been dated to the second century BC and thus agree with the evidence from Dun Mor Vaul. Either this form has a long currency of use or those from Dunadd actually relate to an earlier occupation. There must remain an uncertainty as to whether the Aldclune querns relate to the grinding of cereals on the site or had been brought in from elsewhere.

The remainder of the worked stone objects consist of spindle whorls (cat nos 43–5, illus 20), perforated discs (cat nos 47–53 and possibly 55; for 47, 49 & 51 see illus 20), small shaped discs and blocks (cat nos 56 & 57, illus 20 and cat no 54), elongated hone stones (cat nos 59–62, and 58, illus 20), polishing blocks (cat nos 63 & 64), pebbles used for battering and polishing (cat nos 65–70), stones with cup marks worked upon them (cat nos 71–7) and a pebble used as a weight (cat no 46, illus 20). There was also a small fragment of D-sectioned shale bracelet (cat no 79, illus 20). Attention should be drawn to 63 (not illustrated), a block that has been most carefully dressed to shape and was presumably used in some grinding and polishing process. The purpose of the perforated discs is unclear. It is possible that they were some form of weight attached by a cord through the central perforation, but in that case one might expect the wear on the circumference of the perforation to be concentrated in one particular place where the cord was tied. In most cases, however, the wear is distributed evenly around the circumference of the perforation. It seems unlikely that they would have ever efficiently functioned as spindle whorls because most are somewhat irregular in shape.



ILLUS 20 Worked stone objects

A Roman or post-Roman date may be suggested as being appropriate for the spindle whorls but the remainder of the worked stone assemblage is not chronologically sensitive.

A detailed catalogue of the stone objects has been deposited with the archive of the project records at the National Monuments Record of Scotland (RCAHMS).

PETROLOGY OF THE STONE ARTEFACTS

D Dixon

Excluding the jet fragments, all of the artefacts found at the site are consistent with the use of locally found rock. Garnetiferous schist was the obvious choice for querns, the protruding garnets would act as natural grit, to grind the grain. There must have been plentiful, coherent and relatively fresh garnet schists in the glen sides and river bed, suitable to make good quality querns from: the random quality of some of the stone used, however, suggests that they were not averse to using lower quality stone as well. Some of the querns do show that skill and persistence was applied, for example boring neat holes into hard rock.

Of the other finds the psammite of the river pebbles will have originated upstream, from the *Moine* Struan Flags. The tremolite could occur in veins in the Blair Atholl Pale Limestone. Epidiorite, hornblend schists and amphibolite occur in liberal quantities in the Glen Banvie Series schists. The jet must have arrived as traded imports.

CHIPPED STONE

D Lehane

Twenty-five pieces of chipped stone were recovered of which 19 were of flint, five of quartz and one of pitchstone. Where cortex remained, it was suggestive of a miscellaneous collection of material from beach, river or most probably glacial gravels. However the presence of the piece of pitchstone, which has restricted sources in Scotland, might suggest trade or exchange mechanisms for this material. That 64% of the assemblage shows some sign of use or retouch gives the impression that every scrap of stone was used as a cutting or scraping implement.

A catalogue of the chipped stone has been deposited with the archive of the project records at the National Monuments Record of Scotland (RCAHMS).

METALWORKING DEBRIS

R M Spearman

A quantity of metalworking debris, from a variety of contexts, was examined at $\times 10$ magnification and checked for magnetic attraction. The overwhelming majority of the debris was found to be from the smelting and working of bloomery iron. Small quantities of more general vitrified material were also found.

The production of bloomery iron is essentially a two stage operation. Unlike non-ferrous metals, iron, with a melting point of 1525°C , was not normally produced in a molten form in simple low temperature bloomery furnaces. Instead, the semi-molten iron rich bloom remained in the heart of the furnace while unwanted slag was tapped from the furnace into adjacent shallow pits. Once smelting of the iron ore had finished the furnace was allowed to cool and a fused mass of metal, remaining slag, fuel, and cinder was separated from the furnace and forged at temperatures around 1000°C . At this temperature the slag softened and could be squeezed out by repeated hammering to leave behind the purer workable iron that was the blacksmith's basic raw material.

The debris recovered from Aldclune is consistent with the smelting and initial preparation of bloomery iron. Much of this work was conducted at relatively low temperatures and very little of the debris appears to have been highly vitrified or particularly fluid when molten. Numerous impressions in the cinders of large charcoal fragments would also suggest poor combustion within the furnaces.

The majority of the debris came from the north quadrant of Site 1, although small quantities of debris, including fragments of furnace lining, were found in most quadrants of the site. The most fragile fragment of furnace lining, the vitrified surround to a tuyere blow-hole, was, however, also recovered from the north quadrant. The diameter of the blow-hole was 20 mm and although superficially vitrified fire damage was not extensive. This would again suggest that the temperature and duration of smelting was not great.

ANIMAL BONE

F McCormick

Very little material was recovered from stratified levels and the bulk of this came from Site 1. Most of the assemblage was in the form of small calcined fragments, little of which was identifiable. Of the unburnt material, 59.5% comprised teeth or mandible fragments and the remainder was almost exclusively long bone fragments or astragal.

Cattle was the dominant species on both sites; with pig, horse, red deer and sheep or goat being minimally represented. However, since the total sample was so small (only 35 pieces being identifiable) this cannot be seen as statistically valid.

A full catalogue of the faunal remains has been deposited with the archive of the project records at the NMRS.

HUMAN BONE

K McSweeny

The human bone came from two discrete deposits, relating to the post-defensive activity on Site 1. One of these groups of bone was found in a shallow sub-circular pit (50). The other was recovered from disturbed material overlying the palisade slot (37), 4 m to the south. It was suggested by the excavator that the bone from the latter location represents disturbance to the pit and that all of the bone is from one individual. This was probably an adult male.

The methods of ageing and sexing used are those outlined in Bass (1987). The condition of the remains from both deposits was poor, although that from the deposit over the palisade slot was by far the worse. Some large sections of longbone had survived, but these were mostly crumbly and fragile and surface erosion was severe. The poorer condition of the bone from over the palisade slot is in keeping with the view that it may represent a later disturbance of the contents of pit 50.

Both groups of bone contained fragmentary lower longbones and pelvis. Neither deposit produced any evidence for the presence of more than one individual and it is possible that both groups of bone were from the same skeleton. Most of the information on ageing, sexing and calculations of stature relate to the better preserved bone from the pit. Full epiphyseal fusion and the lack of any degree of wear on the joints suggest that the individual was adult, although advanced adulthood did not appear to have been reached. Sex was very clearly male. An estimation of stature based on fragmentary longbones has suggested a height of approximately six feet. No evidence for disease, trauma or cause of death was identified.

GENERAL DISCUSSION

R Hingley

ALDCLUNE 1 AND 2

The two main structures at Aldclune have much in common. It is likely that they both represent substantial round houses formed of a timber outer wall (palisade trench) and an internal post-ring. In both cases substantial stone structures lay outside the palisade wall line; these were quite different, but this forms the only major difference between the two buildings.

Homesteads

The term 'homestead' has been used in this report to describe Aldclune 1 and 2. The term is used by previous writers who have discussed various sites in central and eastern Scotland (eg Taylor 1990; RCAHMS 1994a) and has been adopted here in preference to alternatives used by other writers (including 'ring-fort'). The value of the term for the substantial round buildings at Aldclune lies in its use in reference to a large building which incorporates domestic space and a range of other activity areas (Roberts 1996, 16). It may be that homesteads formed entire domestic units, while some hut circles on other sites might have associated with other structures to form homesteads of several distinct buildings.

Aldclune 1 & 2 as house-types

It has been suggested on the basis of the internal post-holes that the two structures at Aldclune were probably entirely roofed and formed substantial round houses. Palisade slots similar to those at Aldclune form the outer wall of some of the so-called 'ring-ditch houses' of the Tyne-Forth area (Hill 1982b, 1984; Triscott 1982) and two houses (4 & 5) at Carn Dubh, an open settlement 8 km ESE of Aldclune, incorporated similar slots in their wall arrangements (Rideout 1995). In the case of Aldclune 2 the evidence that the interior was entirely roofed appears fairly clear-cut as a coherent ring of internal post-holes occurred (illus 13). However, for Aldclune 1 there is a problem with this interpretation, as the post-ring did not form a complete circle in either of the two phases (illus 12). Nevertheless, these buildings are complex architectural structures and later prehistoric builders were evidently able to roof areas of large diameter.

Although the Aldclune buildings appear to be rather later in date than the ring-ditch houses discussed by Hill, they share elements of design. Aldclune 1 in its first phase had a paved peripheral area outside its internal ring of post-holes (illus 12), while Aldclune 2 had a hollowed periphery in both its north and west areas (illus 13). Both these features are also represented amongst Hill's ring-ditch houses (1982b, 1984; see also RCAHMS 1990, 4). The stone wall features at Aldclune are perhaps more reminiscent of Hill's (1982b) so-called 'Votadinian' (or stone-walled) tradition of house building. However, very few round houses have been excavated in north-west Perthshire and it is likely that further excavation will show the various traditions of round house buildings across central and south-eastern Scotland to be rather more complex than Hill's interpretation. For instance, Rideout's (1995) work at Carn Dubh has produced a range of round house types dating to various periods in the later prehistoric period.

The wall chamber at Aldclune 1

The passage, or gap, which exists between the stone wall and the palisade to the north of Aldclune 1's western entrance may reflect various later prehistoric building traditions. If it was originally roofed, it is in some ways reminiscent of the context of the souterrain in relation to the timber round house at Newmill in Perthshire (Watkins 1981). It is also similar to the position of the guard chambers and wall chambers of the brochs and some duns. An association may also exist between this chamber at Aldclune 1 and the cells in the walls of some so-called 'double-walled' round houses of north-east Perthshire (RCAHMS 1990, 2–5).

Substantial round houses

Aldclune 1 and 2 and the other homesteads of the Loch Tummel area (below) may form part of a broad tradition of substantial round house building in later prehistory (see Hingley 1992 & 1995

for the concept of the substantial house). The radiocarbon dates for Aldclune 1 and 2 suggest that the buildings are broadly contemporary with the brochs of southern and eastern Scotland. The occurrence of brochs and homesteads in southern Scotland suggests that varying forms of substantial houses were introduced into new geographical contexts and adopted in differing ways during the last few centuries BC and the first two centuries AD (Macinnes 1985, 239). Aldclune 1 and 2 are not brochs, however, but may represent an adaptation of local domestic traditions under the general influence of a growing trend toward the construction of substantial houses at this time.

The sequence of construction at Aldclune

The statistical test on the three radiocarbon dates from Aldclune 1 suggests that they form a coherent group and the same is true for the four radiocarbon dates from Aldclune 2. A further test indicates that Aldclune 2 pre-dates Aldclune 1 by some time, possibly several generations. It is likely that Phase 1 at Aldclune 2 could have started at any time between the third century BC and the mid first century AD. The first Phase of Aldclune 1 was probably constructed some time between the second half of the first century AD and the first half of the third century AD.

These seven dates only help to date the initial phase of construction and occupation within each building as samples for radiocarbon dates from Phase 2 of each homestead were not obtained during the excavation. It is not clear whether Aldclune 2 was still occupied when Aldclune 1 was built, but the single piece of samian ware of second-century date (cat no 14) from a Phase 2 context may suggest that this was the case. The fact that the new house was not built upon the site of the old one also indicates that Aldclune 1 did not directly replace Aldclune 2. Therefore, the later phase of Aldclune 2 might have overlapped with the early phase of Aldclune 1.

The two buildings at Aldclune produced evidence for a complex history of building and adaptation and each may have been occupied for a considerable period of time. However, all the contexts which were radiocarbon dated related to activity prior to the construction of the two buildings, or activities connected with their early use. It is possible that occupation (or reoccupation) extended the life of one or both of the Aldclune buildings in a way which is comparable to some of the northern brochs such as Jarlshof and the Howe (Hamilton 1956; Ballin Smith 1994). Some of the finds from the excavation are probably middle to late first millennium AD in date, including the spearhead (cat no 7, illus 14), a strike-a-light (cat no 10, illus 14) and the penannular brooch (cat no 1, illus 15). There are at least two possible interpretations for these finds: either they relate to occupation of one or both of the buildings in this period, or they relate to deposition of objects on abandoned building sites. The former explanation might appear the more likely; however, some brochs and later prehistoric settlement sites in Scotland have produced later metalwork finds which would appear to have been deposited after their abandonment (Hunter 1997). For instance, the excavation of the round house site at Carn Dubh produced a range of later finds; how these came to the site is unclear (Rideout 1995).

The burial at the east of Aldclune 1 post-dates the disuse of the palisade wall and might either be associated with a late phase of occupation or be an unassociated later burial which was excavated into the remains of the house. The possible evidence for the reuse of Aldclune 1 for smelting recalls the evidence for post-occupation iron-working from Queen's View homestead (Taylor 1990), although in both cases this activity is undated and could be medieval or post-medieval in date.

In conclusion, the two homesteads were probably built several generations apart in the late first millennium BC and early first millennium AD. It is unclear whether the two houses continued

in use for a lengthy period of the first millennium AD or whether abandoned early first millennium AD houses formed a context for later acts of deposition. Evidently the dating framework can not provide clear guidance on the detailed points that have been raised in this discussion, but the complexity of the architectural information obtained from Aldclune highlights the importance of homestead sites in the later prehistoric context.

The enclosures

The structural and chronological evidence from Aldclune may indicate that the household resident in Aldclune 2 split at some point in order to create independent households living in the two separate houses, with entrance structures and defensive earthworks which indicate the relative social distance between the two households. The enclosure boundaries on both sites would conventionally be associated with defence from attack by other communities. Recent reinterpretations, however, suggest a range of alternative explanations for the building of earthworks and walls: they may help to define and identify a household which lived in the individual house or enclosed settlement (Hingley 1984; Bowden & McOmish 1987), and enclosure may have served to reinforce the impression of social isolation created by the construction of the substantial house itself. Thus, the elaborate porch and facade of Aldclune 2 and the entrance structures and width of the wall of Aldclune 1 may also have served to emphasize isolation, to control access and perhaps to project status.

It is interesting to note that, as well as having deeper and stronger defence where the natural protection was at its weakest, both houses are more clearly demarcated in relation to each other by their 'defences'. Aldclune 1, which is probably the later of the two structures to be built, faces away from Aldclune 2, although the easiest access might be from the north. Aldclune 2 faces directly toward the location where Aldclune 1 was to be built, although the higher area of ground between would have prevented the two buildings from being intervisible. However, both phases of the entrance structure at Aldclune 2 face west, away from the site of both Aldclune 1 and 3. Also, in Phase 2 of Aldclune 2, two small blocking pits or ditches were cut across the causeway and blocked direct access to Aldclune 2 from Aldclune 1 and 3. Even though the two buildings were not intervisible, the turning away of the entrance structures of each house to the west may represent a physical statement of the independence of the households living within both.

With regard to the enclosing boundary of Aldclune 1, the stone with multiple cup-markings (cat no 75) which was discovered in the inner ditch (illus 21) was probably derived from the substantial wall that lay between the ditch and palisade. It may have been set into the outer face of the building just to the north of the west-facing entrance. The stone was presumably carved in the Neolithic or Bronze Age and reused in this context. Perhaps an earlier burial monument or settlement structure was robbed in order to create the house wall. Cup-marked stones were often reused in significant locations during later prehistory and occur in a number of souterrains (Hingley 1992, 29), houses (eg Ardestie: Wainwright 1963; Torwood Broch: RCAHMS 1963, 66) and in hillfort ramparts (eg Ball Cross, Derbyshire: Barnatt & Reeder 1982, 42; Easton Nab, Cleveland: Vyner 1988; White Caterthun: NMRS NO56SW 17). Another north-west Perthshire homestead which appears to have had a cup-marked stone incorporated into its wall is recorded at Borenich III (NMRS NN86SW 17; illus 23). The reuse of cup-marked stones in the outer walls of hillforts and houses may have served in symbolic terms to define the boundary through the reuse of a significant and highly visible symbol of ancestry. The context also mirrors the location of cup-marked stones in the kerbs of certain Neolithic and Bronze Age burial monuments. It has

been suggested elsewhere that the earlier monuments sometimes provided inspiration for later prehistoric houses in some areas of Scotland (Hingley 1996).

Divided households

The size and complexity of the two homesteads at Aldclune is impressive and the substantial ditches, ramparts, walls and palisades, together with the natural contours on the site, serve to mark out domestic space with clarity. Internally, it is possible that each homestead housed an extensive and complex household. The organization of the household in later prehistoric Scotland forms an important and under-researched topic; much more research will be required before we have even a rudimentary understanding of household organization. What does the evidence for Aldclune add to our limited general knowledge?

The floor area within each house suggests that the resident groups were fairly large and extended households of some form may have been represented. Many Iron Age houses in Britain show evidence for a single focal hearth (Hingley 1990a, 130–1). It is of interest, therefore, that both phases in each of the two houses at Aldclune contain more than a single hearth (illus 12 & 13). Both houses had a central hearth in their initial phases, but Aldclune 2 had two or three additional hearths in the peripheral area of the house in Phase 1, while Aldclune 1 had three additional hearths, one close to the central hearth and two in the periphery. In the second phases of the two houses multiple hearths again occur, two fairly central examples at Aldclune 1 (in addition to two cooking places) and four peripheral hearths in Aldclune 2.

While it is possible that some of the hearths in either phase of both buildings might have been used successively rather than at the same time, it is also likely that more than one hearth was in use at any one time. The function of hearths in Iron Age buildings is usually thought to have been connected with cooking and they evidently had an additional role in providing heat for the household. It is possible, although perhaps unlikely, that the hearths were used for industrial processes. Therefore, it is very probable that the multiplication of hearths relates to the existence of two or more distinct groups within each house, groups who may have cooked and perhaps eaten separately.

This suggests that, in addition to having been fairly large, the resident household of each house was subdivided into two or more groups on the basis of age, gender or descent. A substantial central hearth occurred in both homesteads in their initial phases, perhaps representing a dominant social group with peripheral subsidiary groups. By the second phases of both buildings, the central hearth was no longer in use: the social connotations of this development are unclear. A similar subdivision of the interior of a substantial house is provided by the broch of Midhowe, Orkney, where the interior was divided into two areas, each with a distinct hearth (Hedges 1985). Any subdivision of the interior of the Aldclune houses was not defined in a physical way which survived in the archaeological record and any boundaries between groups may have been conceptual rather than physical.

Other evidence for zoning in the two houses includes paving and pitting. At Aldclune 1 peripheral paving occurred in Phase 1 and the division between the largely paved periphery outside the post-ring and the unpaved central area was further emphasized by the digging of a number of pits in the centre. In Phase 2 pits continued to be excavated into the central area, while secondary walling filled part of the periphery. A cobbled surface was also constructed to the west of the interior. In Aldclune 2, in Phase 1 a paved area was built within the house to the east of the entrance. To the north and west of the interior in the periphery of the house was a hollowed area of uncertain function. In general, the central area was higher than the periphery and a sediment

build-up occurred in the periphery during Phase 2. At this time, certain areas of the periphery were also paved although there was no evidence for pitting in the interior or centre in either phase.

Patterns of deposition

Recent studies of later prehistoric Britain have emphasized the potential of the analysis of the deposition of artefacts within domestic contexts (Bowden & McOmish 1987; Hill 1989, 1995; Hingley 1990b, 1992). These studies have also challenged the idea that Iron Age communities formed agricultural households with domestic habits which reveal no evidence for ritual behaviour (Hill 1989; Parker Pearson 1996). J D Hill (1995) has studied a range of classes of material and their occurrence in infilled pits on sites in Wessex, while others have studied additional classes of artefact (for Scotland see Hingley 1992). Several classes of information at Aldclune merit study from this perspective. The finds from the two buildings fall into several categories: quernstones; 'cup-marked' stones; other stone artefacts of a variety of types and various items of iron and copper alloy (illus 21 & 22).

A number of patterns in the finds from the two houses at Aldclune will be explored below. The detailed explanation for this patterning is unclear and to what extent the evidence is a result of human activity or post-depositional forces is not certain. However, the analysis of finds patterning in this context has been conducted with the idea that work of this type can inform the archaeologist about patterns of activity within houses and also about aspects of the belief systems of their occupants.

Aldclune produced a fairly large number of rotary quernstones. These stones may be of significance as items with a clear conceptual and functional connection with the arable cycle and thus with fertility. The number of occasions on which querns have been found in enclosure boundaries suggests that these stones were deliberately chosen for incorporation within these specific contexts within some areas of Scotland (Hingley 1992, 32), though they also commonly occur in pits on later prehistoric sites (eg The Dunion: Rideout 1992, 91). However, at Aldclune a different pattern appears to operate since the number of quernstones found in boundary contexts is very limited in contrast to those incorporated within domestic spaces within the homesteads.

The two buildings produced 23 complete or partial quernstones, including 13 upper stones, six lower stones and four stones that could not be defined as either upper or lower. Three of these stones (cat nos 25, 30 and 31) appeared to have been unfinished.

Complete and broken quernstones occur in both phases of Aldclune 1 and a number of stones were built into significant structures, including the walls and enclosures of the house and its central hearth. An entire quern (cat no 20, illus 17) was found built into the outer bank on the north-west (not marked in illus 21) and a broken piece of quern was found in the wall of the house on the east. Two complete querns (cat nos 25 & 37, illus 19) were built into the south-west edge of the Phase 1 central hearth. This pairing of stones included an upper and lower stone and, while the lower stone was well worn, the upper stone appeared unfinished and unworn. The close association of two complimentary stones in this context may endorse the suggestion that they were incorporated for ritual reasons, although they would also have formed a useful flat surface. An association of the hearth with the transformation of raw food to cooked (flour into bread) may have had a conceptual association with the role of the quern in the process of producing food (grain into flour). Many of the other partial and complete quernstones were incorporated in structural elements. One complete quern (cat no 21) was found incorporated as packing into a Phase 1 post-hole. Two other Phase 1 quernstones were incorporated into the paving in the east

of the interior of the house. Phase 2 stones cluster just within the entrance area of the house, close to the quern (cat no 21) from the Phase 1 post-hole. A further fragmentary quern (cat no 42) came from a Phase 2 post-hole, while one complete (cat no 26, *illus 18*) and two fragmentary querns (cat nos 27 & 28) were incorporated in a Phase 2 paved surface. It is noticeable that, despite the fact that the cobbled surface extended across much of the west of the house interior, querns were only incorporated into it in one particular area to its north. Two complete querns (cat no 22, *illus 17*, cat no 30) and one fragmentary example (cat no 34) were found in occupation soil or late paving to the east (rear) of the house (marked as 'superficial' on *illus 21*).

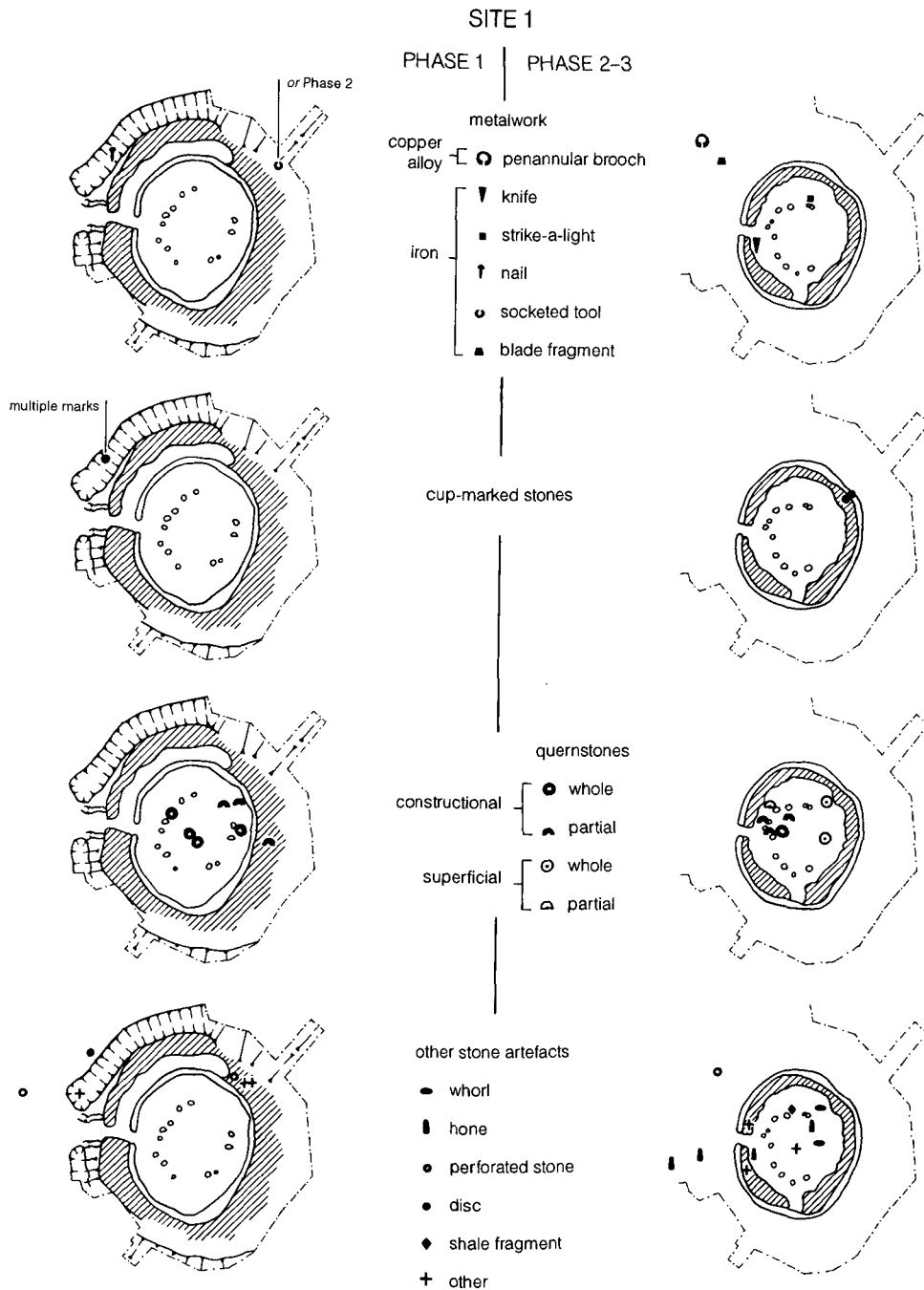
Aldclune 2 produced eight quernstones. All but two of these appear to date from Phase 1 and most were built into structural elements of the site. The querns which were built into structures show an emphasis on the entrance to the building; two were incorporated into the paving of the porch/entrance structure. One was an almost complete stone (cat no 31) which appeared to be unfinished, while a second stone (cat no 29) was fragmentary and worn. A further fragmentary stone (cat no 32) was built into the palisade slot to the east of the entrance. Inside the entrance, a complete stone (cat no 24, *illus 18*) was built into Phase 1 paving, while another (cat no 33) was built into the western internal wall which may have been a Phase 1 or 2 structure. The other three quernstones all occurred in occupation deposits, two from Phase 1 contexts and one from Phase 2 (marked as 'superficial' on *illus 22*).

The lack of direct evidence for occupation of the hilltop prior to the construction of Aldclune 2 suggests that some of these stones were possibly brought from an earlier settlement elsewhere. The querns might even have formed a ritual deposit connected with the foundation of the house, perhaps having been brought from the old settlement to the new. Comparable foundation deposits have been found at Sollas (West Lewis; Western Isles), where numerous animal burials in pits within the wheelhouse appear to have been contemporary with its construction (Campbell 1991).

In both Aldclune 1 and 2 clusters of querns were incorporated into entrance features, or features close to the entrances, in both Phases 1 and 2. By contrast, at both sites, querns occurred in occupation deposits to the rear of the buildings (to the east in the case of Aldclune 1 and to the north in the case of Aldclune 2). These querns may have been abandoned during use and could indicate the locations at which crop processing was carried out at the rear of each building.

Other stone finds include cup-marked stones. Aldclune 1 produced four cup-marked stones, while Aldclune 2 produce a further three of these objects. The significance of these stones is uncertain, although some of them are well made and they do not appear to have been fully consistent with the 'pivot-stones' found on other later prehistoric sites in Scotland. In the case of Aldclune 1, all the cup-marked stones occurred in contexts related to the palisade and the ditches (*illus 21*). Two of these examples (cat nos 71 & 76) were found in close association with the late burial; an example with multiple cup-marks was found in the inner ditch, where it had probably fallen from the outer wall; and a fourth stone (cat no 72) was found in the primary fill of the outer ditch (not marked in *illus 21*). Two of the cup-marked stones from Aldclune 2 (cat nos 73 & 74) occurred in paving associated with the entrance, while one (cat no 77) was built into the eastern internal wall.

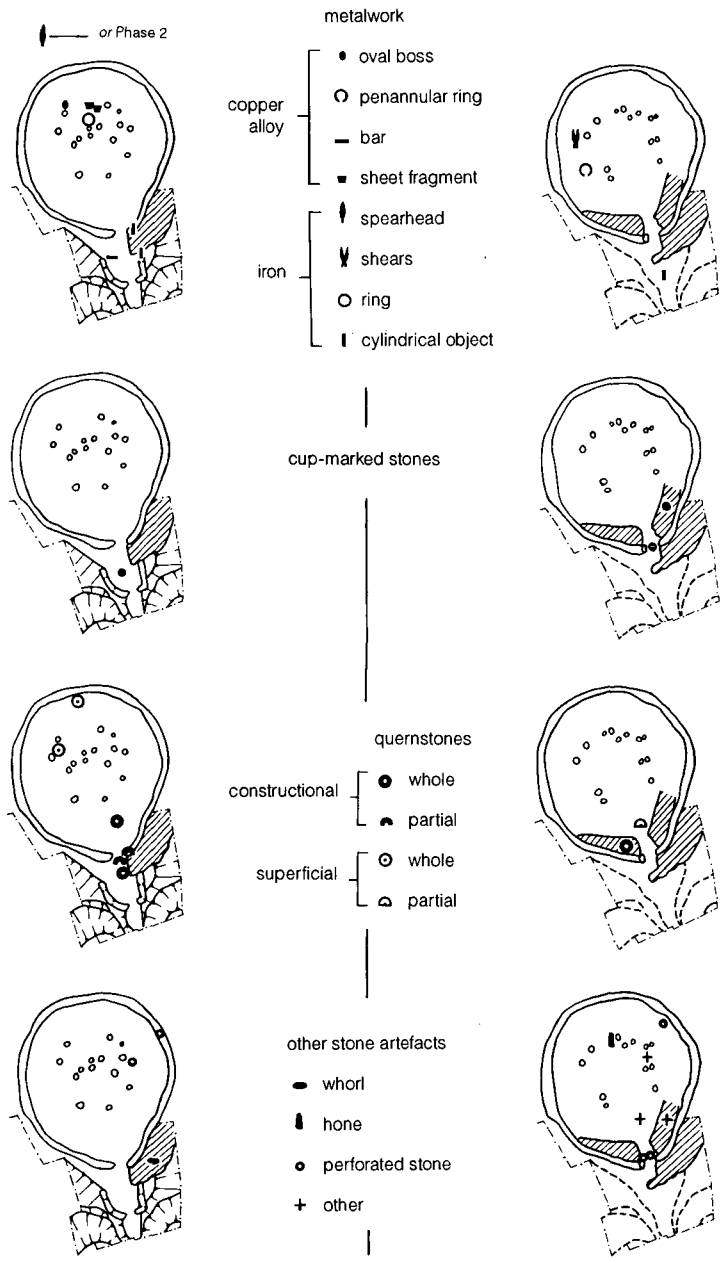
All of these stones occurred in peripheral locations. Of the other stone objects, the perforated stones also occur in the periphery of the two houses in seven out of eight cases (*illus 21 & 22*). Perhaps these simply formed stone weights to hold down roofing material. In the case of Aldclune 1, the quern distribution and that of cup-marked and perforated stones is almost mutually exclusive, with querns occurring mostly within domestic space and cup-marked/perforated stones in peripheral contexts associated with the palisade and enclosures.



ILLUS 21 Site 1: finds distribution

SITE 2

PHASE 1 | PHASE 2-3



ILLUS 22 Site 2: finds distribution

Of the metal objects, several may relate to activity on the site after the buildings fell into disuse and their exact context may be of little relevance to the construction or occupation of either house. The iron-socketed digging tool (cat no 9, illus 14) could well have been contemporary with the occupation of Aldclune 1. It was found in the fill of the inner ditch to the ENE. of the building. It might perhaps have been derived from the stone wall surrounding the house and found its way into the ditch during the collapse of the wall. The deposition of this object, which perhaps had a symbolic and functional association with the arable cycle may well have been ritually motivated. Plough-shares and ards often occur in settlement boundary locations in the British Iron Age (Hingley 1990b; 1992, 38). In comparatively recent times pieces of iron, old horse shoes and other metal objects were added to the wall core of blackhouses in the Western Isles of Scotland for good luck (Walker & McGregor 1996, 4) and the Aldclune evidence may represent a prehistoric version of a similar practice.

Little patterning is evident among the other metal objects from the site. A group of three iron objects of varying types occurred to the north of the western entrance to Aldclune 1 and this reflects the concentration of various stone objects (apart from querns) in this area. In the case of Aldclune 2, more metal items were found and these were concentrated in the northern interior of the house and also in contexts just outside the southern entrance. The only obvious detail in the patterning is that the three cylindrical pieces of ironwork (cat nos 13, 85 & 86) all came from the entrance and porch area — two in soil layers and one in the palisade slot. These were all very small objects of uncertain significance and the circumstances of their deposition is unclear.

Of the pottery, small quantities were found in three contexts within Aldclune 1 and in two contexts within Aldclune 2. The samian sherd from Aldclune 2 was found in the core of the wall to the west of the entrance and may have dated from the second phase of this building.

The general clustering of objects of stone and metal to the north of the interior of Aldclune 1 is of interest. If a line is drawn down the central axis of the house through the Phase 1 central hearth, 32 out of 40 objects were found to the north of this line, while the eight objects to the south of the line included the two querns from the central hearth. This northern patterning is most evident in the Phase 1 finds and the Phase 2 querns. The only body of information that does not fit the pattern is the 'other stone objects' of Phase 2 date, the distribution of which appears to be fairly random. The significance of this patterning is unclear, although it should be noted that a number of later prehistoric houses in southern Britain have produced concentrations of finds to the left of the entrance when entering (see examples in Williams & Zeeprat 1994; Hawkes 1994; Barnes *et al* 1995). It has been suggested that this pattern is the result of the cycle of everyday activities within the household, with cooking and other daytime activities occurring to the left of the entrance and sleeping occurring to the right (Fitzpatrick 1994). The same explanation might hold for Aldclune 1, although in this case the pattern is reversed with regard to the southern British sites, with the entrance to the west rather than to the east and the artefact concentrations to the north rather than to the south.

Other features in the interior of the Aldclune houses may also be significant in social and symbolic terms. A cluster of pits located close to the entrance but within the central area of Aldclune 1 produced some of the scarce pottery from the site. Pits occur in this area throughout the life of the house. The scarcity of preserved animal bone from the site presumably results from the acidity of the soil and precludes analysis of the possibility that animal burials might have been made in these pits, to parallel those from houses at Sollas, on North Uist (Campbell 1991), Broxmouth, East Lothian (Hill 1982a) and elsewhere.

Production and economy

It is likely that Aldclune had a mixed farming economy, although little detail of this economy has been added as a result of excavation. The few animal bones from the excavations indicate that animals were being slaughtered and/or eaten on site, while the spindle whorls indicate the spinning of wool. The numerous quernstones suggest that crops were being produced, or at the very least brought to the site, and were possibly processed within domestic areas. The digging tool from Aldclune 1 may well have been used in farming activities. Limited additional evidence exists for production at the site. A small number of the quernstones from this site were unfinished and this, together with the local origin of the stone used for the querns, suggests on-site production. This appears to be a common pattern in southern, central and eastern Scotland (Hingley 1992, 35).

A range of smelting debris came from Aldclune 1 (Spearman, above) and this suggests that the initial stages of ironworking occurred on this site. However, it is unclear whether this smelting occurred during the occupation of the houses as the debris was not found in clear structural contexts. It is perhaps more likely that the earthwork of the building was later reused for this industrial process since smelting produces large quantities of sparks and unpleasant, noxious fumes (Cleere 1977).

ALDCLUNE 3

Aldclune 3 lay between the two buildings on a raised knoll. Its purpose is unclear and no finds were made. The terrace between Aldclune 2 and Aldclune 3 connects it physically to that building, as does the possible double line of pits running between the two sites. The entrance to Aldclune 2 also points directly toward Aldclune 3 and this may indicate that Aldclune 3 was in existence when Aldclune 2 was built. Further interpretation is made difficult by the limited extent of the excavation, the poor condition of preservation and the nature of the site. However, it is possible that the hilltop structure consisted of a roughly defined circle of pits around the edge of the knoll, with one or more pits in the centre. It is uncertain whether the pits held timbers, stones, or had some other purpose, but four possibilities can be suggested.

First, Aldclune 3 may have formed part of a *chevaux de frise* outside the entrance to Aldclune 2. The excavated structure has no obvious defensive role, but Aldclune 2 would not be the only later prehistoric sites in Scotland to be associated with apparently non-defensive *chevaux de frise* (Hingley 1992, 19).

Secondly, Aldclune 3 may represent the remains of a round-house, where the ring of posts formed the internal post-ring. Such a post-ring would be similar in diameter to those inside Aldclune 1 and 2. If this interpretation is correct it is evident that the Aldclune 3 building did not have a palisade-defined outer wall and it therefore differed in construction from the other buildings on the site. If Aldclune 3 was a house, perhaps the building was dismantled and its stone parts reused in the construction of Aldclune 1 or 2. (It might also have been the origin of the quernstones incorporated in the early structures of Aldclune 2.)

Thirdly, Aldclune 3 could perhaps have formed a ritual structure connected with the settlement. The possible alignment of features leading between Aldclune 2 and 3 hint at the idea of ritual processions. The difficulty with this explanation is the lack of parallels for ritual structures in the Scottish Iron Age (Hingley 1992). Ritual and domestic activity usually appear to have occurred in the same household space.

Finally, Aldclune 3 might have represented a Neolithic or Bronze Age burial monument (a burial cairn or stone circle) or an early settlement site constructed on the highest point of the

knoll. The features might have represented stone holes from which all the stones have been removed during the building of the later houses on the site. The cup-marked stone in the outer face of the house wall of Aldclune 1 might also have been removed from this context, where it would have faced toward the site of the former monument. This explanation does not account for the features that run between Aldclune 2 and 3, but the reuse of the sites and materials of Neolithic/Bronze Age monuments in the building of Iron Age houses is well known in other areas of Scotland (Hingley 1992, 16; Ballin-Smith 1994; Hingley 1996).

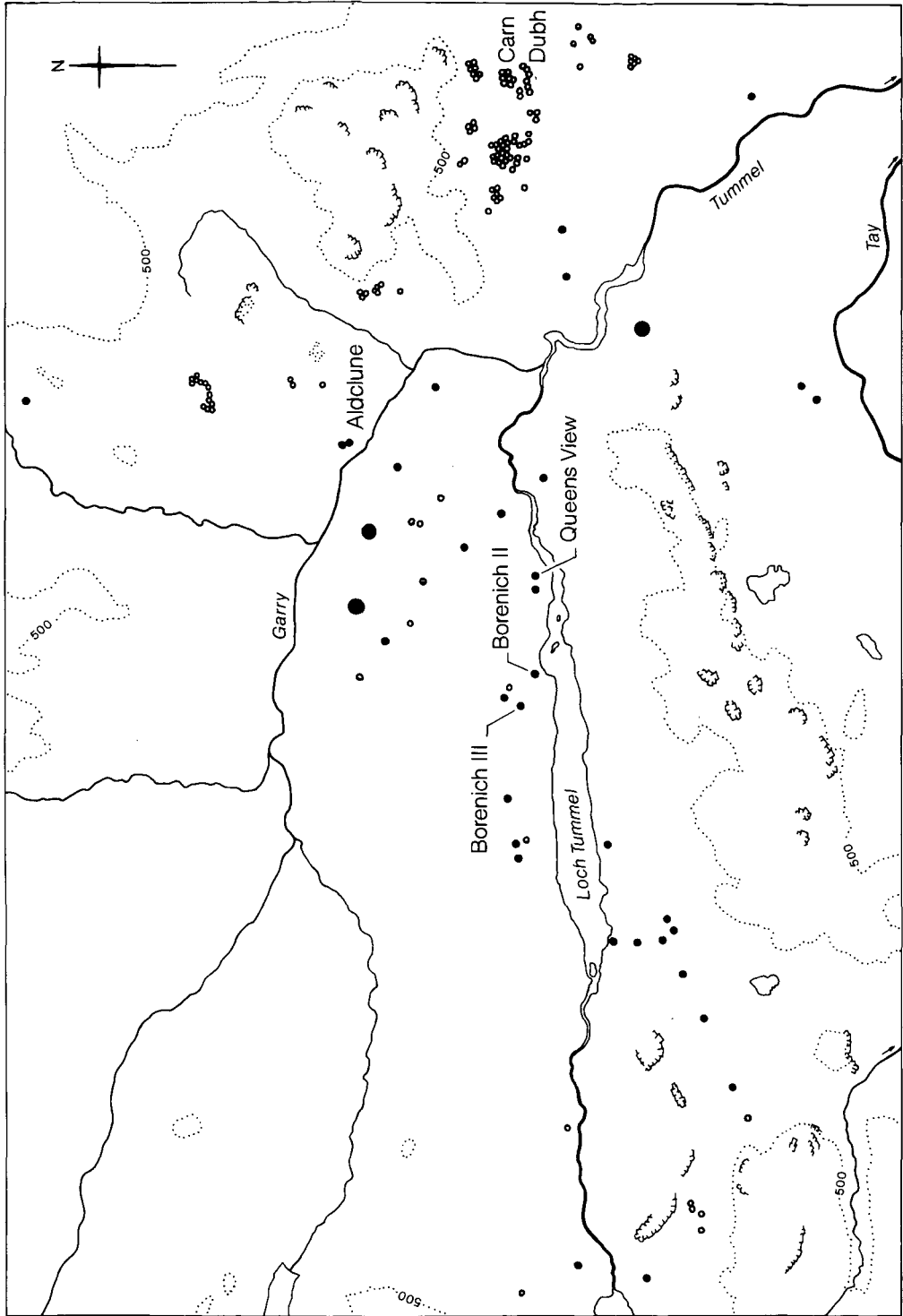
THE REGIONAL CONTEXT OF ALDCLUNE

A broad distinction has been drawn in the Introduction (above) between an area to the south and west of Aldclune in which 'homesteads' occur and an area to the north and east in which there are more extensive open settlements of clusters of hut circles. This evidence may indicate regional patterns in the organisation of later prehistoric settlement in this area of Scotland (illus 23). Three additional sites (marked as 'enclosures' on illus 23) and Aldclune itself lie in the boundary area between the two zones.

Homesteads

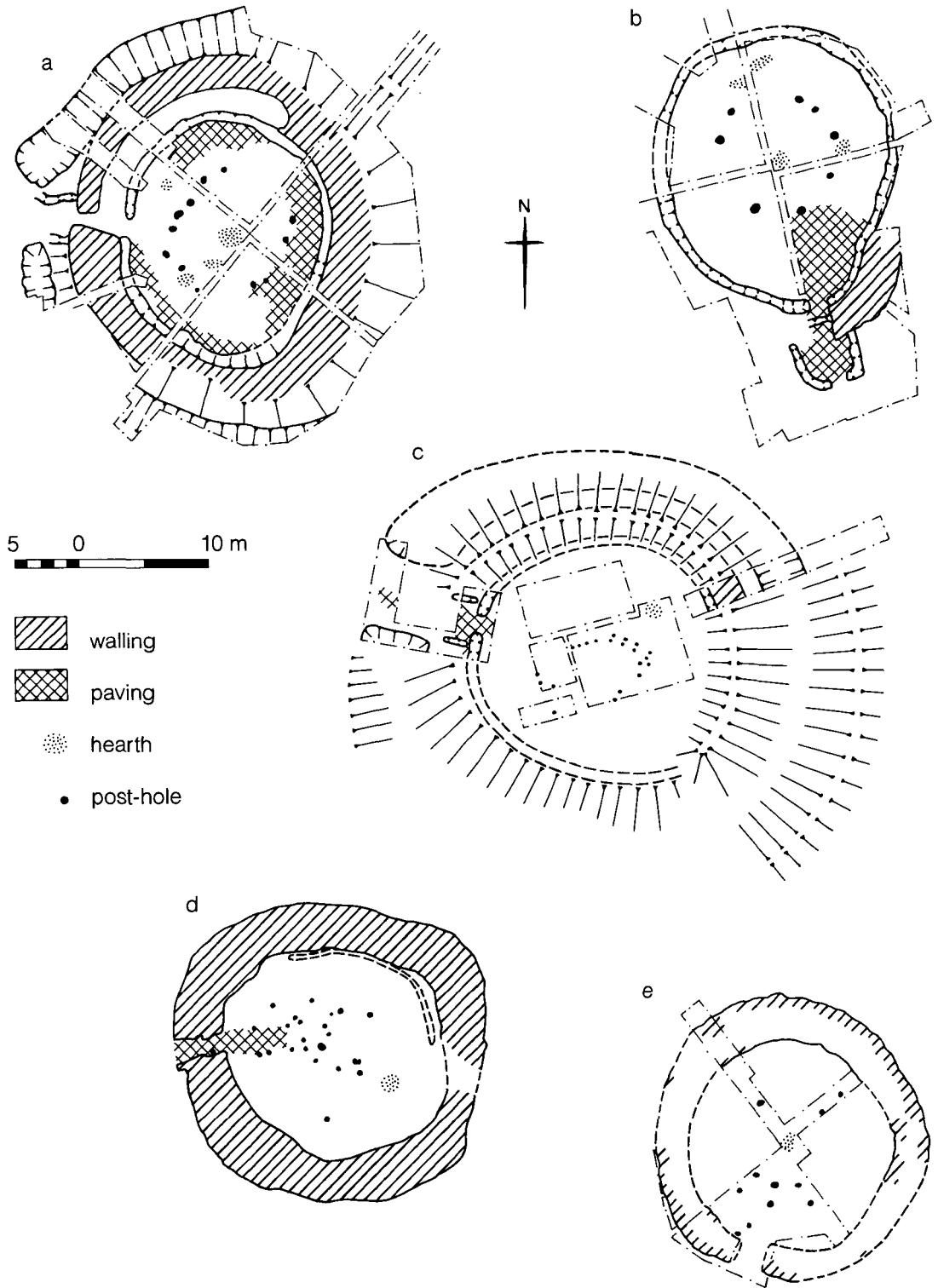
While a small number of hut circles occur in the area to the south and west of Aldclune and around Loch Tummel, a large group of homesteads is also known here (Watson 1913, 1915; Taylor 1990). These are typically 16–20 m in internal diameter with drystone walls 3–4 m thick. Many of the homesteads occur on south-east-facing hillslopes, while a few examples occur on the tops of hills and prominences. Three of these homesteads have been excavated (illus 24): an example at Borenich II was excavated by Watson (1915) and more recent excavations have occurred at Queen's View and Litigan (Taylor 1990). All three sites show some similarities to and some differences from the two buildings at Aldclune. The main difference between the Aldclune structures and the other three homesteads lies in the presence of earthwork enclosing boundaries at Aldclune; also, unlike Aldclune, other homesteads are not usually sited in hilltop positions (Taylor 1990, 43).

At Borenich II, Watson uncovered a monument which consisted of a wall about 3 m wide which defined an internal area about 15 m across and which was built of small stones, with larger stones in the foundation layer. The wall defined a roughly circular internal area. The entrance was to the WSW. Evidence for three separate hearths were found in the internal area (Watson 1915; NMRS NN86SW 6). The excavated homestead at Queen's View (Taylor 1990) consisted of a stone wall roughly 3–5 m wide surrounding an oval internal area with a diameter of around 19 m east/west by about 16 m north/south. On its north side the interior was defined by a shallow groove which parallels the palisade slots of Aldclune 1 and 2. This groove was about 0.2 m wide and appears not to have been very deep (Taylor 1990, 27 & fig 3). It might perhaps have acted as the foundation for a narrow timber revetment facing the inside of the stone wall but it is perhaps unlikely to have supported a substantial palisade of the types represented at both the Aldclune buildings. Inside were a number of post-holes, a hearth and other features perhaps connected with iron working. It would appear that the ironworking may have dated to after the abandonment of the homestead. The Queen's View house had a western entrance with a paved surface running through it, while post-holes in the entrance area suggested an entrance structure. The scattered post-holes revealed by the excavation in the interior indicate that it was at least partly roofed (Taylor 1990, 35). Two depressions towards the east (back) of the building (*op cit*,



0 5 km

ILLUS 23 Sites in the vicinity of Aldclune



ILLUS 24 a: Aldclune Site 1, b: Aldclune Site 2, c: McNaughton's Fort, d: Queen's View, e: Borenich II

fig. 3) parallel the hollowed areas inside Aldclune 2, although they appeared in part to be later than the initial occupation and may have been associated with the iron-working.

Although the excavation at Litigan was limited in extent, it suggested that the homestead had a stone wall around 3 m wide surrounding an area about 16 m in diameter. Internally, the building probably had a double ring of post-holes that supported a roof; the building also had a central hearth (Taylor 1990) and could perhaps have had other hearths outside the excavated area. Its entrance did not survive well but appeared to be to the SSW.

Finds from these three excavations were scarce but included rotary querns (two each from Queen's View and Litigan and one from Borenich II) and slag (from both Queen's View and Litigan; at Queen's View this indicated a phase of ironworking after the disuse of the homestead). A glass bead was also found at Queen's View. The dating evidence provided by the three excavations is not reliable but has been interpreted as indicating occupation in the latter half of the first millennium AD (Taylor 1990, 61). It should be noted, however, that most of the distinctive finds from Aldclune date to the middle and later centuries of the first millennium AD and that without the radiocarbon dating programme their earlier occupation would not have been identified. Perhaps Queen's View, Borenich II and Litigan were also first built in the later first millennium BC or early first millennium AD and the finds relate to later activity on the sites.

In addition to those of north-west Perthshire, homesteads also occur more widely across central Scotland. In south-east Perthshire a possible broch and a 'ring-fort' have been identified by the RCAHMS (1994a, 51) and in the Braes of Doune (Stirling) 10 oval or circular homesteads have been identified (RCAHMS 1994b, 9–10), while other examples have been identified in the Stirlingshire *Inventory* (RCAHMS 1963, nos 85 & 87).

An even closer parallel to Aldclune 1 than that provided by the homesteads of north-west Perthshire is the site of McNaughton's Fort (Nithsdale; Dumfries & Galloway; Scott-Elliot *et al* 1966). The excavators of McNaughton's Fort proposed that it might have represented a large-roofed circular building. If so, Aldclune 1 and 2 and McNaughton's Fort may all have been substantial houses formed with a palisade with a substantial stone wall outside it. All three are further defined by outer ditches and would appear to have had complex entrance structures. The radiocarbon date from the palisade trench at McNaughton's Fort suggests that it is slightly earlier in date than Aldclune 1 and 2, but all three structures were fairly similar and appear to form part of a common architectural tradition (illus 24).

It is likely that Litigan was entirely roofed, while Queen's View was probably at least partly roofed. Two of the best-preserved examples discovered during the Braes of Doune survey may also have been roofed as substantial round buildings, though it has been observed that some circular homesteads appear too large in diameter to have been entirely roofed so that the class of homesteads/ring forts is probably not as homogeneous as has sometimes been thought (RCAHMS 1994b, 10–11). Nevertheless, it is likely that the Aldclune examples, together with many of the north-west Perthshire examples, were roofed as substantial round houses.

Hut circles

The hut circle settlements that occur to the north and east of Aldclune are a type well represented in Perthshire (Harris 1985; RCAHMS 1990, 1994a; Rideout 1995). These hut circles are typically between 3 m and 15 m in diameter inside a stone wall of varying width and often have an east or south-eastern entrance (eg Harris 1985; RCAHMS 1990, 3–5). They are often associated with extensive field systems and represent a type of later prehistoric settlement very common across Scotland and northern Britain as a whole. The local hut circle tradition is very poorly understood

as very few have been excavated though the recently excavated round houses at Carn Dubh were mostly late Bronze Age/early Iron Age (Rideout 1995), it is likely that hut circles in general span the latter half of the second millennium BC and the whole of the first (RCAHMS 1990, 4) and possibly the early part of the first millennium AD.

Enclosures

As well as representing homesteads the two structures at Aldclune also have defensive banks and ditches. Three further sites are marked on illus 23 as enclosures and all lie in a zone on the interface between the area typified by homesteads and that typified by hut circles (NMRS NN86SE 11, 29 & 30). Of these three sites, all would appear to have defensive banks and/or ditches that define an internal area rather greater than that enclosed within the walls of the homesteads. At least two of the sites would appear to have formed forts rather than circular buildings. They are also similar to Aldclune in being situated in commanding situations which may have provided additional protection and might also have provided wider views across the surrounding countryside.

Regional patterning

There are evidently some parallels between the 'homesteads' and hut circles of north-east Perthshire. If the interpretation offered in this report is correct, both homesteads and round houses were circular, fully roofed structures, often built with stone-walls. However, contrasts between the two settlement types occur in terms of their forms and locations, including: (a) the size of the internal floor space of the building; (b) the width and scale of the enclosing wall that forms the building; (c) the orientation of the entrances; and (d) the settlement context of the two house types.

First, the size of the internal floor space of homesteads appears far greater than any but the largest hut circles in the area. An inspection of Taylor's list (1990) and the NMRS details for relevant sites indicates that the internal diameter is seldom less than 15 m for homesteads, while hut circles occasionally reach such a diameter but usually fall between 11 m and 7 m. This suggests that the individual household living within a homestead was larger than that living in a hut circle. It may also mean that homesteads had higher roofs and a more monumental aspect than the typical hut circle.

Secondly, the walls of the homesteads appear to mirror the interiors in being far more substantial than those of most hut circles. Indeed, homesteads in general are more substantial and monumental than the round houses of north-east Perthshire.

Thirdly, in terms of the orientations of entrances, most round houses across southern Britain have an eastern or south-eastern orientation (Oswald 1997; Parker Pearson *et al* 1996, 61). This is also true of hut circles in certain areas of Scotland and the vast majority of the hut circles of south-west and north-east Perthshire have eastern and south-eastern entrances (Harris 1985; RCAHMS 1990, 2). It has been argued that an east or south-east aspect derives from the position of the rising sun on the horizon at the midwinter solstice or at the equinox (Oswald 1997).

The orientations of the entrances of the homesteads forms a clear contrast, as most have entrances to the south-west or west. Of the excavated examples in north-west Perthshire, Aldclune 1 and Queen's View (Taylor 1990, fig 3) had western entrances; Litigan had an entrance to the SSW (Taylor 1990, fig 2); and the site excavated by Watson (1915) at Borenich II had a

WSW entrance (NMRS NN86SW 6). Aldclune 2 had a southern entrance in its both phases although the arrangement of its porch meant that those entering the house did so from the west. Many of the unexcavated homesteads have been robbed as they provide a substantial quarry of stone and it is often difficult to be certain about the position of entrances from surface inspection alone. Nevertheless, many of the unexcavated homesteads recorded on illus 23 would also appear to have a westerly or southerly orientation, so that there is a clear contrast between the entrance orientations of the two classes of site. This evidence for differing entrance orientations between hut circles and homesteads may indicate a general contrast between the two zones of settlement. Evidently such a distinction may be indicative of varying attitudes to nature and to group identity in the two areas. If hut circles faced sunrise, while homesteads faced sunset, it is also of interest that most of the homesteads in this area are located physically to the west of the main hut circle distribution.

Parker Pearson *et al* (1996) have suggested that a high proportion of the brochs of Scotland have western as opposed to eastern entrances. This, they suggest, relates to the fact that their occupants were subverting the natural order of east/front to demonstrate their control over nature and their social isolation and status in relation to the rest of Society. Whether brochs should actually be seen as high-status buildings is a topic of discussion in Iron Age archaeology at present (Hingley 1995; Sharples & Parker Pearson 1997; Armit 1997).

Finally, the settlement context of the two house types appear rather different. Although both homesteads and round houses often occur on south-east-facing hill slopes the main contrast is in the number of individual buildings involved in each settlement. In many cases hut circles occur in multiple groups forming fairly extensive open settlements (RCAHMS 1990, 29–84); this contrasts with the homestead zone in which the buildings are usually isolated, although sometimes they appear to occur in loose pairings (the Aldclune site is unusual in forming a close pairing). However, the evidence from the excavation of a number of buildings at Carn Dubh has been taken to suggest that the houses at this site were largely successive and that only a limited number of relatively isolated houses existed at any one time (Rideout 1995). This could suggest that the two patterns of settlement were less distinct than they might at first appear. However, the Carn Dubh excavation was fairly limited in scale and such a suggestion requires further study in relation to other hut circle clusters in north-west Perthshire.

To summarize, two broadly defined settlement zones may occur in this area of north-west Perthshire and this parallels regionally defined settlement zones elsewhere in Scotland (Hingley 1992, 33–4). Across much of this area communities made up of groups of households may have lived in open hut clusters. In some areas, however, as around Loch Tummel, larger and comparatively more isolated households may have lived in substantial round houses, sometimes located in prominent positions in the landscape. The evidence suggests that the hut circles date to the late second millennium BC, first millennium BC and the early first millennium AD, while the homesteads may relate to the end of the first millennium BC and the early first millennium AD. This regional variation in settlement patterns may parallel the evidence for other areas of later prehistoric Britain. For instance, a distinction has been drawn between the Upper Thames gravels of Oxfordshire where substantial communities based in extensive open settlements appear to occur and the Oxford Uplands, in which more nucleated enclosed settlements are common (Hingley 1984, 1988). A similar distinction has been drawn between the extensive and densely settled lowlands of north-eastern England and the sparsely settled uplands with their more nucleated communities (Ferrell 1995). It should be noted, however, that although the north-west Perthshire patterns vary, the two zones do not form well-defined upland and lowland types, as the hut circles and homesteads shown in illus 23 all have a distinct upland context.

It is suggested that the larger households resident in the two buildings at Aldclune may have been subdivided into a number of sub-groups each with its own hearth, perhaps initially with one dominant domestic group using the central hearth. The hut circles may only have had a single undivided household (as most of the Carn Dubh houses had a single central hearth). This could be taken to indicate that homesteads housed rather larger, or more clearly subdivided households, than hut circles. The homestead at Borenich II produced evidence for three hearths and this fits this interpretation, although the single hearth within the excavated site at Queen's View indicates that some other homestead households may not have been subdivided.

This topic and a number of the other speculative ideas outlined in this discussion should form a focus for future research as the evidence does not exist to assess them in greater detail at the present time.

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