Proc Soc Antiq Scot 141 (2011), 75–102

A 1st millennium BC Atlantic roundhouse in Argyll: survey and excavation at Loch Glashan

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ABSTRACT

A detailed survey of the Atlantic roundhouse at Loch Glashan (NMRS: NR99SW 8; NR 9227 9301) was carried out over two weeks in June 2003 alongside a small-scale excavation to assess the extent of damage caused by encroaching vegetation and to obtain dating evidence. The structure is a large dry-stone circular building located above Loch Glashan, and the excavations produced architectural evidence suggesting more than one phase of occupation, alongside Iron Age artefacts and radiocarbon dates. These reinforce the argument that circular Iron Age structures in Argyll belong within the wider Atlantic milieu of brochs or Atlantic roundhouses dating to the second half of the 1st millennium cal BC.

BACKGROUND

Loch Glashan is a simple Atlantic roundhouse (cf Armit 1992) or 'dun', with an external diameter of 28m, located in thick conifer forest on a knoll which, before forestation, overlooked the east side of Loch Glashan (illus 1). The site was forested in the 1960s and trees were planted very close to the walls, contrary to current best practice that discourages planting within 20m of archaeological sites (Historic Scotland, undated, 8). The authors have regularly visited the site since 1994 to monitor its encroachment by the surrounding vegetation. At the time of excavation, tree roots were penetrating into and onto the walls of the site while natural re-seeding had promoted new tree growth both on the walls and in the interior. The integrity of the stone walls and the interior deposits were being further threatened by dense bracken roots (Rees & Mills 1999: 9).

As a result of this perceived threat, a single-season project was funded by Historic Scotland and the University of Nottingham to assess the extent of damage being caused by encroaching vegetation. The project presented the authors with the opportunity to survey the architectural features of a circular drystone site in Argyll in detail as well as carry out small-scale excavation in an attempt to obtain dating evidence. This was done to contribute to the on-going debate about the dating of 'duns' and 'brochs' in Argyll and more widely throughout Atlantic Scotland (Neike 1990; 2004; Hingley 1992; Harding 1997; 2004; Armit 1992; 2004; Gilmour 1994; 2000b; 2005; Parker Pearson et al 1996; 1999; Henderson 2000; 2007: 150–72; MacKie 2007; 2008; 2010).

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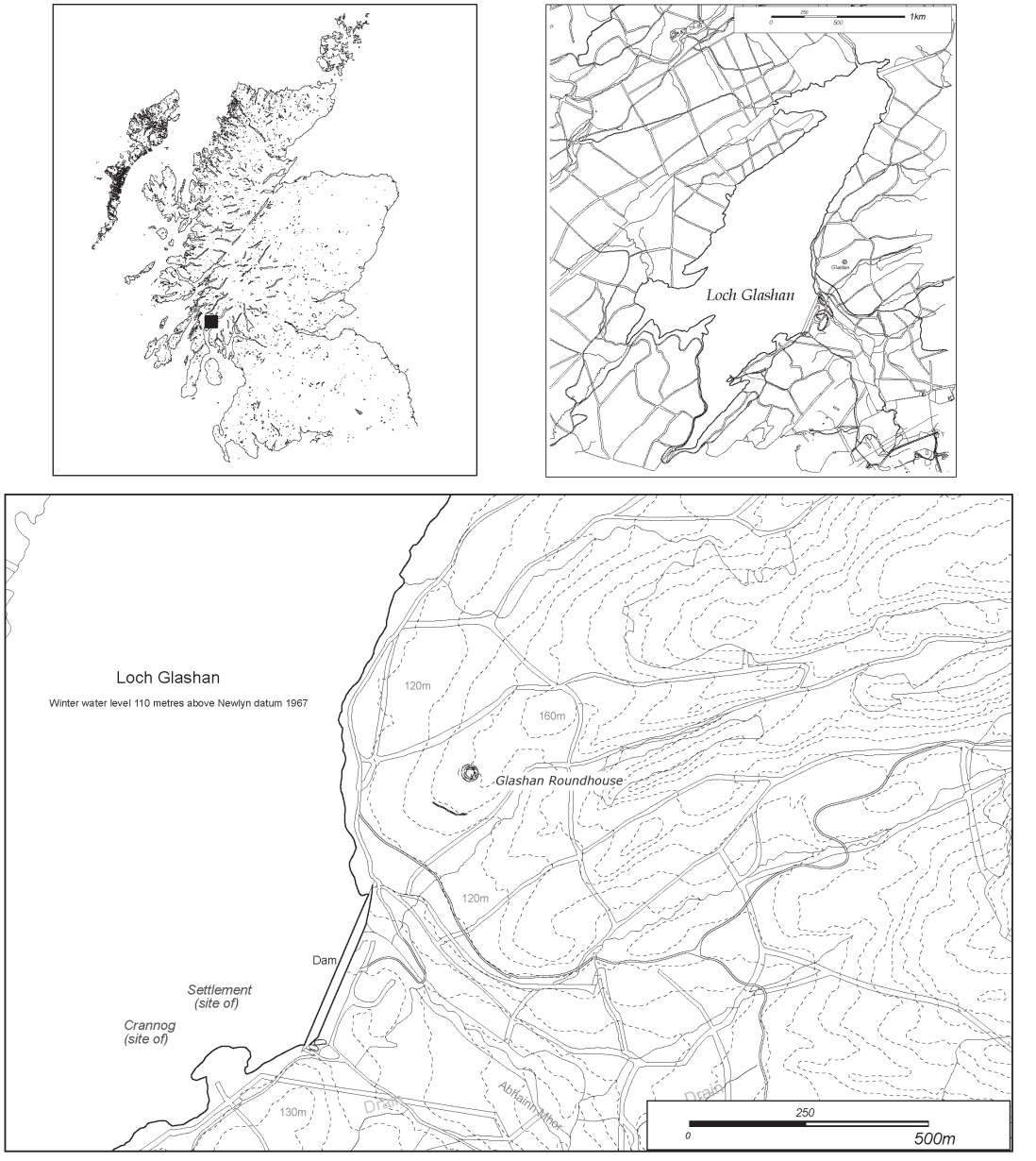
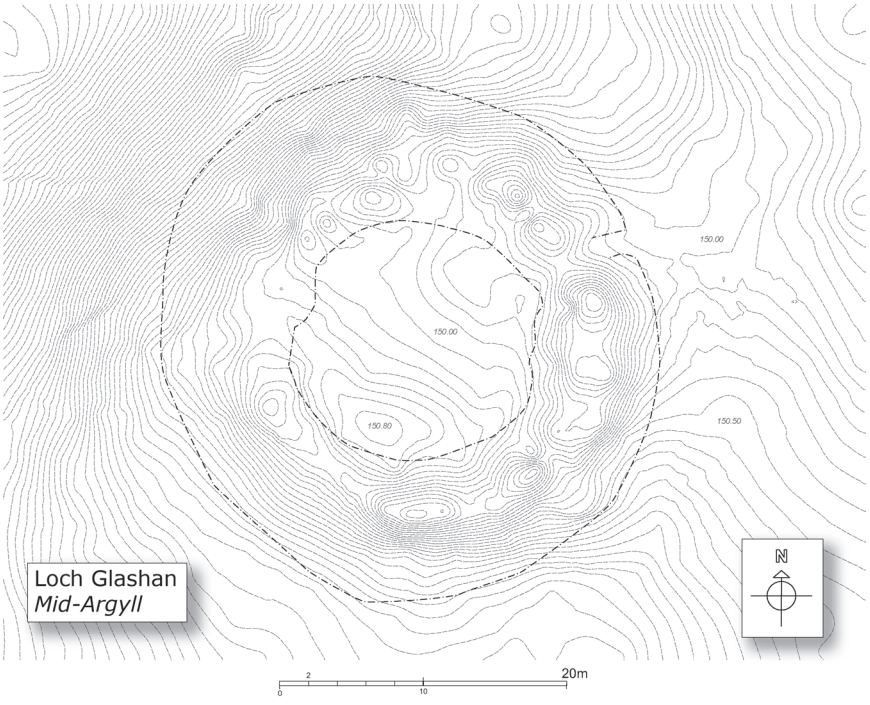


ILLUS 1 Site location map (position of head dyke marked to south-west of site)

The 'duns' of the area are traditionally dated to the Early Historic period (AD 400–800), and are seen to form an important element of the Dál Riata settlement hierarchy (Neike 1990; 2004). Whilst it is true that sites classed as 'duns' have produced 1st millennium AD dates (see below) it does not follow that all such sites, particularly circular examples, should

be unequivocally placed within this dating bracket. Neike (1990: 133–4) also noted that not all 'duns' may be late and offered some comparisons between 'brochs' and 'duns' that display complex architectural features which could suggest earlier origins. Armit (2004) considers that many Argyll 'duns' are Atlantic roundhouses and, as previously observed by Gilmour (1994), are therefore likely to belong to a prehistoric Iron Age horizon (*c* 800–100 BC). Armit's development of the Atlantic Roundhouse nomenclature, with its complex and simple types (1992), was a necessary development that allowed the re-consideration of the dry-stone structures of the Iron Age in Atlantic Scotland, not only within the Atlantic area, but also placing them within the growing understanding of Iron Age settlement in Northern Britain (Harding 2004). Despite MacKie's disagreement (2008: 263), this nomenclature should be maintained in the professional lexicon as a tool to ensure academic discourse is conducted on a clearly understood set of broad criteria which can be easily applied in the field. Crucially, Atlantic Roundhouse nomenclature does not rely on the recognition of a complex suite of architectural details (MacKie 2010: 90–1) which are only visible on sites under exceptional circumstances of preservation. As a result, Glashan will be referred to as an Atlantic roundhouse throughout this paper.

The work, carried out between 14 and 28 June 2003, consisted of a detailed survey of the site alongside a small-scale excavation across the wall and the interior area. Topographic and detailed site survey was carried out using a Total Station linked to Penmap datalogging software which was used in conjunction with photography to record the features of the site

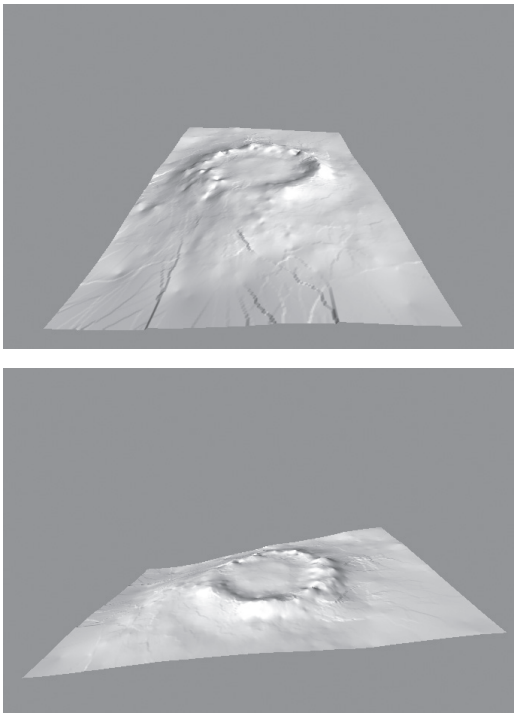


Illus 2 Contour survey (10cm increments). Dotted line indicates the current extent of rubble wall

itself and the extent of bracken and tree-root incursion. Using the survey and excavation data, a preservation strategy was developed in consultation with Forestry Enterprise to prevent further tree regeneration on the site and ensure the future preservation of the site (Henderson & Gilmour 2005).

SURVEY

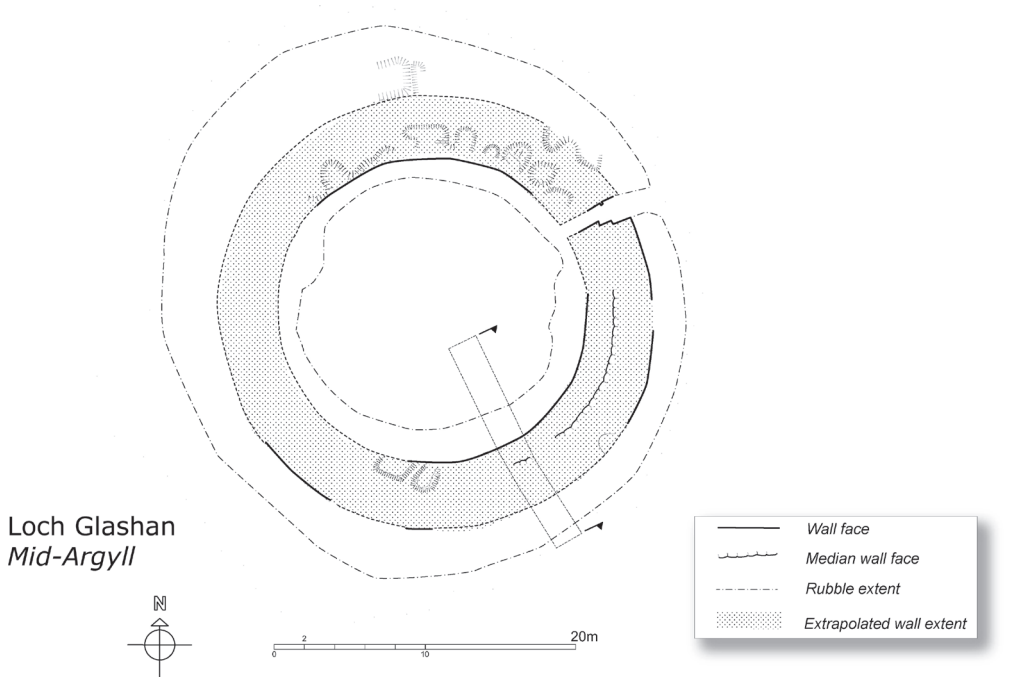
Circular in plan, the Atlantic roundhouse has an external diameter of 28m, although rubble consisting of angular boulders defines a larger area of collapse some 35m from north to south and 33m from west to east (illus 2 & 3). The massive stone wall, ranging from 4.5–5.1m thick, encloses a large internal area about 19m in diameter (illus 4). Inner and outer facing stones of the wall can be intermittently traced and suggests that the outer wall survives as high as 1.7m in places and the inner to a height of 1.2m with five irregular courses surviving. A clear wall face was recorded within the core of the main wall in the south-east quadrant of the site and facing inwards, with about a metre between this face and the innermost face of the main wall. Such intramural wall faces are known at several sites in Argyll and are known as 'median' wall faces (see below). A small polished pebble stone was found associated with this 'median' wall face (SF 1). The entrance is located to the north-east and measures 1.6m wide at its outer end. Individual jamb stones form rebates at a distance of 1.15m from the outer wall, and at this point the passage narrows due to collapse and rubble spread to 0.95m wide and appears to narrow further towards the interior (although the northern side of the passage wall is obscured by rubble at this point).



ILLUS 3 Digital terrain model of the site looking north (*top*) and west (*bottom*)

Several enclosures and small structures occur on the wall, some giving the initial appearance of wall chambers, but all undoubtedly secondary to the initial construction of the wall (marked with hachures in illus 4). Three appear to be later shieling-type enclosures, particularly the structure located to the west of the centre of the site, which employs the primary interior wall face in its construction. The remaining structures, although representing secondary activity, may be of some antiquity.

About 60m to the south of the site, a turf and stone head-dyke was traced running across the slope (illus 1). The uphill side of this dyke had a stone component while the downhill side was completely turf. Examination of vertical aerial photographs from 1946 (CPE/UK/SCOT194 frames 1083–4), 1948 (541/A/398 frames 4209–10), 1950 (58/A/433 frames



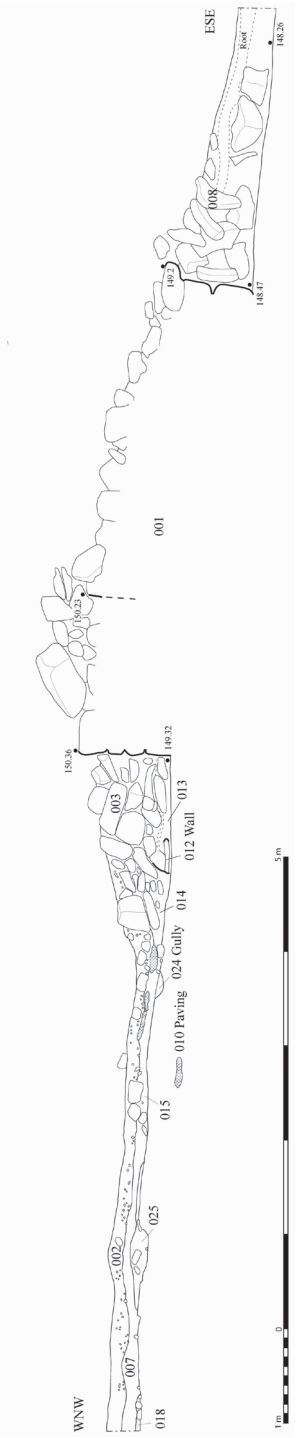
ILLUS 4 Main surveyed features at Loch Glashan roundhouse. Shading indicates original wall extents (extrapolated) while hachures outline the extent of secondary wall features

5391–2) and 1956 (RAF/903 frames 0200–1) reveal that the area downhill of the head-dyke was covered in rig cultivation prior to the forestry plantation. It is, therefore, likely that this feature is a later medieval component of the landscape, separating upper grazing areas from the crops lower on the slopes. A single trench was cut through the head-dyke and confirmed that the wall was a later feature in the landscape.

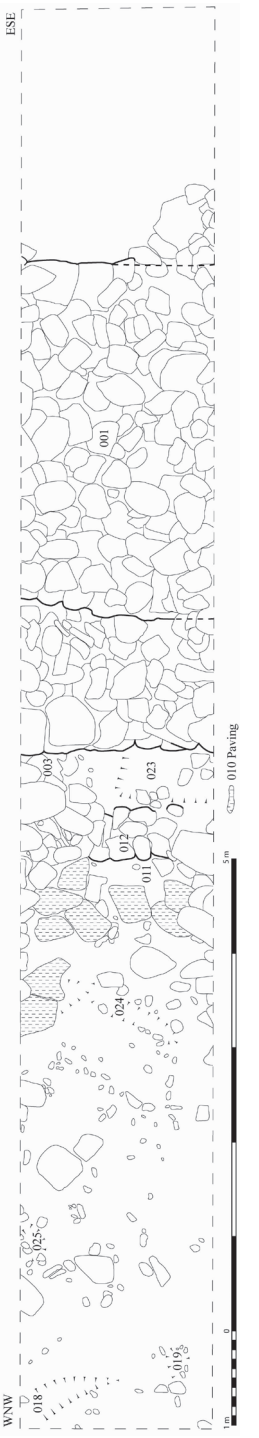
EXCAVATION

A slot trench 2m wide and 15m long was placed over the wall, at a location considered after the initial survey to represent the best chance of analysing the disturbance caused by tree and bracken growth (illus 4). Deposits were excavated by hand and recorded by context. A bulk sample of each context was taken for wet-sieving and flotation. Contexts, small finds and samples were recorded in three dimensions using the Penmap for Windows software.

Excavation was hampered by the presence of midges on-site throughout much of the excavation period. It was necessary to wear midge-masks that impeded the ability of excavators to discern very small objects through the mesh of the mask, and made the differentiation of soil colours more difficult too. While steps were taken to mitigate these problems (including the full sampling of contexts), the process of excavation was necessarily slower while deposits were checked without masks and at the same time, excavators would often complain of being unable to fully concentrate on the tasks at hand.



Illus 5 Trench section



Illus 6 Trench plan

CONTEXT RELATIONSHIPS

Clearing the trench of vegetation and topsoil revealed that the main structural wall of the Atlantic roundhouse (C001) comprised two well-built faces with a rubble core. This core contained an inward facing 'median' wall about 1.6m from the inner edge (illus 5 & 6). Examination of this 'median' wall in areas of collapse farther to the north, outside the trench, indicated that it was of relatively poor construction compared to the inner and outer faces of the main wall and appeared to rest on further rubble core material and thus not to be securely founded at its base (illus 14). This would suggest that it was a constructional mechanism to reduce stress on the inner and outer faces from the weight of the rubble core. The offset nature of the 'median' face within the thickness of the wall and the fact that the outer wall skin appears to be more substantially built than the inner skin may suggest that there are chronological differences between their construction. However, a stronger outer wall is likely due to its location further downslope than the inner face (this would also likely be accompanied by a batter to the external wall, but due to the considerable rubble surrounding the site this could not be clearly examined). The rubble foundation for the median wall certainly argues that it was constructed after the initial rubble fill between the inner and outer walls was laid. The authors would therefore interpret these relationships as the result of choices made during primary construction, and argue that the inner and outer faces and the median wall should be considered a single primary construction. Only further excavation involving the dismantling of the wall could attempt to definitively answer this question.

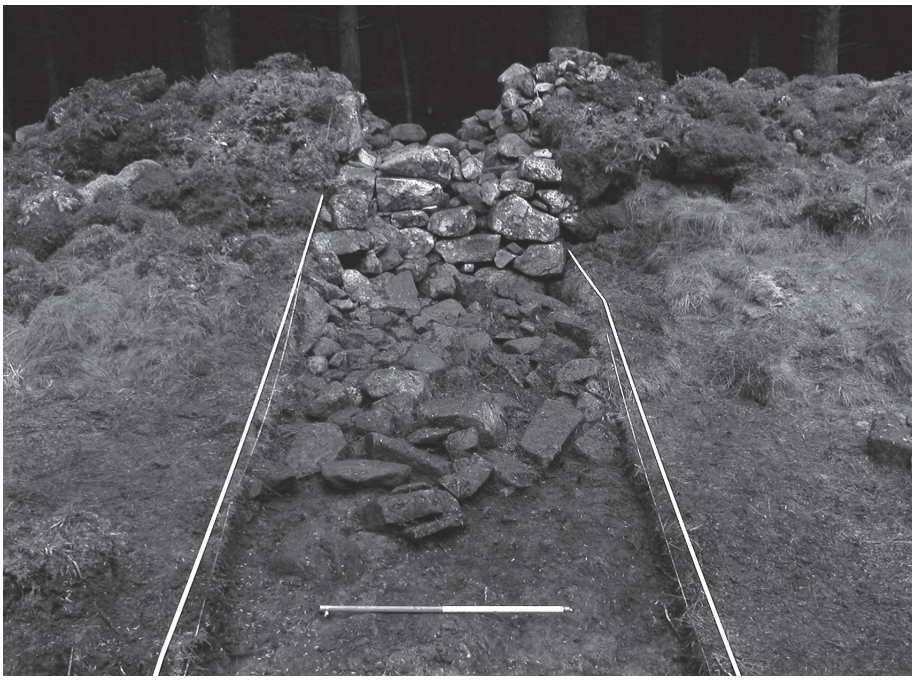
De-turfing of the exterior (southern) side of the trench revealed a densely packed layer

Illus 7 De-turfing of the exterior (southern) side of the trench revealed a densely packed layer (C008) of boulders. No outer front face could be detected at this time. Note the penetration of tree roots into the external stonework. Scale 1m

ILLUS 8 Removal of C008 revealed the outer front face of the main structural wall (001). Scale 1m

(C008) of boulders (illus 7). None of these stones were dressed and they were similar to the stones used in the main wall core – albeit some were smaller – based on an examination of that core material. It seems likely that the smaller stones had been placed here, amongst already existing collapse from the wall, as the result of later agricultural clearance in the surrounding area. No front face to the wall could be detected until these stones were removed (illus 8). The face survived only two to three courses high and was located some 2.7m from the southern edge of the trench. The full width of the wall in the excavated trench was thus 5.14m (the 'median' wall face occurring 3.7m in from the outer face). No other significant features were recorded in the exterior part of the trench.

Overlying the whole northern part of the trench, within the interior of the Atlantic roundhouse, was a topsoil horizon that was a lighter colour over the stonework (C004) than in the rest of the trench (C005), most likely reflecting the effect of leaching in this area. Both contexts contained some evidence of bracken and tree root penetration. Above this was context 002, immediately below the turf (C000), which was choked with bracken roots. Bracken was actually rare on the surface at the time of excavation and this material appears to be the remains of dead plants. A number of features were recorded in the interior trench, the most significant of which were a secondary wall (C012), an area of paving (C010) and tightly packed stones (C009), a gully feature (C024) and a rectilinear pit (C023) with fill running under the face of the main wall (C001) (illus 6). Bracken roots were also found in contexts below and around the paving suggesting that



Illus 9 Area of paving (C010) in front of interior wall (C001). Looking south-east. Scale 1m

their influence was pervasive throughout the upper archaeological deposits. It was for this reason that only contexts with little or no root activity were chosen for dating.

The interior trench featured large stones (C003) in its southern half, most likely collapse from the main wall (C001), and a very compact grey/brown sandy loam (C007) with small stone inclusions and abundant charcoal flecks in the northern half, running into the centre of the site. Context 003 appeared to comprise collapse from 001, although there were also smaller stones that may have come from wall 012. Context 003 was only traceable in the north-east half of the trench and tapered away quickly to the south in the area where the pit (C023) was later discovered (see below). The tumble of larger stones (C003) was found to overlie the remains of a possible secondary wall (C012) and an area of paving (C010). The wall (C012) formed the south-east side to paving (C010) that extended about 2m into the interior of the site (illus 9) and was associated with an inorganic grey soil with quartz and charcoal inclusions (C011). A hammerstone (SF 2) was recovered from context 011 amongst the paving. This secondary wall (C012) comprised medium-sized angular stones packed closely to form a single course running across the trench parallel to wall 001. Above the main layer of paving was a small 1m × 1.2m rectangular area of closely packed small- to medium-sized stones (C009). This feature continued to the east outside the trench – and was therefore not fully excavated – but could represent a rectangular hearth built upon the paving. Unfortunately, only stone rubble (C003) and a natural brown soil horizon (C004) overlay this feature and no burnt material was recovered to support this

ILLUS 10 Context 022 with gully feature (C024) located in the centre of the picture. Looking north. Scale 30cm

interpretation. Alternatively, the feature may be the corner or part of a larger structure and again only further excavations would be able to discern this. A linear arrangement of larger stones (C006) running from the wall (C012) to the interior of the site may represent the remains of either repairs to the paving or a rough radial division.

Under the paving stones were the remains of a small closely packed area of cobbling (C022) measuring some 1.86m north-west/south-east and covering the full width of the trench (2m). The cobbling (C022) certainly predated wall (C012) and paving (C010) and comprised a series of relatively discrete areas of small angular stones that were compressed into the subsoil. However, at least one gully filled with compact dark brown silt clay soil (C024) may have been cut through the cobbling, although it is also possible that the cobbling was placed around this feature (illus 10).

Other negative features, because of their distance from the main structural features in the east of the trench, could not be directly related to that construction sequence. They included an irregular hollow (C026) with fill (C025) on the north edge of the trench and two slightly shallower hollows with dark fills (C018 & C019) at the west end of the trench. Both the latter appeared to contain carbonised material, although only context 019 produced charcoal from floatation. The interpretation of these negative features, including that below the paving to the east and perhaps associated with the cobbling (C022), is made more problematic by the presence of root debris from bracken and tree roots. It is possible that

roots, subsequently rotted away, created these features rather than human activity, or that pits and gullies were enhanced by roots, and it would require the opening of a larger area to discern whether they formed part of a coherent pattern that might suggest an anthropogenic origin.

The most important deposits in terms of obtaining dating material were found between the rubble wall (C012) and the main structural wall (C001). Below and among the stonework of the wall (C012) was a grey mineral-rich deposit (C017) that could also be traced to the north-west of the wall under the paving (C010). Context 017 produced half a small yellow glass bead in post-excavation (SF 3). A rectilinear pit (C023) located between the secondary wall (C012) and the main wall (C001) was found to underlie context 017 (illus 11). Significantly, the lower fill of this pit, a very dark brown compact soil (C021), appeared to both abut and underlie the main structural wall (C001), although removal of the wall would be required to confirm this. A partially overlying fill in pit 023 comprised a layer of packed small stones (C020) that rose to the west to abut the secondary wall 012. The uppermost layer of pit fill (C016) was also found to abut wall 012 and was certainly secondary to it. Above this deposit was a very mixed context (C013) that lay under the turf in this part of the trench. That the upper fill of pit 023 abutted the secondary wall 012 suggests it was either deposited after the construction of wall 012 or that the secondary wall cut the deposits associated with the upper fill of the pit. It was not possible in the small area excavated to be absolutely certain whether the packed stones of fill 020 also underlay wall 001. Neither could any cut be discerned

Illus 11 Rectilinear pit (C023) located between the secondary wall (012) and the main roundhouse wall (001). Top of frame north. Scale 30cm

between wall 012 and the deposits lying 'behind' or to the south of it. Also discovered between wall 012 and the internal face of the main wall 001 was a deposit abutting the latter, containing a large amount of compact carbonised material (C027); unfortunately the exact relationship between this deposit, the wall 012, and the fill of the pit (C020), could not be determined. However, context 027 certainly sat directly on subsoil and it is possible that context 027 was cut by the insertion of the pit (C023).

POST-EXCAVATION

During excavation, every context deposit was bulk sampled for archaeobotanical analysis in an effort to obtain datable material as well as economic and environmental information. Wet sieving of all sampled contexts was carried out by AOC Archaeology Ltd following the procedure outlined by Kenward et al (1980). Analysis of the resulting flots and residues by Dr Michael Church of the University of Durham Archaeology Department revealed a relatively poor and homogenous assemblage. It was clear that every sampled deposit had been subject to post-depositional turbation and bio-chemical alteration, most likely due to the modern intrusion of roots and bracken rhizomes in upper levels. As a result, only charcoal and carbonised plant macrofossils that could be relatively reliably considered in situ were used for dating purposes. During the analysis of the residue samples, a small annular yellow glass bead was discovered from context 017 (SF 3).

Both context 017 and context 027 were chosen for radiocarbon dating, based on the plant macrofossil concentration (following protocol outlined by van der Veen 1992), the level of modern intrusion and the archaeological significance of the deposits; the former due to the presence of the glass bead and its relationship to the secondary wall (C012) and the latter due to its early

Table 1
Radiocarbon dates

Context	*Sample*	*Lab code*	*Material*	*Radiocarbon age BP*	*Calibrated age OxCal v4.1 2009 at 2 sigma*
017	17A	SUERC-5476 (GU-12749)	Hazelnut shell *Corylus avellana* L	2140635	355 cal BC–53 cal BC
017	17B	SUERC-5477 (GU-12750)	Hazelnut shell *Corylus avellana* L	2140635	355 cal BC–53 cal BC
027	21A	SUERC-5478 (GU-12751)	Charred grain *Hordeum* sp Hulled symmetric caryopsis	2245635	393 cal BC–205 cal BC
027	21B	SUERC-5479 (GU-12752)	Hazelnut shell *Corylus avellana* L	2165635	363 cal BC–108 cal BC

stratigraphic location against the main wall (C001) behind the secondary wall (C012). Unfortunately, none of the contexts within the pit were deemed suitable for radiocarbon dating, and thus it remains only speculation as to the exact chronological relationship between this feature and the other features in the trench. Four samples were submitted to SUERC, two from each context, as detailed in the table below:

SMALL FINDS

SF 1 Polished stone (illus 12.1)

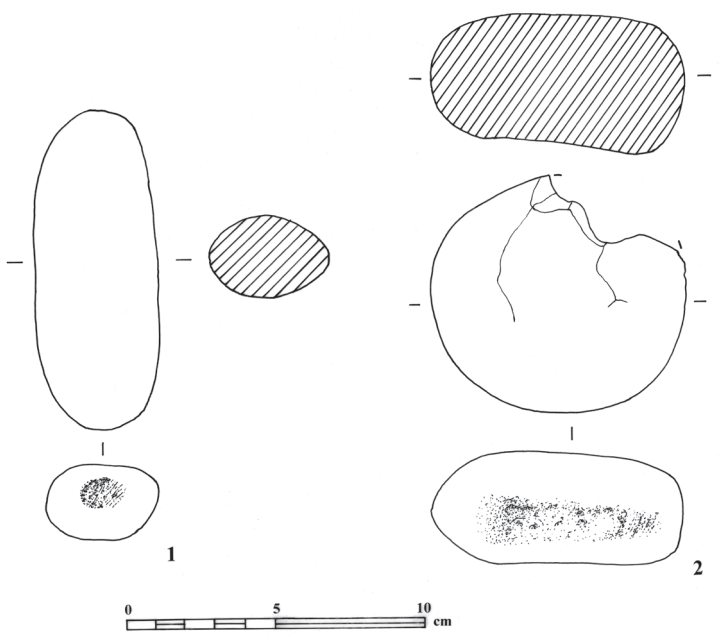
Smooth beach pebble of fine-grained grey sandstone with wear around *c* 20% of circumference on one end (15mm × 10mm). Wear has produced a single faceted edge and is consistent with use as a grinder. The stone was found on cleaning the main wall (C001) of vegetation to the north of Trench 1. It rested directly on the rubble of the collapsed section of the inner 'median' wall face, just to the south of the main entrance. Other than this, no stratigraphic details could be ascertained.

Length 108mm Width 41mm T 27mm

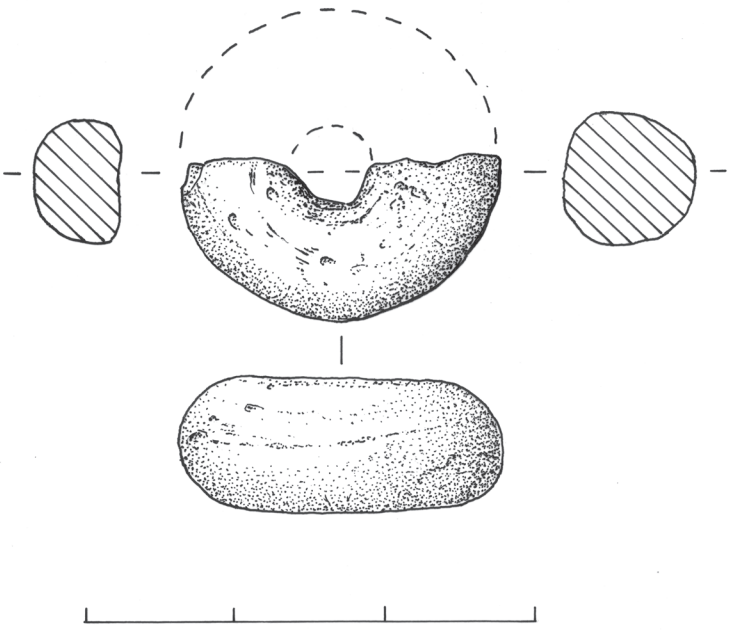
SF 2 Hammerstone (illus 12.2)

Flat, rounded, ovoid, coarse-grained siltstone cobble with pecked damage around *c* 35% of circumference on one end (62mm × 15mm). Slight flake scars around the facet suggests fairly vigorous use as a small pounder. Heat cracking and black and red staining over the whole surface may indicate secondary use as a potboiler. Found in context 011 associated with paving context 010.

Length 80mm Width 85mm T 43mm



ILLUS 12 1. Polished stone (SF 1); 2. Hammerstone (SF 2)



ILLUS 13 Yellow glass bead (SF 3)

SF 3 Yellow glass bead (illus 13)

One-half of a wound opaque yellow glass bead of Guido's Type 8 (Guido 1978), 2.2mm in diameter and 0.8mm thick. Electron probe microanalysis revealed the bead is a lead oxide soda-lime-silica glass opacified by lead-tin oxide. This suggests strongly that the bead dates to between the 2nd century BC and 2nd century AD, and does not date any earlier than the 2nd century BC. This finding is consistent with the available results for the analysed beads from other Scottish sites. The bead was recovered from context 017, which provided two radiocarbon dates from hazelnut shells calibrating at two sigma (OxCal v4.1 2009) to 355 cal BC–53 cal BC.

INTERPRETATION

A simple sequence of activity on the site can be interpreted, albeit one based on the evidence from a relatively small trench that proved to have a shallow stratigraphy (averaging just 0.24m deep). Detailed analysis of the development and use of the site would require excavation over a larger area.

A pit may have been cut and began to fill prior to the construction of the internal face of wall 001 at the point of excavation. It is quite possible that this pit is contemporary with the areas of cobbling and other negative features since these had no stratigraphic relationships. After the construction of the inner face of wall 001, which itself may or may not be a secondary addition to the roundhouse structure, a small rubble wall (C012) was built inside and formed the edge of an area of paving (C010). This appears to have either been repaired (C006) or included the remains of a radial division (as seen at many other roundhouse sites), before it was abandoned and the main wall began to collapse. The

ILLUS 14 Median wall to the north of the trench (looking south) after clearance of vegetation. Scale 1m

secondary rubble wall and other features may have been at least partially dismantled before the collapse of the main wall onto them. The internal face of wall 001 appears then to have undergone some rebuilding or reconstruction work, above the area of the pit, which also seems to have removed rubble 003 from this area. This can be clearly seen through differences in the style and quality of construction of the wall face in this area. Given the radiocarbon evidence presented below, it is possible that the pit might be a consequence of this demolition of part of the interior wall face and its reconstruction, and hence a late feature on the site rather than its earliest.

Activity on the site in general, noted outside the excavated area, appears to have included secondary pens and other constructions on the walls and the moving of stonework within the walls to form depressions that could also have been used as small pens (illus 4). It is possible that this included the reconstruction of the internal face of wall 001 in the trench, and the exposure of the 'median' face farther to the north (illus 14). Stripping moss from the main walls at various points around the site revealed no in-situ deposits associated with these various re-use events in and on the wall, although a polished stone artefact was recovered (SF 1). Given the site location above the head-dyke, and the relative lack of agricultural remains in the area above this dyke, we can suggest that these small-scale works were carried out when the site was used as an animal pen, or possibly a sheep fank, anytime between its abandonment as an Atlantic roundhouse with re-use and its

ILLUS 15 Interior trench showing root penetration into the internal deposits. Looking south-west. Scale 1m

subsequent engulfing in a tree plantation. Unfortunately, it is not possible to link any of this re-use stratigraphically. The shallow nature of the internal deposits generally, and especially towards the centre of the site, and the prevalence of bracken roots and tree root penetration, suggests that it will ultimately be very difficult to determine the detailed chronology of the site.

TREE AND BRACKEN ENCROACHMENT

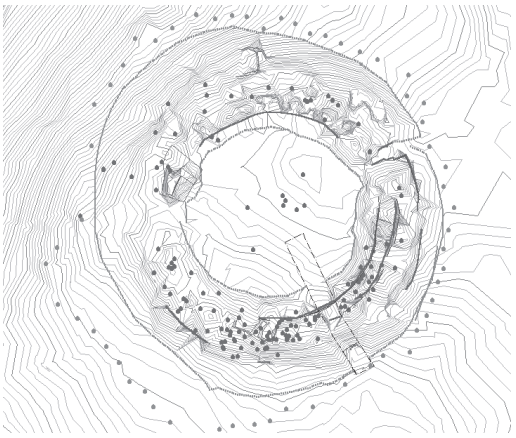
When the area around the site was forested in the 1960s, trees had been planted very close to the walls and, as a result, tree roots were observed during the excavation undermining the walling at the site (illus 7). A tree root discovered crossing the trench in the interior of the site had penetrated from the exterior all the way through the 5m-thick wall (illus 15). Left unchecked, tree root encroachment of this nature has the potential to severely damage archaeological deposits and could have had potentially disastrous effects on the stability of the walling. It is currently unknown whether the catastrophic collapse of the external walling in the investigated area was due to tree root encroachment, although the fact that the roots appeared to overlie at least some of the resultant rubble suggests not. In addition, the close proximity of the surrounding trees also resulted in natural re-seeding occurring on the site with new tree growth occurring within the interior, on the walls and along the exterior circuit of the site (illus 16). This further threatened the integrity of the interior archaeological deposits and the stone walls (illus 15).

As well as simply obscuring sites, bracken (*Pteridium aquilinium*) is a problem because it is known to destroy and reduce the significance of sub-surface archaeological deposits due to its vigorous and destructive rhizome system (Rees & Mills 1999). Over the years prior to the excavations, the threat from bracken had lessened at Loch Glashan as the surrounding tree cover thickened, encroached and shaded the site, with the result that little living bracken survived on the site at the time of this project. This fact increases the likelihood of problematic on-site tree regeneration because dense bracken cover prevents tree regeneration by reducing the establishment of seedlings and slowing the growth of saplings (Pakeman & Marrs 1992).

However, the effects of previous bracken infestation were clear in the upper levels of the interior deposits subjected to excavation. The context (C002) immediately below the turf (C000) was choked with the remains of bracken rhizomes from dead plants (few recent or living fronds were recognised). Rhizomes were common in deposits below context 002 but were absent at depths of more than 20cm, which is in keeping with the levels of rhizome penetration recognised at Upper Tillygarmond (Rees & Mills 1999: 13–16). Some of the negative features excavated could have been created by tree root or rhizome penetration. The presence of bracken rhizomes did not necessarily exclude the potential for stratigraphic relationships to be recognised at the site. The apparent lack of any complex matrix-supported activity between the recognised features in the trench did not allow the effect of bracken rhizome on such deposits to be securely assessed. However, the archaeobotanical value of deposits with bracken infestation was compromised.

Collaboration with Forest Enterprise immediately prior to the project allowed the supervised clearance of internal tree growth and the cutting of overhanging branches with high pruning machines. Trees were sawn off to ground level with roots left intact to minimise disturbance to deposits and the locations of all encroaching trees on the site were recorded prior to their removal (illus 17). This relatively small-scale work had an immediate and dramatic effect on the visual impact of the site, and allowed the detailed examination and survey of previously obscured architectural features. In addition, moss was removed from some parts of the main wall. It was felt that the occurrence of

Illus 16 Natural re-seeding on the site with new tree growth along the main walls and saplings in the interior



ILLUS 17 Locations of encroaching trees on the site prior to removal. The dots around the outer walls represent mature tree stands illustrating showing how close they had been planted to the site. The interior dots indicate new growth from natural re-seeding.

moss on the site, in many places 20–50mm thick, could act as a 'seed-bed' for the growth of trees on the site, particularly on the walls. Equally, there was some concern that the growth of this moss may have negative effects on the stone itself. The removal of moss improved the appearance of the site, no in-situ deposits were encountered, and in terms of revealing the underlying stonework it was useful archaeologically as well as aesthetically. Keeping the site clear from bracken and tree encroachment is now part of Forest Enterprises' annual management strategy for the site.

LOCH GLASHAN: AN ATLANTIC ROUNDHOUSE

On excavation, the structure proved to have no visible galleries or cells, while the clearing of moss and trees from the walls elsewhere confirmed the lack of such architectural complexity. The site could therefore be termed a simple Atlantic roundhouse, albeit a very large example of the type; analysis of the Atlantic roundhouses of Argyll (Gilmour 1994 & 2000a) indicated that statistically those without visible complex features were generally smaller than those with cells and/or galleries. Loch Glashan would appear to contradict this. The small number of finds from the site, a single hammerstone from within the trench (SF 2, C011), half of a yellow annular glass bead found during sieving (SF 3, C017) and a polished stone from the wall itself (SF 1, C001) is not unusual in Argyll for the prehistoric Iron Age, nor indeed for the wider Atlantic area (Henderson 2000). Even excavations at the similar, though more complex, site at Ardifuar (NR79NE 2), which opened the majority of the interior, produced relatively few finds (Christison et al 1905), and these are almost certainly from later secondary re-use of the site (see below).

The coherent set of radiocarbon dates recovered support the initial Iron Age date considered by the excavators, based on the construction style of the walling, the significant scale of the walling and the circular nature of the site with its wide rebated entrance. The dates are consistent with the stratigraphy on the site and can be tentatively interpreted as support for the earlier deposition of material accumulating in context 027 against the main internal wall face (C001) prior to the secondary wall and paving associated with context 017. Again this is consistent with the re-facing and re-use of Atlantic roundhouses across Atlantic Scotland (Gilmour 2000b). Indeed, the radiocarbon dating of the site to the second half of the 1st millennium cal BC supports the contention argued by the authors on numerous occasions, that circular drystone sites should be considered earlier than previous theories would allow (Henderson 2000; 2007; Gilmour

2005). The site has also produced a directly radiocarbon dated context for a yellow glass bead in Scotland, between 355 cal BC and 53 cal BC.

The dates divorce the site in its original phase of use from the crannog in Loch Glashan (NR99SW 1), recently re-analysed, and the 1960 excavations published (Crone & Campbell 2005). Crone and Campbell suggest several possible chronological interpretations for the use of the crannog, but the earliest possible episode of use spans the 2nd to 4th centuries AD (op cit: 117). However, given the present preservation of the Atlantic roundhouse structure up the hill it would have remained a prominent marker in the landscape during the crannog's use. There may, of course, have been later re-use of Loch Glashan Atlantic roundhouse contemporary with the crannog that was not picked up by this very small-scale study.

Interestingly, there were no large post-holes or stones that might be considered post-pads suitable for the support of a timber roof, floor or even lean-to within the excavated interior area. Although the trench was narrow enough to have missed this evidence, the lack of any sub-surface feature that could confidently be ascribed a non-natural phenomenon outside the area of paving and walls covered by rubble, might argue for the lack of any roofing structure across this massive diameter site. However, without further excavation in a less damaged part of the site, this cannot be conclusively proven by the results to date. Similarly, the lack of any conclusive hearth feature, other than the possible corner disappearing into the trench section (C009), could be held to argue for a non-domestic function for the site, although the presence of burnt cereal grains and hazelnut shell fragments, and the fire-cracking of the hammerstone suggests a fire source somewhere in the vicinity. Again, without larger area excavation the lack of a hearth or similar feature cannot be used as evidence of possible function.

Given its appearance and large diameter, Loch Glashan is one of the few sites in Argyll that offers possible comparison with Irish drystone cashels. There are many solid-walled circular drystone cashels in Ireland, and particularly north-west Ireland, that are of a similar scale and construction, and some even have possible evidence of 'median' wall faces (Henderson 2007: 190–8). It is perhaps interesting to note that the Irish Iron Age is argued to be aceramic in the same way as the majority of Argyll (notwithstanding the evidence from the northern inner isles).

The presence of a 'median' wall face at Loch Glashan is argued here to be a primary construction, and the structure of this feature and the style of rubble infill around it are interesting to compare to other sites in Argyll, as is the dynamic collapse of the external face visible in the excavated trench. Since their discovery at Kildonan Bay 'dun' (NR72NE 5; Fairhurst 1939: Figure 5), 'median wall faces' have been recorded at many sites from field survey and are generally considered to be primary structural features created to add stability to enclosing walls (Maxwell 1969: 44). Actual investigation of the wall structure took place at Kildonan and this was the only previous time the phenomenon was properly analysed. An inward-facing vertical wall was located in the middle of the rubble-filled rampart. However, between the inner face and this 'median' face the rubble was more loosely packed than that of the outer. This sounds very similar to the evidence from Glashan; however, in contrast to the evidence seen at Glashan the 'median' wall at Kildonan was well-founded on a layer of slabs that formed the base of the outer and inner cores and upon which shells were piled against the 'median' wall. It was suggested therefore that there was a later thickening of the wall

by constructing the inner wall face, although this was undatable owing to only later strata resting against the inner wall face (Fairhurst 1939: 193). A second section was cut through the wall 16ft (4.88m) south of the previous with exactly the same results, except that the 'median' face rested on bedrock – although the 'slabby layer' and the whelks were again present (op cit: 194). It was found however, that earlier strata rested against the inner wall face at this point and thus it was concluded that this must be the primary constructional form of the rampart (op cit: 194). Fairhurst conceded that the dating of the site on the basis of the material recovered, specifically a fragment of *terra sigillata* and a penannular brooch, must be considered against the 'general character of the fort' (op cit: 220), which would indicate a date earlier than the 7th century AD. He concludes that the site, 'may be as late as the 7th century, but that there are indications of an earlier date, though hardly before the 2nd or 3rd century AD' (op cit: 221). Subsequent excavations of the site recovered stratigraphically earlier material which also dated to the 1st millennium AD (Peltenburg 1982: 207) but the excavator was never completely satisfied that primary material had been recovered owing to periodic clearing of the site during, or prior to, re-use (Edgar Peltenburg pers comm).

It is therefore possible that the earliest materials from Kildonan are the shells lying against the 'median' walls and piled on what may be the earliest constructional paving. However, it is also probable that this would date to the 1st millennium AD and thus would not change the overall chronology of the site. The so-called 'median' wall face thus appears to be a primary constructional technique in this case, with use of the site suggested by the shells, and perhaps the secure slabbed footings, prior to the development of the final visible inner wall face. Alternatively, the shells could represent the remains of builders' meals or a ritual deposit within the wall core. Median faces are well known in large fort walls elsewhere in Britain and Europe but at an entirely different scale of construction, and in many instances has also been argued as representing secondary cladding of an original wall. More evidence for the presence of median facing being indicative of secondary construction in Argyll can be found at Ranachan Hill (NR62NE 12) where the intramural walls were discovered by field survey to face in different directions in different areas (RCAHMS 1971: 74–5). It is therefore difficult to be sure if this represents a primary construction technique without excavation. Similar problems exist with the many other sites at which this technique has been observed, such as the broad variation in recorded median wall positioning. At Ballymeanoch, mid-Argyll, where the walling is only 1m from the inner face in a 4.8m-thick wall (NR89NW 22; RCAHMS 1988: 173), the inner walling is possibly secondary cladding, reflecting the insertion of a secondary roundhouse as at Dùn Mór Vaul (NM04NW 3; above) and many other Atlantic roundhouse sites in Scotland (Gilmour, 2000b). Dun Mhadaidh, on Mull (NM35SE 6; RCAHMS 1981: 111), has an outward-facing 'median' wall face and an entrance to an intramural feature, suggesting it is a probable complex Atlantic roundhouse. At An Caisteal, also on Mull (NM32SE 2), a 'median' wall line is closer to the outer wall and this may reflect a similar situation to that recovered at Bu in Orkney (HY20NE 11; Hedges 1987), where masonry cladding was added to the exterior of a simple Atlantic roundhouse. A similar feature is also recognisable at Dùn Mór a'Chaoláis, Tiree, previously considered a 'broch' (NM04NE 1; op cit: 91; MacKie 2007: 996). This latter would now be classed as a complex Atlantic roundhouse and the construction of internal

secondary roundhouses at these sites is often accompanied by the dismantling of upper levels and construction of 'revetments' to their exteriors. This might also explain the 'median' wall lines at these sites. In some cases, there are descriptions of multiple 'median faces' in the same area of walling, as at Allt Cill Chrìosd, on Mull (NM35SE 3; op cit: 95). It is possible that this is tentative evidence of intra-mural cells or galleries (MacKie, 1963: 21; MacKie 2007: 994–1016). This would increase the number of known complex Atlantic roundhouses in Argyll. In the Western Isles it has been found that complex roundhouse sites are effectively masked by the debris resulting from their collapse and re-use (Harding 1990: 6). It has even been suggested that simple roundhouses may not exist in the west due to this tendency (Armit 1992: 203). In Argyll, the complex architectural nature of some sites is suggested by these tantalising glimpses. The evidence from Glashan indicates that at some sites the use of 'median' walls as original constructional features, to help create stability within thick rubble walls, must also be considered, but is likely only to be accurately discerned through intervention rather than survey.

That 'duns' were generally considered to be a 1st millennium AD phenomenon is mainly due to the fact that 8 out of the 13 excavated examples have produced Early Historic material in the form of imported pottery, beads, or metalwork. However, when one considers that much of this material comes from secondary deposits, this view is cast into considerable doubt. Only a very few sites have produced reliable 1st millennium AD dates from contexts that could be considered primary; for example, Dùn Fhinn (NR63SE 10) was excavated to bedrock and produced early to mid-1st millennium AD artefacts, and Kildonan Bay 'dun' was subject to small-scale excavations to produce radiocarbon assays and test the assumption that the site was late 1st millennium in date (Peltenburg 1984: pers comm). Radiocarbon dates and artefacts from in situ lower levels in the interior, below Fairhurst's excavations, have confirmed a late date (Peltenburg 1982: 207). The majority of the sites that have been excavated are of an irregular or rectilinear shape and are therefore completely different from Atlantic roundhouses. There is no reason to expect that these sites will produce 1st millennium BC dates. Although many have produced evidence of secondary occupation, those that have been excavated produced 1st millennium AD evidence from their earliest levels. Sites such as Dùn Fhinn (Bigwood 1966: Figure 20c), Kildonan Bay (Fairhurst 1939: Figure 19b) and Eilean Righ 1 (NM80SW 5; RCAHMS 1988: 194) have provided clear 1st millennium AD dating evidence. These sites generally belong to a rectilinear class of site and are rarely found elsewhere in Atlantic Scotland, and they should certainly not be directly compared to the roundhouse class.

Excavations of roundhouse sites in Argyll are few and often dominated by secondary activity. Only Rahoy (NM65NW 2) was considered, in previous studies, to be certainly dated to the 1st millennium BC (Nieke 1990: 133) due to the presence of a La Tène fibula and an iron socketed axe (Childe & Thorneycroft 1938). Other finds included saddle querns (op cit: 39) and burnt bone (op cit: 32). However, this site produced evidence of multiple occupations, including references to 'false faces' and 'angular footings' within the roundhouse (op cit: 35) and paved floors and hearths were noted at various levels (op cit: 30 & 32). The site was vitrified, indicating it was originally timber laced. A similar timber-laced complex Atlantic roundhouse excavated at Langwell, Sutherland (NC40SW 3), produced radiocarbon dates between 550

cal BC and cal AD 250, but was considered most likely constructed and occupied around the 4th century cal BC (Nisbet 1996: 66). While the possibility of complex architecture at Rahoy cannot be ruled out due to the use of explosives to excavate the walls (Childe & Thorneycroft 1938: 26) which may have obliterated or missed such evidence, the Langwell evidence compares well with the dating of the Rahoy La Tène 1 fibula fragment to around the 3rd or 2nd centuries BC (op cit: 40). The iron socketed and looped axe-head, with a potentially charred oak handle, is considered to be certainly pre-Roman Iron Age and was retrieved from charred material on the rock in the south-west quadrant of the site (op cit: 39–40). It is one of a group of artefacts from across Britain that date to the same Early Iron Age period (Manning & Saunders 1972: 282); a comparable socketed and looped iron axe from the river Thames had part of its wooden shaft preserved in the socket (Barclay et al 1995), recently radiocarbon dated to the first half of the 1st millennium BC (2480 ± 50 BP) between 790 cal BC and 410 cal BC.

Analysis of the evidence at Kildalloig (NR71NW 11) suggests it too has origins earlier than the 1st millennium AD. It was dated to the 2nd century AD by a bronze Collingwood Group Q head-stud Roman fibula recovered from below external paving, under a midden against the west wall of the roundhouse (Bigwood 1964: 19; RCAHMS 1971: 88). However, this deposit need not be original to the roundhouse construction, and has no stratigraphic link to the interior of the structure, indeed an analogous paved area and 'catwalk' around the exterior of Loch na Beirgh complex Atlantic roundhouse in Lewis relates to much later tertiary re-use (NB13NW 3; Harding & Gilmour 2000). A similar external midden was originally considered to reflect the primary use of Dun Vulan complex Atlantic roundhouse, South Uist (NF72NW 1; Parker Pearson et al 1996) but is also probably secondary and perhaps tertiary (Armit 2000; Gilmour 2000; Parker Pearson et al 1999). The deposition of the fibula at Kildalloig was conceivably related to well-documented secondary activity within the site. Earlier material would not only be relatively rare on-site, as at Glashan and elsewhere in the Atlantic prehistoric Iron Age, but also relatively simple and unattributable to period (Henderson 2000). The lack of a fully published excavation report makes a full assessment difficult but it is probable that this roughly circular site with complex architecture also dates to the 1st millennium BC.

A similar claim of secondary deposition could be made for the 1st millennium AD material recovered from Ardifuar, mid-Argyll (Christison et al 1905: 267–9). The material, including 2nd century AD Samian sherds and 6th to 7th century AD E-ware, is likely to originate from within a secondary internal cellular building incorporating revetted vertical slabbing which was not removed during these early excavations. No diagnostic material was recovered from Druim an Duin (NR79SE 1) but it too had recognisable secondary re-use (op cit: 287). It is the authors' contention that the collapse of the original east wall of this site downslope required a rebuilding of this wall, and explains the discrepancy in stonework between the curved ends of the structure and this straighter wall, as well as differences in the height of the scarcement. A visit to the site located what could be the original wall footings among rubble further downslope on the east side. The proposed collapse of this wall compares well to Glashan, where only a couple of basal wall courses were preserved, and Glashan has a far less severe downhill slope.

Dùn Mór Vaul represents the only excavated, dated and published 'broch'

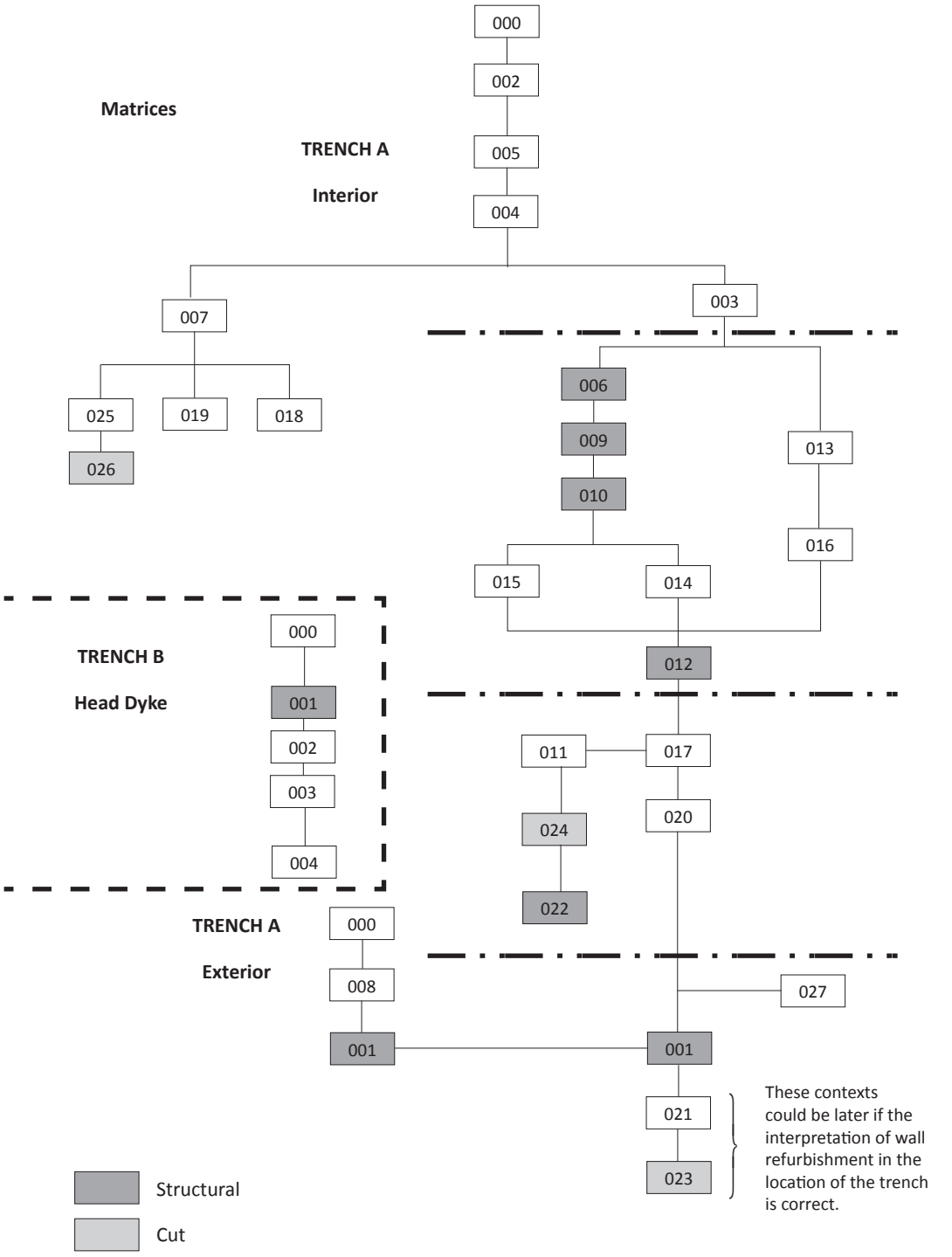

Matrices
TRENCH A
Interior
000
002
005
004
007
003
025
019
018
026
006
009
010
013
016
015
014
012
TRENCH B
Head Dyke
000
001
002
003
004
011
017
024
020
022
TRENCH A
Exterior
000
008
001
027
001
021
023
These contexts could be later if the interpretation of wall refurbishment in the location of the trench is correct.
Structural
Cut

TABLE 2
Context register

Context	*Type*	*Description*
000	Deposit	Topsoil, pine needles and moss
001	Structural	Main structural drystone wall. Composed of medium to large stones with smaller chocking stones
002	Deposit	Very dark brown, sticky organic soil with roots (remains of roots and bracken) and small- to medium-size stones
003	Deposit	Light brown soil in a rubble matrix of medium to large stones. Less organic in content than 002 but darker than 004
004	Deposit	Light brown soil (lighter colour than 003) in a rubble matrix of medium to large stones
005	Deposit	Light brown layer with small stones and roots
006	Structural	Linear feature of rubble and stones (unbonded and loose)
007	Deposit	Very compact grey/brown sandy loam with small stone inclusions and abundant charcoal flecks
008	Structural	Loose rubble in front of the outer wall (001)
009	Structural	Tightly packed small to medium stones
010	Structural	Layer of medium to large flat stones (possible disturbed paving)
011	Deposit	Compact grey soil with quartz and charcoal inclusions
012	Structural	Medium-sized stones closely bonded running north–south. Possible remains of a drystone wall running along the boundary of 010
013	Deposit	Mixed, loose, claggy dark brown deposit with roots and small to medium stone inclusions
014	Deposit	Sticky brown soil which partly overlays and abuts 011
015	Deposit	Dark brown soil with charcoal inclusions
016	Deposit	Compact brown soil with small stones and charcoal inclusions
017	Deposit	Compact, grey soil with very few stone inclusions but some charcoal flecks
018	Deposit	Compact, grey soil with charcoal and quartz inclusions
019	Deposit	Compact, grey soil with charcoal and quartz inclusions (very similar fill to 018)

TABLE 2 (*continued*)
Context register

Context	*Type*	*Description*
020	Deposit	Compact dark brown soil with small stones and charcoal inclusions
021	Deposit	Very dark brown/black compact soil at base of hollow
022	Structural	Cobble feature consisting of close packed small to medium stones mixed with compact grey/brown soil (similar to 011)
023	Cut	Rectangular pit cut into the natural running under main structural wall (001)
024	Deposit	Dark brown /black soil compact soil at base of hollow
025	Deposit	Light, loose brown soil with very few inclusions of small stones
026	Cut	Amorphous shaped hole (probably root holes or remnants of animal burrows)
027	Deposit	Carbonised material in dark brown matrix against main wall (001)

or complex Atlantic roundhouse in Argyll (MacKie 1974), but the radiocarbon dates from this site are unfortunately prone to error and wide deviation (Lane 1990; Ashmore 1997: 240). However, if taken at face value they could be argued to represent 1st millennium BC construction of this complex Atlantic roundhouse site prior to the 1st century BC. Dùn Mór Vaul also has well-documented re-use including the insertion of a secondary roundhouse with coursed masonry, and external vertical slabbed cellular structures. The recent excavations at Tirefour 'broch' or complex Atlantic roundhouse (NM84SE 1), while unable to investigate the interior, has produced radiocarbon dates for its associated external works in the second half of the 1st millennium cal BC (Simon Stoddart pers comm).

This chronology and secondary-use is comparable to that argued for Atlantic roundhouses elsewhere in western and northern Scotland (Gilmour 2005) and suggests that the Argyll sites are indeed part of a wider Atlantic continuum (Henderson 2007: 161–4). These similarities suggest that Atlantic roundhouses in Argyll should be dated to the second half of the 1st millennium BC. The dating evidence from Glashan certainly supports such a view, and its architectural traits and artefactual remains provide interesting material with which to compare other Iron Age sites in Argyll.

CONCLUSION

The small-scale excavation and detailed survey of the site have been successful in their aim to determine the nature of the deposits on the site, their present condition and potential management, and provided surprisingly cogent dating for this magnificent structure. In addition, we have been furnished with

further artefactual material for the Iron Age in Argyll, and been able to radiocarbon date the precise deposition context for a well-known type of glass bead, itself often used to date sites elsewhere. The presence of a 'median' wall face was confirmed. The site has also provided a sequence of activity, including later walls and paving, which were not visible through survey alone and indicate that the site was a focus of activity beyond its initial construction and use in the second half of the 1st millennium cal BC.

ACKNOWLEDGEMENTS

The authors wish to thank Andrea Smith and subsequently Rod McCullagh of Historic Scotland for their support during this project, and the University of Nottingham students (Thomas Whitbread, Tom Patterson, Alistair Bush and Marcus Wood) for their contribution to the excavation. Thanks also to Dr Michael Church (University of Durham), Professor Julian Henderson (University of Nottingham), and Dr Ciara Clarke (AOC Archaeology Ltd) for their post-excavation work, and Dr Rebecca Jones and two anonymous referees for commenting on a draft of this report.

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This paper is published with the aid of a grant from Historic Scotland