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Two Iron Age duns in western Scotland: excavations at Barnluasgan and Balure, North Knapdale, Argyll

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1. ABSTRACT

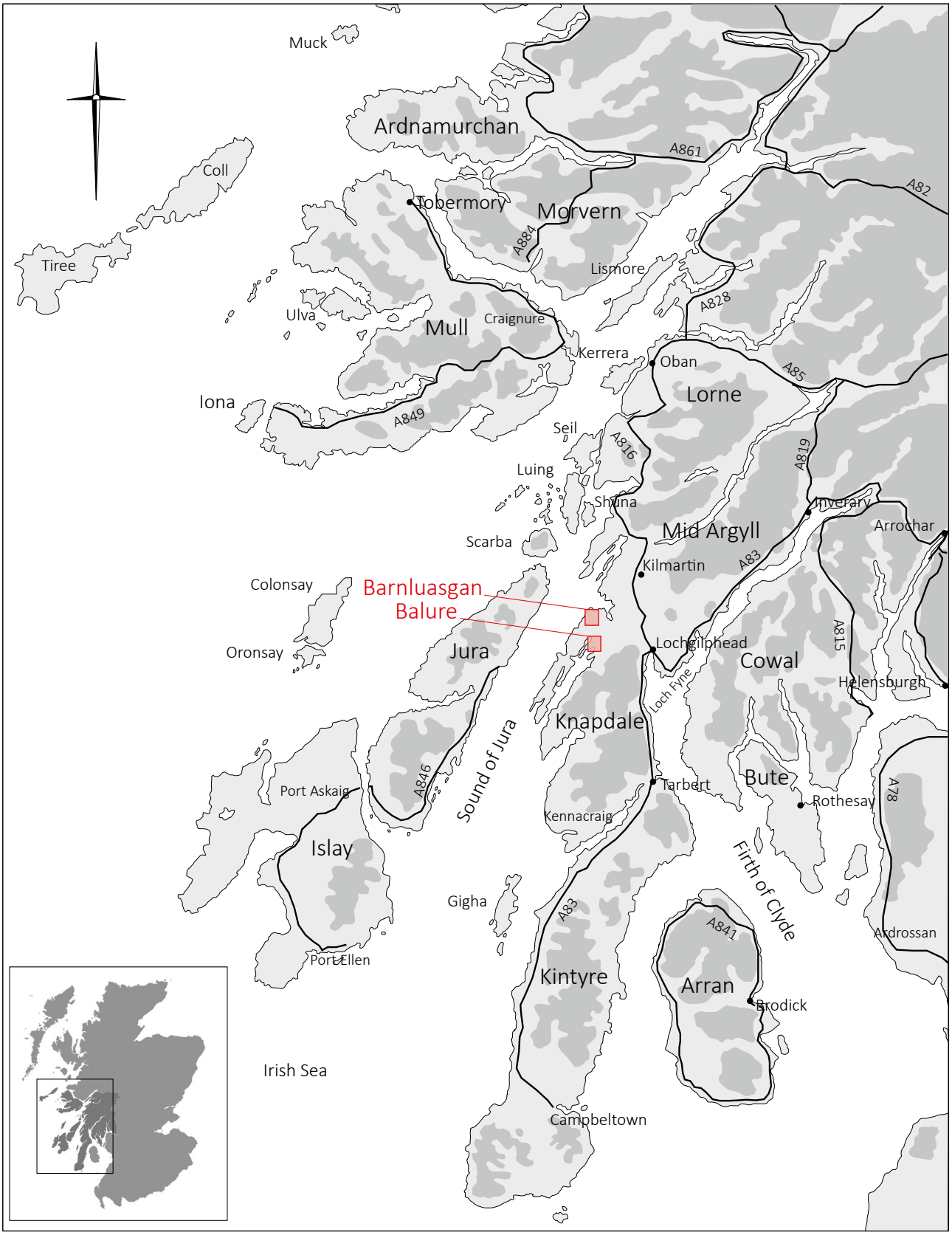
This report discusses the excavation of two stone-walled duns situated in North Knapdale, Argyll and Bute, led by Kilmartin Museum. Substantial areas of both sites were excavated, providing a good stratigraphic record of the development of the structures. Both sites proved to be multiphase, and six radiocarbon dates established a fairly restricted period of occupation for both in the last centuries of the 1st millennium BC and the first centuries AD. These dates are important contributions to an ongoing debate on the chronology of duns and forts in Argyll as there are so few reliable dates for this class of monument. At Barnluasgan an oval structure enclosing a craggy knoll was replaced by a smaller circular one. At Balure, in contrast, a primary circular structure had a series of successive enclosures added. Both circular structures had internal post holes and hearths, suggesting they were roofed 'dun-houses'. No intramural features were seen, but median wall faces were present. Artefacts were sparse, as is usual on sites of this period, but included an unusual decorated rotary quern, and rare glass toggles. There are detailed reports on the artefacts and on the palaeobotanical remains. The landscape context of the sites is explored, and a discussion places the sites in this context and in relation to debates on classification of stone-walled structures in Atlantic Scotland.

2. INTRODUCTION

Many drystone enclosure structures in the west of Scotland, particularly in Argyll, are known as duns, a Gaelic vernacular term that can be used to classify any fortified place, or even a naturally defensive place. Duns are the commonest Iron Age site type in western Scotland, with a particular concentration of sites on hilltops and crags in Argyll. The term 'dun' was adopted by the former Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS), who used it to distinguish smaller (up to 375m^2) thick-walled stone enclosures from larger stone enclosures they termed 'forts'. This classification is now perhaps unsatisfactory, as duns and forts in Argyll (along with some sites termed by RCAHMS as 'enclosures' and 'brochs') form a heterogeneous group, in terms of size, date, structural morphology and landscape locations. However, in this discussion to avoid confusion, past-type site designations for the two sites discussed here will be used, although the need for reclassification, particularly of the site at Barnluasgan, will be addressed in the final section.

The function, date and social significance of these structures have been much discussed, particularly in relation to what has more recently been termed the 'Atlantic roundhouse', although this debate has tended to focus on the broch (and to a lesser degree the wheelhouse) conducted, with a few exceptions, within a framework focused on the Western and Northern Isles (Nieke 1990; Armit 1991, 2004; Hingley 1992; Parker Pearson et al 1996, 1999; Harding 1997, 2004a; Gilmour 2000; Henderson 2000, 2007; MacKie 2000, 2007b, 2008, 2010). Similarly the chronology and typology of enclosed Iron Age sites in Argyll has been open to debate, particularly that between Nieke/Alcock and Harding (Nieke 1990; Alcock 2003; Harding 1997, 2004a). Henderson & Gilmour have most recently summarised the debate and argued that most of the excavated dun sites date to the second half of the 1st millennium BC and while many dun sites have produced artefacts of later date, they also have evidence of earlier but poorly dated occupation or constructional phases, such as at Druim an Duin and Ardifuir, and few of the excavated sites have reliable 1st millennium AD dates for their construction (Henderson & Gilmour 2011). One of the major factors that influence the fluctuation in this debate is the paucity of diagnostic or securely dated finds from sites excavated to modern standards. The present paper reports on the excavation of two dun sites, Barnluasgan and Balure, which provide data on this debate, including new radiocarbon dates, and discusses the sites within the context of other Iron Age sites in the area. The sites lie about 5km apart in North Knapdale, south of the Crinan Canal, in the area around the head of Loch Sween (Illus 1).

Note: artefacts in this report are described by their catalogue number, eg <100>; small find (SF) and context number (C) correspondences can be found in the catalogue entries. All the illustrations (except Illus 112) are by Roddy Regan, © Kilmartin Museum.



Illus 1 Site locations within Argyll. (Image by Roddy Regan, © Kilmartin Museum)

3. DATING DUNS IN ARGYLL

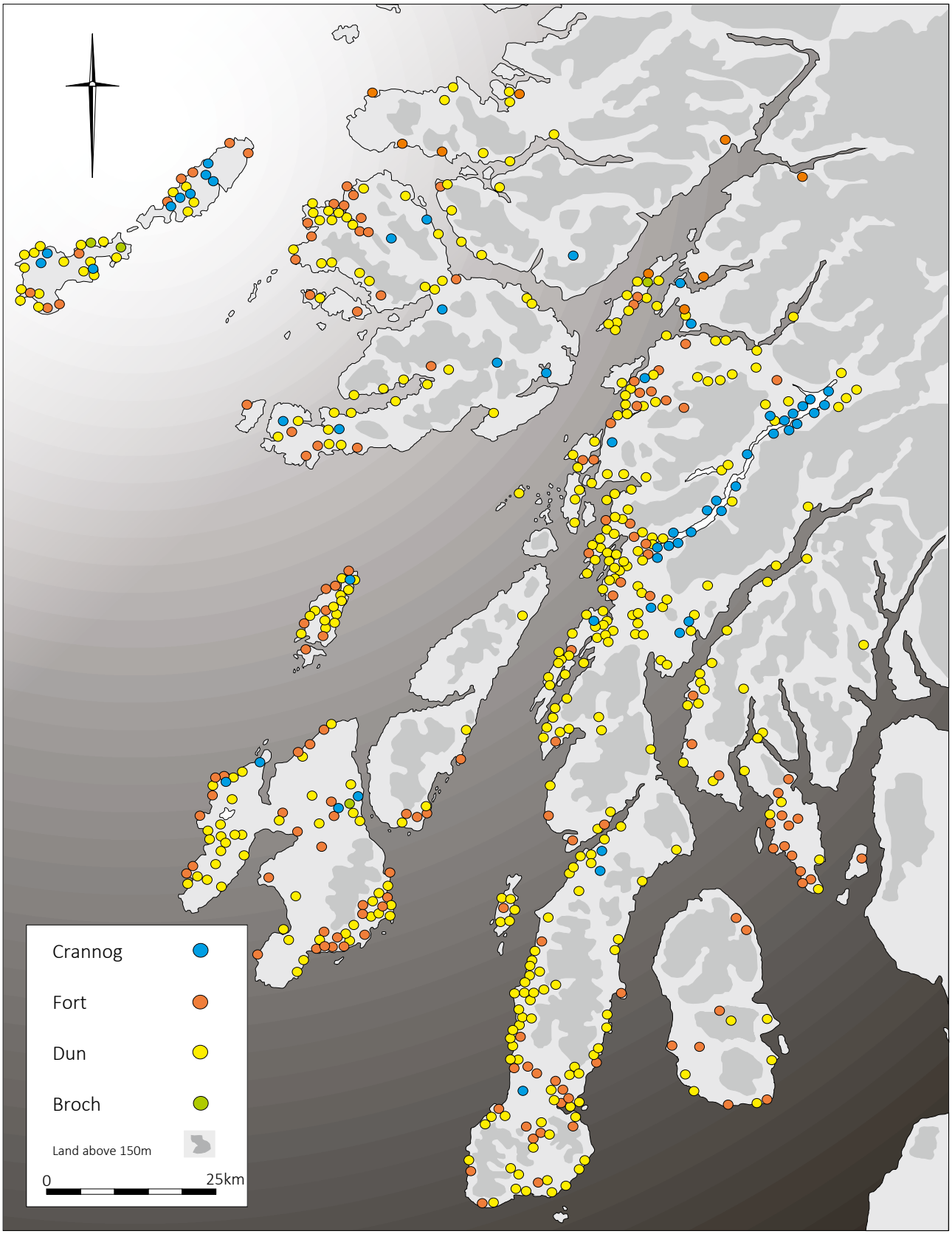
The dun sites at Barnluasgan (Canmore ID 39168) and Balure (Canmore ID 290103) are two of over 300 sites classified as duns in Argyll, the majority situated in coastal locations in the west and north of the area (Illus 2).

Across Argyll 34 sites classified as duns have previously undergone some degree of excavation, but prior to this work only two had associated radiocarbon dates. The dun at Kildonan Bay (Canmore ID 38756) was revisited after its initial excavation specifically to obtain radiocarbon dates, which indicated occupation between cal AD 610 and 1020 and were reinforced by the few diagnostic finds from the original excavations (Peltenburg & Hood 1979; Peltenburg et al 1984). Roman pottery and locally produced Iron Age ware was also recovered, indicating that the dun, as suggested in the original published report, 'may have been built before the second century AD' (Fairhurst 1939). More recently, the dun at Loch Glashan (Canmore ID 40067) has produced dates between the 4th and 1st centuries BC (Henderson & Gilmour 2011: table 1).

The dating of other dun sites relies on associated finds derived from excavation. A 4th–3rd-century BC date was postulated for the occupation of the vitrified dun at Rahoy (Canmore ID 22470), this based on the recovery of a looped and socketed iron axehead and part of a La Tène bronze brooch, this relatively early date perhaps underlined by the recovery of saddle querns (Childe & Thorneycroft 1938). This date, however, has to be treated with some caution given the excavation techniques (including explosives) used in the excavation. A saddle quern was also recovered from the excavation of Clachan Ard (Canmore ID 40269), on Bute, which might also suggest an occupation date before the 3rd century BC (Marshall 1934). A comb fragment recovered from Dun Scalpsie (Canmore ID 40254) might indicate a similar date if the suggested parallels are proven to be correct (MacCallum 1959, 1963).

As at Kildonan, the recovery of datable Roman artefacts often provides the only diagnostic material to date the occupation of dun sites. At Kildalloig, Glenramskill (Canmore ID 38708), for example, the recovery of a bronze fibula and a spiral ring date some occupation of the site to the 1st/2nd century AD (Bigwood 1964). The Roman pottery, ring-headed pin and strap end from Dun an Fheurain (Canmore ID 22954) were examined some time after the initial excavations (Anderson 1895; Ritchie 1974). The finds derived from a midden below the dun and as such do not directly date the structural remains, although they indicate occupation from the 1st–2nd century AD to the middle of the 1st millennium AD. Roman pottery has also been recovered from Ardifuir (Canmore ID 39140) and Dun Fhinn (Canmore ID 38467), which suggests a date of construction prior to the 2nd century AD (Christison et al 1905; Bigwood 1964). The excavation at Dun Fhinn also produced a glass toggle bead and similar beads have also been recovered from the dun at Ronachan Bay (Peltenburg 1979) (Canmore ID 38964), and the fort at Dunagoil (Harding 2004b) (Canmore ID 40291), and the significance of these will be discussed below. A ring-headed pin recovered from Dun Beag Vaul (Canmore ID 21527) perhaps suggests a date before the 4th century AD, as does the recovery of decorated Hebridean pottery (MacKie 1963). Decorated pottery has been recovered from excavations on Dun Nighean (Canmore ID 21450) and Dun na Cleite (Canmore ID 21412) on Tiree, while finds of similar decorated pottery have been recovered from An Dunan (Canmore ID 21501) and Dun Beag (Canmore ID 21495) also on Tiree, along with Dun Beic (Canmore ID 21571) and Dun an Achaidh (Canmore ID 21587) both on Coll (Piggott 1951; Holley 1994a, 1994b, 1996a, 1996b).

The recovery of coarse undecorated pottery from Dunan nan Nighean (Canmore ID 38209) on Colonsay led Piggott to suggest an occupation date of 'the last century BC or early centuries AD' (Piggott 1951), but it is notoriously difficult to date undecorated handmade pottery in Scotland, as similar wares have been produced from prehistoric through to modern times. Small quantities of undecorated pottery have also been recovered from several dun sites, namely Ardifuir, Leccamore South (Canmore ID 22629), Kildalloig, Kildonan, Dun Aorain (Canmore ID 22613), Dun Cul Bhuirg (Canmore ID 21638), An Caisteal (Canmore ID 21757), Dun Mhic Choigil (Canmore ID 38479) and Dunadd (Canmore ID 39564) (MacNaughton 1891, 1893; Fairhurst 1939; Bigwood 1964; Hedges & Hedges 1977; Lane & Campbell 2000). The



Illus 2 Distribution of duns, forts, brochs and crannogs in Argyll. (Image by Roddy Regan, © Kilmartin Museum)

duns at An Caisteal and Leccamore also produced rotary querns, which have also been recovered from a number of other sites – Torr a' Chaisteil (Canmore ID 21774), Druim an Duin (Canmore ID 39160), Dun Chroisprig (Canmore ID 37467) and An Dun (Canmore ID 23201) – and suggest occupation after their introduction some time in the latter half of the 1st millennium BC, but their use is a long one and without further dating evidence they cannot firmly place any of these sites in the Iron Age (McArthur 1873; Christison et al 1905; Newall 1966; Betts 1969). The excavation on Dun Breac (Canmore ID 39290) produced iron slag and a few stone objects but no datable artefacts, while that at Suidhe Chennaidh (Canmore ID 23466) produced only bones and charcoal (Christison 1891; Graham 1915). Similarly, excavations at Kingcross (Canmore ID 40075) and Eilean Buidhe (Canmore ID 40458) along with smaller evaluations at Laganreure (Canmore ID 290104) and Castle Dounie (Canmore ID 39164) failed to produce readily datable artefacts (Balfour 1910: 182–5; Maxwell 1941; Regan 2006; Regan 2011).

The recovered artefacts from the dun at Ugadale (Canmore ID 38760) indicate occupation of the site from the 8th century AD and perhaps sporadically into the late medieval period, although as the excavator pointed out the investigations were limited in nature and produced no firm dates for the actual construction of the dun (Fairhurst 1956). Similarly, the early medieval artefacts recovered from Dunollie (Canmore ID 23027) and Eilean Righ I (Canmore ID 22857), along with the medieval finds from MacEwans Castle (Canmore ID 39861), while indicating occupation in those periods, may not necessarily date the primary construction or occupation of these structures (Marshall 1982; Alcock & Alcock 1987; Brown & Cowie 1987). While it seems that the bulk of the dated sites were occupied or constructed prior to the 2nd century AD (and most probably some time before that date), the excavations at Barnluasgan and Balure add to this limited picture and possibly resolve some of these dating issues, providing a clearer understanding as to how small enclosed sites have developed within the area.

More locally relevant are the excavations that have been undertaken at Ardifuir, Druim an Duin, Dunadd and Loch Glashan. The first three were extensively excavated under the auspices of Christison and the Society of Antiquaries of Scotland in 1904. As mentioned above, Ardifuir produced coarse handmade pottery from what was likely a globular pot and fragments of samian ware, both perhaps suggesting an Iron Age date. The presence of E ware, however, shows occupation into the historic period (Campbell 2007: 50, fig 36). The recovered diagnostic artefacts from Druim an Duin were even more limited, a steatite cup, (possibly suggesting an earlier medieval date) along with two rotary querns, the rest of the reported artefacts being utilised stones.

The various campaigns of excavations at Dunadd produced enough evidence to indicate an enclosure structure on the summit in the Iron Age and produced sherds of pottery with fabric similar to that recovered from Ardifuir (Fabric B2), along with sherds of vessels in coarser fabrics (Fabric B4), these indicative of an Iron Age date (Lane & Campbell 2000: 104–5). Some utilised stones and a yellow glass bead were more recently recovered from the dun site at Loch Glashan. In summary, it can be seen that there is a paucity of closely dated, securely stratified finds on Argyll duns.

4. THE CIRCUMSTANCES OF THE PROJECTS

Kilmartin Museum led the excavations at the two dun sites of Barnluasgan and Balure specifically to increase our understanding of the Iron Age in Argyll, which prior to this had been described as a 'black hole' (Haselgrove et al 2001). This underpinned the research agenda at both sites, although different excavation methodologies were adopted in each case.

Beyond the possible structural superimposition of a 'dun' and an 'enclosure' at Barnluasgan there was little about these or the structure at Balure that stood out in terms of size or preservation. Their apparent 'normality' is what made them of interest, in that it is useful to understand what appears to be unexceptional or typical before we can understand what makes a site exceptional or special.

The excavation of Barnluasgan, a scheduled monument (SM I0337), was conducted in a series of targeted trenches, while that at Balure, an unscheduled site, was conducted through a more open area approach. Both of these techniques, given time and budget limitations, have their advantages and drawbacks. At Barnluasgan excavation within selected trenches allowed deeper deposit sequences to be explored, but made it difficult to firmly equate deposits across or between trenches. Open area excavation across larger areas can counter this, but given similar funding and time limits can be at the expense of revealing the deeper/earlier stratigraphy across a site.

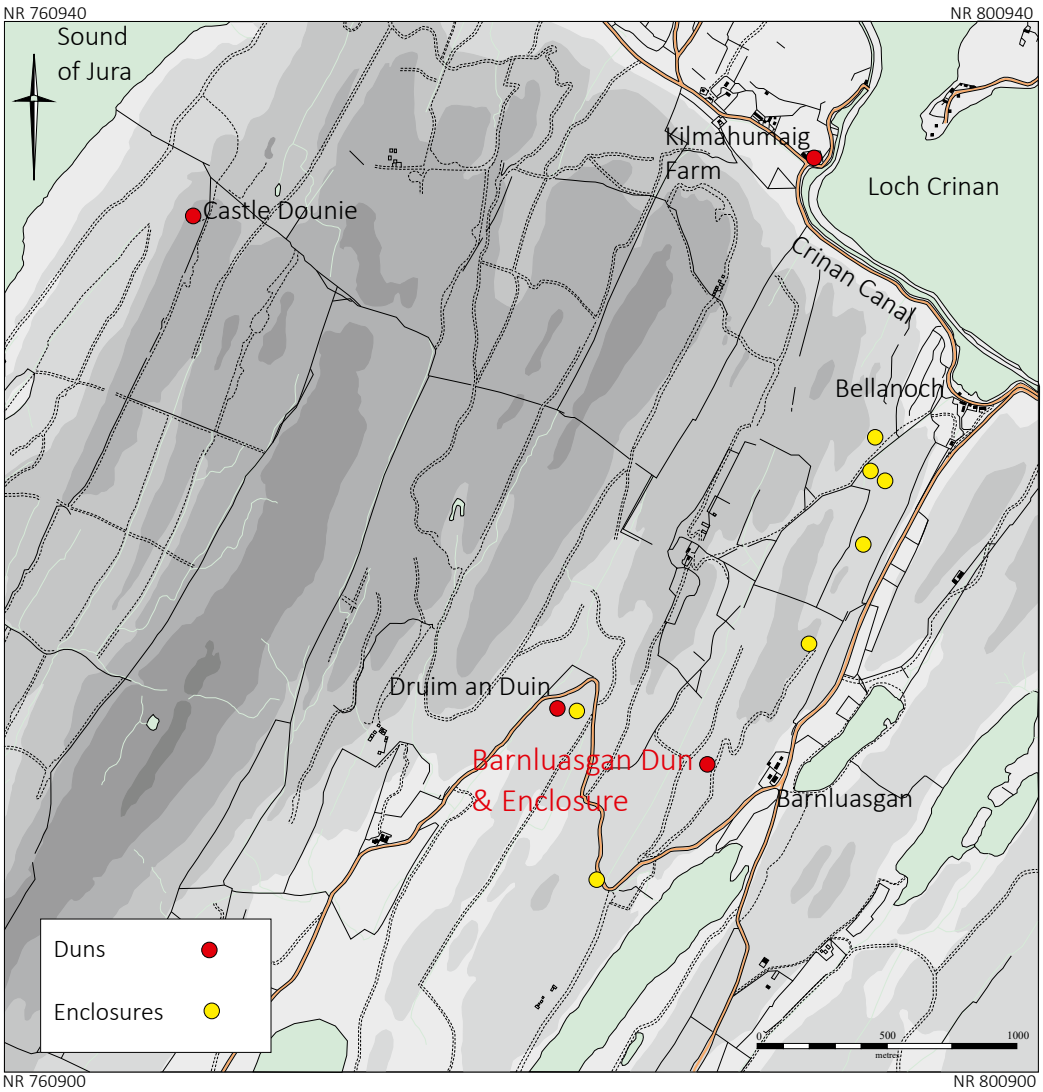
5. BARNLUASGAN DUN AND ENCLOSURE

5.1 Archaeological background

The earliest known mention of the site at Barnluasgan is in the *New Statistical Account of Scotland* for the parish of North Knapdale, which states: 'A short distance W of Barnluasgan is a double circular vallum of stones and earth, situated on a small rocky eminence' (MacLachlan 1834–45).

Christison later describes the site as:

> Baranloisgan.—The slight remains of this fort are 15 yards south of 'Cairn Baranloisgan' (O.M), 300 yards west of the farm of the same name, and of the south end of Lochan na Cailliche; a mile and quarter S.W. of Island Add Bridge, Bellanoch. The position has little natural strength, the approaches from the north and south being along the level top of a ridge, above which the site is raised only 6 feet, and the slopes to east and west are short. The fort stands 160 feet above the Lochan, and 286 above the sea. The oval interior measures about 80 by 45 or 50 feet, but the east side, which is the steepest, shows no remains of a wall which at the south-east corner shows itself distinctly enough, the outer face in one place having three courses of masonry still in position. The entrance is at the north end, and is much broken up, but has been apparently formed on the west mainly by natural rock, and on the east by a



Illus 3 Barnluasgan, site location within North Knapdale. (Image by Roddy Regan, © Kilmartin Museum)

> wall. A curved mound crosses the west side of the interior, and joins on to the mound or wall of the enceinte. Possibly this is the remains of a round tower, about 40 feet in diameter inside, at the south end of the fort. The cairn appears to be much dilapidated, and is reduced to a low irregular mass of stones extending about 30 feet across the ridge, 15 yards north of the entrance to the fort (Christison 1904: 237–8).

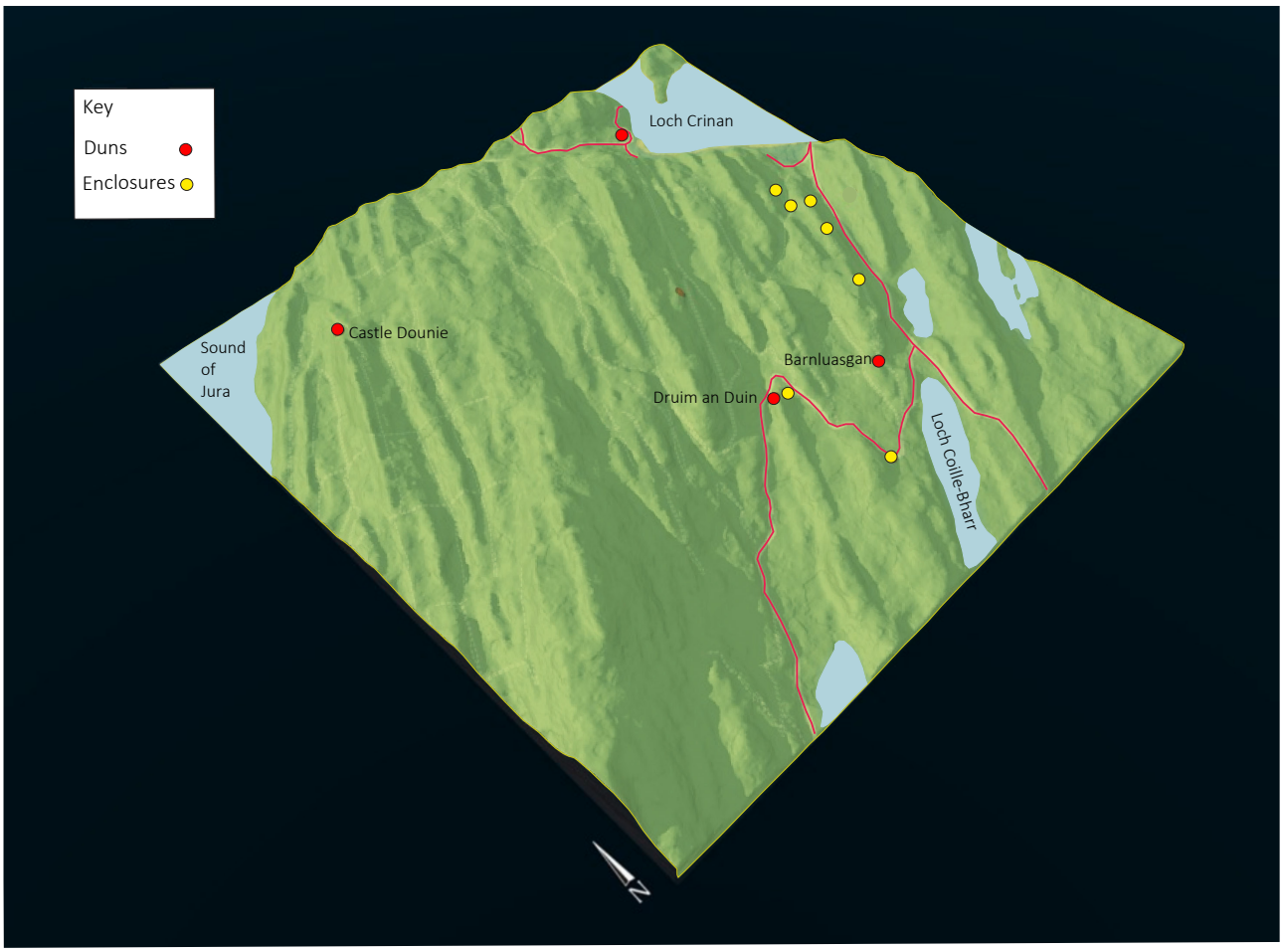
Campbell & Sandeman briefly described the site (Campbell & Sandeman 1964), while a fuller description and survey of the dun and enclosure was undertaken by the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS 1988) and the site was scheduled in 2001.

A survey of the site was undertaken in October–November 2005 (Regan et al 2005). The first phase of the excavation took place in April 2006 (Site Code BAR 06) with the second phase of work conducted in May 2007 (Site Code BAR 07). The preliminary results of these excavation phases appeared in the subsequent Data Structure Reports, where more extensive descriptions of the contexts and features mentioned below can be found (Regan & Webb 2006, 2007).

The excavation was funded by Forestry Commission Scotland, the Society of Antiquaries of Scotland, and Historic Scotland. The RCAHMS described the site as consisting of three main elements: dun, enclosure and cairn (or outwork), and these terms have been maintained in the current work.

5.2 Site location

The site is located within North Knapdale Forest, which lies to the north of North Knapdale parish and is bordered on the west by the Sound of Jura (Illus 3). Loch Crinan and the Crinan Canal demarcate the forest area to the north. The site lies west of the B8025 road that runs along the western



Illus 4 Barnluasgan, local topography. (Image by Roddy Regan, © Kilmartin Museum)

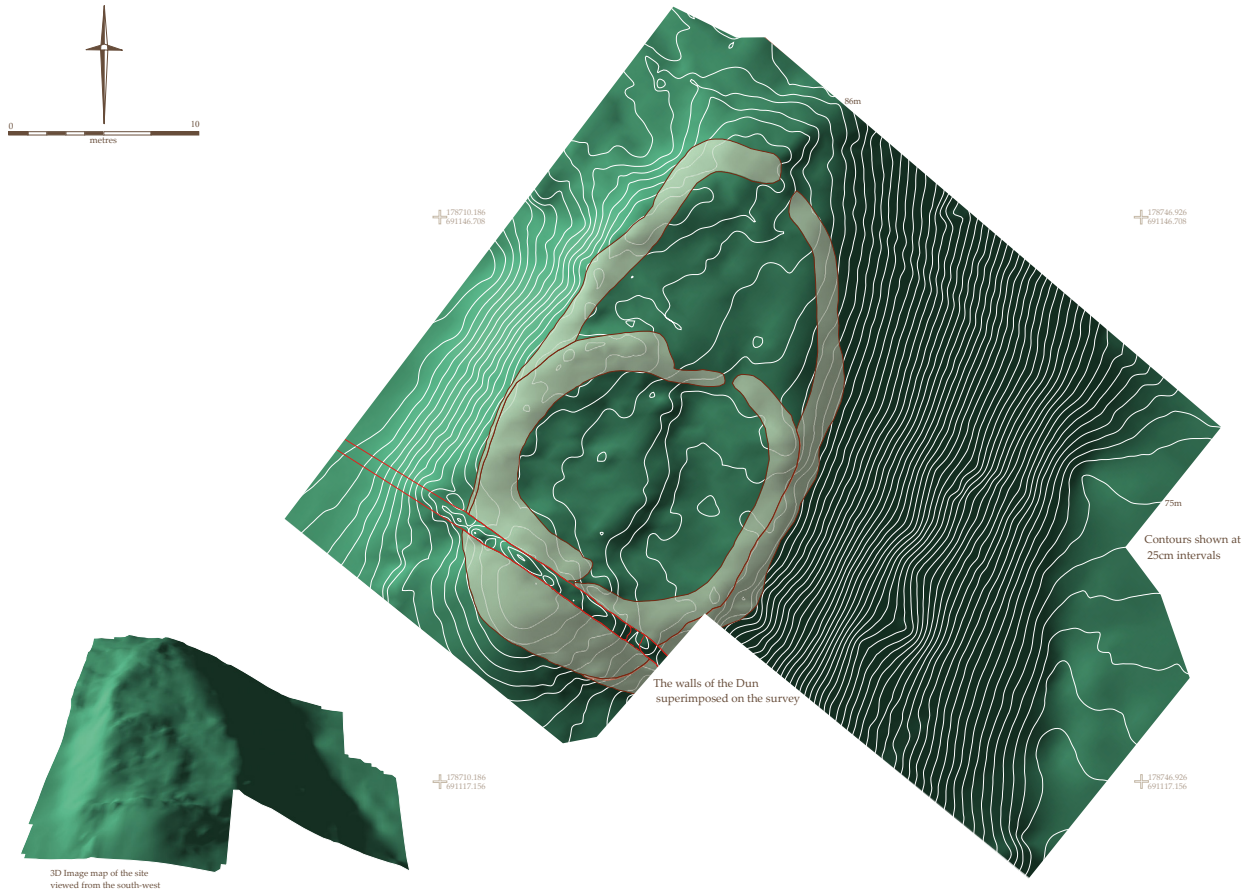


Figure 5: 3D image map of the dun and enclosure

Illus 5 3D image map of the dun and enclosure. (Image by Roddy Regan, © Kilmartin Museum)

side of Loch Barnluasgan between the villages of Bellanoch and Tayvallich.

Barnluasgan dun and enclosure lie approximately 250m west of Barnluasgan Farm, and at the time of excavation was situated in an open area among mature Sitka spruce plantation (centred NGR: NM 78720 91130). The remains of the monuments lie on a natural ridge at a height of 86.5m above ordnance datum (AOD), the highest point lying just above 88m AOD (Illus 4). Access to the site is gained along a forest track that runs north-east/south-west along the lower ground on the eastern side of the ridge. Access to both dun and enclosure is relatively easy from the north and south along the ridge although there are steep escarpments on the eastern and western sides (Illus 5). The site is located on one of the south-west/north-east aligned undulating rock ridges that are typical of the geology of this part of Argyll. The ridge is formed from chlorite schist and overlain by relatively acidic glacial clay soils, with peat covering this in the deeper, wetter areas. At the time of the excavation the site was covered in low vegetation consisting mainly of moss, grass and bracken. Trees had either been planted over the dun or had been allowed to establish themselves through natural regeneration as several rotted tree stumps were still in evidence across the internal area of the dun. These had been cut down in the past, possibly when trees in this area were cleared after a severe storm in 1968. Since then the area around the scheduled area had been replanted with Sitka spruce, with the main part of the dun and enclosure and the ridge on the lower eastern side kept clear of plantation with only a few small self-seeded oak trees allowed to grow. On the west, north and south the roots of now mature Sitka spruce had encroached on the edge of the dun and had grown over the structures to the south beyond a post-medieval drystone wall. The 'cairn' to the north was also set within mature plantation, and tree roots

had penetrated the monument. Since the excavation the trees over the 'cairn' along with the surrounding area have been clear-felled.

5.3 The structures

5.3.1 The dun structure

The dun is oval or 'egg' shaped, with the narrow end at the north, and measured 28.7m externally across the longest east/west transect by 17.2m across the widest north/south transect (Illus 6). Due to the tumbled nature of the remaining walls, their exact width was unclear, but they could originally have been up to 2m thick. Several lengths of outer wall facing could be traced at the north and south. Despite the poor preservation of the dun walls, enough survived to suggest that the wall fully enclosed the summit. The existence of an entranceway into the dun was not established, although the presence of a paved surface at the north end of the dun suggests an entrance lay on this side. However, there was also a thickening of the wall to the south, a feature often seen around the entrances of dun structures, and a double entranceway cannot be discounted as this arrangement is recorded at nearby Druim an Duin. The width of the wall foundations on the east side of the dun suggested they provided the footings for a batter or buttress on this steep side.

5.3.2 The enclosure structure

The enclosure was sub-circular in shape and measured between 15.5 and 15.8m across externally (13.5–14m internally). The walls were up to 2m in width and lengths of coursed facing could be traced around the outer wall circuit, being most apparent on the north-western and eastern sides. A dip in the rubble at the north suggested the position of an entrance.

Both structures were heavily denuded and much of the original wall material had no doubt been utilised in the later estate wall that crosses the site to the south.

5.3.3 The 'cairn'

This small structure lay 12m from the northern edge of the dun and consisted of a loose group of slightly mounded stones measuring 5.2m by 4.6m across, and standing no more than 0.8m high.

5.4 The excavation results

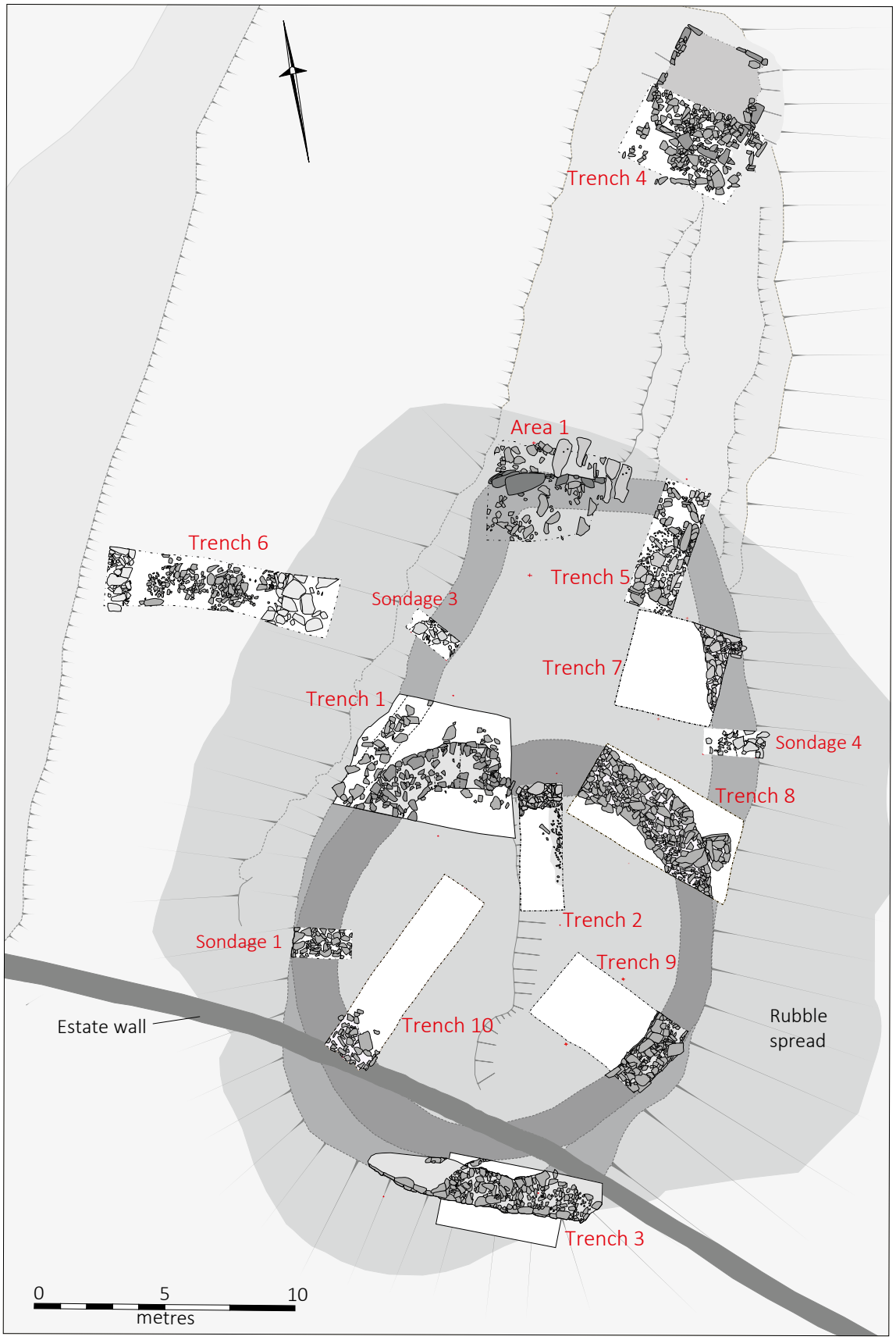
The trenches will be discussed individually from the earliest to the latest deposits encountered. The upper soils in all trenches were badly disturbed by the presence of bracken roots and degraded and recent tree root disturbance from the Sitka plantation that previously covered and surrounded the site (for the potential disturbance caused by bracken, see Rees & Mills 1999).

5.4.1 Trench 1

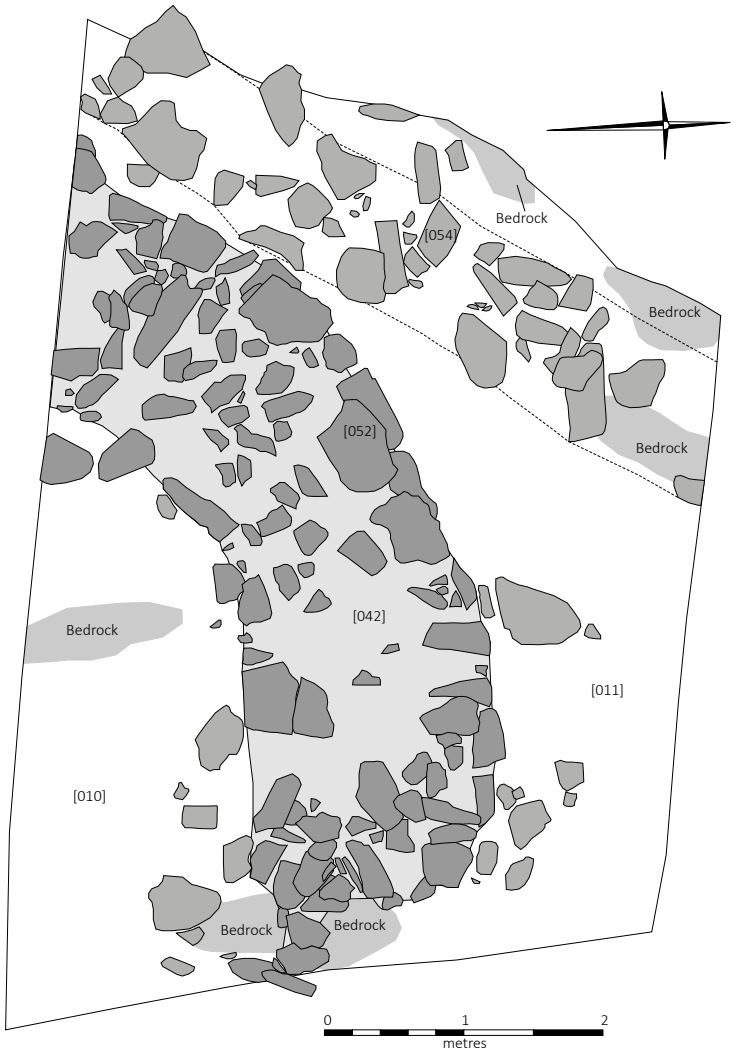
Wall structures

The stretch of the dun wall (054) seen within the trench (Illus 7) was badly disturbed and lay directly under the topsoil Context (001). The wall appeared as a tumble of angular stones with no coherent pattern or structure other than the general alignment of the wall. The north-western arc of the enclosure wall (052) had survived with both inner and outer faces revealed in the trench (Illus 8). The wall stood up to 0.62m in height and measured 1.78m at its widest point, constructed with stones up to 0.7 × 0.5 × 0.18m. The inner core of the enclosure wall was retained by larger facing stones levelled and packed with smaller horizontally lain rubble.

Between the two faces the inner core consists of occasional angular stones within mainly dark brown silty clay matrix (C042). The relative lack of smaller packing stones lying between the larger facing stones might suggest the use of turf as core material. There was very little evidence of rubble or collapse either side of the enclosure wall, suggesting any (which was present within the trenches to the east) had been completely robbed or removed. Because of the thinness of the soils and the disturbed nature of the dun wall (054) no reliable stratigraphic relationship was established between it and the enclosure wall, with only the comparatively better preservation of the latter suggesting it was later in date. Lying against either side of the enclosure wall were fairly homogeneous dark brown clay silt soils (C011) and (C010) that had formed after its construction. Sizeable fragments of charcoal were recovered from this soil although it was badly disturbed by roots. This upper soil horizon was present across most of the site and was fairly homogeneous in nature, and apart from the occasional stone and charcoal fragment had



Illus 6 Dun and enclosure layout and trench locations. (Image by Roddy Regan, © Kilmartin Museum)



Illus 7 Trench 1. (Image by Roddy Regan, © Kilmartin Museum)

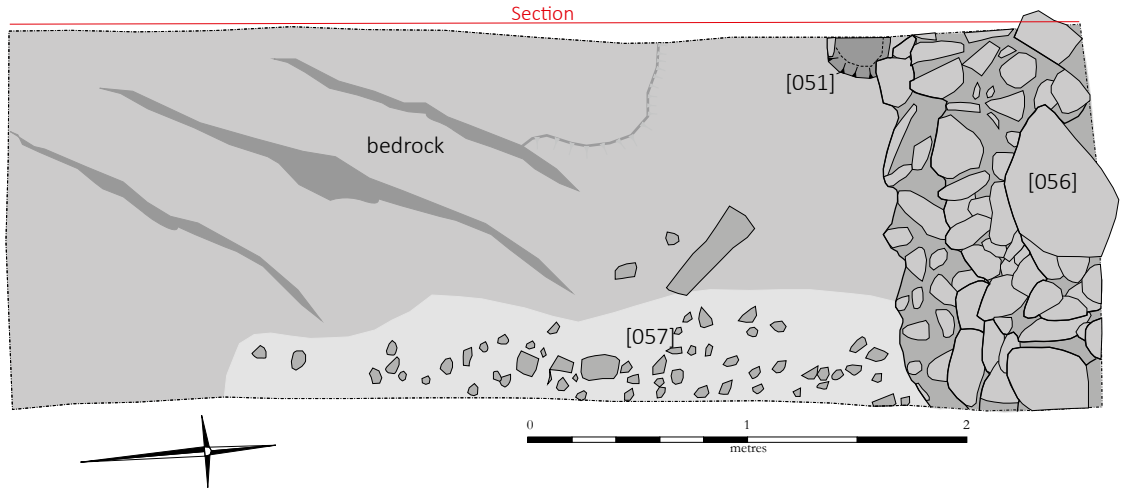
few other finds. This soil was extensively disturbed by roots of trees and bracken, and several degraded tree stumps were exposed in excavation trenches.

5.4.2 Trench 2

Dun occupation?

Within the west and south of Trench 2 (Illus 9), natural bedrock was encountered just below the topsoil, although deeper soils survived where the natural bedrock stepped down to the east and north. The earliest deposit recorded within the trench was (C057) consisting of a cluster of small to medium stones within a dark brown soil matrix that appeared to be a trampled/compacted surface (Illus 10). The surface was sealed by a sequence of deposits that likely originated from the higher ground to the south-west, these dumped and slumping into the natural dip to the east. Listed from the earliest to the latest in the sequence, the deposits were Contexts (045), (044), (043), (036), (027) and (026) (Illus 11). Four of these deposits (027), (036), (043) and (045) contained quantities of ash and charcoal along with burnt stones and may be hearth derived. All four deposits also contained quantities of burnt cereal grain, predominantly barley, with lesser quantities of oats and emmer wheat. A single grain of rye was also recovered from deposit (036) (see 5.7 'The radiocarbon dates' below) and carbonised barley seed from the same deposit returned a radiocarbon date of 350–50 cal BC (95.4% probability; SUERC-35519). All these deposits were sealed or cut by the foundation of the enclosure wall and likely belong to the earlier occupation of the dun.

Illus 8 Trench 1, enclosure wall (052) looking west. (Image by Roddy Regan, © Kilmartin Museum)



Illus 9 Trench 2. (Image by Roddy Regan, © Kilmartin Museum)

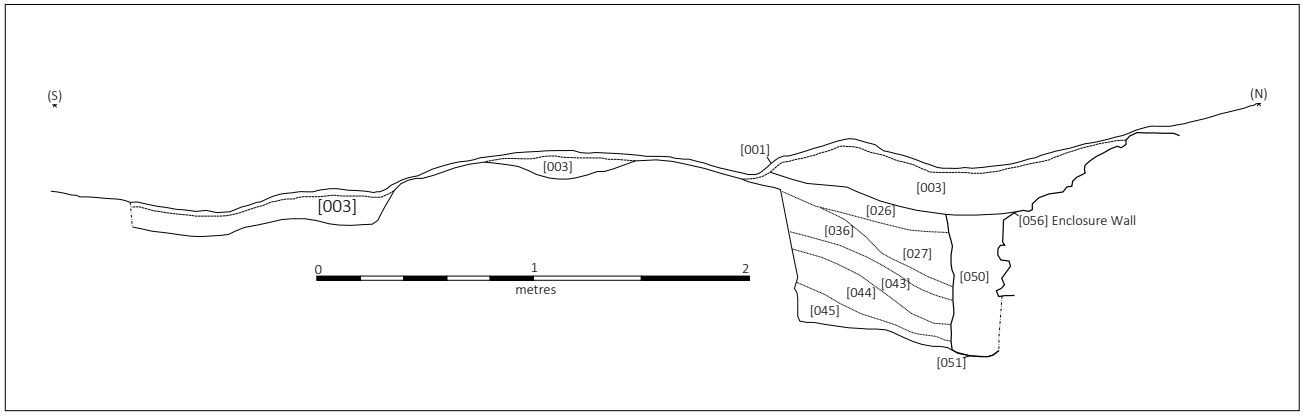
Enclosure construction

The enclosure foundation (056) consisted of medium to large stones that appeared to have been built up in a random fashion with no attempt made at horizontal coursing. Added stability may have come in the form of a driven post (051) seen in section on its southern side (Illus 12, 13), suggesting revetting or piling along this side. The foundation was sealed in this part of the trench by deposit (C003), a yellow-brown soil that equated to (C010/011) in Trench 1.

Illus 10 Trench 2, surface (057) looking south. (Image by Roddy Regan, © Kilmartin Museum)

5.4.3 Trench 3

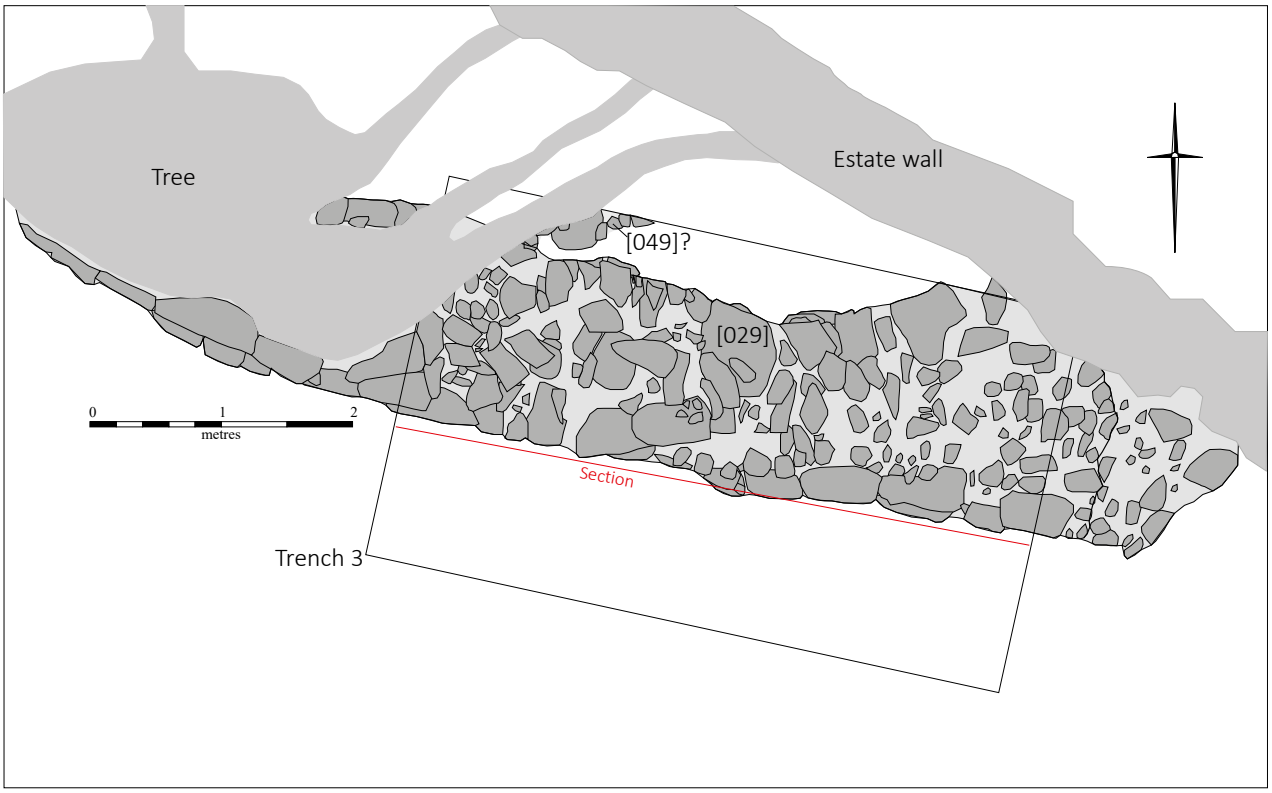
Once the topsoil had been removed from Trench 3 (Illus 14) it became clear that the whole of the trench was occupied by the dun wall (029) and rubble (C023) likely derived from its collapse/demolition. The wall for the most part appeared to be constructed directly on bedrock, with only small patches of what appeared to be clean subsoil (C028) below the lower wall courses within natural gullies (Illus 15, 16). The absence of evidence of any darker subsoils perhaps suggests the area was de-turfed prior to the construction of the walls. Within the trench only the lower courses of the wall survived and this showed the alignment of the wall to be relatively straight along its outer face, with suggestions of it beginning to curve at its westernmost extent (Illus 17). Contrary to the relatively straight alignment of the outer wall footings, the inner wall face had a distinct curve to the north-east (Illus 18). The wall footings also appeared to thicken at the east and why it does so is not clear but it may be that it was originally battered on this side. The limitations of the trench size and the presence of mature tree roots, unfortunately, partially masked the area where the dun and enclosure walls were calculated to meet. However, there were hints of a rough wall face seen after the removal of rubble from the north side (inner side) of the dun wall, this possibly evidence



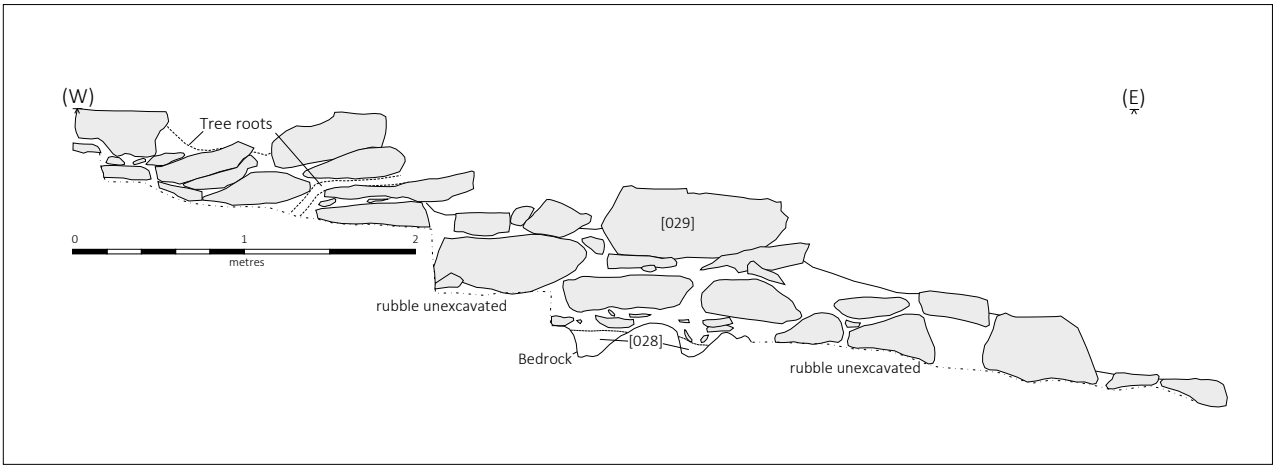
Illus 11 Trench 2, east-facing section with post hole 051 against enclosure wall. (Image by Roddy Regan, © Kilmartin Museum)

Illus 12 Trench 2, dumped deposits cut by later enclosure wall. (Image by Roddy Regan, © Kilmartin Museum)

Illus 13 Trench 2, enclosure wall (052) looking north. (Image by Roddy Regan, © Kilmartin Museum)



Illus 14 Trench 3. (Image by Roddy Regan, © Kilmartin Museum)



Illus 15 Trench 3, elevation of outer wall face. (Image by Roddy Regan, © Kilmartin Museum)

of the enclosure wall abutting the dun wall, although this was by no means wholly conclusive. Both the dun wall and the putative enclosure wall were overlain by rubble (C024) in a mid-brown silt clay matrix, which in turn was overlain by upper rubble (C023) within a similar but darker soil. These rubble spreads were sealed by a layer of dark grey-brown clayey silt (C012) and pine needle/organic litter (C003).

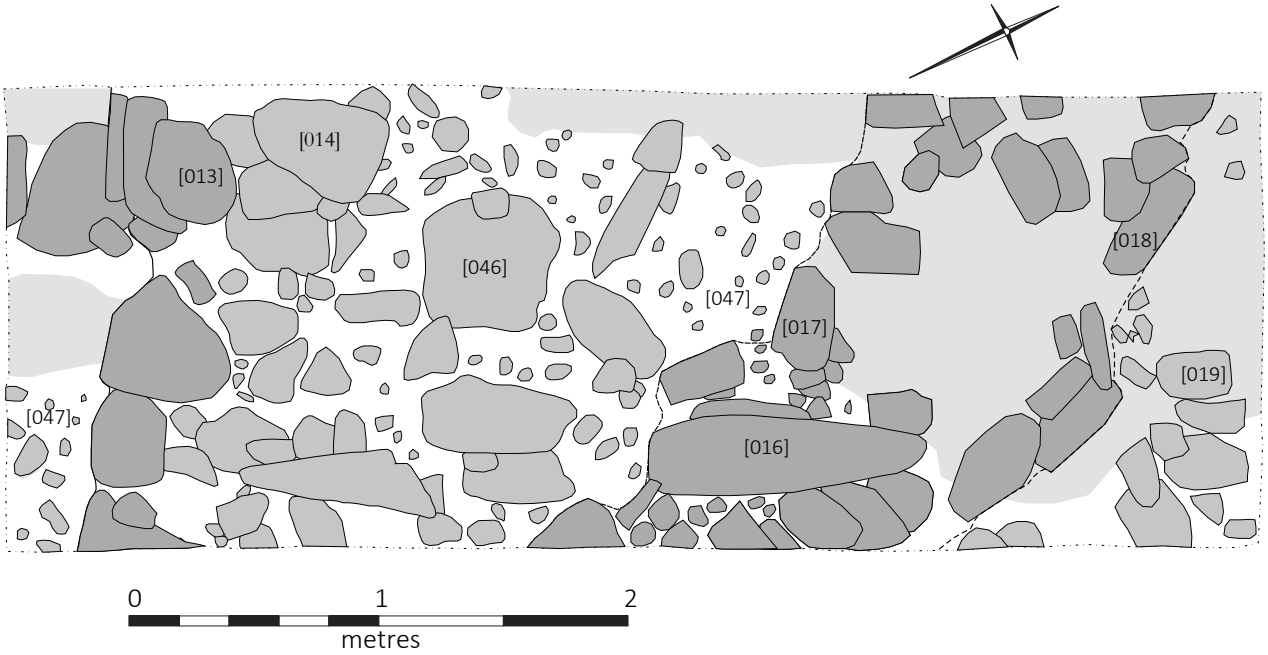
5.4.4 Trench 5

At the north end of Trench 5, though much disturbed and lying directly over bedrock, were several large horizontal stones that possibly represented the base of the much denuded dun wall, with stones (016)/(017) representing the inner edge and (018) delineating the outer edge, while stones (019) represented collapsed wall material (Illus 19). In

Illus 16 Trench 3, external face of wall (029) looking north. (Image by Roddy Regan, © Kilmartin Museum)

Illus 17 Trench 3, external face of wall (029) looking east. (Image by Roddy Regan, © Kilmartin Museum)

Illus 18 Trench 3, internal face of wall (029) looking east. (Image by Roddy Regan, © Kilmartin Museum)



Illus 19 Trench 5. (Image by Roddy Regan, © Kilmartin Museum)

Illus 20 Trench 5, dun wall footings (016)/(017) looking south with surface (046) at south. (Image by Roddy Regan, © Kilmartin Museum)

Illus 21 Trench 5, surface (046) and possible internal wall (013)/(014) looking north. (Image by Roddy Regan, © Kilmartin Museum)

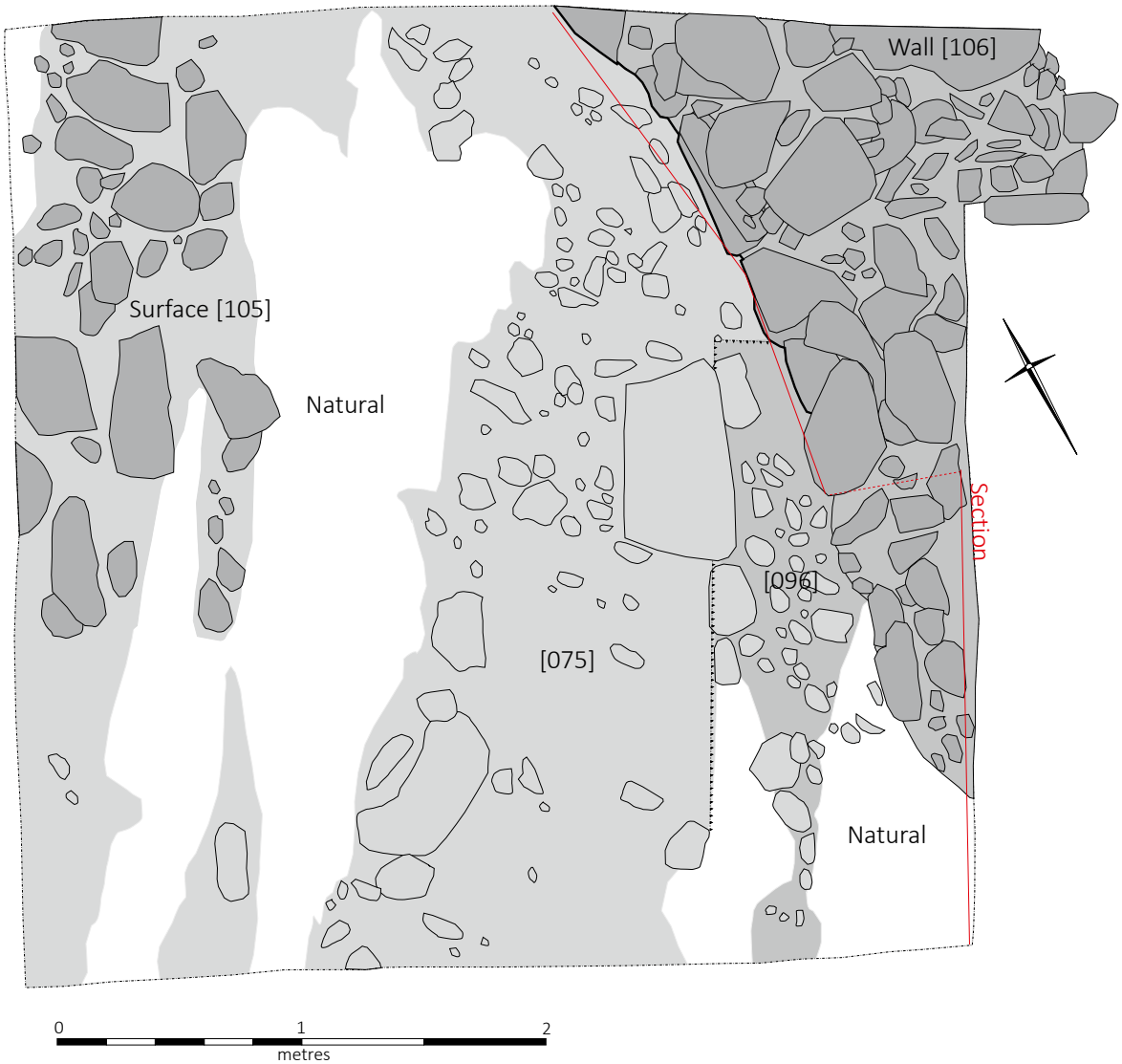
the southern half of the trench were flat stone slabs (C046) and pebble spread (C047) placed in and between dips within the natural bedrock, creating a level surface (Illus 20). At the south edge of this surface was a wall line (013/014), which could suggest the presence of an internal structure, albeit badly truncated, surviving within the dun circuit (Illus 21). Sealing these features was a light grey-brown clay loam (C020). This and the underlying

deposits were much disturbed in the north of the trench by a fallen tree and much of the resultant loose material was removed as (C009).

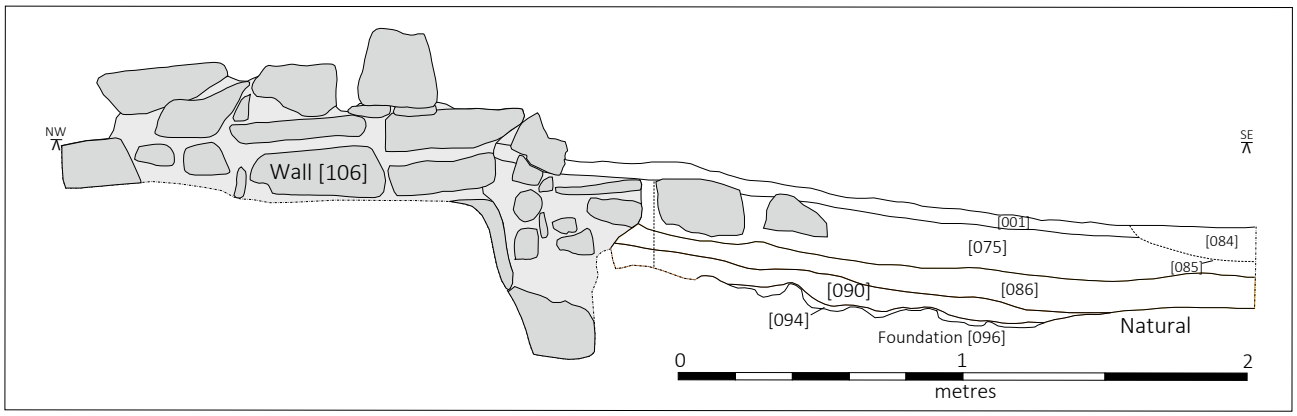
5.4.5 Trench 7

Dun occupation

Natural bedrock was encountered close to the surface within the western side of Trench 7 (Illus 22), which falls away in a series of natural steps to the east where the underlying deposits were deeper. The earliest deposit encountered within the trench (C096) was tentatively associated with the construction of the dun wall (106) (Illus 23). This deposit included frequent small angular stones, placed between bedrock and over which the larger foundation stones of the dun wall appeared to have been laid. In the field this relationship appeared clear, although confirmation of this would have involved the removal of the dun wall to verify that (C096) continued to run underneath the wall. The reason that this may be of some importance was that the angular stones within (C096) were mixed with small fragments of charcoal and occasional burnt bone, while some soil appeared red and fire affected, perhaps suggesting human activity prior to or during the construction phase of the dun wall in this part of the site. The best-preserved part of the dun wall lay in the north of the trench standing 1.21m high in four rough courses. To the south of this the dun wall had either been completely robbed or possibly had fallen down the steep escarpment



Illus 22 Trench 7. (Image by Roddy Regan, © Kilmartin Museum)



Illus 23 Trench 7, west-facing section. (Image by Roddy Regan, © Kilmartin Museum)

Illus 24 Trench 7, robbed dun wall (106) looking north. (Image by Roddy Regan, © Kilmartin Museum)

to the east (Illus 24). Within the western part of the trench natural bedrock lay close to the surface, and here this had been evened out by epidiorite slabs (105) laid between dips in the bedrock. Given the similar level of the surface thus formed and its proximity to the surface (C046/047) seen in Trench 5, they are interpreted as being part of one contemporaneous event. Although no entrance into the dun had survived, the presence of this relatively robust surface might suggest an entrance on this north side, but this has to remain speculative given that no direct relationship to either dun or enclosure was established.

Enclosure occupation

The collapsed/robbed wall of the dun was sealed by a layer of red-brown silt (C094) which contained numerous fragments of wood charcoal along with small amounts of burnt bone, possibly hearth derived and likely related to the occupation of the later enclosure as it lay over the remains of the robbed dun wall. As such, this deposit and those immediately above likely represent midden material dumped in this part of the site. Deposit (C094) was sealed by similar deposits, first (C090) and then (C086) (Illus 25). Both of these dark grey dumped deposits contained small fragments of burnt bone and charcoal, along with burnt barley and oat seeds as well as fragments of fire-reddened clay, the latter more apparent in (C086) which also contained a small fragment of non-ferrous slag or fly ash. The latter is interpreted as broken up remnants of a hearth or oven. A carbonised barley seed from (086) returned a radiocarbon date of 200–0 cal BC (95.4% probability; SUERC-35518).

Overlying these occupation dumps and sealing surface (C105) was red-brown loam (C075). The base of this deposit at the east contained numerous stone fragments, their disparate and loose nature perhaps suggesting they were derived from a secondary robbing of the dun wall, the smaller

Illus 25 Trench 7, dumped burnt deposit (C090). (Image by Roddy Regan, © Kilmartin Museum)

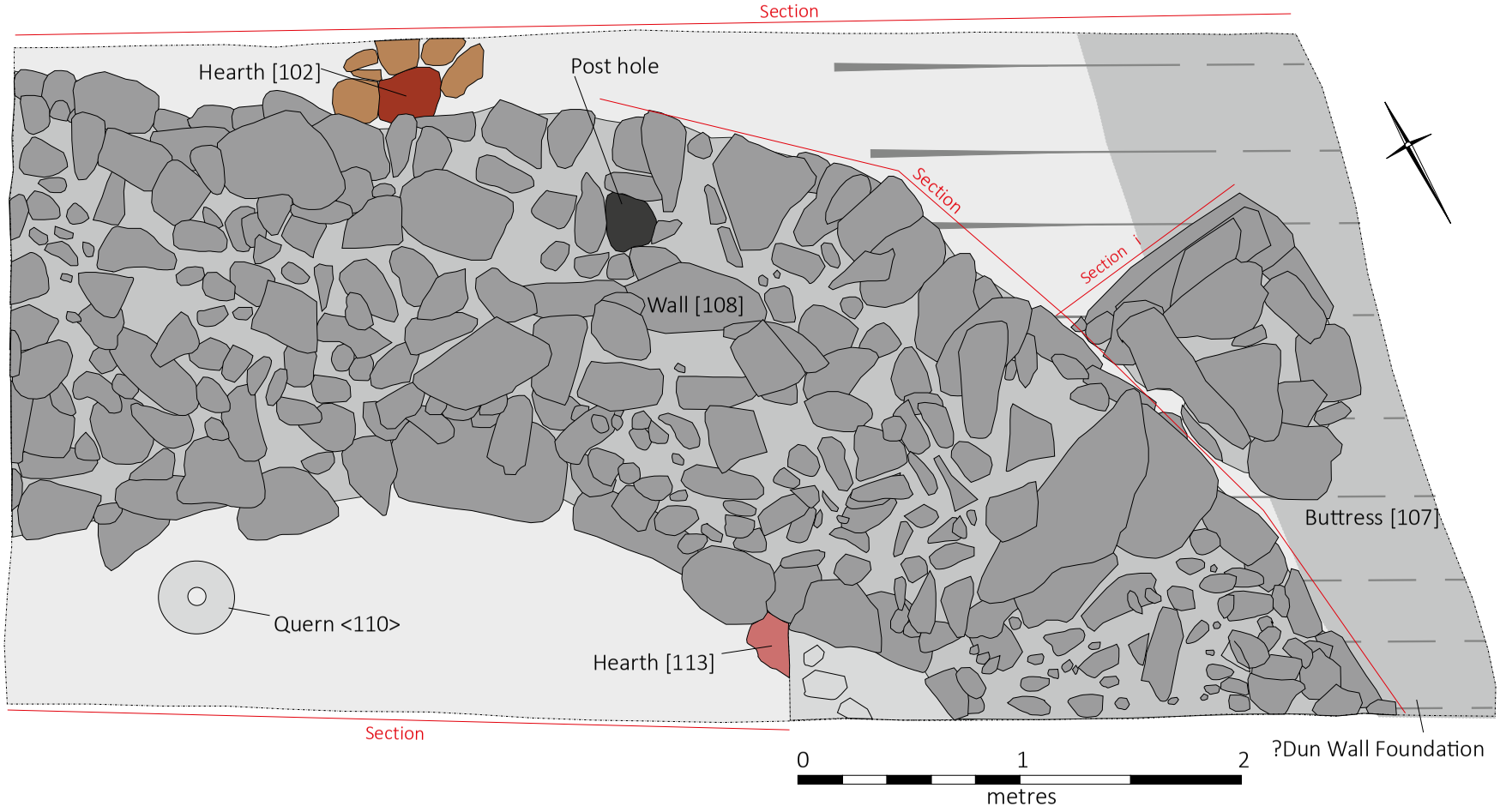
stones discarded when larger blocks were taken from the wall. Context (075) was sealed by topsoil and vegetation cover (C001).

5.4.6 Trench 8

Dun occupation

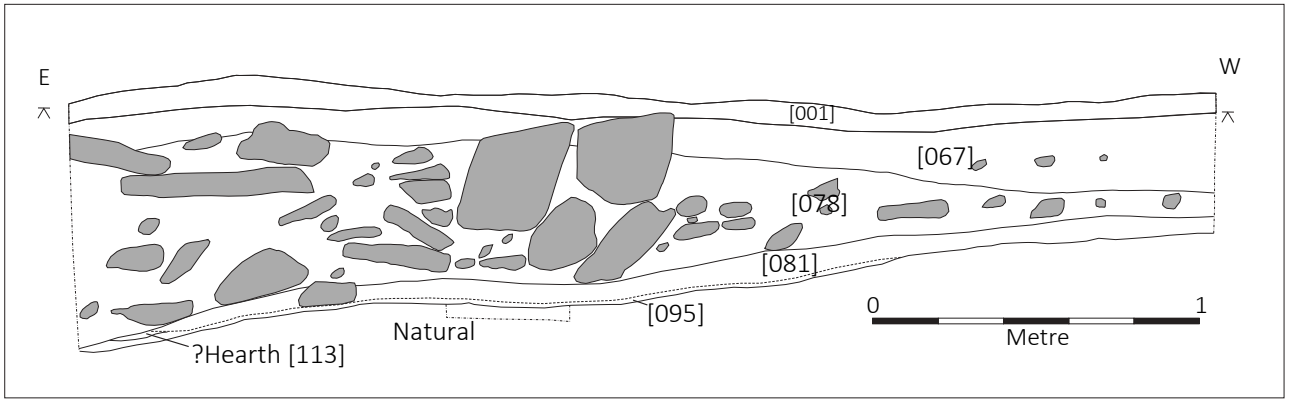
Although natural bedrock was not encountered within Trench 8 (Illus 26), the nature of the excavated deposits suggests a similar stepped profile from west to east as seen elsewhere across the site. The earliest deposits located within the trench appeared to be the robbed or collapsed remains of the original dun wall as represented by a tumble of large stones (C114) at the base of possible robber cut (C115), although given the restricted nature of the trench at its east end this has to remain speculation. To the west of the potential wall and robber cut was a light brown clay deposit (C117). Little of this deposit was examined although it may represent an old ground surface, but this is extremely speculative given its limited exposure in the trench. Also unclear was how this deposit related to the potential wall (114) due to the presence of the later robber cut. Sealing (C117) was a deposit of red-yellow silt (C076). This deposit had very few inclusions and its relatively 'clean' nature suggests this soil may have been re-deposited and represents a levelling or primary floor deposit. This possible floor was sealed by dark grey deposits (C077) and (C110), likely contemporaneous and lying either side of a hearth (101/102). Both these deposits contained relatively high quantities of burnt barley, oats and some wheat, suggesting cereal processing possibly from corn drying or food preparation around the hearth, and are interpreted as forming during the occupation of the dun. The hearth (101/102) (Illus 27) was constructed with a surround of green schist slabs containing a red (burnt) clay base in the centre.

As both the hearth and its associated occupation layers (C077/110) physically lay below the external foundations of the later enclosure wall,



Illus 26 Trench 8. (Image by Roddy Regan, © Kilmartin Museum)

Illus 27 Trench 8, hearth setting (101)/(102) looking south. (Image by Roddy Regan, © Kilmartin Museum)



Illus 28 Trench 8, south-west-facing section. (Image by Roddy Regan, © Kilmartin Museum)

the deposits should be associated with occupation of the dun. This depositional sequence ended abruptly at the east end of the trench and was lying at a higher level to remnants of the putative dun wall, cut away by what is interpreted as a stone-robbing trench (115) (Illus 28). If the dun wall has indeed been robbed, then it seems likely that this was undertaken in order to construct the later enclosure wall.

Enclosure construction

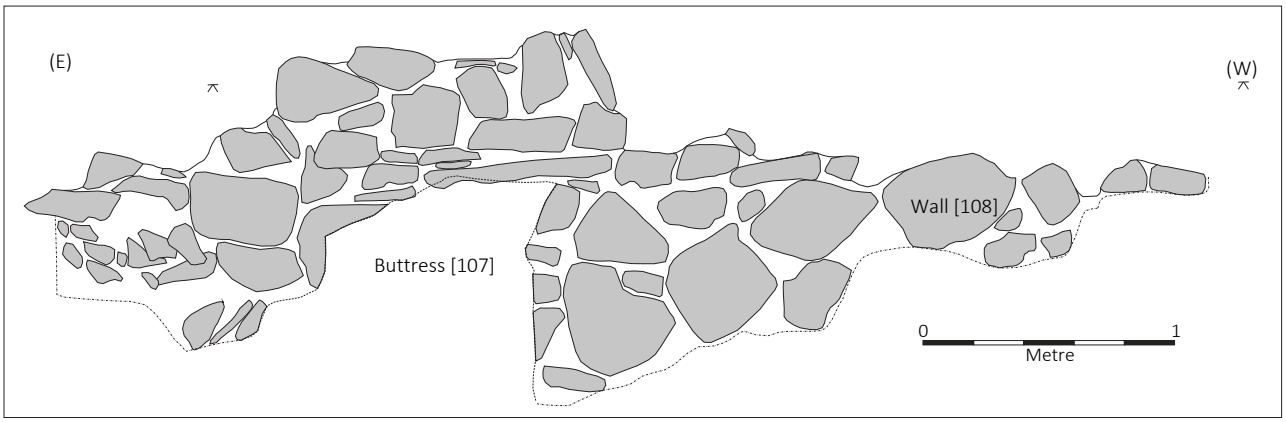
The north-eastern arc of the enclosure wall (108) ran through the trench (Illus 29). The wall measured

up to 2m at its widest point and was constructed in drystone rubble, with larger blocks of stone used within the facing of the wall and smaller blocks used internally as packing and levelling. The external face of the enclosure wall (108) was best preserved at the east end of the trench, where it stood up to 1.4m high in seven rough courses. The upper extent of the wall was less well preserved and appeared to have been badly disturbed, with many stones displaced from their original positions. Built against the external face of the enclosure wall where it curved to the south was a buttress (107) (Illus 30, 31, 32). The buttress measured 1.3m wide and 1m long, standing 1.2m high in three courses and was likely constructed to support the enclosure wall.

Internally the enclosure wall lay directly over a natural glacial till, suggesting that any existing turf/soil had been removed prior to the construction of the enclosure. Sealing this were deposits (C095/081), both of which lapped up against the internal face of the wall (Illus 33). Both of these deposits contained small quantities of charcoal along with burnt barley and oats. A carbonised barley seed from (C095) returned a radiocarbon date of 50 cal BC–120 cal AD (95.4% probability; SUERC-35517). Likely associated with these deposits and suggesting they likely represent occupation deposits was hearth (113). The hearth was only partially seen at the eastern end and consisted of an area of heat-reddened clay lying against the internal wall face, which had also been turned red by scorching/burning (Illus 34). Overlying these occupation deposits were layers of stone collapse/demolition lying either side of the enclosure wall, (C078) (internally) and (C087) (externally). Lying internally at the interface between the occupation deposit (C081) and the rubble (C078) was a near complete upper stone of a rotary quern (<110>; Illus 35). While it is possible that this upturned quern was deliberately dumped/placed as part of an abandonment process, it is also

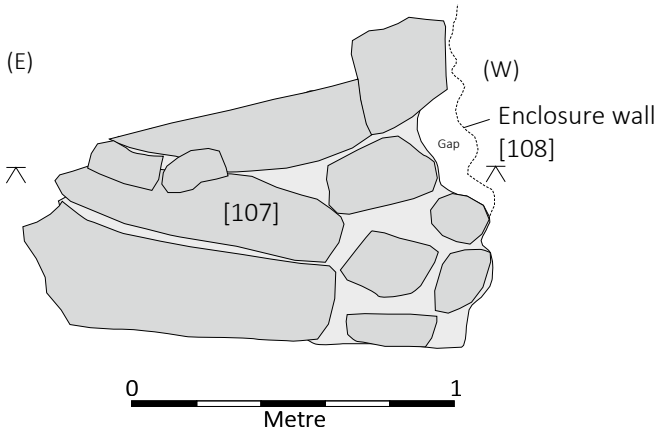
Illus 29 Trench 8, later enclosure wall (108) looking east. (Image by Roddy Regan, © Kilmartin Museum)

Illus 30 Trench 8, enclosure wall (108) and external buttress (107) looking south. (Image by Roddy Regan, © Kilmartin Museum)



Illus 31 Trench 8, elevation of external wall face. (Image by Roddy Regan, © Kilmartin Museum)

possible that the quern had been secondarily used in the construction of the enclosure wall; rotary querns were seen used in the construction of the walls of An Dun, Glenamachrie (Betts 1969). Sealing the stone collapse on the north were three similar red-brown deposits (C071), (C069) and (C067). These soils were progressively lighter in colour although they were essentially the same deposit. During the removal of these deposits numerous loose stones were removed from around the upper extent of the wall circuit, suggesting the wall stones were being continually disturbed. Cutting through the upper



Illus 32 Trench 8, buttress. (Image by Roddy Regan, © Kilmartin Museum)

disturbed stones on the north side of (108) was a post hole (103/104). The function of this remains unclear, but it would appear to belong to the post-demolition phase of the enclosure and as such may delineate some late division across the top of the plateau area, possibly a fence line.

5.4.7 Trench 9

Dun occupation

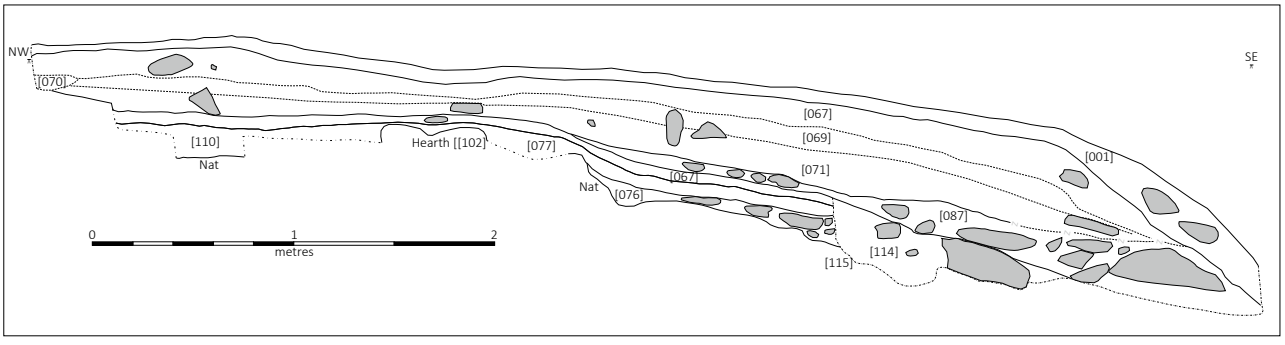
A natural bedrock ridge ran along the western edge of Trench 9 while the enclosure wall defined the east. Between these lay a relatively deep sequence of deposits.

Lying above bedrock in the west of the trench was a natural glacial till of light yellow-brown sandy silt. Sealing this were very dark grey deposits (C091/092) containing small quantities of burnt bone and carbonised barley and a perforated schist disc <168>. A carbonised barley seed from (C092) provided a radiocarbon date of 350–50 cal BC (95.4% probability, SUERC-35516). While (C091/092) was being removed the traces of a possible foundation slot (C111/112) became apparent as a dark linear strip of soil lined by several stones set on edge. While this may have been contemporary with deposit (C091/092), it is possible it may relate to a later deposit (C083); post holes (097/098) and (099/100) (Illus 37) may relate to either context.

Deposit (083) was a similar dark grey humic deposit, although relatively thick and homogeneous in nature. The deposit contained 20 worked or utilised stones (<122> – <125> and <127> – <143>), an iron point (<126>), daub, fly ash, burnt bone, charcoal and burnt grains of barley and oats and it is likely this may represent the continued build-up or dump of occupation material in this area of the site. The presence of these post settings along with the possible beam slot suggests some form of timber structure may have occupied this area of the site, although what this may have been remains speculative.

Later enclosure construction (Illus 38, 39)

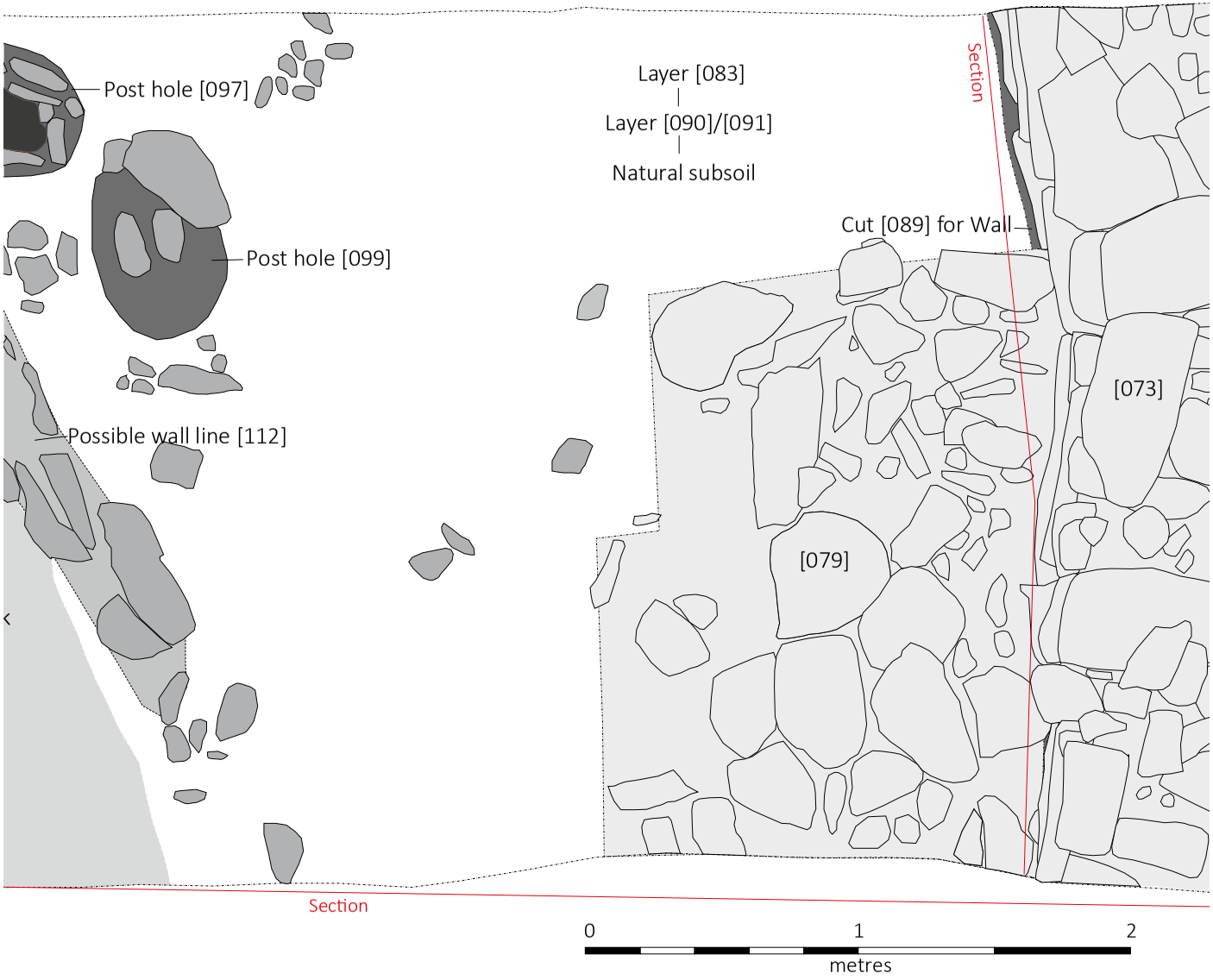
A distinct cut (089) (and fill (C088)) for the enclosure wall truncated the earlier dun occupation deposits (Illus 36, 44). The presence of this construction cut suggests that any earlier dun wall and/or occupation deposits had been cut back or levelled prior to the wall being built or reconstructed in this area. The wall itself (073) was constructed from drystone rubble standing up to 1.1m high in four courses and up to 1.4m wide, with the largest blocks again used along the outer faces of the wall and smaller stones used as packing/levelling (Illus 40, 41, 42).



Illus 33 Trench 8, north-east-facing section. (Image by Roddy Regan, © Kilmartin Museum)

Illus 34 Trench 8, internal face of enclosure wall (108) and hearth (113) looking south-east. (Image by Roddy Regan, © Kilmartin Museum)

Illus 35 Trench 8, quern <110> in situ, looking south-east. (Image by Roddy Regan, © Kilmartin Museum)



Illus 36 Trench 9, earlier features and deposits. (Image by Roddy Regan, © Kilmartin Museum)

Illus 37 Trench 9, post settings (097)/(098) and (099)/(100) looking south-east. (Image by Roddy Regan, © Kilmartin Museum)

Overlying this cut and the earlier occupation accumulation was a paved surface (079) consisting of a relatively even spread of green schist slabs, which likely represent a paved surface running around the internal face of the enclosure wall (Illus 43, 44, 45). Partially overlying surface (079) and continuing to the west of it was a deposit of dark grey silt (C080). At the west of the trench this deposit was compacted, suggesting its use as a floor or surface possibly associated with surface (079). This deposit contained quantities of carbonised grain including (possible) emmer (*Triticum dicoccum*) and bread/club wheat (*Triticum* cf *aestivo/compactum*), which, if correct, were rare or absent in other earlier deposits and may indicate access to different foodstuffs or even the adoption of a different crop regime.

Overlying (C080) and lying against the wall internally were dark grey organic layers (C075/072) containing carbonised barley along with a few utilised stones, these likely representing an occupation accumulation associated with the use of the enclosure. Sealing this occupation horizon was a layer of rubble collapse (C074), which spread over much of the trench, but was deepest along the inner face of the enclosure wall. Over this rubble and lying under the present topsoil was a fairly homogeneous deposit of red-brown loam (C068), this up to 0.3m deep, containing few larger stones, which was surprising given the proximity of the wall.

5.4.8 Trench 10 (Illus 46)

Natural bedrock lay close to the surface across most of Trench 10. In the north-east of the trench a thin red-brown clay loam (C082) covered a slightly darker but similar deposit (C109). These two layers combined were no more than 0.2m deep. At the south of the trench and lying above natural bedrock were the badly disturbed remains of the southern arc of the enclosure wall (116). A few stones from what was likely the original wall core appear to be in situ but disappeared below the relatively recent estate wall that traverses this end of the site (Illus 47).

Several areas were also cleared of pine needles or were topsoil stripped to allow the tracing of the dun/enclosure walls, although no further excavation was undertaken in these areas.

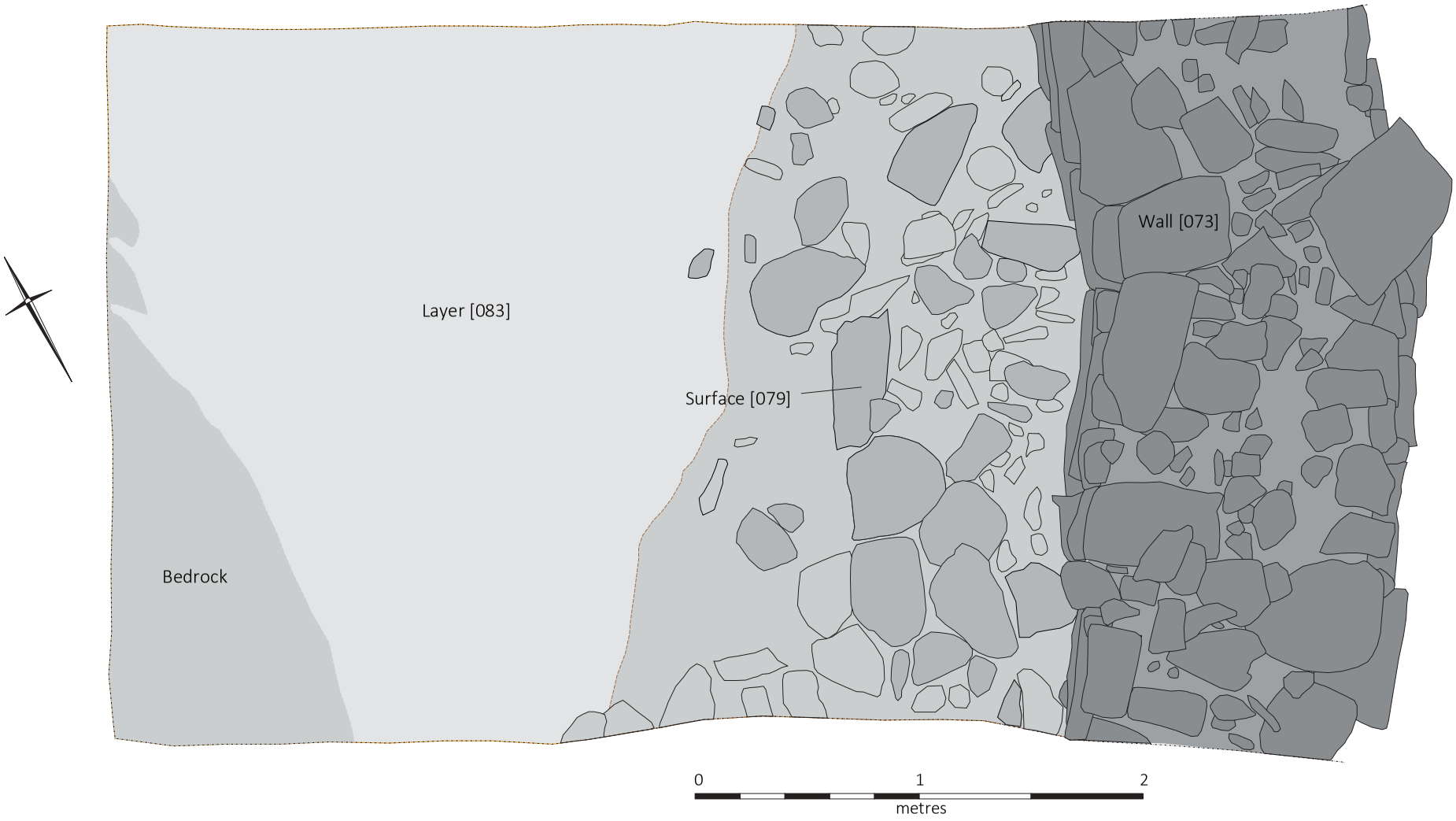
5.4.9 Area 1 (Illus 48)

The face of the north dun wall was evident during the earlier survey work and an area round this was cleared of pine needle cover to clarify its full extent. The dun wall was best preserved in the west of this area and beyond this to the east survived only as a single line of basal stones (055) built directly onto bedrock (Illus 49).

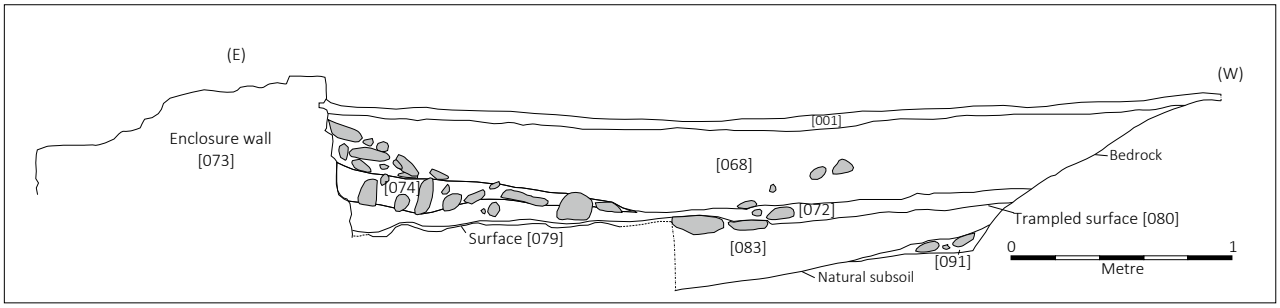
Two panels of bedrock to the north of the dun wall bore cup-marks. The eastern panel (064) displays two clear cup-marks with perhaps traces of two more (Illus 50), while the western panel (065) incorporated two cup-marks (Illus 51).

5.4.10 Sondages 1, 3 and 4

In order to investigate the potential wall lines of the monument during the first phase of the excavation, four areas of the site had the vegetation/topsoil removed (Sondages 1–4). The area of Sondage 2 was incorporated into Trench 8 during the second phase of excavation while the rest are described below.



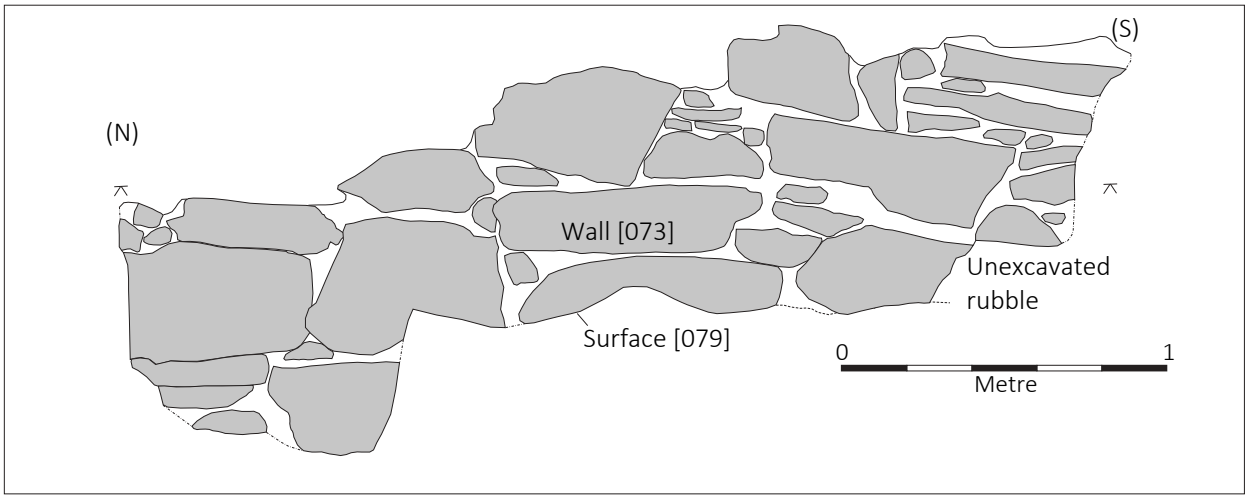
Illus 38 Trench 9, later deposits (079), (083) and wall (073). (Image by Roddy Regan, © Kilmartin Museum)



Illus 39 Trench 9, north-facing section. (Image by Roddy Regan, © Kilmartin Museum)

Illus 40 (left) Trench 9, enclosure wall (073) looking north-east. (Image by Roddy Regan, © Kilmartin Museum)

Illus 41 (above) Trench 9, enclosure wall (073) looking north. (Image by Roddy Regan, © Kilmartin Museum)



Illus 42 Trench 9, west-facing wall elevation. (Image by Roddy Regan, © Kilmartin Museum)

Illus 43 Trench 9, enclosure wall (073) and surface (079) looking south-east. (Image by Roddy Regan, © Kilmartin Museum)

Illus 44 Trench 9, cut (089) for early enclosure wall (073) under surface (079) looking south. (Image by Roddy Regan, © Kilmartin Museum)

Illus 45 Trench 9, surface (079) looking south. (Image by Roddy Regan, © Kilmartin Museum)

Illus 46 Trench 10. (Image by Roddy Regan, © Kilmartin Museum)

Illus 47 Trench 10, wall (116) under later estate wall, looking south-east. (Image by Roddy Regan, © Kilmartin Museum)

Sondage 1 (Illus 52)

Removal of the turf revealed the outer face of enclosure? wall (056), while the inner face could be only vaguely distinguished among the rubble lying to the east of the sondage trench (Illus 53).

Sondage 3 (Illus 54, 55)

Removal of the turf cover revealed the denuded remains of the former dun wall (054) with no recognisable inner or outer face surviving.

Sondage 4 (Illus 56, 57)

This small trench revealed a mass of rubble beneath the turf cover. The outer face of the dun wall (053) might have been exposed within the trench, but if so it was very crudely built and the revealed stones are more likely to be collapse/demolition.

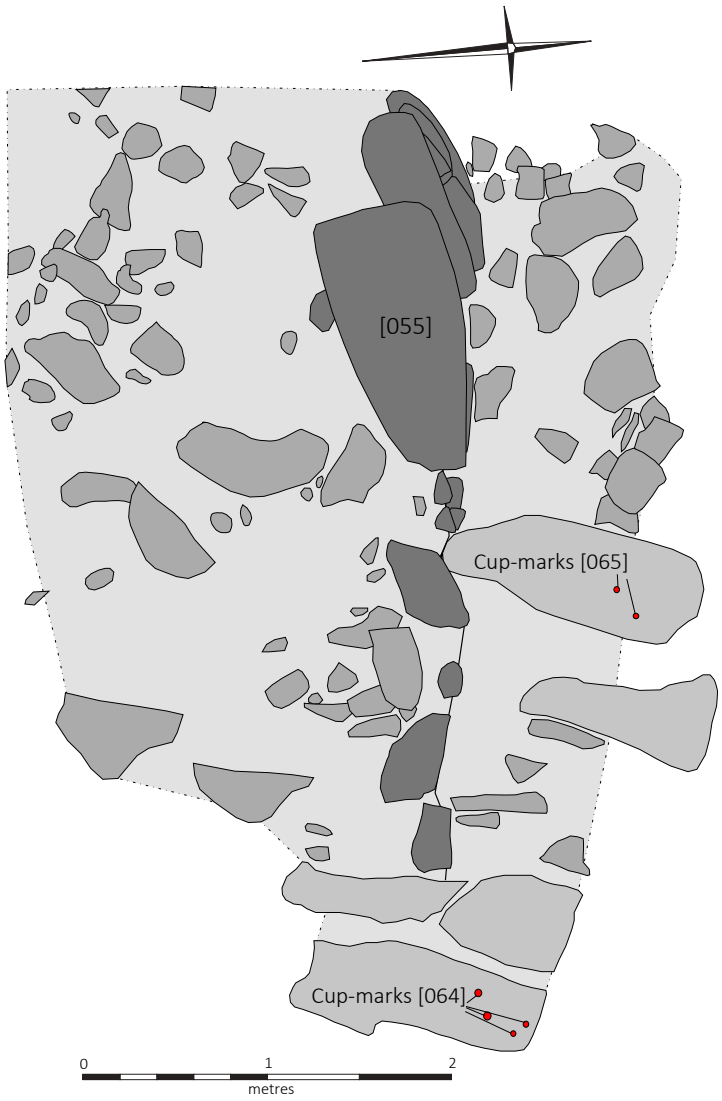
Two further areas were investigated during the first phase of work, both lying outside the dun and enclosure.

5.4.11 Trench 4 'cairn'

The 'cairn' (Illus 58, 59, 60)

The removal of pine cover (C007) and upper topsoil (C041) from the stone heap previously considered a possible cairn revealed the presence of a square structure (4.3 × 4.4m) delineated by a wall or kerb of horizontally laid angular stones (059).

Within and around this kerb was a mass of what appeared to be heaped demolition/collapse material consisting mainly of medium to large angular stones (C058). These had been much disturbed by fallen trees and also appeared to have a hollow or dip in the central area. Removal of the rubble over the south-west corner of the structure, deposits (C058) and (C062), failed to reveal a convincing inner face to the structure (061). Excavation stopped at the top of the kerb and the inner stones (061) and a sandy organic material lying within the interior



Illus 48 Area 1. (Image by Roddy Regan, © Kilmartin Museum)

of this 'wall' line (C060) was left unexcavated in situ.

5.4.12 Trench 6 (Illus 61, 62)

Trench 6 was excavated on the terrace below the dun on the west side of the ridge to examine the possibility of any significant deposits on this relatively flat adjacent ground.

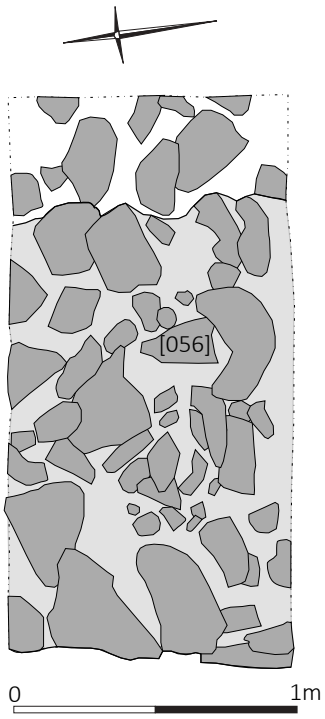
The lowest deposit uncovered within the trench was a grouping of stones that may have been the remnants of a curvilinear wall (038). Sealing these stones was soil (C037), this in turn sealed by what appeared to be the remnants of a rough surface (C035/039) situated at the west of the trench. Sealing this possible surface were deposits (C022) and (C021), similar yellow-brown sandy silt, together being between 0.3 and 0.4m in depth. Lying to the east and west of the trench and lying along either side of the terrace were groups of large stones (C063), these interpreted as fallen from the dun/enclosure and subsequently cleared from the central terrace area. Between these stones the relatively stone-free and homogeneous nature of deposits (C022) and (C021) suggested they may be turned and cleared agricultural soils.

The development of a later agricultural soil might also be argued for the upper soils within the dun and enclosure areas. In Trench 9, for example, the

Illus 49 Area 1, north wall of dun (055) looking south. (Image by Roddy Regan, © Kilmartin Museum)

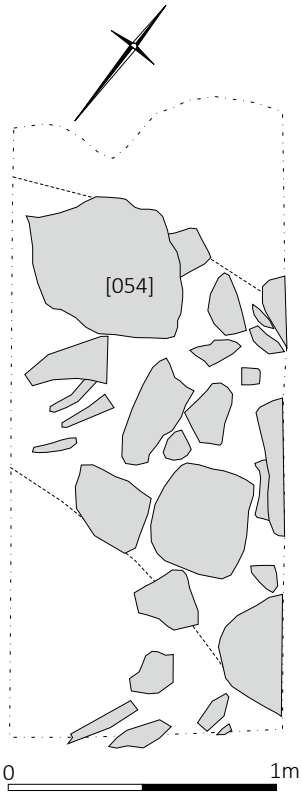
Illus 50 Area 1, cup-marked panel (064) looking south. (Image by Roddy Regan, © Kilmartin Museum)

Illus 51 Area 1, cup-marked panel (065) looking south. (Image by Roddy Regan, © Kilmartin Museum)

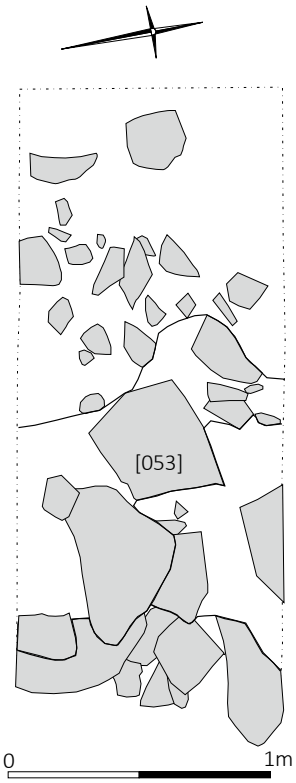


Illus 52 Sondage 1. (Image by Roddy Regan, © Kilmartin Museum)

Illus 53 Sondage 1, wall (056) looking south. (Image by Roddy Regan, © Kilmartin Museum)



Illus 54 Sondage 3. (Image by Roddy Regan, © Kilmartin Museum)



Illus 56 Sondage 4. (Image by Roddy Regan, © Kilmartin Museum)

Illus 55 Sondage 3, wall (054) looking south-west. (Image by Roddy Regan, © Kilmartin Museum)

Illus 57 Sondage 4, wall (053) looking south-east. (Image by Roddy Regan, © Kilmartin Museum)

upper soil contained little in the way of rubble that one might expect, given the proximity of the wall line, suggesting that much of the wall collapse had been cleared, possibly when this soil was cultivated. More solid evidence of this can be seen within a nearby enclosure situated on the same ridge, its *c* 11m internal diameter containing remnant rig and furrow cultivation (Canmore ID 39191). Since the excavation this area of the terrace has been completely disturbed by forestry operations, when a large trench was machine excavated through the area.

5.5 The artefacts from Barnluasgan

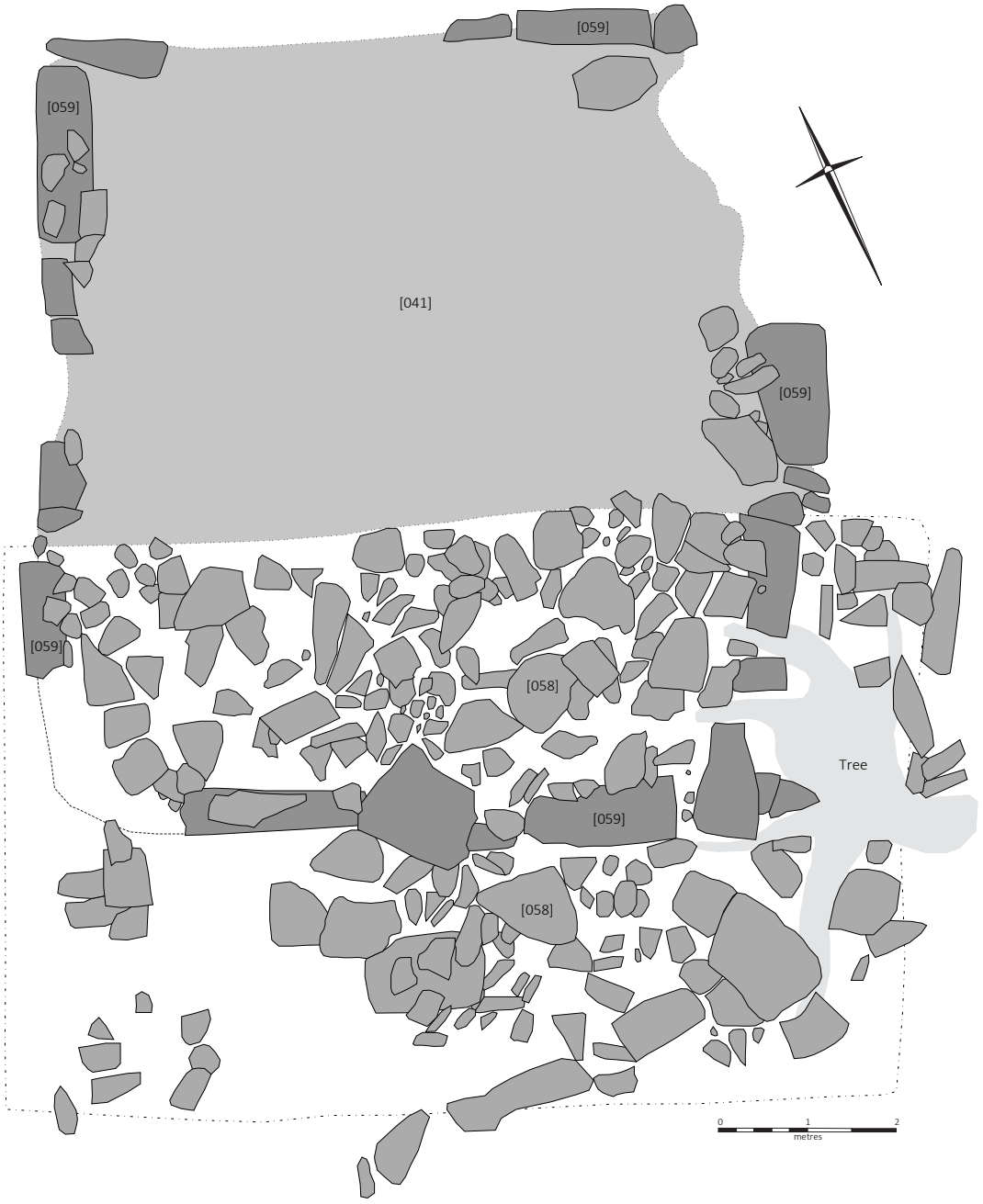
Ewan Campbell

5.5.1 Lithics

The assemblage of stone objects from Barnluasgan is not very extensive. Most of the utilised stones are well-rounded beach/river pebbles, mainly of quartzite, which have been used for a variety of purposes. Most of these are for polishing. Some have glassy smooth patches (<074>, <122>, <129>, <130>, <131>, <134>), and others have signs of discolouration or brown deposits indicative of use as leather slickers (<044>, <053>, <083>, <096>, <128>). Surprisingly, none of the pebbles have been used as hammerstones/pounders, though one (<109>) has grooves indicating possible use as a temporary anvil (Illus 63d, 64).

There is a small number of fire-cracked pebbles, including some that have previously been utilised as polishers/slickers (<042>, <044>, <129>, <130>). As most of these are of quartzite, this might be the result of accidental heating in a hearth rather than deliberate use for cooking. There is one palette of thin slabby quartzite <124>, similar to those found at Balure dun (see below), but there are other signs of use of pigments. Notably, <132> is a large pebble of the iron ore hematite, which has been rubbed down in places to produce red pigment.

Other pebbles show signs of use of iron-rich material (<101>, <145>). The hematite pebble is



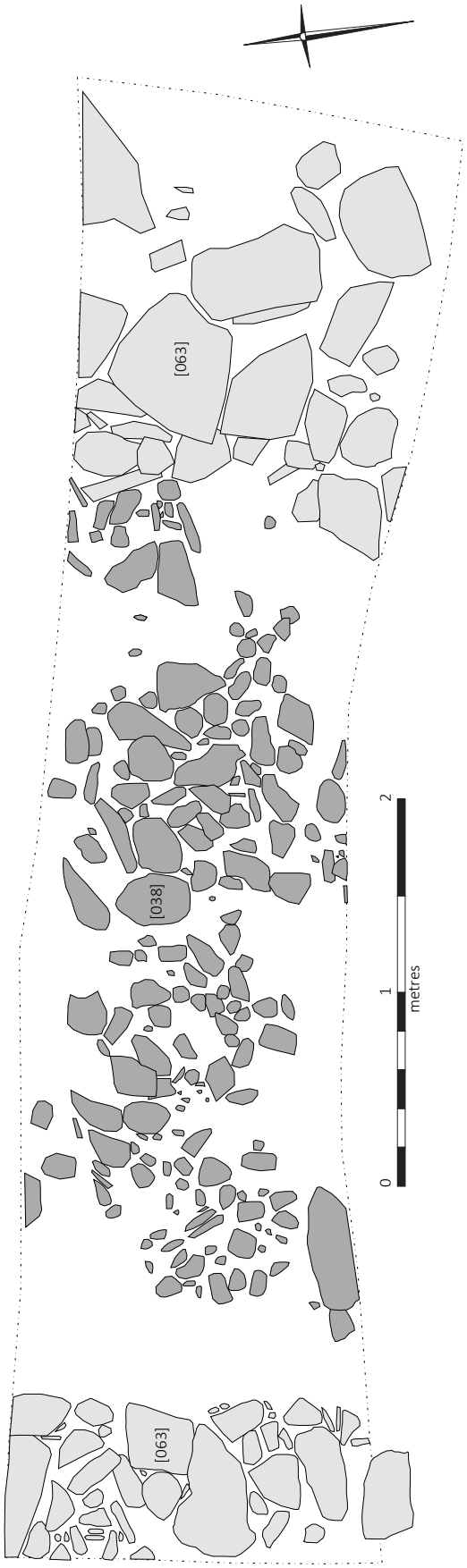
Illus 58 Trench 4. (Image by Roddy Regan, © Kilmartin Museum)

unusual and, as it was not obtained from a vein deposit, must have been a chance find on a beach or river deposit, but there is no way of knowing where it was found. All the other utilised material, except for the flint, is locally available from the Dalriadan Assemblage rocks of the immediate locale.

There are many pieces of slate/phyllite, mostly unworked, but some were utilised in the production of perforated discs (Illus 63a–c). Different stages of manufacture are present, with one unperforated disc (Illus 63a, 65) and several partial or incomplete pieces (Illus 63b & c, 66, 67). These were perhaps intended as spindle whorls, though they are rather large and thin. There is a parallel of a large perforated disc from Dun Mor Vaul, Tiree (MacKie 1974: fig 18, 430). Some of the notched fragments may be the

Illus 59 Trench 4, 'cairn' looking north-west. (Image by Roddy Regan, © Kilmartin Museum)

Illus 60 Trench 4, north-west corner of 'cairn' looking north-west. (Image by Roddy Regan, © Kilmartin Museum)



Illus 61 Trench 6. (Image by Roddy Regan, © Kilmartin Museum)

Illus 62 Trench 6, wall? (038) looking west. (Image by Roddy Regan, © Kilmartin Museum)

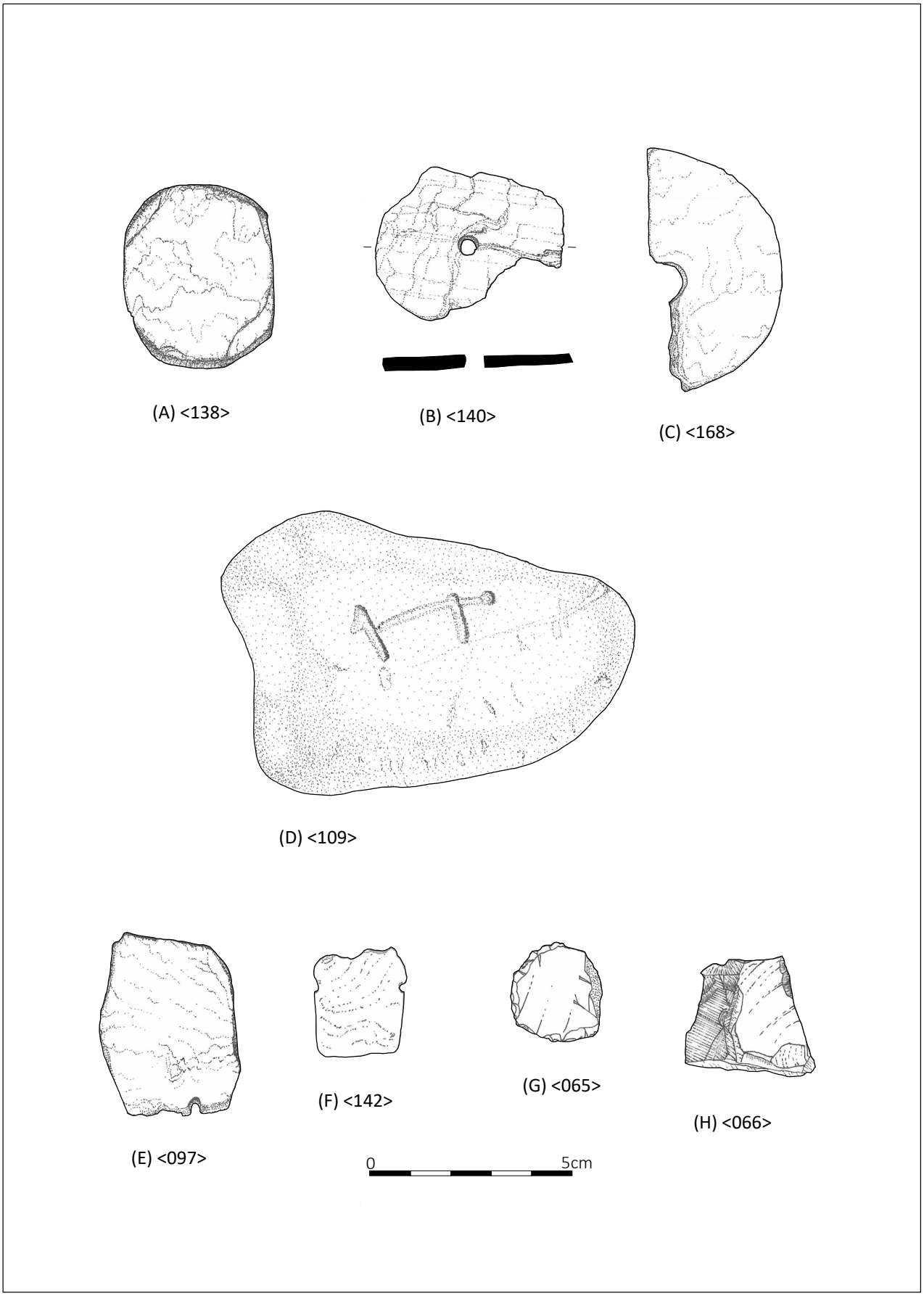
result of prising from outcrops of rock, and may not be functional. One small rectangular piece (Illus 63f, 68) has two opposed notches, but no parallels or use can be given and it seems too small to be functional.

Most of the other collected material is of natural origin, and not utilised. There are many bags of broken vein quartz, probably frost-shattered and not obviously worked. A broken slab of quartz-schist <095>, thought to be a quern, is natural. A number of rounded beach pebbles are not obviously utilised, but must have been brought to the site, perhaps for use as slingstones.

5.5.2 The quern

The Barnluasgan dun quernstone (Illus 69, 70) is a shallow bun-shaped form, and is unusual in being decorated on its upper surface with concentric grooves. MacKie (2007a) has established a general progression of forms, from beehive querns in the earlier Iron Age, through to bun-shaped querns and later disc-shaped querns of the later Iron Age, and has shown a geographic distinction with disc-shaped querns dominating the Atlantic west and the bun-shaped forms in the south-east of Scotland. Most querns are undecorated, but those that are decorated have been classified into a number of types. The Barnluasgan quern belongs to Type 2a (McLaren & Hunter 2008: 117, illus 4b), with ten examples spread widely over Scotland, dating from the Iron Age to early medieval period. The classic bun-shaped quern has a horizontal (lateral) hole for a fixed handle, while the disc-shaped quern usually has a vertical conical hole for a movable handle. The Barnluasgan quern handle hole is vertical, and completely perforates the stone, but shows no sign of being movable, as the hole is drilled, straight-sided and narrow rather than being pecked or chiselled out. This feature is paralleled by one of the querns from Dunadd (Lane & Campbell 2000: 185, illus 4.92, no. 2221), but differs from most disc-querns found in Middle Iron Age Atlantic contexts, where the upper handle is movable (MacKie 1987: 7). However, drills were used on some Iron Age querns, and the rotational drill marks can be seen on an example from Clachtoll broch (McLaren pers comm). The concentric decoration is rare in Middle Iron Age types, though there is a well-stratified example from Broxmouth, reused in the flooring of a 1st-century BC/AD hut (McLaren 2013: 321, illus 10.32, SF934). More locally, there are parallels at Dunadd, where there are querns with one or more concentric grooves forming a collar around the hopper (Lane & Campbell 2000: illus 4.92), including the decorated example mentioned above, but these are undated.

MacKie (1995, 2002) has described a transitional type – the Fintry type – which is bun-shaped but with a projecting lug containing a vertical handle and probably dates to the 1st or 2nd centuries AD. The Barnluasgan quern is oval-shaped, and it is possible that a projecting lug has broken off, as the stone is damaged at this point. The Fintry type dates to the early centuries of the 1st millennium AD, which fits neatly with the Barnluasgan dates. The variety of the quern shapes at Broxmouth, with both disc- and bun-shaped querns being found in Phase 6 of the site (1st century BC/AD), led McLaren to suggest that there was no chronological distinction between the types, and that the 'traditional three-fold division masks some diversity' (2013: 311).



Illus 63 Stone and flint objects. (Image by Roddy Regan, © Kilmartin Museum)

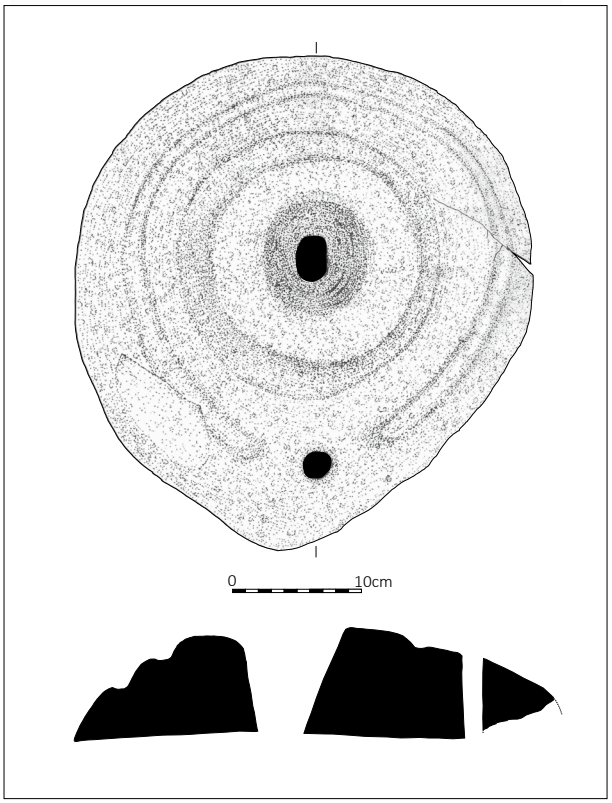
Illus 64 Grooved stone <109>. (Image by Roddy Regan, © Kilmartin Museum)

Illus 65 Unperforated phyllite disc <138>. (Image by Roddy Regan, © Kilmartin Museum)

Illus 66 Perforated phyllite disc <140>. (Image by Roddy Regan, © Kilmartin Museum)

Illus 67 Broken phyllite perforated disc <168>. (Image by Roddy Regan, © Kilmartin Museum)

Illus 68 Notched phyllite <142>. (Image by Roddy Regan, © Kilmartin Museum)



Illus 69 Decorated quern <110>. (Image by Roddy Regan, © Kilmartin Museum)

Illus 70 Quern <110>. (Image by Roddy Regan, © Kilmartin Museum)

The schistose grit of the quern is ideal for querns, and was also used for some of the Dunadd and Loch Glashan querns. This rock-type outcrops fairly close to the site. Considerable effort has been expended on decorating this item of basic domestic equipment, suggesting it was either a special item, or that bread production had assumed symbolic significance in the social life of the community, something which is apparent in the 7th-century cross-decorated quern from Dunadd (Campbell 1987). The context of the quern, and the damage to it, suggest it may have been deposited as part of a closure deposit when the site was abandoned. Several of the Broxmouth querns seem to have been deliberately broken (McLaren 2013: 320), as has the quern from Balure which was also deposited in the final phase of the site (see 6.5.1 'Glass, metal, metalworking debris and utilised stone': 'Utilised stone' below).

5.5.3 Flint

In contrast to Balure, there are only four pieces of flint from Barnluasgan. The flint is of two types, white/grey and brownish-yellow (Illus 63g, 63h). Both types are probably from drift deposits in the near locale. The presence of a flake <066> and a small scraper <065> in the same context may indicate production on the site. They may also indicate some low-level use of flint artefacts on the site in the Iron Age, increasingly recognised as a feature of Scottish Iron Age and early medieval sites.

5.5.4 Other material

The one iron object, <126>, is unfortunately too fragmentary to identify. It does not seem to be a knife, but might be a tool or large nail. Two lumps of vitrified fuel ash slag <166> cannot be specifically associated with ironworking as they could have been produced in any high-temperature domestic process. Small fragments of burnt bone were recovered from several of the occupation deposits across the site but none were identifiable to taxa.

5.5.5 Discussion

Overall, the assemblage is rather restricted in the range of types of artefact, even compared to sites such as Balure and other Iron Age Argyll duns (Crone & Campbell 2005: 121, table 4), but the

small number of artefacts is not unusual for a later prehistoric site. There is nothing especially diagnostic among the finds except for the quern. Almost all the material utilised is of local origin. There is, however, a concentration of items used in the preparation of leather (slickstones), and painted decoration (the palette and iron ore), activities recognised at other local sites such as Balure and Dunadd.

5.5.6 Catalogue

▸ **<053> (040) SF4:** Fragment of quartzite beach pebble, with brown staining suggesting use as slicker.

▸ **<065> (024) SF3:** Scraper, sub-angled, brownish-yellow flint. Part of cortex remaining. 24 × 24 × 3mm.

▸ **<066> (066) SF7:** Irregular chunk of brownish-yellow flint. 12 × 10 × 7mm.

▸ **<067> (066) SF8:** Pointed chunk of grey flint, part of cortex visible, slightly burnt. 20 × 8 × 5mm.

▸ **<074> (067) SF52**: Small quartzite pebble, used as polisher on one side.

▸ **<077> (068):** Small chunk of white/grey flint beach pebble, part of white cortex remaining. 15 × 5 × 4mm.

▸ **<078> (068) SF11:** Quartzite beach pebble, possibly used as a polisher.

▸ **<083> (068) SF10:** Fragments of rounded quartzite beach pebble, one side with glassy polish and darkening. Slicker.

▸ **<087> (070) SF13, <89> SF21:** Fragments of fire-cracked pebble of quartzite.

▸ **<093> (072) SF20:** Phyllite fragments with signs of notching on one side.

▸ **<096> (072) SF18:** Flat broken quartzite pebble, used as slicker on edges and one surface.

▸ **<097> (074):** Small piece of phyllite with notch at one end. 32 × 20 × 2mm.

▸ **<101> (074):** Small flat pebble of basalt, one side with vein of iron-rich minerals, this side rubbed flat. 45 × 55 × 20mm.

▸ **<102> (075):** Bag of phyllite fragments, some partly worked. One SF38 with a large notch, another partly rounded.

▸ **<107> (075) SF21:** Flake of quartzite beach pebble.

▸ **<108> (078) SF22:** Quartzite pebble, smooth on one side, possibly used as a polisher. 75 × 45 x35mm.

▸ **<109> (078) SF26:** Igneous pebble with linear markings on one face. A series of intersecting grooves, 3mm wide, probably the result of use as an anvil rather than deliberate artistry.

▸ **<110> (078) SF27:** Upper stone of rotary quern. Low bun-shaped quernstone, with central hopper and vertical handle hole on upper surface. The upper surface is decorated with two concentric pecked grooves. The inner is complete, and forms a collar around the hopper. The outer fades out as it approaches the handle hole. The depth and width of the grooves is irregular. The hopper is *c* 90mm in diameter at the top, conical in section, narrowing to 22 × 18mm at base. The surface is pecked but smooth, and the hole to the lower surface seems to have been recut, forming a figure-of-eight shape, but there are no rind grooves. The handle hole is vertical, a regular 15mm in diameter, drilled, with very smooth sides. The lower surface is slightly dished, worn very smooth in places. The stone is a schistose grit from the metamorphic Dalradian Assemblage, very suitable for a grinding stone. The stone is almost complete, but is missing a flake at one side near the handle hole, and has a fracture. The shape is slightly oval, *c* 340 × 370mm, and a maximum of *c* 90mm thick.

▸ **<111> (078) SF50:** Unworked phyllite.

▸ **<119> (082) SF42:** Fragment of fire-cracked boulder of gabbro.

▸ **<122> (079) SF23:** Triangular quartzite pebble, with glassy polish on one edge. 150 × 80 × 35mm.

▸ **<123> (083) SF24:** Irregular quartzite pebble, possibly used as a polisher.

▸ **<124> (083) SF25:** Thin slab of quartzite, one surface smoothed, used as a palette. 175 × 100 × 15mm.

▸ **<126> (083) SF30:** Iron bar of indeterminate form, fractured and disintegrating. Section *c* 7 × 7mm. Minimum length 80mm.

▸ **<127> (083) SF31:** Quartzite pebble, with one flat side, possibly used as a polisher.

▸ **<128> (083) SF33:** Quartzite pebble, with discolouration in places, suggesting use as slickstone. 40 × 40 × 25mm.

▸ **<129> (083) SF34, <134 > (083) SF41:** Two joining fragments of a fire-cracked quartzite cobble, polished on one surface.

▸ **<130> (083) SF35, <131> (083) SF36:** Two joining fragments of another fire-cracked quartzite cobble, polished on one surface.

▸ **<132> (083) SF37:** Broken beach pebble of massive hematite iron ore, rubbed down on one side. 45 × 45 × 35mm.

▸ **<135> (083) SF43:** Small pebble of coarse quartzite, possibly used as polisher.

▸ **<136> (083) SF44:** Large struck flake of yellow-brown flint, some possible retouch. 30 × 35 × 10mm.

▸ **<137> (083) SF45:** Fire-cracked pebble of quartzite, with patch of brown deposit and polish suggesting use as slicker.

▸ **<138> (083) SF47:** Irregular disc of phyllite, edges smoothed, unperforated. 45 × 38 × 6mm.

▸ **<140> (083) SF54:** Perforated phyllite disc, incomplete on one side. Diam: 43mm; hole Diam 4mm, irregular; maximum Th: 7mm.

▸ **<141> (083) SF54:** Part of perforated phyllite disc, similar to 168. Diam: *c* 60mm; hole Diam: 6mm; Th: 2mm.

▸ **<142> (083) SF56:** Small rectangular plate of phyllite, with two opposite notches at one end, broken at one end.

▸ **<143> (083) SF57:** Piece of phyllite with notch, possibly recent.

▸ **<145> (083):** Pebble of basalt with an iron-rich coating, possibly utilised. 60 × 40 × 35mm.

▸ **<157> (083):** Bag of phyllite of various sizes, one piece slightly notched on one side.

▸ **<159> (083):** Bag of phyllite of various sizes, one piece slightly notched on one side.

▸ **<166> (083) SF32:** Two pieces of vitrified fuel ash slag.

▸ **<168> (087) SF46:** Perforated disc of phyllite. Broken in half, thin layer. Diam: 60mm; hole Diam: 9mm; Th: 2mm.

▸ **<175> (091):** Unworked flakes of phyllite.

▸ **<176> (109) SF48:** Thin irregular slab of phyllite with notch on one side. 25 × 20 × 2mm.

▸ **<177> (109) SF49:** Slab of phyllite, with perforation or notch on one side. 82 × 47 × 10mm.

5.6 Environmental report

Mhairi Hastie

5.6.1 Methodology

The flots and other carbonised plant remains recovered from 24 soil samples were submitted for full post-excavation analysis. All of the flots were scanned using a binocular microscope (magnification ×10–200) and all cereal grain, weed seed remains and nutshell were removed. These and any other carbonised plant remains already sorted from the samples were then identified with reference to the modern comparative collection at CFA Archaeology. Botanical nomenclature generally follows that of Tutin (1964–80).

A tabulation of the results is presented in Table 1a & b. The samples have been ordered by trench number and context description. Where remains were recovered from more than one sample, but from the same context (for instance Samples 31 and 33 from Context (090)), the number of grains etc from these samples was amalgamated to provide the total amount from that context.

5.6.2 Results

General

Large quantities of carbonised plant remains, primarily charred cereal grains, were recovered from

the samples. Preservation was generally good, with the bulk of the material recovered being identifiable to at least species level.

Cereal grain
The most common cereal by far was barley (*Hordeum* sp), and where preservation allowed the bulk of these were identified as the hulled (*Hordeum* var *vulgare*) variety, although occasional grains showing some characteristics of the naked (hull-less) variety (*Hordeum* var *nudum*) were also recorded, suggesting its presence. Both straight and twisted grains of hulled barley were present, indicating the predominance of the six-row variety.

Oat grains were recovered from the bulk of the samples; these were not as common as the barley and, in the absence of accompanying well-preserved florets, do not enable identification to the level of species. The inability to distinguish between cultivated and wild oats restricts the scope of interpretation; however the relatively large number of oat grains recovered overall suggests that they represent the cultivated species.

Small quantities of wheat grain were present; preservation of the grain was generally poor; although some grains possessed characteristics in keeping with free-threshing wheats – spelt/emmer (*Triticum dicoccum/spelta*) – most of the grain did have slight dorsal ridges, suggesting that the bulk of these were probably emmer (*Triticum dicoccum*). The identification of emmer was confirmed by the recovery of one small spikelet fork (heavy woody base of the spikelet) from Context (110) (occupation deposit).

One probable rye grain (*Secale cereale*) was recovered from Context (036) (likely midden deposit) and one from Context (080) (likely floor deposit).

Other cereal remains
Small fragments of straw (culm nodes) were recovered from two of the samples (Contexts (090) and (110) – occupation deposits). No other chaff remains or other by-products from cereal grain processing were recovered.

Wild taxa
The wild taxa, as represented by the seeds (here used in a general sense to include items which are strictly fruits, etc) were relatively sparse, although greater numbers of wild taxa were recovered from samples that contained the highest concentrations of grain.

The flora was entirely in keeping with Northern Britain. A large proportion of the wild taxa were common components of disturbed soils of waste places and agricultural fields, including: knotgrass (*Polygonum aviculare*), persicaria/pale persicaria (*Polygonum persicaria/lapathifolium*), fat hen (*Chenopodium album*), chickweed (*Stellaria media*) and grass seeds (*Gramineae* indet).

Occasional seeds of more heathland environs, such as sedge (*Carex* sp) and heath-grass (*Danthonia decumbens*), were present within a small number of the samples.

Given the small amounts of weed seeds recovered from the site, and the general lack of much diversity in taxa present, there is no potential for any detailed discussion.

Nutshell
Small fragments of carbonised hazel (*Corylus avellana*) nutshell were recovered from the bulk of the samples.

5.6.3 Discussion

Cereal assemblage
The majority of samples analysed produced at least some charred plant remains. The diversity of the remains was not great and by far the most abundant element was cereal grain. The cereal assemblage, dominated by hulled barley, with lesser quantities of oat and emmer, would be in keeping with the Middle Iron Age date indicated by radiocarbon dates for the site, hulled barley having been a major staple in Scotland since the Bronze Age.

Little in the way of any chaff remains (spikelet forks, culm nodes, etc) were recovered from the samples and the cereal assemblage consists of 'clean' grain – grain that has already been through the threshing and winnowing stages. The recovery of chaff remains from Scottish prehistoric sites is very rare and the results from Barnluasgan are not unique. The absence of any remains from the primary stage of crop processing suggests that this was being carried out away from any hearth.

Of interest is the presence of possible naked barley, possible bread/club wheat and rye within the assemblage, albeit in very small quantities.

Naked barley is more commonly recovered from earlier prehistoric sites in Scotland, having been

Table 1a Barnluasgan, Trenches 1, 2 and 7: composition of carbonised plant remains, excluding wood charcoal (OD: occupation deposit/dump; CS: cultivated soil; PH: post hole; D/L: dump/levelling deposit; REW: rubble collapse from enclosure wall; AS: archaeologically sterile; ST: straight grain; TW: twisted grain)

Trench no.				1	2	2	2	2	2	2	7	7
Context type				CS	OD	OD	OD	OD	D/L	PH	OD	OD
Context no.				042	027	036	043	045	044	050	086	090
Sample no.				13	9	10	17	15	18	19	28	31/33
Sample volume (litres)				20	20	20	20	20	20	20	20	40
	Latin name	Plant part	Common name						AS			
Weed seeds	*Polygonum aviculare*	nutlet	knotgrass									1
	Polygonum cf *aviculare*	nutlet	knotgrass									
	Polygonum persicaria/ lapathifolium L	nutlet	persicaria/ pale persicaria		2	1***						5
	Rumex sp	nutlet	dock								2	
	Ranunculus sp	achene	buttercup								1	
	Chenopodium album L	seed	fat hen								1	1
	Gramineae indet (medium)	caryopsis	medium-grained grass									
	Gramineae indet (large)	caryopsis	large-grained grass		1		1					1
	Danthonia decumbens	caryopsis	heath-grass								1	2
	Danthonia cf *decumbens*	caryopsis	heath-grass								1	
	Euphorbia sp	seed	spurge									
	Carex sp	nutlet	sedge									1
	cf *Carex* sp	nutlet	sedge								1	1
	Galium aparine L	seed	goosegrass/ cleavers									

Table 1a *cont*

Trench no.				1	2	2	2	2	2	2	7	7
Context type				CS	OD	OD	OD	OD	D/L	PH	OD	OD
Context no.				042	027	036	043	045	044	050	086	090
Sample no.				13	9	10	17	15	18	19	28	31/33
Sample volume (litres)				20	20	20	20	20	20	20	20	40
	Latin name	Plant part	Common name						AS			
Weed seeds	*Viola* sp	seed	violet									1
	Stellaria media (L) Vill.	seed	chickweed									
	Galeopsis sp	nutlet	hemp-nettle									1
	Stachys sp	nutlet	woundwort									
			rhizome		+							
			seed indet								2	2
Cereals	*Avena* sp	caryopsis	oat		37	100	16	14		13	128	66
	cf *Avena* sp	caryopsis	oat		7		6			5		
	Triticum/ Hordeum sp	caryopsis	wheat/ barley		1							
	Triticum sp	caryopsis	wheat			3	1					1
	cf *Triticum* sp	caryopsis	wheat		3		1					
	Triticum dicoccum/ spelta	caryopsis	emmer/ spelt wheat									
	Triticum dicoccum	caryopsis	emmer wheat		1							
	Triticum cf *dicoccum*	caryopsis	emmer wheat (possible)		1		3					1
	Triticum cf *spelta*	caryopsis	spelt wheat (possible)			1						
	Triticum cf *aestivo/ compactum*	caryopsis	bread/club wheat (possible)		1							

Table 1a *cont*

Trench no.				1	2	2	2	2	2	2	7	7
Context type				CS	OD	OD	OD	OD	D/L	PH	OD	OD
Context no.				042	027	036	043	045	044	050	086	090
Sample no.				13	9	10	17	15	18	19	28	31/33
Sample volume (litres)				20	20	20	20	20	20	20	20	40
	Latin name	Plant part	Common name						AS			
Cereals	*Triticum dicoccum*	rachis internode	emmer wheat									
	Secale cereale	caryopsis	rye			1						
	Hordeum sp	caryopsis	barley	1	267	698	142	97		48	762	429
	cf *Hordeum* sp	caryopsis	barley (possible)		22	12					41	41
	Hordeum cf var *vulgare*	caryopsis	hulled barley (possible)								13	
	Hordeum var *vulgare*	caryopsis	hulled barley	4	111	112	78	64		46	124	117
	Hordeum var *vulgare* (ST)	caryopsis	hulled barley (ST)		39	28		7			35	10
	Hordeum var *vulgare* (TW)	caryopsis	hulled barley (TW)	1	3	13		5			15	4
	Hordeum cf var *nudum*	caryopsis	naked barley (possible)		1	4					3	
	Cereal indet (fragments)	caryopsis	indeterminate		120	93	11	13		13	389	146
	Cereal indet	culm node	indeterminate									3
	Other remains						1					
Nut remains	*Corylus avellana*	shell (fragments)	hazel		4	8				1	1	2
Other remains			seaweed frond (possible)									

Table 1b Barnluasgan, Trenches 8 and 9: composition of carbonised plant remains, excluding wood charcoal (OD: occupation deposit/dump; CS: cultivated soil; PH: post hole; D/L: dump/levelling deposit; REW: rubble collapse from enclosure wall; AS: archaeologically sterile; ST: straight grain; TW: twisted grain)

Trench no.				8	8	8	8	8	8	9	9	9	9	9	9	9
Context type				OD	OD	OD	PH	CS	REW	OD	OD	OD	OD	OD	OD	OD
Context no.				095	077	110	070	071	087	072	081	083	088	091	092	080
Sample no.				38	24	43	22	23	32	27	37	25/30	29	42	34	26
Sample volume (litres)				20	20	20	20	20	20	20	20	40	20	20	20	20
	Latin name	Plant part	Common name				AS									
Weed Seeds	*Polygonum aviculare*	nutlet	knotgrass									1				1
	Polygonum cf *aviculare*	nutlet	knotgrass	1		1										
	Polygonum persicaria/ lapathifolium L	nutlet	persicaria/ pale persicaria	4	5	6			1			1				
	Rumex sp	nutlet	dock													
	Ranunculus sp	achene	buttercup													
	Chenopodium album L	seed	fat hen													
	Gramineae indet (medium)	caryopsis	medium-grained grass			1										
	Gramineae indet (large)	caryopsis	large-grained grass													
	Danthonia decumbens	caryopsis	heath-grass		4	1										

Table 1b *cont*

Trench no.				8	8	8	8	8	8	9	9	9	9	9	9	9
Context type				OD	OD	OD	PH	CS	REW	OD	OD	OD	OD	OD	OD	OD
Context no.				095	077	110	070	071	087	072	081	083	088	091	092	080
Sample no.				38	24	43	22	23	32	27	37	25/30	29	42	34	26
Sample volume (litres)				20	20	20	20	20	20	20	20	40	20	20	20	20
	Latin name	Plant part	Common name				AS									
Weed Seeds	*Danthonia* cf *decumbens*	caryopsis	heath-grass													
	Euphorbia sp	seed	spurge		1											
	Carex sp	nutlet	sedge	1	1											
	cf *Carex* sp	nutlet	sedge		1											1
	Galium aparine L	seed	goosegrass/ cleavers		1											
	Viola sp	seed	violet													
	Stellaria media (L) Vill.	seed	chickweed		1	1										
	Galeopsis sp	nutlet	hemp-nettle			4						1				
	Stachys sp	nutlet	woundwort										1			
			rhizome									1				
			seed indet	2	2							3		1		
Cereals	*Avena* sp	caryopsis	oat	5	68	125				2	3	5	1	3		
	cf *Avena* sp	caryopsis	oat	2		3				1				2	2	
	Triticum/ Hordeum sp	caryopsis	wheat/ barley													
	Triticum sp	caryopsis	wheat	4		10				2		3				
	cf *Triticum* sp	caryopsis	wheat							1	1		5		2	

Table 1b *cont*

Trench no.				8	8	8	8	8	8	9	9	9	9	9	9	9
Context type				OD	OD	OD	PH	CS	REW	OD	OD	OD	OD	OD	OD	OD
Context no.				095	077	110	070	071	087	072	081	083	088	091	092	080
Sample no.				38	24	43	22	23	32	27	37	25/30	29	42	34	26
Sample volume (litres)				20	20	20	20	20	20	20	20	40	20	20	20	20
	Latin name	Plant part	Common name				AS									
Cereals	*Triticum dicoccum/ spelta*	caryopsis	emmer/ spelt wheat									2				
	Triticum dicoccum	caryopsis	emmer wheat	3						1		1				
	Triticum cf *dicoccum*	caryopsis	emmer wheat (possible)			2										
	Triticum cf *spelta*	caryopsis	spelt wheat (possible)		2											
	Triticum cf *aestivo/ compactum*	caryopsis	bread/ club wheat (possible)			1										41
	Triticum dicoccum	rachis internode	emmer wheat			1										10
	Secale cereale	caryopsis	rye													1
	Hordeum sp	caryopsis	barley	115	387	789			18	73	18	151	74	18	54	
	cf *Hordeum* sp	caryopsis	barley (possible)	2	32					13		5	5		4	
	Hordeum cf var *vulgare*	caryopsis	hulled barley (possible)			27							9			
	Hordeum var *vulgare*	caryopsis	hulled barley	16	35	183		3	6	2	5	16			6	
	Hordeum var *vulgare* (ST)	caryopsis	hulled barley (ST)		7	12				7						

Table 1b *cont*

Trench no.				8	8	8	8	8	8	9	9	9	9	9	9	9
Context type				OD	OD	OD	PH	CS	REW	OD	OD	OD	OD	OD	OD	OD
Context no.				095	077	110	070	071	087	072	081	083	088	091	092	080
Sample no.				38	24	43	22	23	32	27	37	25/30	29	42	34	26
Sample volume (litres)				20	20	20	20	20	20	20	20	40	20	20	20	20
	Latin name	Plant part	Common name				AS									
Cereals	*Hordeum var vulgare* (TW)	caryopsis	hulled barley (TW)			14										18
	Hordeum cf var *nudum*	caryopsis	naked barley (possible)		2							5			2	
	Cereal indet (fragments)	caryopsis	indeterminate	59	139	269		5	12	38	21	66	28	19	34	4
	Cereal indet	culm node	indeterminate			3										
	Other remains															
Nut remains	*Corylus avellana*	shell (fragments)	hazel			5				3		1		1	2	
Other remains			seaweed frond (possible)												1	

largely replaced by hulled barley during the Bronze Age. Nevertheless, it may have continued to be grown on a small scale throughout the later prehistoric period. It is possible that both naked barley and emmer wheat, which is also present in small amounts at the site, were being grown as secondary crops. This is similar to the plant assemblages, for example, recovered from Kintore (Holden et al 2008), where both naked barley and emmer wheat are seen as minor crops being cultivated for specific purposes such as brewing, or possibly because they were more suited to cultivation on some local soils. Given the particularly small number of naked barley grains recovered from the plant assemblage from Barnluasgan, it cannot, however, be ruled out that it merely survived as a weed of the hulled barley fields.

Bread wheat is not usually recovered from later prehistoric sites, although grains of bread wheat have been recovered from earlier Neolithic sites such as Lockerbie (Hastie 2011), Balbridie (Dickson & Dickson 2000) and Crathes (Murray et al 2009), and over 80 grains of bread wheat were identified at the Middle Iron Age site of Rispain Camp, Wigtonshire (Dickson & Dickson 2000). The western districts of Scotland are not normally suitable for the cultivation of bread/club wheat, as heavy rainfall and lack of summer sunshine makes it difficult to grow. Given the proximity of the site at Rispain to the sea, Dickson & Dickson (2000) suggest that the bread wheat may represent an early import. As only two (cf) bread/club wheat grains were recovered from the Barnluasgan samples, it is hard to make any assertion, but its presence, as with the Rispain grain, could potentially indicate that some food was being sourced from further afield.

A grain of rye was recovered from a midden deposit in Trench 2, (036). Rye is more commonly recovered from later periods, principally medieval sites in Scotland, and the one grain of rye from Barnluasgan is more likely to be a weed seed rather than evidence to indicate specific cultivation of the crop.

Other foodstuffs and wild plants

The wild taxa present are principally segetal/ruderal types and most are common components of disturbed soils of agricultural fields and waste ground. They are frequently found around settlement sites, particularly common on enriched disturbed soils and brought into dwellings adhering to boots/clothing and tools. Although only recovered in small amounts from the site, there are increased numbers of weed seeds in samples that contain larger concentrations of grain and it is likely that some of the wild taxa present were being accidentally gathered along with the cereal crops. For instance, fat hen and chickweed were common weeds of agricultural land prior to the introduction of herbicides and are frequently recovered along with the carbonised cereal assemblages from many Scottish excavation sites from the prehistoric onwards. The small amount of heathland species (ie sedge and heath-grass) recovered from the site may also, rather than be indicative of the specific collection of heather or heathy turfs, be part of the agricultural flora, with the plants growing in damp areas of the field or around field edges (Hinton 1991).

There is little direct evidence to suggest any exploitation of wild species as a food source from the plant assemblage, although this does not necessarily indicate that such resources were not being collected. The New Statistical Account for the parish (MacLachlan 1834–45) records that during the 19th century such wild fruit plants as blackberry, wild strawberry, blackthorn and juniper were growing wild in abundance in the area, and it would not seem unreasonable that such resources would have also been available during the Iron Age period. Unlike cereal grains from temperate climates, it is not necessary to dry these fruits before consumption and unless accidentally burnt they would not be represented in the archaeological record.

Only small amounts of hazelnut shell were recovered from the site, with no high concentrations being present, and although collection of nuts as a food source cannot be ruled out it seems more likely that, in this case, the small amount of nutshell was being brought to the site inadvertently along with hazel wood gathered for firewood.

Concentration and distribution

Particularly rich deposits of grain were recovered from contexts interpreted as occupation dumps/deposits, with the largest quantity of grain being present in occupation deposits from Trenches 2, 7 and 8. High concentrations of grain were principally associated with the remains of hearths, for example Contexts (077)/(110) spread either side of hearth (101)/(102), Contexts (096) and (090) associated with fire-cracked clay thought to be the remnants of a hearth or oven,

and Context (095) associated with hearth (113).

Given this association it is most likely that the burnt grain accumulated along with other hearth rake-out material, such as ash and charcoal, throughout the use of the fire, the grain presumably being burnt during food preparation or corn-drying activities. Charred grains are commonly found throughout many different deposits at Scottish prehistoric sites and this spread of cereal grain is generally attributed to small-scale crop processing and food preparation activities carried out on a piecemeal basis. At Barnluasgan there is a particularly clear association between the high concentrations of burnt cereal grains and hearth remains, suggesting that crop processing was concentrated principally around the domestic hearth. Ethnohistorical evidence from Scotland (Fenton 1978; Crawford 1987) records that a number of methods were used to dry small amounts of grain, for example pot-drying or the parching of grains on flat stones before the cooking hearth, and spillage from these activities would no doubt result in the accumulation of grain within the hearth area.

A further high concentration of grain was recovered from Trench 2, from two deposits of midden (Contexts (027) and (036)), and this is likely the source of much of the grain throughout the other deposits in this area. The grain was recovered along with other domestic debris such as burnt bone, burnt stone, slate and charcoal. Here again the most likely source of the charred grain is accidental burning during food processing which is swept up and dumped along with other rubbish.

A more general low-level background spread of cereal grain present throughout other deposits across the site probably relates to the redistribution and trampling of the hearth debris.

5.7 The radiocarbon dates

Four radiocarbon dates were obtained from the site from carbonised barley grains (*Hordeum vulgare*) (Table 2). All radiocarbon dates come from well-stratified occupation deposits associated with both structures. Dating the occupation of the earlier dun structure were deposits (036) and (092) which produced similar dates of the 4th to 1st centuries BC, though likely to be in the later part of that range. Deposit (036) lay stratigraphically below the later circular enclosure wall and is associated with the occupation of the dun, as does deposit (092) which was one of the earliest deposits in Trench 9.

Dating the occupation of the later enclosure were deposits (086) and (095). Deposit (086) overlay the robbed remains of the earlier dun wall in Trench 7, and its date in the 2nd or 1st century BC suggests that the early dun was replaced by the later structure after a fairly short occupation. Context (095) was an occupation deposit sealing the internal wall face of the later enclosure in Trench 8. This was associated with a hearth and probably dates the use of the enclosure structure to the 1st century BC or AD.

The dates suggest that the earlier oval dun structure was constructed and occupied for a few centuries towards the end of the 1st millennium BC, and later superseded by a more regular circular structure around the turn of the 1st millennium.

Table 2 Barnluasgan: radiocarbon dates, calibrated in OxCal 4.4 using IntCal 20 curve

Context	Laboratory code	Material	$\delta^{13}C$ ‰	Radiocarbon age BP	Calibrated at 1σ (68.3%)	Calibrated at 2σ (95.4%)
Later enclosure						
095	SUERC-35517	*Hordeum vulgare*	-23.8	2000±30	40 BC–AD 60	50 BC–AD 120
086	SUERC-35518	*Hordeum vulgare*	-24.4	2090±30	150–50 BC	200–0 BC
Early dun						
036	SUERC-35519	*Hordeum vulgare*	-24.4	2120±30	180–60 BC	340–50 BC
092	SUERC-35516	*Hordeum vulgare*	-24.3	2150±30	350–110 BC	350–50 BC

6. BALURE DUN

6.1 Archaeological background

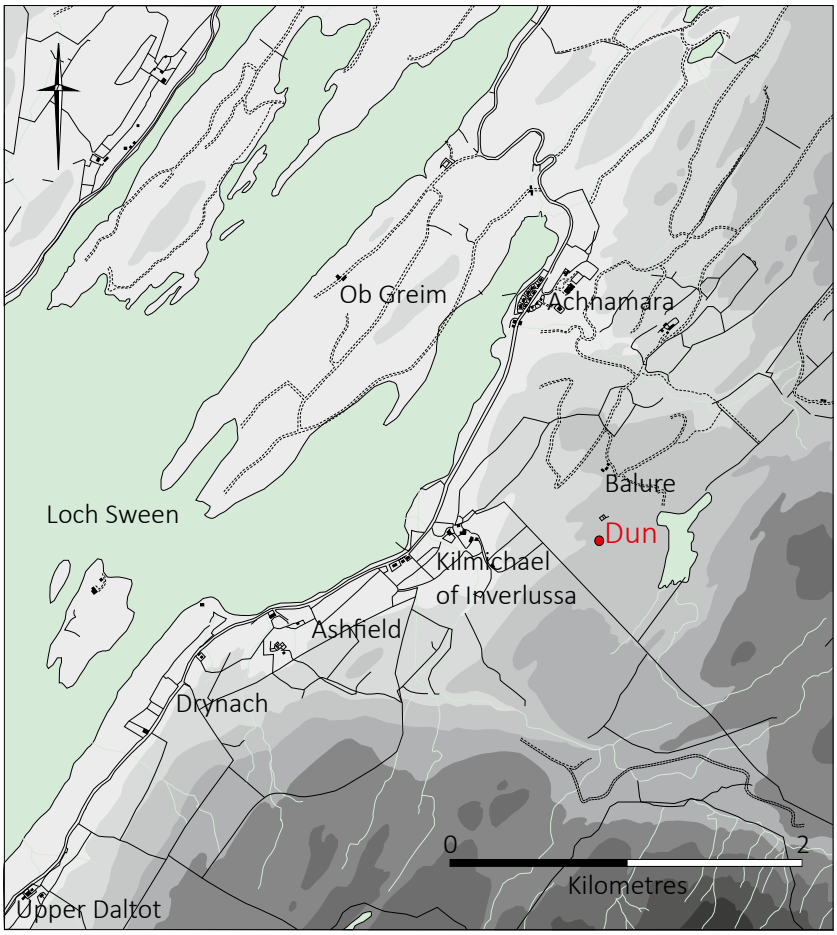
The site at Balure, until relatively recently, was unrecognised as a dun structure, although it had been noted by Forestry Commission operatives as an enclosure and/or cairn and recorded as such on the Forestry Commission's Heritage database for North Knapdale Forest.

In 2004 as part of an archaeological survey of North Knapdale Forest undertaken by Kilmartin Museum the site was briefly surveyed and identified as a likely dun structure (Regan 2005). Further survey and archaeological evaluation work undertaken in 2006 as part of the Dalriada Project enhanced the picture of the dun as consisting of a sub-circular inner enclosure with a series of outworks to the north and south (Regan 2006).

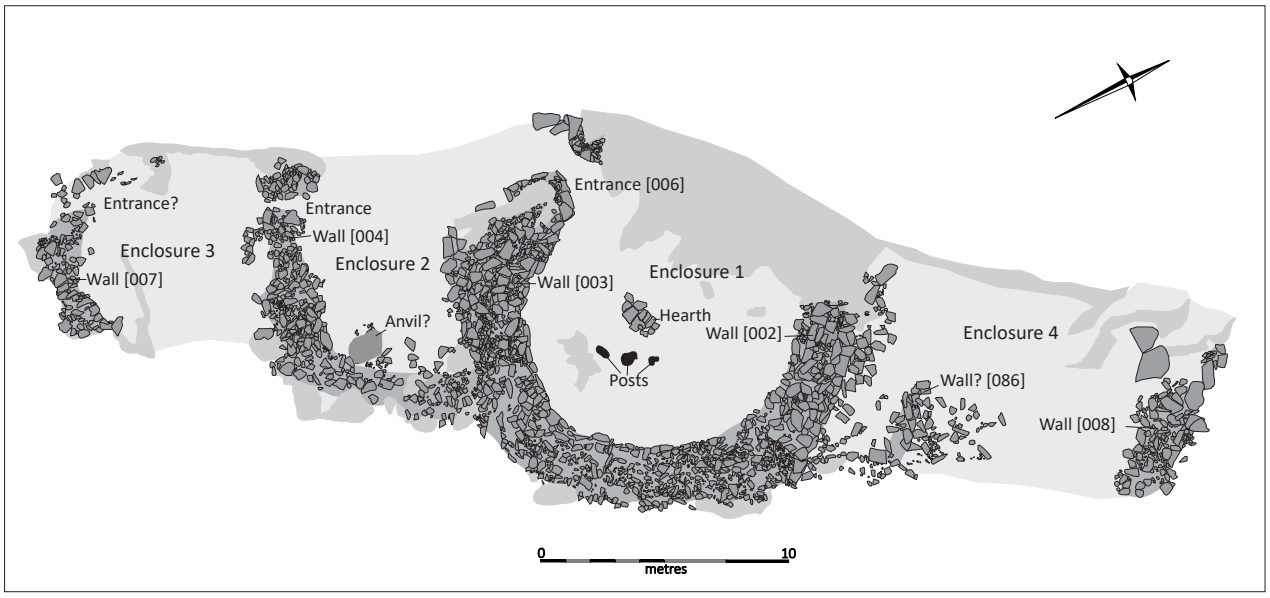
Two phases of excavation (totalling six weeks) were funded by the Dalriada Project and undertaken in October 2008 (Site Code BAL 08) and May 2009 (Site Code BAL 09). The preliminary results of these excavation phases appeared in the subsequent Data Structure Reports, where more extensive descriptions of the contexts and features mentioned below can be found (Regan 2008, 2009).

6.2 Site location

The dun occupies the southern end of a steep-sided south-west/north-east oriented natural knoll occupying a commanding position above the sloping glens to the east and west situated about 500m south of the deserted settlement of Balure and 300m west of Loch Laraiche (Centred NGR: NR 78270 85750, 142m OD) (Illus 71). Approach from the north is relatively easy along a natural ridge lying above wet and marshy ground to the north-east. The site has a good vantage point with extensive views west and south over Loch Sween towards Jura. The outcrop rises from level boggy ground in the north-east narrowing



Illus 71 Balure, site location in North Knapdale. (Image by Roddy Regan, © Kilmartin Museum)



Illus 72 The layout of the four enclosures at Balure. (Image by Roddy Regan, © Kilmartin Museum)

Illus 73 Balure dun, Enclosure 1 pre-excavation, looking south-east. (Image by Roddy Regan, © Kilmartin Museum)

and becoming steep-sided to the south (Illus 72). The west side below the dun is a near vertical slope. The south and east sides of the outcrop are less steep and descend from the summit in a series of rock escarpments.

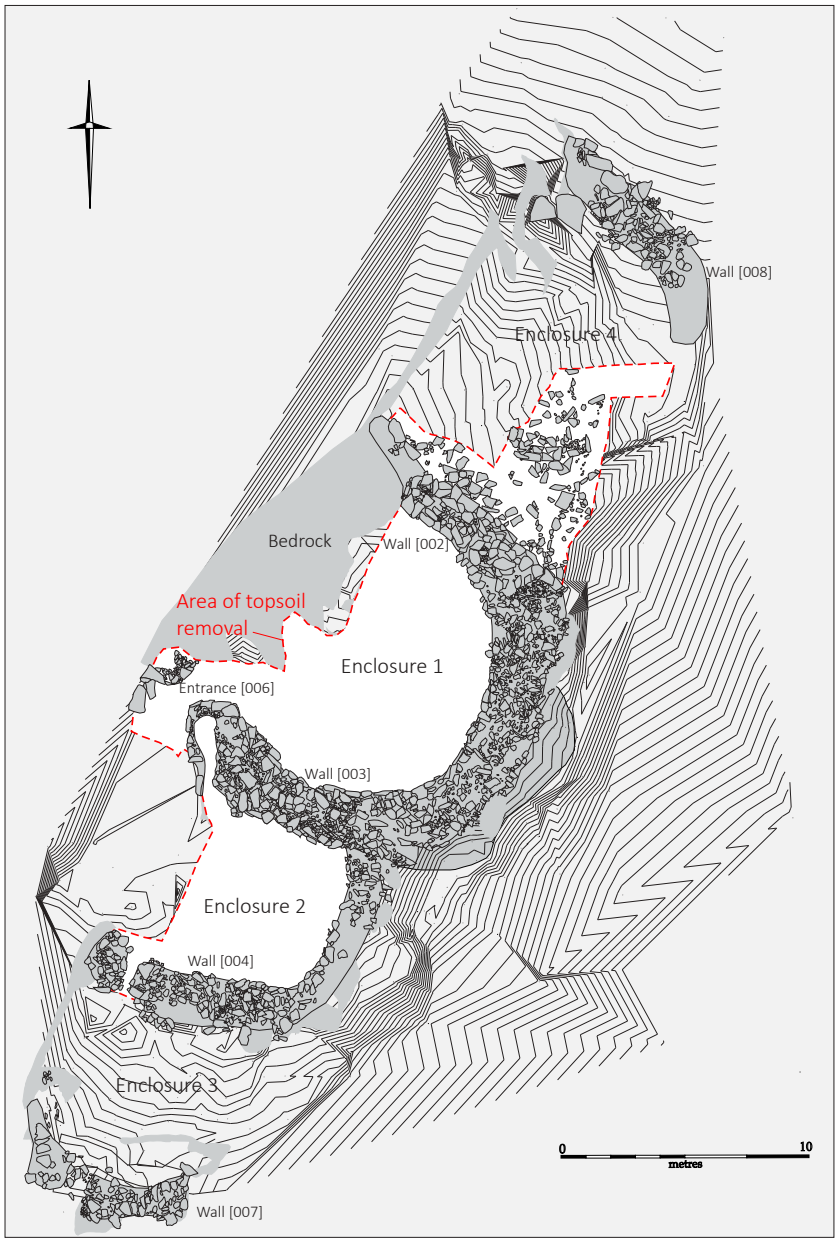
The summit of the knoll is defined by a humpbacked rise to the west with more level but sloping ground to the east. The steep scarp on the west side negates the need for any walling on this side. This defensive advantage was obviously enough

to overcome the relative disadvantages of the more easily accessible sides on the east, south and north, which were defended by lower works on the north and south sides. The dun layout utilises a natural rise to the east of the entrance. The upper soils across the site were badly disturbed by the presence of bracken roots and the planting and subsequent clearance of trees across the site (Illus 73). The roots of several mature trees had caused substantial damage to the remaining structural elements of the dun and these have also probably disturbed the upper stratigraphic sequence. Much of the walling material was tumbled and the walls appeared to have been extensively robbed in the past (there is a post-medieval estate wall *c* 150m to the south).

6.3 The structures

6.3.1 The dun structure

The upper enclosed area, Enclosure 1, is interpreted as the main enclosed area, while the outworks effectively divide the ridge into a series of smaller outer enclosures (Enclosures 2–4, Illus 74).



Illus 74 Balure dun site plan. White denotes area of excavation. Dashed red line shows limit of excavation where there are stratified deposits; elsewhere the walls of the structures delimit the excavation. Wall tops (grey) were cleaned but not excavated. (Image by Roddy Regan, © Kilmartin Museum)

The enclosed area of the dun lies easily within the range of dun enclosures across Argyll, although its outworks increase its overall internal dimensions. While not complicated in layout, the outwork walls effectively control access to the summit along the less steep slopes of the ridge. If constructed at the same time as the dun, the outworks might suggest a relatively sophisticated layout, perhaps for defence or display. However, it is likely they developed in a more piecemeal fashion. Other duns in Mid Argyll with similar outworks have been noted, including; Dun A' Chrannag (Canmore ID 39053), Dun Rostan (Canmore ID 39107), Dun Cragach (Canmore ID 38968) and Dun Bhronaig (Canmore ID 39098). The outer enclosure walls at Balure were not obvious before excavation and it would not be surprising if further outworks came to light through more intensive survey and/or excavation work, especially around the more denuded dun sites.

The entrance to the dun lay on the south side, where two entrance gaps were identified, accessing Enclosures 1 and 2. It is still possible an entrance lay to the north but none was positively identified during the excavation work. As will be seen below, there is evidence that both Enclosures 1 and 2 contained some form of structure. The uneven and more rugged ground within Enclosure 3 possibly precludes the presence of any substantial structure within the enclosed area and this might similarly be the case within Enclosure 4, although there is enough level ground within both to contain smaller structures.

All the enclosure walls were constructed in drystone rubble, mainly blocks of chlorite schist (epidiorite), the stone probably locally sourced, given that there is evidence of quarrying into the natural rock outcrops (see 6.4.1 'Enclosure 1': 'Phase 1a' below). The walls appear to have been extensively robbed and stand no higher than 0.9m.

Enclosure 1 (Illus 75)

Within Enclosure 1 both internal and external faces of the enclosure could be discerned on the north and south sides, with only the internal face apparent on the east side (Illus 76). Internally the enclosure had a maximum width of 11.7m between the south and north walls and 8m between the east wall and the

Illus 75 Enclosure 1 under excavation, looking south-west. (Image by Roddy Regan, © Kilmartin Museum)

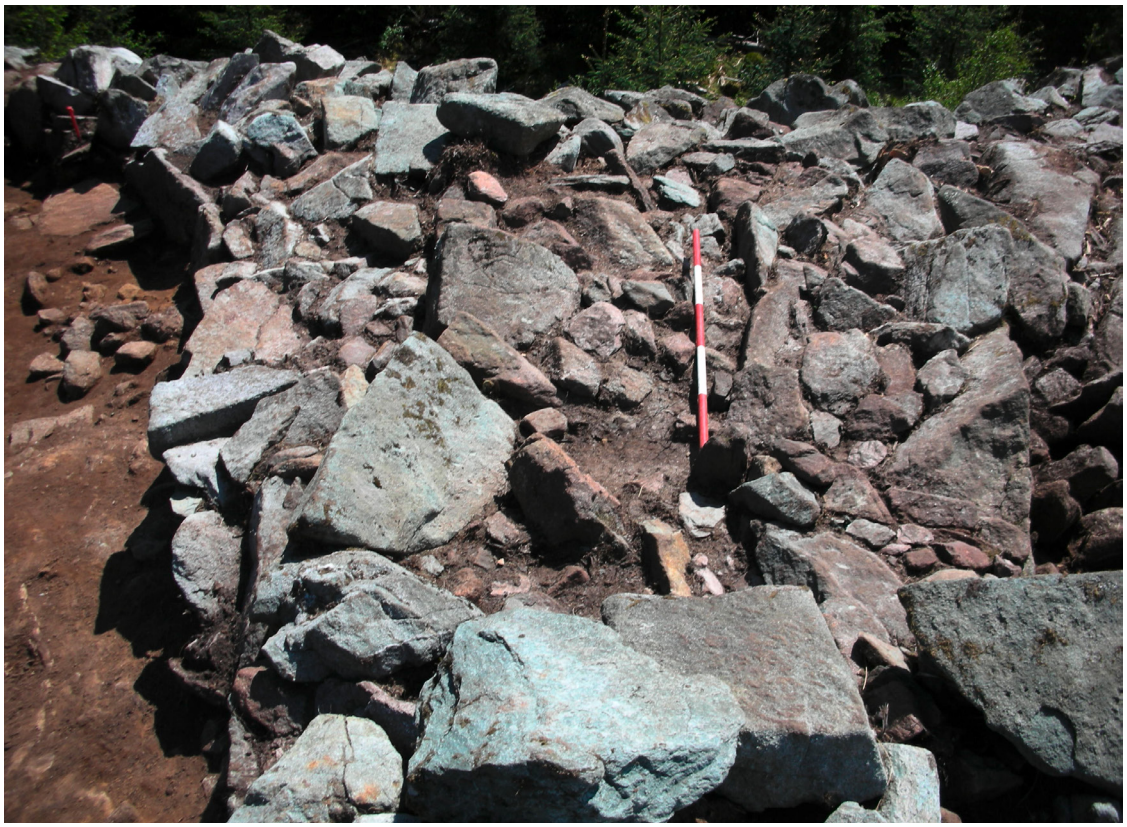
Illus 76 Enclosure 1, wall (003) internal face, looking south-east. (Image by Roddy Regan, © Kilmartin Museum)

steep natural rock outcrop forming its west side. The north side of the enclosure wall (002) was aligned north-west/south-east and ran in a relatively straight line from a raised natural ridge on the west to a steep escarpment at the east. The wall measured between 1.85m and 2.3m wide and stood 0.7m high in three irregular courses. From here the enclosure wall then turned sharply to the south along the upper escarpment on the east side. Here the ridge was less steep and the external edges along the east arc were less easy to determine among the mixture of rubble and structural footings revealed below the scrub cover. Footings were constructed over or along natural rock-ledges on this side, the eastern extent lying some way down the slope of the ridge, the majority of the remaining stones appearing to be in situ and probably structural. These relatively wide footings (*c* 5m) might indicate that the wall was originally battered on this side, as noted at Druim an Duin and as argued at Glashan (Henderson & Gilmour 2011: 81).

From the east the enclosure wall turned to the west where it incorporated a natural outcrop east of the entrance, where the wall was recorded as (003). The thickness of these southern footings varied but they were generally between 1.8m and 2m thick, widening to just over 3m at the entrance, where the wall stands up to 0.9m high. The entrance was located at the south-west of the enclosure and lay between a steep natural scarp on the west and a natural outcrop on the east (Illus 77). The entrance gap between these two outcrops had been narrowed by rubble walling, the surviving stones suggesting an original entrance gap of 1–1.3m. The largest stones within the wall appear to have been used on the external faces, these retaining smaller stones used as levelling and packing between the larger blocks. Within the core along this part of the wall there was an alignment of stones that possibly suggest the south side of the escarpment was closed off with a relatively straight wall section prior to the construction of a more curvilinear wall (Illus 78). It may be that this was also the case with the north wall but without excavation of the walls on these sides these relationships remained unproven.

An alternative explanation for this alignment may

Illus 77 Enclosure 1, wall (003) internal face and entrance, looking south. (Image by Roddy Regan, © Kilmartin Museum)



Illus 78 Enclosure 1, wall (003), looking south-east. (Image by Roddy Regan, © Kilmartin Museum)

be a deliberate construction technique to counteract slumping within the wall core. Within the wall mass, particularly on the east side, there could be discerned 'rows' of larger elongated stones that also give the appearance of 'medial faces'. These 'rows' appear to be integral to the primary construction of the wall rather than representing consecutive building phases and, as has been noted before, may have functioned to counteract internal slumping of the wall mass (see 7, 'Discussion of the two dun sites' below). The same building technique appears to have been used within the wider foundation on the east side, where larger stones have been used to retain or consolidate smaller stones or rubble within foundation 'blocks', a construction technique Harding (2004a) refers to as 'quasi-casement'.

The walls of the outworks appeared to be less substantial, although these again had been extensively robbed and disturbed, with only the footings surviving.

Enclosure 2

The wall of Enclosure 2 (004) consisted of an arc of rubble springing from the south-east of Enclosure 1, running south then curving west before abutting a natural rock outcrop (Illus 79). As with Enclosure 1, a steep escarpment to the west negated the need for walling on that side. The wall circuit created an internal space 7–10m east/west by 8m north/south. Near the western edge what was initially a dip in the rubble turned out to be an entrance, although only the basal courses of this survived, suggesting a width of between 0.8 and 1m. The ruined nature of the walls meant it was difficult to ascertain the original width of wall (004) but it probably ranged between 1.8 and 1.9m.

Enclosure 3

A tumbled wall (007) lay 7m to the SSW of Enclosure 2, indicating a further blocking wall lying across this lower access to the dun (Illus 80 & 81). Only scrub was removed from along the rubble circuit, which runs from a steep natural drop at the east to a near vertical natural cliff at the west. A slight dip in the rubble within this circuit might indicate an entrance, although this was far from conclusive. No further deposits were excavated within the enclosure.

Illus 79 Enclosure 2, wall (004) and anvil? stone, looking east. (Image by Roddy Regan, © Kilmartin Museum)

Illus 80 Enclosure 3, wall (007), looking south-west. (Image by Roddy Regan, © Kilmartin Museum)

Illus 81 Enclosure 3, wall (007), looking east. (Image by Roddy Regan, © Kilmartin Museum)

Enclosure 4

Scrub was removed from a length of the rubble circuit on the north side of the dun ridge. A tumbled wall (008) springs from a steep natural outcrop at the north-west and runs east towards another steep rise on that side, although tree growth prevented the exposure of its eastern limit (Illus 82). The wall utilises natural tumbled rock within its build and it is possible some of these blocks may have been levered into position away from the natural rock face. Removal of scrub immediately to the north of Enclosure 1 revealed a relatively extensive spread of collapse and rubble. Within this rubble spread there was the outline of another possible wall (086). This appeared to be only a short length of walling springing from a natural scarp at the west and running towards a steep cliff to the east. As the surrounding deposits remained unexcavated, the function of this possible structure remained unclear. No further deposits were excavated within the enclosure.

Illus 82 Enclosure 4, wall (008), looking south-east. (Image by Roddy Regan, © Kilmartin Museum)

6.4 The excavations

The deposits within Enclosure 1 have been grouped within three broad phases, these based on the presence of three superimposed hearths. The majority of the deposits lying away from the hearths could not be stratigraphically linked to the hearths, so the sequence of hearths in relation to these deposits is for the most part speculative and their phasing is based on cruder depositional sequencing. Similarly, the phasing for Enclosure 2 is represented in the figures as a depositional sequence rather than as correlation to the phasing in Enclosure 1.

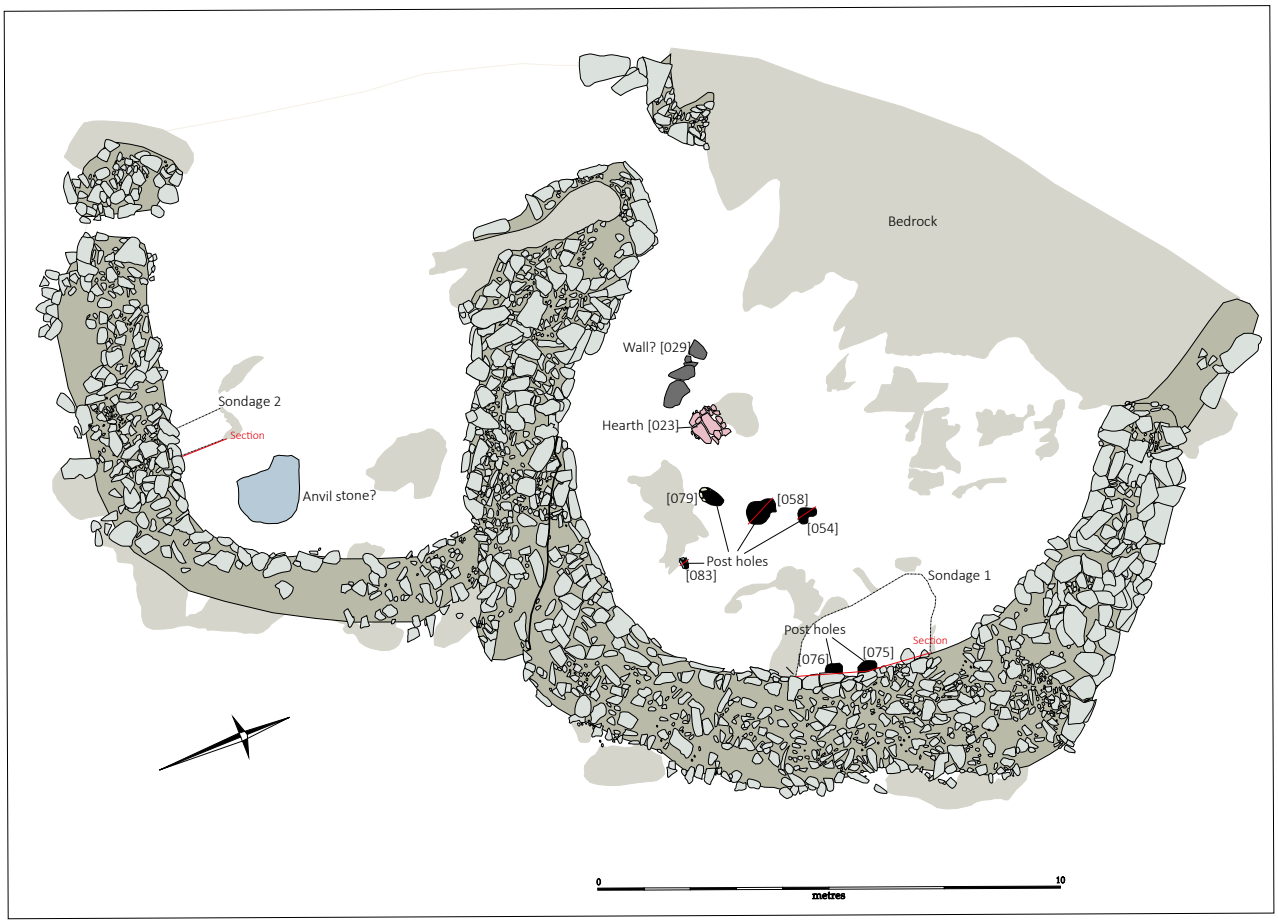
6.4.1 Enclosure 1

The depositional sequence within the enclosure reflected the natural slope of the ground from west to east, with the deposits at the east generally deeper, as reflected in the depositional sequence encountered within Sondage 1 excavated against the inner face of the dun wall at the north-east.

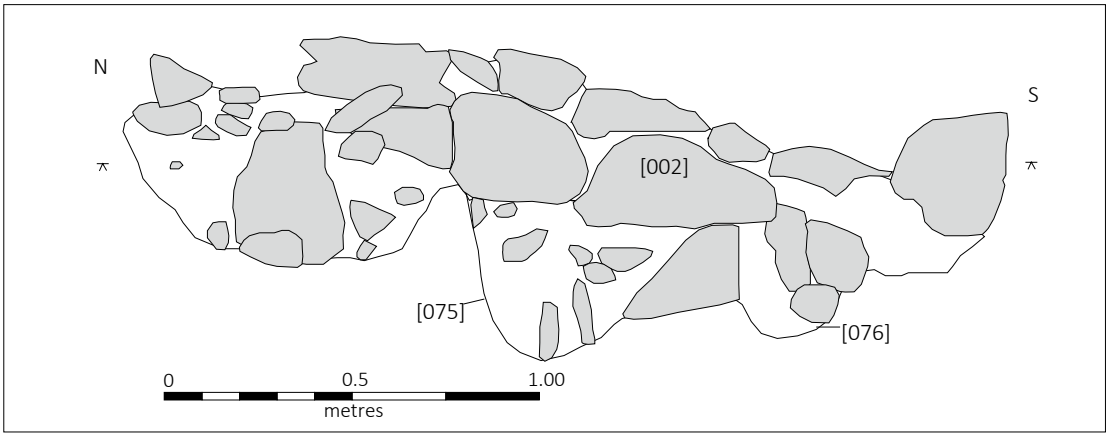
Phase 1a (Illus 83)

Outcrops of bedrock occurred across the site and some of these showed evidence of having been quarried. This was most apparent along the east face of the natural knoll that formed the west side of the enclosure, the angular quarried surface plainly evident when compared to the more naturally smoothed rock on the rest of the exposed rock surface. Similar evidence of quarrying was also seen in the base of Sondage 1 on the east side of the enclosure where again the surface profile of the rock was very sharp and angular. On the east side of the enclosure these angular outcrops lay beneath the enclosure wall, suggesting the quarrying occurred prior to or during its construction, with blocks prised away from the exposed rock face used as the raw material for the enclosure walls.

The deepest deposits encountered within Enclosure 1 were lying against the internal face of the east enclosure wall. These consisted of accumulations of dark brown soils (C072) and (C077) that probably represented dumps of midden material, with (C072) containing frequent small fragments of burnt animal bone, fragments of fire-cracked stones and charcoal. Situated against the inner face of the enclosure wall were post placements (075) and (076)



Illus 83 Balure, Phase 1a. (Image by Roddy Regan, © Kilmartin Museum)



Illus 84 Enclosure 1, section against north-east wall (002). (Image by Roddy Regan, © Kilmartin Museum)

(Illus 83, 84 & 85). These only became apparent when natural bedrock was encountered because the post-hole fills were very similar to the surrounding deposits, making it unclear if the posts cut the soils or the soils formed around the posts. A number of possibilities suggest themselves as to the function of the post settings, ranging from an early palisade, construction scaffolding, wooden floor supports or outer posts of a roofed structure. Without further excavation their function remains speculative.

The presence of burnt animal bone and charcoal in (C072) and (C077) suggests the possible presence

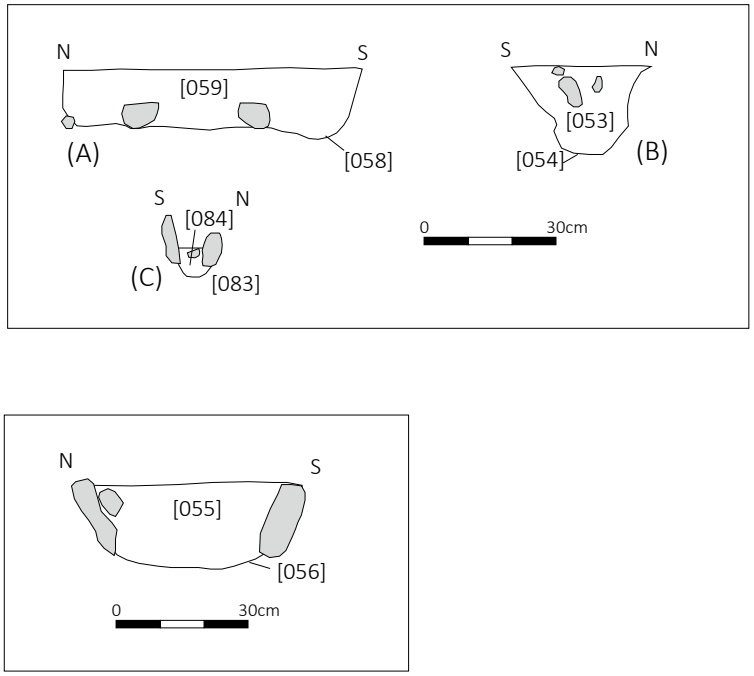
Illus 85 Enclosure 1, post settings (075) and (076), looking east. (Image by Roddy Regan, © Kilmartin Museum)

of a hearth or cooking area within the enclosure and these might be tentatively linked to hearth (023) (Illus 83 & 86). This hearth setting was comprised of a group of horizontally laid stone slabs set against a natural sloping rock at the west. The stones on the west side were reddened from burning. Probably also early in the occupation sequence of Enclosure 1, was a north-east/south-west alignment of post holes (079), (058) and (054) (Illus 83, 87 & 88). These were irregular in shape, suggesting that they had held more than one post (up to three in (054) for example) and represent a series of post replacements utilising the same position over time. The posts suggest that the internal space within the enclosure was divided, and being centrally placed these may have provided support for a roof, perhaps hinting that the enclosure was wholly covered. Another post setting (083) lay to the south of the post alignment, again suggesting some form of internal division or wooden support within the enclosure.

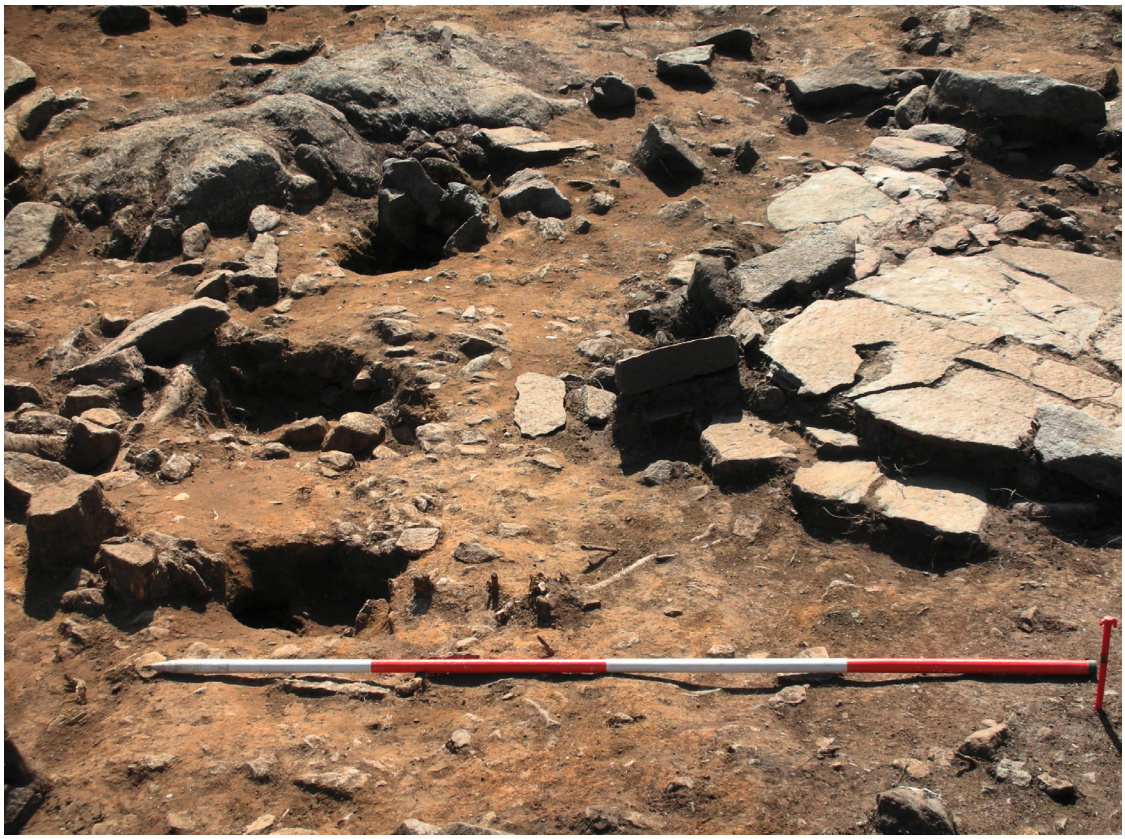
Phase 1b (Illus 89)

Around the hearth and probably associated with its use was a dark grey deposit (C068) that appeared to have been trampled forming a rough surface. A few carbonised barley seeds along with some burnt bone were recovered from this deposit and may indicate food preparation in and around the hearth area. This deposit, as with other deposits and surfaces associated with the later hearth sequence, lay north of a rough arc of larger stones (029) that may represent a wall or internal division, the deposits noticeably different and lighter in colour beyond to the south. Possibly contemporary with the use of hearth (023) and its associated deposit (C068) was surface spread (C064/052) associated with ashy dumps (C065) and (C045), these situated in the northern half of the enclosure. Possibly related to deposit (064) but separated by a natural rock outcrop was surface (071), comprising a slightly sloping layer of rubble and smaller stones within a dark brown matrix sealing the posts and the dark midden-like deposits. Some of the stones were fire-

Illus 86 Enclosure 1, hearth setting (023) looking north-west. (Image by Roddy Regan, © Kilmartin Museum)



Illus 87 Sections of post holes (054), (058) and (083) in Enclosure 1; post hole (056) in Enclosure 2. (Image by Roddy Regan, © Kilmartin Museum)



Illus 88 Enclosure 1, post holes (054), (058) and (079) looking south-west. (Image by Roddy Regan, © Kilmartin Museum)

reddened but mixed within unscorched stones, suggesting a dump of collected material used to make up this rough surface.

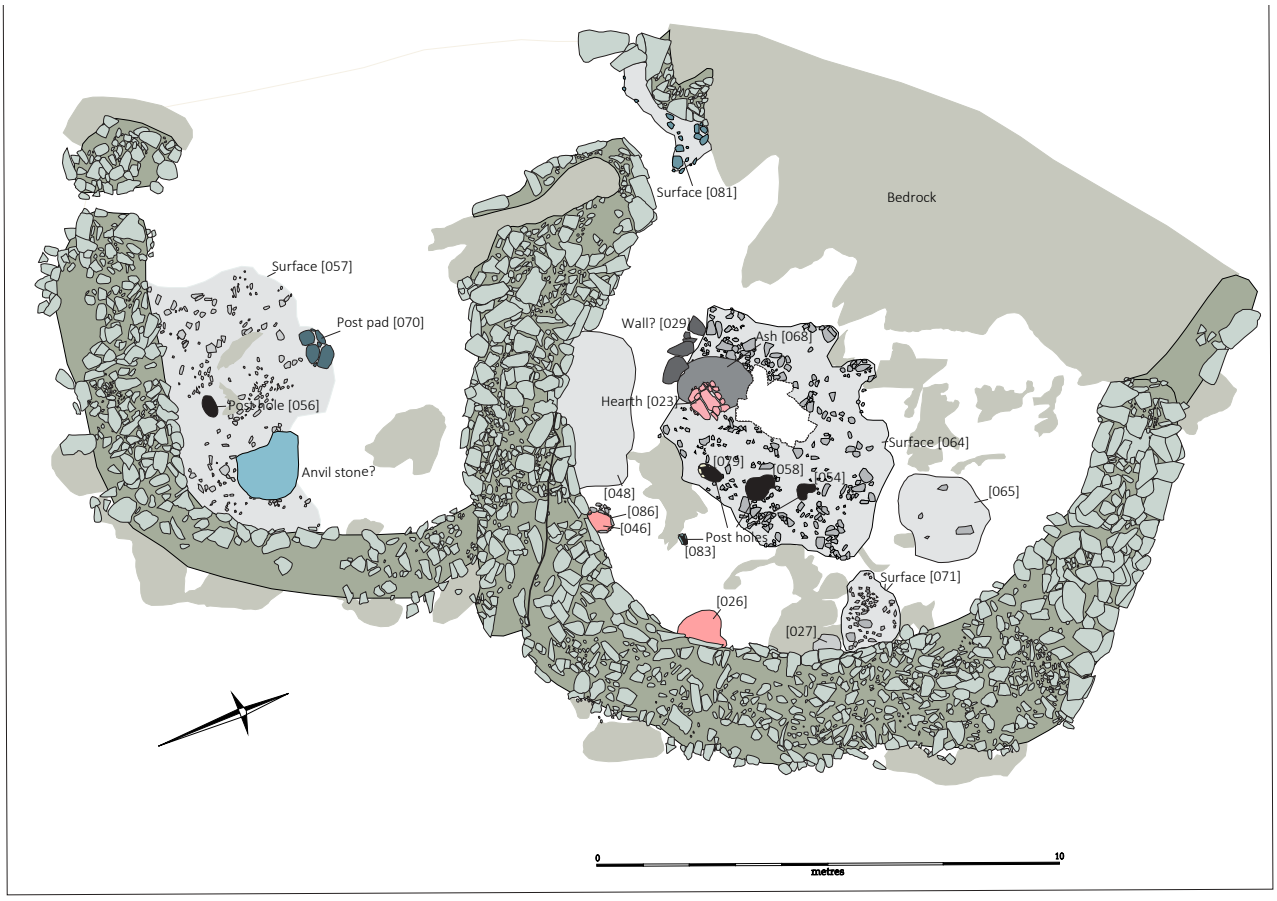
The undulating nature of the natural bedrock and the uneven or patchy nature of the later deposits within the enclosure meant that discrete deposits or localised deposit sequences could be only tentatively related. Against the south-west wall of the enclosure lay rough surface (048), and possibly contemporary with this surface was burnt ash and charcoal deposit (046) that lay within a stone setting (086) interpreted as the remnants of a small hearth or fire setting (Illus 90). The charcoal from (C046) produced a date of 200–0 cal BC (95.4% probability; SUERC-31664).

Evidence of another fire setting or hearth against the east wall of the enclosure was interpreted from deposit (026) which was fire-reddened and contained large fragments of charcoal. These remnants of fuel were dominated by hazel with minor oak and birch. Deposit (027) to the north may have been an associated dump of burnt wood ash and charcoal.

The presence of large rubble blocks within the entranceway to the enclosure meant that any surface/s could be only partially revealed. A lower rough cobbled surface (081) was sealed by a dump or build-up of occupation material (C080) situated along the west side of the entrance. The east side incorporated an upper rough cobbled surface (028) (Illus 91). Both surface and occupation deposit were sealed by a mid-brown clay silt (C009) that also contained the rubble collapse situated within the entrance.

Phase 2 (Illus 92)

Sealing hearth (023) were dark ashy deposits (C043) and (C051) and rough stone surface (050), these likely contemporary with stone hearth setting (022/049). As with the deposits surrounding the lower hearth, these later hearth-derived deposits also contained small amounts of burnt barley seeds, hazelnut shells and bone. This hearth was only partially revealed (because later stone setting (021) was left in situ), with the horizontally laid stones being fire-reddened on the south side.



Illus 89 Phase 1b plan. (Image by Roddy Regan, © Kilmartin Museum)

Illus 90 Enclosure 1, hearth setting (086)/(046) looking east. (Image by Roddy Regan, © Kilmartin Museum)

Illus 91 Enclosure 1, entrance and surface (028) looking east. (Image by Roddy Regan, © Kilmartin Museum)

Several dispersed deposits were recorded across the enclosure, (C018), (C019), (C063) and (C067), all of which contained lenses of pinkish peat ash and quantities of charcoal, likely representing mixed hearth-derived dumps/spreads. A fire-reddened deposit (C037) lying against the south wall of the dun is interpreted as an area of in situ burning with an associated dump (C036).

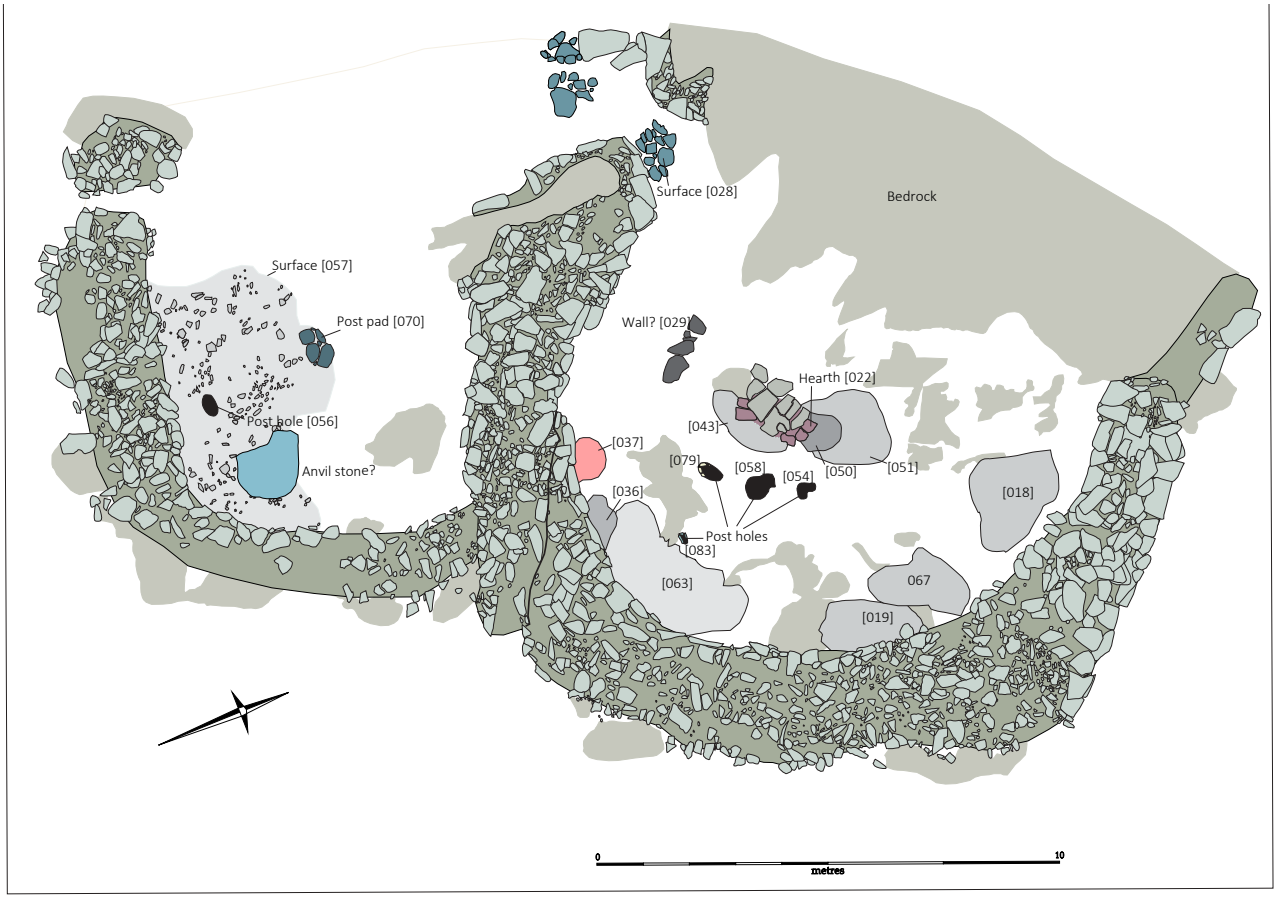
Phase 3 (Illus 93)

The stones of hearth (022) lay under a third and final stone setting (021) neatly constructed from closely fitted horizontally laid chlorite schist fragments (Illus 93 & 94). Despite there being no obvious discolouration of the stones by fire, it is likely that this was also a hearth, given its position and that it was surrounded by a series of dark accumulations (C035/038), (C040), (C042) and (C016), interpreted here as trampled hearth rake-out. Probably contemporary with these later deposits, although noticeably darker in colour, were deposits (C013/014), which lay to the west of the stone hearth (020/021). This dark humic deposit is interpreted as the remnants of midden or hearth material dumped against the natural rock scarp within the western part of the enclosure.

Mixed within the lower wall collapse were a series of deposits, (C009/010/031/034), interpreted as the disturbed upper deposits in the enclosure sequence. A dark red-brown silty loam (C010/034) covered much of the north and east of the enclosure, and was deeper to the east. This deposit was equivalent to deposit (C009) recorded within the entranceway and (C031) within the south of the enclosure. Within deposit (C034) was a small cluster of stone objects – a quern <133> (Illus 95) along with two unutilised rounded cobbles <108> and <109>.

Deposit (C034) was sealed by deposit (011/033), which the excavator suggested was the possible remnants of collapsed turf walling, surviving against the rock ridge at the west of the enclosure. Any similar deposits were absent along the internal wall lines of the rest of the enclosure.

All of these later deposits appeared to be relatively homogeneous and no discrete occupation horizon, surface or floor could be discerned within them.



Illus 92 Phase 2 plan. (Image by Roddy Regan, © Kilmartin Museum)

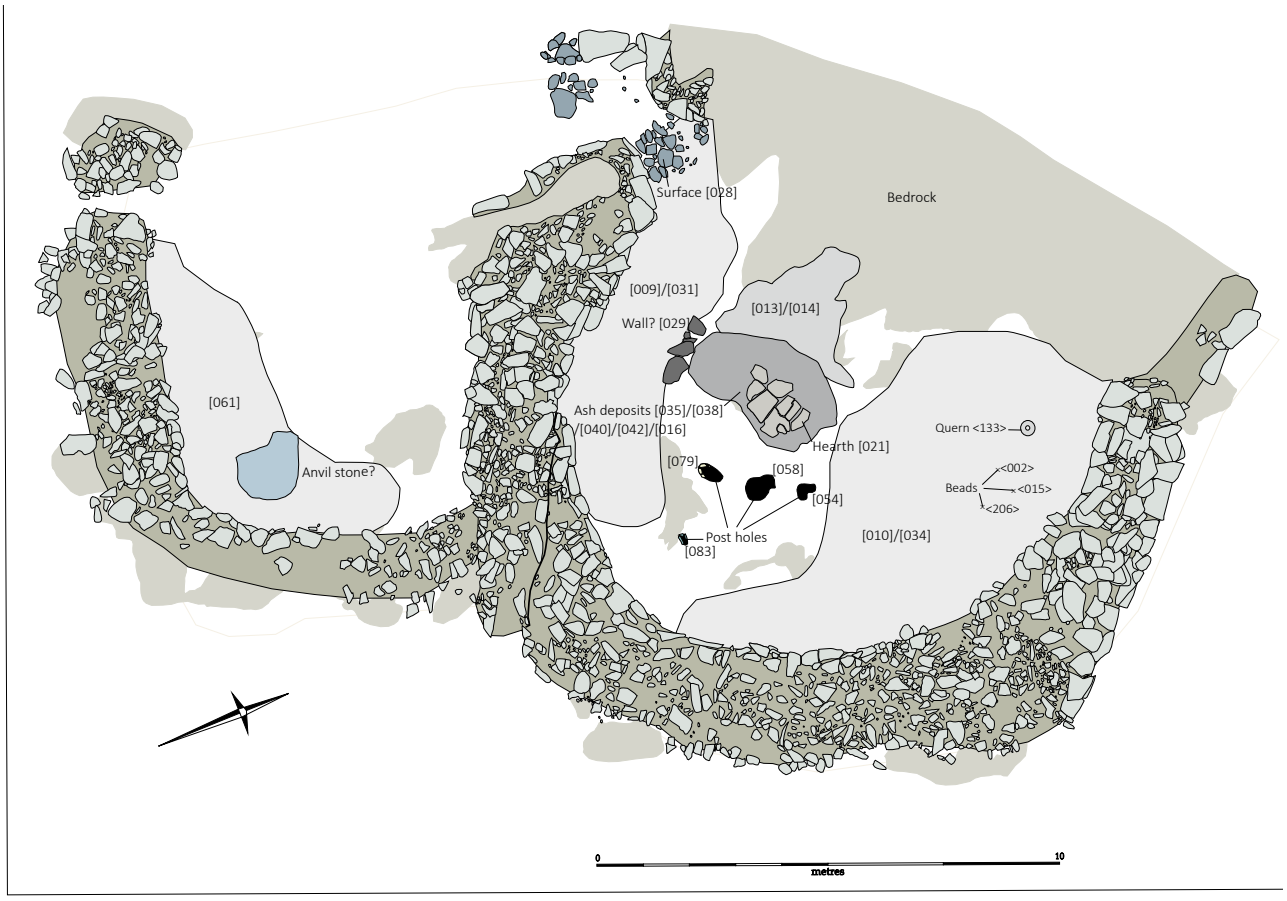
They did, however, contain a relatively high quantity of artefacts, particularly deposit (C010), which contained two glass beads <002> and <206>; a third bead <015> was recovered from the same area during initial cleaning of the trench. This deposit also contained fragments of pottery <010> and <092>: crucible fragments <011>, <012> and <020>; slag <017, <019> and <021> along with 25 utilised stones <025>–<039>, <041>–<047>, <051>, <052> and <119>. These deposits may represent a mixing of upper occupation sequences and/or colluvial accumulation (particularly to the east). Deposit (009) contained one pottery sherd <095> along with utilised stones <032> and <114>, while (031) contained one pottery fragment <098> and utilised stones <124>, <125> and <129>.

Given the recognisable disturbance across the site through wall robbing, bracken, tree planting, felling and regeneration, it is perhaps not surprising that any upper occupation horizons, if they existed, have been mixed, and it is impossible to determine whether the recovered artefacts derived from midden accumulation or disturbed floors.

These upper disturbed occupation deposits were sealed by a ring of rubble lying against the inner face of the enclosure, (C020) in the north and (C047) in the south. The quantity of rubble within the collapse, if repositioned within the walls, would have added a height of only one, or at most, possibly two courses to the existing wall heights. It is of course possible that the walls of the enclosure did not stand to any great height or that any upper walling consisted of a less robust material, such as turf, although it seems more likely that any apparent lack of stone collapse within the enclosure was due to later robbing. All deposits within the enclosure were sealed by dark brown topsoil and vegetation cover (C001).

6.4.2 Enclosure 2

The earliest deposits within the enclosure were revealed within a small trench (Sondage 2) excavated against the south wall of the enclosure, (004) (Illus



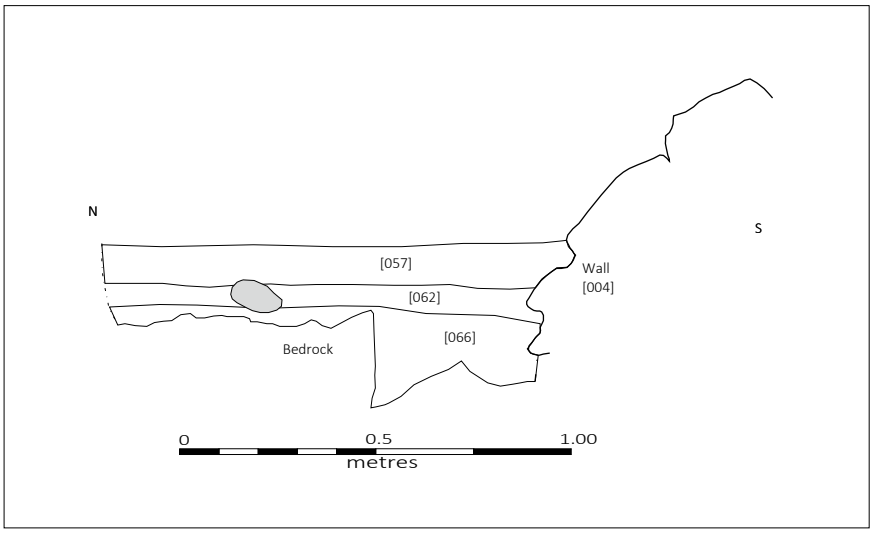
Illus 93 Phase 3 plan. (Image by Roddy Regan, © Kilmartin Museum)

Illus 94 Enclosure 1, hearth setting (021) looking south-east. (Image by Roddy Regan, © Kilmartin Museum)

96). The natural bedrock sloped down to the south and, like that exposed in Enclosure 1, appeared very angular and may have been quarried prior to the formation of the dumped deposits above. Sealing the bedrock was mixed deposit (C066) that contained numerous compacted schist fragments, some fire-reddened. The deposit also contained charcoal and burnt barley seeds, a seed returning a radiocarbon date of 50 cal BC–120 cal AD (95.4% probability; SUERC-31665) and burnt fired clay. This deposit ran under the lower course of wall (004) and could either be an earlier midden accumulation or a deliberate dump of mixed midden material (as suggested by the presence of small quantities of burnt barley and oats) and 'hardcore' material to level the area prior to the wall being constructed. This interpretation would suggest that the outwork was an addition to an already occupied site. Of similar nature was deposit (C062), although this had formed or been dumped against the enclosure wall, again perhaps indicating a deliberate attempt to level this area of the enclosure. Sealing this dump was surface (005/057), forming a rough cobbled and trampled area that appeared to be contemporary with two post settings, post hole (056) (Illus 87& 97) and post pad (070) (Illus 98). The post settings are another indication of the presence of a roofed structure. Joining crucible fragments <100> were found in (C057). This surface was sealed in part by a mixed occupation deposit (C061) situated along the south-east of the enclosure.

Illus 95 Enclosure 1, stone cluster within (C034) with quern <133> looking west. (Image by Roddy Regan, © Kilmartin Museum)

The surrounding surface deposit contained a number of burnt stones along with flakes of hammerscale detected by the use of a magnet. Where exposed, this deposit lay close to a large flat natural outcrop and it is attractive to see this stone as being used as an anvil base (Illus 79). Lying over this was an extensive spread of rubble across the



Illus 96 Enclosure 2, west-facing sondage section. (Image by Roddy Regan, © Kilmartin Museum)

Illus 97 Enclosure 2, post hole (056) looking east. (Image by Roddy Regan, © Kilmartin Museum)

internal area of the enclosure, recorded as (C060) and (C069). Sealing the rubble in the east and south area of the enclosure was dark humic deposit (C012/025), while to the west of the excavated area the soil was redder and less humic in content; this recorded as (C015/024).

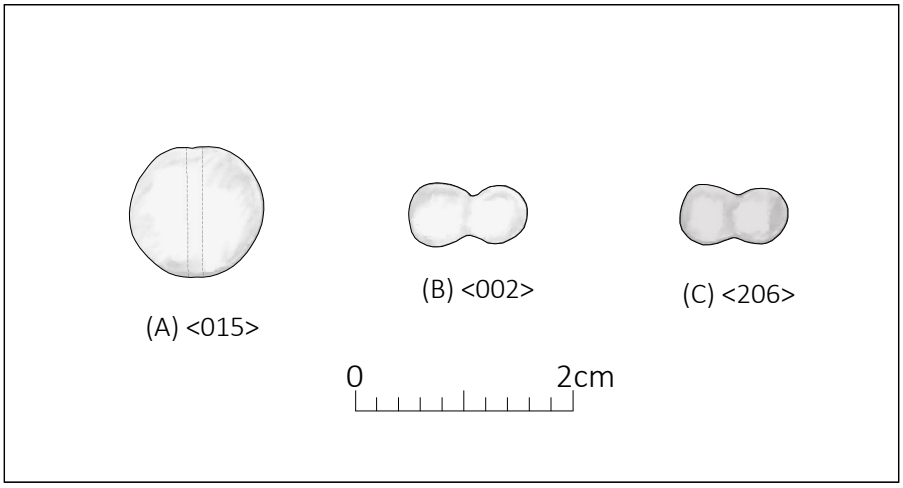
6.5 The artefacts from Balure

6.5.1 Glass, metal, metalworking debris and utilised stone

Ewan Campbell

The range of finds from Balure is typical of Argyll duns: three glass beads, an iron tool, a stone quern and spindle whorl, a range of metalworking debris, and fairly numerous utilised pebbles. With the possible exception of the beads, all the material is likely to be of local origin and manufacture. The picture that emerges is of a self-sufficient agricultural community. As far as chronology is concerned, all of the material fits comfortably into a Middle Iron Age tradition (*c* 200 BC–AD 400), and there is no indication of early medieval occupation. Many Argyll duns have indications of early medieval use,

Illus 98 Enclosure 2, post pad (070) looking east. (Image by Roddy Regan, © Kilmartin Museum)



Illus 99 Glass artefacts. (Image by Roddy Regan, © Kilmartin Museum)

even if they may have been constructed much earlier (Alcock & Alcock 1987: 131; cf Harding 1997: 122–33), but there is nothing in the assemblage that would indicate later occupation at Balure.

Glass

The glass beads are an interesting group. A spherical bead of Guido's Group 7(ii) or (iii) <015> (Illus 99a & 100), is in a colour shared by much Roman glass, and is probably of Roman date and manufacture, though few examples are well stratified. Rather surprisingly, Roman beads are quite rare on native Highland Scottish sites, but there is a similar one from Clettraval, North Uist (Scott 1948: 66).

Two other glass artefacts, (Illus 99b & c, 101 & 102) are toggles, an unusual type that is not perforated and is shaped like a dumb-bell or two spherical balls cinched in the middle (Beck 1973: 40). Because they are unperforated some specialists consider them not to be beads, though others describe them as toggle or dumb-bell beads. The form is known in other materials such as copper alloy and bone. One, <206>, is of transparent aquamarine glass, which is the commonest colour, and the other, <002>, is of opaque green glass. Iron Age glass toggle beads from Scotland represent a rare group of artefacts, with 11 previously recorded prior to the two recovered at Balure. Since then further beads have been discovered from the site of Kilninian on Mull (Ellis pers comm), Blackspouts ring-fort, Pitlochry (Strachan 2013) and Culduthel, Inverness (Hunter 2021: illus 6.69). Elsewhere, 21 toggles have been discovered in Ireland and four on the Isle of Man, which has led to the suggestion that these are predominantly of Irish manufacture (Jordan 2009, 2010). However, there is now good evidence of manufacture of the type in Scotland (see below). The Scottish examples, along with the Irish and Isle of Man beads, indicate a clear western bias in their distribution, though there may be a separate cluster in north-east Scotland associated with the Culduthel manufacture site. In Scotland, artefacts of this type are generally found throughout the Atlantic region, with few exceptions, occurring on sites with evidence of Iron Age and/or early medieval occupation, although few are derived from well-dated deposits (Hunter 2021: 200).

One of the Balure glass toggles and 13 other examples were examined by Martina Bertini to assess the evidence of how these objects were manufactured, and to examine their chemical make-up in order to provenance the raw glass (Bertini & Ellis 2015; Bertini & Ellis forthcoming). This was achieved by using Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS). Examination of the bead found within a hearth at the above-mentioned site at Kilninian has shown it was almost certainly produced at the site, and charcoal from the hearth dated between 206 and 51 cal BC. Of the 15 beads examined all were of similar manufacture, produced by heating small fragments of recycled vessel glass (cullet) on the end of an iron rod or pontil in a low-temperature fire and probably using small tongs to shape the glass. The glass toggle from Blackspouts was made

Illus 100 Glass bead <015>. (Image by Roddy Regan, © Kilmartin Museum)

Illus 101 Glass toggle <002>. (Image by Roddy Regan, © Kilmartin Museum)

Illus 102 Glass toggle <206>. (Image by Roddy Regan, © Kilmartin Museum)

by a different method, by grinding down a single piece of Roman bottle glass (Strachan 2013). Once shaped, the toggles are broken off from the pontil, leaving a scar on the beads, which, as in the case of both Balure beads, were subsequently ground down. The LA-ICP-MS analysis has shown that 14 of the 15 beads examined, again including the Balure beads, contained the same soda-lime-silica (natron) derived from eastern Mediterranean coastal sands. As the Balure beads came from the uppermost (disturbed) occupation deposits, it is possible given the radiocarbon dates for the site that the glass could have been obtained by trade with Roman sites in Britain. The distribution of sites, from Shetland to the Isle of Man and Ireland, supports the idea of sea-borne trade up the Atlantic façade. Most of the sites with these beads were forts, brochs and duns, suggesting these beads had a fair degree of status. However, the Kilninian site, where at least one bead was manufactured, was an open settlement, perhaps the site of an itinerant craftworker. Culduthel, near Inverness, is another open site which has produced a glass toggle, in this case multi-coloured, and also evidence of glassworking and other craftworking. Analysis of the Culduthel toggle suggested it was made on the site, alongside other types of bead (Davis & Freestone 2021: 213). The toggle came from a context with a calibrated radiocarbon date of 40 BC–AD 120 (Hunter 2021: 203), and glassworking on the site was dated slightly earlier, from the 2nd century BC to the 1st century AD (Hatherley & Murray 2021: 65). It seems likely that the Balure toggles were made in Scotland and formed items traded along the Atlantic coasts.

As Jordan (2009, 2010) has pointed out, there has been little discussion as to what toggles might have been used for or how they may have been worn or displayed, if one assumes they were decorative objects. Examples of the possible use of such objects are rare and include tin toggles that were found woven into a plaited cowhair arm band from a Bronze Age cist burial at Whitehorse Hill, Dartmoor (Jones 2016). At Knowth in Ireland a glass toggle bead was located around the neck of a skeleton, suggesting it was used as a pendant (Eogan 1974: 80–7). The wear pattern around the central constriction on one of the Balure beads (<002>) suggests this may have been worn in a

similar way to the Knowth example, although there are other decorative possibilities, such as their use as small fasteners, like modern duffle-coat toggles.

▸ **<002> (010) SF57:** Glass toggle, unperforated, complete. Dumb-bell shape, wear in central constriction showing attachment. Opaque, blue-green, bubbly. 10 × 6 × 6mm.

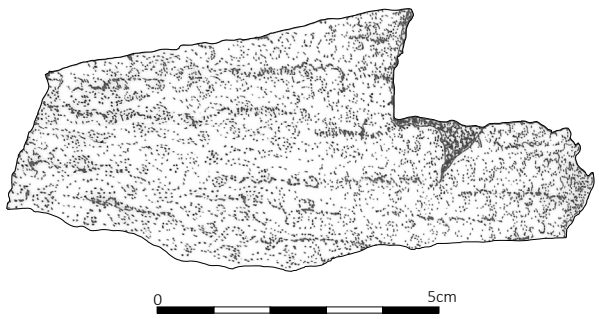
▸ **<015> (001) SF56:** Spherical, wound, perforated glass bead, one half missing. Transparent pale aquamarine colour, good metal quality, few bubbles. Some wear around perforation, showing stringing with other beads. Guido's Group 7(ii/iii). Diam: 12mm, perforation 1mm.

▸ **<206> (010) SF83:** Glass toggle, unperforated, complete. Dumb-bell shape, knocked-off at one end. Transparent, pale aquamarine colour, good metal, bubbly in layers. 12 × 6 × 6mm.

▸ **<207> (015):** Modern glass, thin flat sheet. 25 × 14 × 1mm.

Iron

The only iron object, <213> (Illus 103 & 104), was a fragment of a substantial blade, bent and damaged. The straight cutting-edge and curved back initially suggest a knife, but it is very broad-bladed for a knife. Another possibility is that the fragment is from the straight part of a billhook or reaping-hook. Iron Age reaping-hooks had such straight edges and curved backs (Manning 1976: fig 8.1). Iron agricultural implements are very rare on western Scottish Iron Age sites (Hunter 2006), due to poor preservation and recycling of broken tools. An almost complete example from Culduthel shows the possible form (Hatherley & Morris: illus 6.45, SF0510).



Illus 103 Iron blade <213>. (Image by Roddy Regan, © Kilmartin Museum)

▸ **<213> (013) SF71:** Iron blade fragment, bent and broken at both ends, heavily corroded. Curved back and straight cutting-edge. Blade W: 42mm; Th: 2–7mm; L: 100mm.

Metalworking debris

Three crucible fragments were recovered from the site. One crucible fragment, <020>, is straight-sided, so probably comes from a triangular-shaped crucible of common Scottish Iron Age form (Lane 1987: 55–6). This crucible is relatively large, and appears to have tongs-marks around the rim similar to one from Dunadd (Lane & Campbell 2000: illus 4.43, 1352/1). There are no signs of metal deposits in the interior, but it was heated from below and probably used for copper alloy melting. The other two fragments, <100>, refit and had vitrified residues on their inner sides. This was analysed non-destructively by XRF (X-ray fluorescence, see Appendix 1) to check for inorganic residues, the results showing that none were present. Later Iron Age and early medieval crucibles have a wide variety of forms (Lane & Campbell 2000: 204–7, illus 4.40), but the simple triangular form continued in use, for example at sites such as the Mote of Mark (Laing & Longley 2006: 26–7), so the Balure example is not easily datable. There is only one possible mould fragment, <212>. One edge survives, but there are no surviving surfaces of the object being cast.

There are two fragments of furnace lining, with external vitrification. One, <063>, may be from near a bellows opening or tuyère. The size of the fragments suggests a substantial furnace, possibly associated with ironworking. There are several small pieces of smithing slag, and some hammerscale, proving that iron smithing took place on the site. Some vitrified fuel ash slag could also come from this activity, though it could also have been the product of domestic ovens.

Most of this metalworking debris comes from the latest occupation deposits, but one crucible came from the early deposits, as did hammerscale, which shows smithing was taking place during the earlier occupation. Evidence of ironworking is widespread,

Illus 104 Iron blade <213>. (Image by Roddy Regan, © Kilmartin Museum)

but copper alloy working is less common, though on many older excavations mould fragments may have been unrecognised or uncollected (Lane & Campbell 2000: 30–1).

▸ **<017> (010) SF30:** Smithing slag. 13g.

▸ **<018> (010) SF39:** Lump of corroded iron or iron slag. 87g.

▸ **<019> (010) SF64:** Vitrified fuel ash slag. 13g.

▸ **<020> (010) SF58:** Fragment of large crucible wall. Simple rim and straight side. Exterior with glassy vitrification, interior slaggy. Fabric heavily quartz-tempered. Signs of tongs-marks near rim. Estimated height greater than 40mm. 41 × 48 × 8mm. 18g.

▸ **<021> (010) SF60:** Vitrified fuel ash slag. 18g.

▸ **<050> (010) SF38:** Stone coated in glassy vitrification.

▸ **<063> (012) SF40:** Furnace lining with external vitrification. Fabric heavily quartz-tempered. Signs of an opening at one edge. 35g.

▸ **<064> (012) SF37:** Smithing slag. 53g.

▸ **<090> (061):** Hammerscale. 5g.

▸ **<100> (057) SF116:** Two pieces of crucible with vitreous slag adhering.

▸ **<208> (057) SF119:** Furnace lining. Exterior with glassy vitrification. Th: 22mm. 50g.

▸ **<209>:** Smithing slag.

▸ **<210> (012) SF76:** Vitrified fuel ash slag. 50g.

▸ **<211> (057) SF57:** Smithing slag. 5g.

▸ **<212> (013):** Possible mould fragment. One rounded edge. Fine fabric, orange to grey exterior. 21 × 18 × 8mm. 20g.

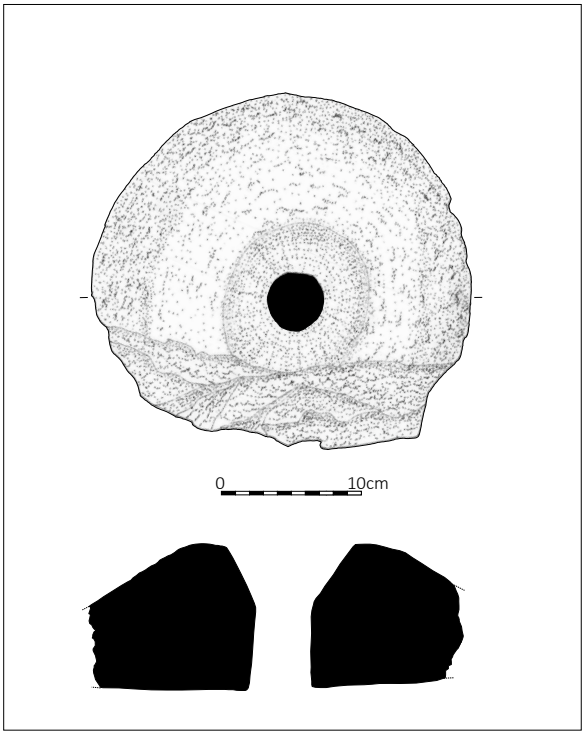
Utilised stone

The utilised stone from the site shows that the inhabitants of the site had a good appreciation of the benefits of particular lithologies for specific functions. The quern is made from schistose grit, which is an excellent quern material as it has hard grits in a softer matrix. The rounded river pebbles have been carefully selected with quartzite the favourite lithology. Quartzite is extremely hard (harder than steel), and evenly textured, making it ideal for grinding and polishing. It takes a very high polish without wearing out. Slabs of bedded quartzite were also utilised, as palettes for grinding and smoothing. The softer phyllites and schists have been used to produce the spindle whorl and other items, some unfinished. These lithologies can be cut with a knife. The fire-cracked pebbles, used in cooking, are almost all of igneous rock types, which retain heat and do not splinter or explode when subjected to high heat. All of these resources can be located within the immediate area of the site. A similar range of stone use was recovered at Dunadd (Lane & Campbell 2000: 177–8). As at Dunadd, few specific whetstones were found, though the unusual quartzite palettes, for example <143> (Illus 105), may have been used for this purpose. These palettes have been mined from an outcrop of a very thin band of quartzite, presumably locally, but I know of no parallels. It is probably a fortuitous use of a naturally flat-shaped rock. Many of the quartzite pebbles show signs of organic deposits alongside areas of very high glossy sheen. This suggests these were used as slickstones in the final stages of leather production (Singer et al 1956:

148). Similar finds have been made at Dunadd and other sites (Lane & Campbell 2000: 179), but have not been widely recognised. Others seem to have iron staining on some surfaces, perhaps due to grinding down of minerals for colouring material – indeed, one piece of iron ore has signs of this type of use (<025>). Some of the pebbles with no signs of usage may have been intended for use as slingstones.

The quern, <133> (Illus 106 & 107), is a bun-shaped form typical of the Middle Iron Age. The quern has been deliberately broken, which is not easy to accomplish. Unfortunately, the breakage makes it difficult to say where the handle hole was positioned, a potentially diagnostic feature. The breakage and/or ritual deposition of querns is a recurring feature of Iron Age sites in Scotland, for example at Sollas, North Uist (Campbell 1991: 133) and Broxmouth, Lothian (Büster & Armit 2013: 185; McLaren 2013) and are often found reused in thresholds, hearths and walls, or in closure deposits. A similar feature is widespread on early medieval Irish sites, where deliberately deposited broken querns and other material have been interpreted as closure deposits (O'Sullivan et al 2014: 98–100). As with the quern from Barnluasgan, this quern was found in the latest occupation deposits, so there is the possibility that it was deliberately broken and deposited as an act of closure when the site was abandoned. It was found in a cluster of objects, with two cobbles, and close to the three glass beads. This context produced almost one-third of all the finds from the site.

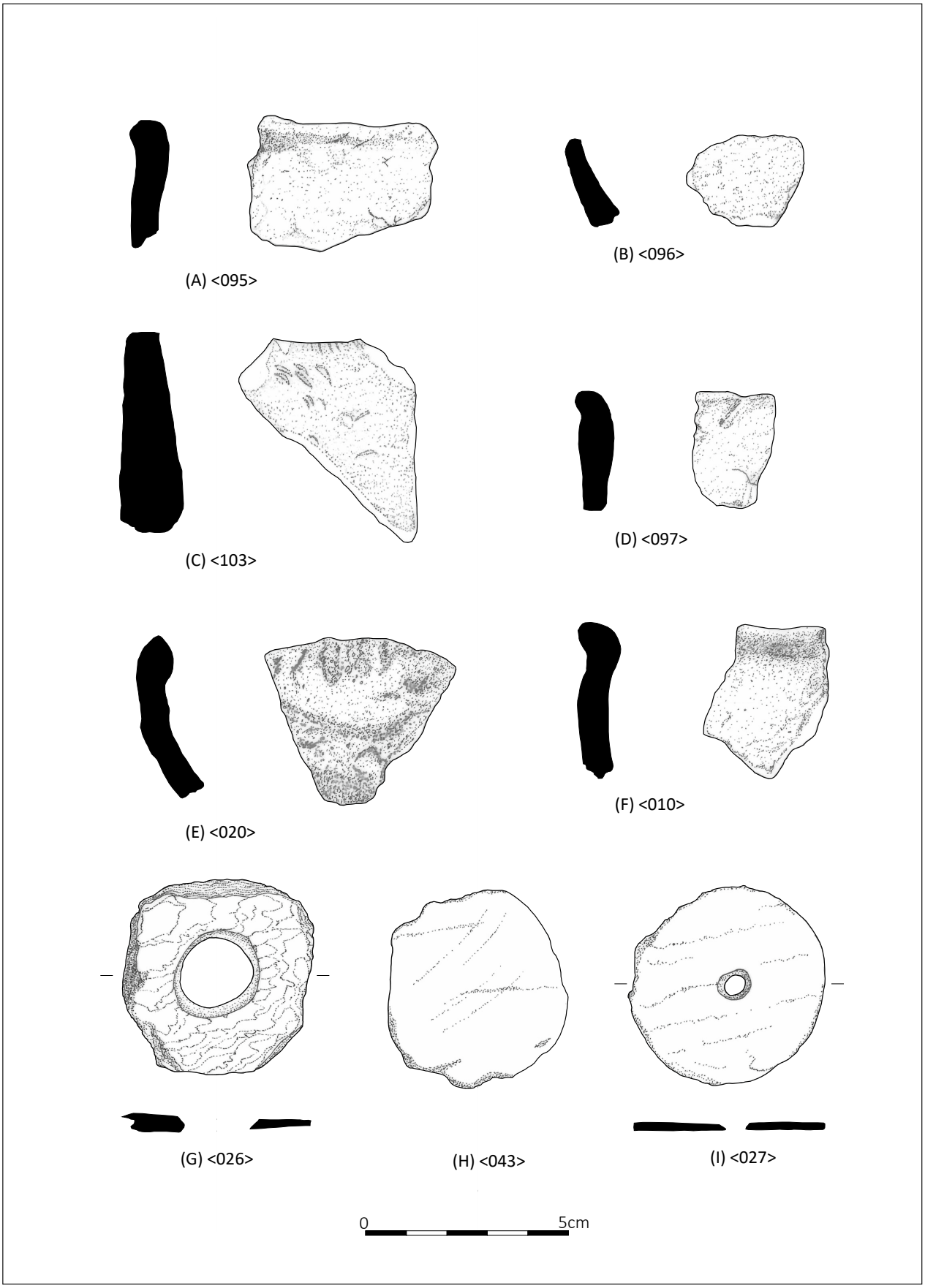
The only other shaped items are a spindle whorl <027> (Illus 108 & 110) and an enigmatic



Illus 106 Quern <133>. (Image by Roddy Regan, © Kilmartin Museum)

Illus 105 Quartzite palette <143>. (Image by Roddy Regan, © Kilmartin Museum)

Illus 107 Quern <133>. (Image by Roddy Regan, © Kilmartin Museum)



Illus 108 Stone and ceramic artefacts. (Image by Roddy Regan, © Kilmartin Museum)

perforated object <026> (Illus 108 & 109), neither of which is diagnostic of any particular period. Other phyllite objects may be unfinished discs or whorls: <043>, <062>, <066> and <180>.

▸ **<025> (010) SF29:** Earthy iron ore (limonite). Signs of wear on one place – possible use as colouring material.

▸ **<026> (010) SF19:** Sub-square slab of phyllite with large central perforation. Edges roughly worked. Hole knife-trimmed, hour-glass profile, 23 × 20mm. One face spalled off. 47 × 47 × 5mm.

▸ **<027> (010) SF22:** Circular spindle whorl of schist. Knife-trimmed edges. Central perforation hour-glass shaped oval, 6 × 5mm. Diam: 50mm; Th: 4–6mm.

▸ **<028> (010) SF6:** Quartzite river pebble, oval. One end burnt.

▸ **<029> (010) SF7:** Quartzite river pebble, oval. One face polished. ?Whetstone. 120 × 68 × 35mm.

▸ **<030> (010) SF8:** Unworked quartzite river pebble, oval.

▸ **<031> (010) SF9:** Quartzite river pebble. One edge with possible polishing.

▸ **<032> (010) SF12:** Quartzite river pebble. One face highly polished. 60 × 40 × 28mm.

▸ **<033> (010) SF10:** Quartzite river pebble. One end hammered, the other broken. 60 × 65 × 32mm.

▸ **<034> (010) SF11:** Quartzite river pebble. One surface flat, polished over a large area. 127 × 75 × 33mm.

▸ **<035> (010) SF15:** Epidiorite river pebble, one corner hammered.

▸ **<036> (010) SF17:** Fragment of fire-cracked cobble of quartzite. Both flat faces with signs of polishing.

▸ **<037> (010) SF18:** Slab of quartzite. One face smoothed and polished. 105 × 90 × 18mm.

Illus 109 Perforated disc <026>. (Image by Roddy Regan, © Kilmartin Museum)

Illus 110 Schist spindle whorl <027>. (Image by Roddy Regan, © Kilmartin Museum)

▸ **<038> (010) SF21:** Quartzite river pebble. One face highly polished, with traces of brownish red colouring. Possible slickstone. Patch of polish on other side. 90 × 75 × 30mm.

▸ **<039> (010) SF23:** Oblong cobble of quartzite, one end with wear facet and hammering. 110 × 47 × 35mm.

▸ **<041> (010) SF25:** Ovoid river pebble of quartzite, one end hammered.

▸ **<042> (010) SF26:** Slab of quartzite, one face smoothed, broken.

▸ **<043> (010) SF27:** Possible unfinished disc of schist.

▸ **<044> (010) SF28:** Rectangular river pebble of quartzite, broken, one face with smoothing, dished, with slight iron staining.

▸ **<045> (010) SF32:** River pebble of quartzite, broken, one face with smoothing, dished, with iron staining.

▸ **<046> (010) SF33:** River pebble of quartzite, one face smoothed.

▸ **<047> (010) SF34:** Ovoid river pebble of schistose grit. One face burnt, the other with iron deposits.

▸ **<051> (010) SF47:** Slab of quartzite, rectangular, one face with smooth area, slight staining.

▸ **<052> (010) SF51:** Slab of quartzite, one face smoothed.

▸ **<062> (012) SF20:** Phyllite disk. Sub-square, trimmed, one corner broken – unfinished whorl?

▸ **<065> (012) SF42:** River pebble of quartzite, one face dished and polished.

▸ **<066> (012) SF48:** Phyllite, one quarter of disc with small pierced hole. Unfinished spindle whorl?

▸ **<067> (012) SF49:** Broken pebble of diorite. Traces of smoothing and staining on one face.

▸ **<072> (014) SF3:** Oval quartzite river pebble. Three faces polished, one with black deposit – slickstone.

▸ **<073> (014) SF4:** Flat river pebble of quartzite, one face polished.

▸ **<074> (014) SF5:** Irregular quartzite pebble, one face dished and polished.

▸ **<078> (017) SF16:** Broken river pebble of schistose grit. One face dished and polished – whetstone.

▸ **<080> (018) SF31:** River pebble of speckled diorite. One face polished.

▸ **<081> (018) SF41:** Flake of quartzite river pebble. Pounding and flaking at one edge.

▸ **<088> (024) SF44:** Flat slab of quartzite. One face polished. 123 × 95 × 12mm.

▸ **<104> (032) SF67:** Schistose grit river pebble, one face highly polished.

▸ **<108> (033) SF73:** Pounder.

▸ **<109> (033) SF74:** Pebble, polished and stained.

▸ **<110> (035) SF77:** Quartzite river pebble, one face with glassy polish and staining.

▸ **<111> (034) SF80:** Quartzite river pebble, one face with slight polish.

▸ **<112> (034) SF81:** Flat river cobble of quartzite, one face polished and stained.

▸ **<114> (009) SF86:** Flat slab of quartz-schist, one face polished and slightly dished.

▸ **<115> (036) SF90:** Quartz river pebble, broken, one face possibly polished.

▸ **<116> (036) SF91:** Cobble of schistose grit, oblong, broken, some hammering at one end.

▸ **<119> (010) SF99:** Broken flake of quartz river pebble, black deposit on one face.

▸ **<124> (031) SF110:** Quartzite river pebble, one face with polish, the other with black deposits.

▸ **<125> (031) SF111:** Quartzite river pebble, two faces with glassy polish.

▸ **<126> (039) SF122:** Broken boulder of quartzite. Dished and smoothed area, with some black staining.

▸ **<129> (031) SF115:** Quartzite river pebble, one face with slight polish.

▸ **<133> (033) SF72:** Damaged upperstone of bun-shaped rotary quern of schistose grit. One

third missing, outer edges chipped off all round. Bun-shaped form, with wide hopper off centre. Lower face concave and smooth. Hopper 85mm in diameter at top, V-shaped, funnelling down to 40mm diameter vertical lower perforation. H: 85mm; size 240 × 190mm.

▸ **<134> (068) SF41:** Small schistose grit disc, polish on one face.

▸ **<135> (042) SF82:** Broken quartzite river pebble, slight polish one face.

▸ **<141> (048) SF96:** Quartzite river pebble, very smooth, with organic staining – slickstone.

▸ **<143> (057) SF120:** Large flat thin slab of quartzite. Both faces with patches of smoothing. 210 × 80 × 13mm.

▸ **<144> (057) SF121:** Quartzite river pebble, one face with glossy polish and organic staining – slickstone.

▸ **<147> (063) SF124:** Quartzite river pebble, broken, one face flat and highly polished, possible staining.

▸ **<152> (063) SF129:** Broken quartzite pebble. Possible smoothing on one face.

▸ **<154> (063) SF131:** Broken pebble of dolerite, possibly fire-cracked.

▸ **<155> (067) SF132:** Boulder of dolerite, possibly fire-cracked.

▸ **<158> (067) SF135:** Fire-cracked fragment of diorite pebble.

▸ **<159> (072) SF136:** Fire-cracked boulder of dolerite.

▸ **<160> (068) SF144:** River pebble of quartzite, one end hammered.

▸ **<161> (072) SF145:** Fire-cracked fragment of diorite boulder.

▸ **<164> (073) SF139:** Small quartzite river pebble with gloss on one face.

▸ **<165> (072) SF146:** River pebble of quartzite, glassy polish on one face.

▸ **<179> (042):** River pebble of quartzite, signs of polish.

▸ **<180> (044):** Partially worked disk of phyllite, broken.

▸ **<183> (063):** Slab of phyllite with notch on one side.

▸ **<185> (067):** River pebble of quartzite, one face smoothed.

Unutilised stone

Most of the unutilised stones found on the site were highly rounded river pebbles which had been brought to the site from nearby streams or the seashore. While the majority of the utilised river pebbles were of quartzite, a significant number of the unutilised pebbles were of other lithologies, mainly epidiorites and igneous rocks. It seems that some selection of pebbles took place on site, with the pebbles best suited to particular functions, such as polishing or slickstones, being preferentially used, while the others may have been kept as potential slingstones. The other material, mainly irregular pieces of phyllite and chlorite schists, were derived from the local bedrock, and may have been intended for working into whorls and discs.

▸ **Phyllite/schist**

<003>, <004>, <055>, <058>, <069>, <105>, <118>, <121>, <123>, <127>, <167>, <168>, <169>, <171>, <173>, <176>, <177>, <178>, <181>, <182>, <184>, <187>.

▸ **White vein quartz**

<048>, <057>, <113>, <172>.

▸ **Slab quartzite**

<049>, <120>, <140>.

▸ **Quartzite river pebbles**

<040>, <106>, <122>, <128>, <132>, <136>, <137>, <138>, <139>, <148>, <157>.

▸ **Other river pebbles**

<007>, <008>, <053>, <054>, <084>, <107>,

<108>, <109>, <117>, <131>, <140>, <142>, <145>, <146>, <149>, <150>, <151>, <153>, <156>, <162>, <166>, <168>, <174>, <175>.

6.5.2 The lithic assemblage

Torben Bjarke Ballin

From the excavations at Balure, 18 lithic artefacts and 12 (mainly burnt) pebbles were recovered. They are listed in Table 3. In total, 67% of the assemblage is debitage, whereas 5% are cores (one), and 28% are tools. The definitions of the main lithic categories are as follows:

- *Chips*: All flakes and indeterminate pieces, the greatest dimension (GD) of which is ≤10mm.
- *Flakes*: All lithic artefacts with one identifiable ventral (positive or convex) surface, GD > 10mm and L < 2W (L = length; W = width).
- *Indeterminate pieces*: Lithic artefacts which cannot be unequivocally identified as either flakes or cores. Generally, the problem of identification is due to irregular breaks, frost-shattering or fire-crazing. *Chunks* are larger indeterminate pieces, and in the case of quartz, for example, the problem of identification usually originates from a piece flaking along natural planes of weakness rather than flaking in the usual conchoidal way.
- *Blades and microblades*: Flakes where L ≥ 2W. In the case of blades W > 8mm, in the case of microblades W ≤ 8mm.
- *Cores*: Artefacts with only dorsal (negative or concave) surfaces – if three or more flakes have been detached, the piece is a core, if fewer than three flakes have been detached, the piece is a split or flaked pebble.
- *Tools*: Artefacts with secondary retouch (modification).

Table 3 Balure: lithic assemblage list

	Flint	Quartz	Rock crystal	*Total*
Pebbles (mainly burnt), including fragments				
	12			*12*
Debitage				
Chips	1			*1*
Flakes	2	6	1	*9*
Indeterminate pieces		2		*2*
Total debitage	*3*	*8*	*1*	*12*
Irregular cores				
	1			*1*
Tools				
Short end-scrapers	1			*1*
Side-scrapers	1			*1*
Double side-scrapers	1			*1*
Notched pieces		1		*1*
Pieces with edge-retouch	1			*1*
Total tools	*4*	*1*		*5*
Total artefacts	*8*	*9*	*1*	*18*
Total, including pebbles	*20*	*9*	*1*	*30*

Raw materials – types, condition and sources

The collection from Balure dun includes 12 small pebbles in flint. The artefacts of the assemblage embrace eight pieces of flint, nine pieces of quartz and one piece of rock crystal.

The flint is mostly grey, fine- to medium-grained material with smooth abraded cortex. The character of the cortex suggests that the flint was procured from a pebble source, most likely from beaches along the Sound of Jura, where this raw material is being washed in from offshore deposits (Trewin 2002: 351). Other attributes of the flint – such as colour, texture and impurities – are consistent with material collected along the shores west of Balure.

All recovered quartz is white milky quartz. As all quartz artefacts are tertiary pieces, it is not possible to determine whether this raw material was procured from pebble or vein sources, but it would have been possible to obtain quartz from a variety of sources in the local area. The solitary flake in rock crystal, <205>, is in a very pure and translucent form of this raw material. It retains dorsal specks of abraded cortex, suggesting that it was picked up from a shore, possibly in connection with the procurement of flint.

The pebbles

Usually, pebbles are not collected from prehistoric archaeological sites, but in the present case it was found pertinent to retain 12 small pebbles (including fragments), as this group of objects is quite informative. Two intact pebbles measure 26 × 12 × 10mm and 19 × 18 × 9mm, respectively, and minuscule pebbles like these were obviously of no use as raw material for tools. The pebbles and pebble fragments reveal the following:

- As flint is not present in the local natural environment, flint must have been deliberately collected along nearby shores.
- As 11 of 12 pieces are visibly, albeit slightly, burnt, they inform of activities which took place at the site.
- It has been possible to refit a number of fragments, and as several refitting pieces are from different contexts, they most likely inform of disturbances, such as bioturbations (eg rabbits, moles, tree roots, etc). <001> conjoins with <070d> and <191>, thus linking Contexts (001), (013) and (034). Other burnt pebbles were recovered from Context 14, and it is possible that all four contexts may be linked.

Unmodified debitage and tool blanks

The unmodified debitage includes 12 pieces, namely one chip (flint), nine flakes (two in flint, six in quartz, one in rock crystal), and two indeterminate pieces (quartz). Three of the flakes were identified as hard-percussion flakes, but it was not possible to technologically define the remainder. Four of the collection's five tool blanks are also hard-percussion flakes, with one being an indeterminate flake. Bipolar flakes are not present. The number of flakes with surviving platform remnants is low, but these pieces generally suggest low-level core preparation, if any. <024>, for example, has a broad and deep cortical platform remnant. Due to the high level of fragmentation, it is not possible to define the flakes and flake blanks precisely, but <024> measures 42 × 25 × 10mm. This flake is probably one of the larger blanks produced at the site.

The core

The site's solitary flint core <192> is an irregular (or multi-directional) core. It is based on a thick hard-hammer flake, and it has a pronounced bulb-of-percussion on the face opposite the main flaking-front. Technically, it is a so-called 'flaked flake'. One face was clearly used as the main striking platform, and a number of small flakes were detached from the associated flaking-front. No signs of core preparation are present. The apex is crushed, and the ripples of the flake (?unintentionally) detached from the apex show similarities to the ripples of bipolar flakes. This indicates that the core was worked by placing the core on an anvil, and then detaching flakes by strikes to a traditional flat platform. The core is small and measures 28 × 20 × 20mm.

The tools

Five implements were recovered at Balure dun, four of which are in flint, while one is in quartz (Illus 111). Three pieces are scrapers, with one (in quartz)

Illus 111 Lithic artefacts. Clockwise from top left <061>, <013>, <024>, <060>, <009>. (Image by Roddy Regan, © Kilmartin Museum)

being a notched piece, and one an edge-retouched piece.

▸ **<009> (009) SF50:** Proximal fragment (33 × 23 × 8mm) of a notched piece on a hard-hammer flake. It has at least one small notch in either lateral side, proximal end, possibly to facilitate hafting. It is impossible to determine whether the piece was modified in other ways, as parts of the dorsal face have been shed due to the exposure to fire.

▸ **<013> (010) SF2:** Burnt fragment (20 × 34 × 9mm) of a flake which, judging from the differently oriented ripples of ventral and dorsal faces, was detached from an irregular core. It has semi-acute, clearly used retouch along its distal edge. It is not possible to determine whether this piece was used for scraping or for cutting hard materials.

▸ **<024> (010) SF55:** One double side-scraper is intact (42 × 25 × 10mm). It is an elongated hard-hammer flake with full steep retouch of both lateral sides. One straight lateral side was formed by retouch from the ventral face, and one convex lateral side by retouch from the dorsal face. Although the two modified sides meet at the distal end to form a point, no use-wear suggests a supplementary piercing function.

▸ **<060> (012) SF59:** A very small left-side fragment (21 × 12 × 7mm) of a short end-scraper. It has the remains of a convex, steep (and worn) scraper-edge at the proximal end. At the distal end, ventral face, it appears to have been worked, possibly in an attempt to detach small flakes from an exhausted tool. It split along its long axis, but in contrast to CAT <061> (below) which split accidentally as a result of excessive force directed towards its platform, circular impact scars on the ventral face of CAT <060> suggest that this piece was split deliberately as a result of strikes to its ventral face. Use-wear along all edges, including those of the break facet, suggests that the broken-up implement was then used for cutting hard materials.

▸ **<061> (012) SF54:** Proximal fragment of a side-scraper (30 × 30 × 10mm) based on a hard-hammer flake. It has the remains of a straight and steep scraper-edge along one lateral side, but as the piece also split along its long axis (Accident Siret), it is not possible to determine whether it may have had a second working-edge, like <024> (above).

Summary and discussion

During the excavations at Balure dun, 18 lithic artefacts and 12 pebbles were recovered. They are summarised in Table 3. Twelve (two-thirds) of the site's lithic artefacts were found in Enclosure 1, as were all flint pebbles and pebble fragments (Contexts (001), (009), (010), (013), (014), (033), (034) and (038)). Four lithic artefacts were retrieved from Context (012) in Enclosure 2. Apart from Context (001) (topsoil) and (033) (re-deposited soil, possibly representing a collapsed turf roof and wall collapse), all the above Enclosure 1 contexts represent more or less discrete occupation layers, middens or hearth surroundings. However, the fact that it was possible to refit fragmented (mostly burnt) flint pebbles from Contexts (001), (013) and (034) (two non-conjoinable burnt flint pebbles were found in Context (014)) suggests widespread disturbances, probably – as suggested by the excavator – by root activity.

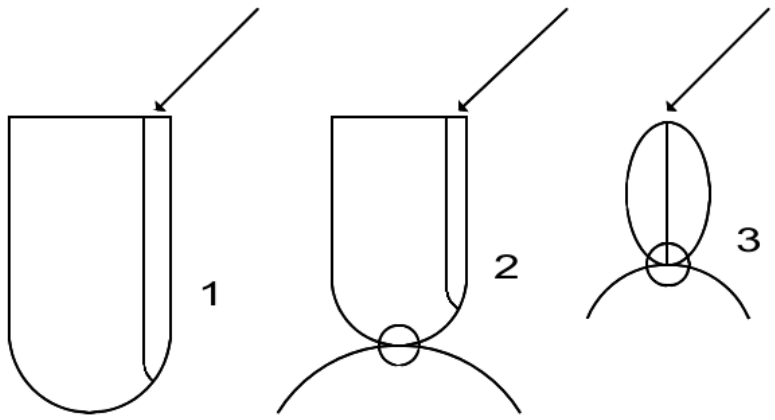
The presence of the flint pebbles is slightly enigmatic, as they are too small to have been useful as lithic raw material for the production of tools.

They could have been used as paving material, but suitable material for this purpose would have been available in the dun's surroundings, whereas the flint must have been collected along the shores of the Sound of Jura. Furthermore, if collected from a beach (as general paving material), pebbles in other raw materials should also have been present, as flint is generally a relatively rare commodity, even in beach walls. Most likely, these small, smooth flint pebbles were collected on a beach for presently unknown purposes (gaming pieces?), probably as a 'by-catch' in connection with procurement trips, the focus of which was flint (and quartz?) pebbles. It is uncertain why and how all the flint pebbles were exposed to fire.

The lithic artefacts, which are roughly equally distributed across pieces in flint and quartz (eight and nine pieces, respectively, supplemented by one flake in rock crystal), were generally produced by the application of hard percussion, with bipolar technique apparently not having been used. It is thought that the pebbles may have been rested on an anvil during the reduction process. Illustration 112 shows the differences between the three main percussion techniques, platform technique, platform-on-anvil technique and bipolar technique (where an anvil is also used).

The implements are mainly in flint (four out of five tools), which is commonly seen in connection with mixed flint-quartz assemblages (at Rosinish on Benbecula, quartz had a tool ratio of 1%, whereas flint had a ratio of 62%; Ballin 2008). This most likely reflects the fact that flint flakes in a much more controlled manner than quartz, and that it provides much sharper and more regular working-edges. It may be assumed that, at Balure, flint was perceived as a highly valuable commodity. This is supported by <060> (a recycled end-scraper), which has a complex biography: it was initially shaped into a small end-scraper, which was then (unsuccessfully) used as a core, and at the end of its 'life-span' it was deliberately split, and the edges of the final, very small implement were then used for cutting or scraping/planing/shaving hard materials. The character of the implements' working-edges, as well as the use-wear of unmodified and modified pieces, indicates that most of the formal and informal tools were used for scraping, cutting and possibly planing/shaving hard materials (wood, bone, antler).

The assemblage includes no strictly diagnostic artefacts but, as a whole, the lithic finds suggest a late date, probably in the later Bronze Age or even in the earliest part of the Iron Age. The complete lack of soft percussion indicates a date after the onset of the Late Neolithic period, and the lack of invasive retouch indicates a date after the Early/Late Bronze Age transition. Clark (1936: 47) and Young & Humphrey (1999) presented a technological profile which they dated to the Early Iron Age period but, as pointed out by Ballin (2002), this profile also seems to cover the later Bronze Age period. At this moment in time, it is not possible to date the present assemblage



Illus 112 The three main percussion techniques, platform technique, platform-on-anvil technique and bipolar technique. (© Torben Bjarke Ballin)

more precisely than to the general later Bronze Age/Iron Age period.

6.5.3 Ceramics

Alison Sheridan

The sherds of at least two vessels were recovered from the the site and, while others may also be present, these are represented by small featureless body sherds. Two fragments, <094> and <103> (Illus 108c & 113), are from one vessel and indicate a small undecorated pot (rim diameter *c* 160mm) with a flat squared off rim (the vessel is coil made with a possible flat base); sherd <096> (Illus 108b) also comes from a similar, if not the same, flat-based vessel.

The second vessel, <010> (Illus 108f), <095>(Illus 108a) and <097> (Illus 108d), was a possible thin-bodied undecorated globular pot (rim diameter *c* 180–190mm) with an unevenly folded everted rim (Illus 114).

▸ **<005> (001) SF1:** Featureless abraded body sherd, 25.7 × 21.5mm, max Th: 8.5mm. Fairly hard. Exterior and core pinkish, interior mid-grey-brown. Exterior surface abraded and pitted; interior smooth. No obvious inclusions.

▸ **<010> (010) SF61:** Rim sherd and body sherd from undecorated, probably globular pot with uneven surfaces. Rim sherd conjoins with <095> (see below). Sherd sizes: rim sherd: 28.4 × 39.5mm; max Th: 8.7mm. Body sherd: 34.2 × 31.0mm; max Th: 10.0mm. Exterior dark grey; core slightly reddish-brown; interior dull to bright salmon pink. Both the interior and exterior of the body sherd are uneven. The rim sherd has traces of where a coil joint has been smoothed over on its interior. Inclusions: as in <095>.

▸ **<011> (010) SF62:** Featureless abraded body sherd, 21.5 × 21.6mm, max Th: 8.3mm. Medium hard. Exterior heavily abraded; light brown. Core pink-brown; interior pink-grey. No inclusions visible except for minute mica platelets, probably naturally occurring in the clay.

▸ **<012> (010) SF63:** Two featureless spalls of abraded but hard pottery, lacking external surfaces. Core: medium grey-brown; interior red-brown,

Illus 113 Ceramic vessel rim <103>. (Image by Roddy Regan, © Kilmartin Museum)

Illus 114 Ceramic vessel rim <095>. (Image by Roddy Regan, © Kilmartin Museum)

fairly smooth. Sizes: 20.2 × 19.1mm; max Th: 6.0mm; and 11.75 × 8.1mm; max Th: 5.7mm. Inclusions: sub-angular fragments of rotten brown stone up to *c* 5.5 × 3mm; also minute mica platelets.

▸ **<091> (026) SF022:** Small featureless sherd (22.75 × 18.2mm; max Th: 11.6mm) and two fragments, of dull grey-brown and mid-brown, slightly sandy pottery. It resembles the crucible fragments SF116, but there are no traces of slag adhering.

▸ **<092> (010) SF65:** Small featureless abraded body sherd, 19.1 × 14.9mm, max Th: 7mm. Exterior bright salmon pink; core and interior slightly duller pink. Interior seems carefully smoothed. Undecorated. No inclusions visible.

▸ **<093> (041) SF104:** Undecorated featureless body sherd, 26.5 × 26.1mm, max Th: 10.0mm, from pot with uneven surfaces. Abraded; fairly hard. Exterior pink-buff; core pinkish-buff (but obscured by sediment); interior bright salmon pink. Angular, sub-angular and rounded lithic inclusions up to *c* 3 × 3mm, density *c* 3–5%, of whitish and dull grey-brown stone; tiny mica platelets in clay.

▸ **<094> (034) SF75:** Two sherds from same pot as <103>. One (38.0 × 10.1mm; max Th: 10.9mm) has broken along a coil joint line; the other (26.75 × 20.0mm; max Th: 9.65mm) may have come from near a flat base. Both are abraded.

▸ **<095> (009) SF84:** Rim sherd from thin pot with uneven surface. Sherd size: 45.9 × 31.5mm; max Th: (at bottom of rim) 9.1mm; estimated rim diameter 180–190mm. Rim everted and unevenly folded over; may have been from a globular pot. Abraded. Exterior blackish-grey over pink-brown; core pinkish-buff; interior bright salmon pink. Interior surface particularly uneven, with finger-tip depressions. Sherd undecorated. Hard fabric, with sub-angular and rounded inclusions of grey-brown stone up to *c* 5 × 2.5mm, at a density of *c* 7%. There are also tiny mica platelets in the clay which give the surface a slightly glittery appearance. Note: sherd <097> is from the same pot.

▸ **<096> (041) SF92:** Sherd from just above the base of a flat-based, thin-walled pot with gently splaying wall. Size: 25.7 × 27.8mm; max Th: 8.4mm. Sherd too small to estimate diameter of vessel at this point. Abraded; fairly hard. Exterior blackish over red-brown; core and interior red-brown. The only visible inclusions are tiny platelets of mica, probably present naturally in the clay.

▸ **<097> (041) SF106:** Small rim sherd from same pot as <095>; 20.9 × 28.15mm; max Th: 8.9mm.

▸ **<098> (031) SF107:** Featureless undecorated body sherd, 30.8 × 28.4mm; max Th: 11.75mm. Uneven surfaces. Abraded; fairly hard. Probably burnt. Exterior buff; core pinkish-buff; interior pale grey-buff. Angular and sub-angular inclusions, up to *c* 3 × 2.5mm, density *c* 5–7%, of dark glittery mineral and hard grey-brown stone.

▸ **<101> (059) SF118:** Featureless body sherd, superficially similar to <093> but not from same pot; surfaces uneven. Size: 26.0 × 27.9mm; max Th: 8.9mm. Abraded; fairly hard. Exterior medium brown with grey patch; core reddish-buff; interior salmon pink. A few sub-angular lithic inclusions, up to *c* 4 × 3mm and at a density of *c* 3% of hard grey stone.

▸ **<102> (015):** Possible fragment of burnt potter's clay, or else highly abraded and featureless burnt fragment of pottery, with rounded edges (except in area of recent fracture). Size 11.5 × 9.3 × 7.25mm. Soft. Exterior grey-red-brown; interior light salmon pink.

▸ **<103> (041) SF103:** Rim sherd from small undecorated pot. Sherd size: 50.4 × 45.4mm; max Th: 13.6mm; estimated rim diameter *c* 160mm. On one side, broken diagonally along a coil joint line. Rim flat and squared off. Abraded. Exterior blackish over pink-buff; core pink-buff to mid-grey; interior dark grey. May have been slipped; interior crazed. Superficially hard but interior fairly soft. Slightly uneven exterior; small indentations below rim may well be accidental marks (possibly from nail impressions) rather than decoration.

6.5.4 Macro plant remains

Michael Cressey

All but one of the 24 processed samples contained charcoal, with small quantities of carbonised seeds recovered from Contexts (035), (040), (043), (062), (066) and (068). Apart from (062), which also contained oats, all the identified grains were barley. Birch, oak and hazel charcoal were identified within several deposits, (026), (046), (065), and (067). Three of the most abundant samples were more fully assessed as to their environmental potential.

Samples comprising the 4mm and 1mm sieve fraction from three contexts were submitted to CFA for assessment. The assessment was carried out to determine the species abundance and potential for AMS dating within the three samples.

Methodology

Identifications were carried out on the 4mm charcoal fragments using a binocular microscope at magnifications ranging between ×10 and ×200. Charcoal fragments from the 1mm size fraction are below the level of identification (BLOI); these were scanned to determine the presence or absence of cereal grains.

Anatomical keys listed in Schweingruber (1992), Gale & Cutler (2000) and CFA Archaeology's reference charcoal were used to aid identifications. The charcoal was identified to species level to 25 individual counts per sample. Observations on the condition of the charcoal were recorded, including the presence of any vitrified material.

Individual samples for AMS dating were not selected at this stage, but samples in which there are sufficient quantities of unabraded charcoal present are noted in Table 4, with an assessment of the potential for AMS dating.

Results

Three species are represented within the 4mm charcoal assemblage (Table 4) with *Corylus avellana* (hazel) the most dominant species. This is followed by *Quercus* sp (oak) and *Betula* sp (birch) respectively.

The 1mm fraction is below the level of identification (BLOI) and is dominated by amorphous fragments. Roundwood (small branchwood) is present in Sample 26 but it is very fragmented. Blocky fragments are abundant in Samples 21 and 26 and this represents charcoal that is firm and fresh, having undergone no taphonomic reworking.

6.6 The radiocarbon dates

Two radiocarbon dates were obtained from Balure dun, confirming a general Middle Iron Age date (Table 5). From Phase 1b of Enclosure 1 a fragment of hazelwood was dated from (C046), a burnt deposit from a small fire installation constructed against the wall of the enclosure. This returned a date between the 2nd and 1st centuries BC. This context was early in the sequence of deposits within Enclosure 1 and probably gives a date near the construction of the enclosure.

The second date was obtained from a mixed deposit that probably represents a dump or levelling

Table 4 Balure: charcoal assessment results

Context no. and setting	026 Debris in fire setting	062 Dump deposit	067 Dump of hearth material
Sample no. Identifications	26	17	21
Quercus sp	7 (4.5g)	–	7 (0.5g)
Betula sp	2 (0.2g)	2 (0.2g)	3 (0.7g)
Corylus avellana	30 (4.5g)	10 (0.7g)	15 (1.3g)
Hordeum sp (barley)	–	5	–
Vitrified	1 (0.7g)	–	–
BLOI (1mm fraction)	50g	0.3g	1.9g
Amorphous fragments	****	****	****
Blocky fragments	***	*	***
Roundwood	**	*	*
AMS Dating Potential for charcoal	Good	Poor	Good

deposit prior to the construction of the wall of Enclosure 2 (C066). A burnt grain of barley from this deposit produced a date between the late 1st century BC and the early 2nd century AD. This provides a *terminus post quem* for the construction of Enclosure 2, and shows it clearly post-dates Enclosure 1.

Table 5 Balure: radiocarbon dates, calibrated in OxCal 4.4 using IntCal 20 curve

Context	Laboratory code	Material	$\delta^{13}C$ ‰	Radiocarbon age BP	Calibrated at 1σ (68.3%)	Calibrated at 2σ (95.4%)
066	SUERC-31665	*Hordeum vulgare*	-22.8	2000±30	40 BC–AD 60	50 BC–AD 120
046	SUERC-31664	*Corylus avellana*	-27.9	2090±30	150–50 BC	200–0 BC

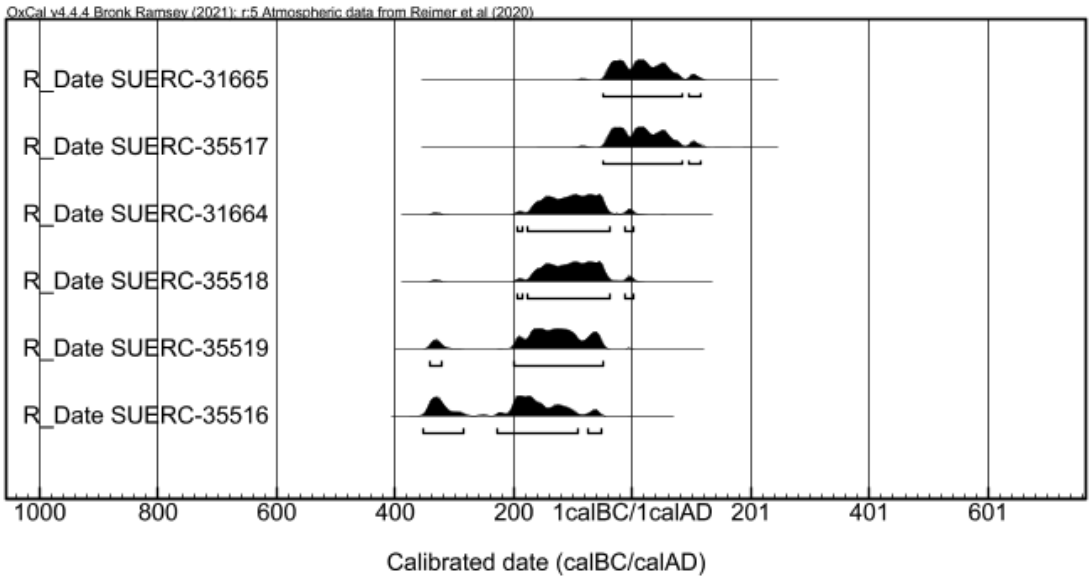
7. DISCUSSION OF THE TWO DUN SITES

The six radiocarbon dates from the two sites are important in giving some independent chronology for this class of monument, supplementing the two previously dated sites at Kildalloig and Glashan (Illus 115). Three dates associated with the early dun phase at Barnluasgan indicate that the site was occupied some time between the later half of the 4th century BC and the middle of the 1st century BC, but probably in the later part of that range. These dates are similar to the Phase 1b date from Balure. The dates from the later enclosure at Barnluasgan and the secondary Enclosure 2 at Balure are also similar, dating these structures to the period of 1st centuries BC/AD. Thus both sites are firmly placed in the Middle Iron Age and were occupied and modified over a fairly constrained period, possibly a few centuries. There is no artefactual or other evidence that the sites were occupied in the early medieval period or later.

This similarity of dates between the two sites of course raises questions as to whether, given the relative proximity of the sites, the occupants of each site actually knew one another, or were indeed part of a wider kin grouping, questions we are unlikely ever to answer. However, the fact that these contemporary sites were of similar size, form and location does have implications as to the status of the inhabitants, discussed further below in relation to the landscape context. The length of use of the site at Barnluasgan was also indicated by the relatively deep occupation deposits encountered along the eastern edge of the site, while at some point the original dun structure was remodelled to construct the more circular enclosure structure. At Balure deep accumulations of occupation deposits were absent within the excavated trenches, although some longevity of occupation is suggested by midden material lying below the wall of Enclosure 2. This perhaps suggests that the outer enclosures were added in an incremental fashion, although the relationship between Enclosures 3 and 4 in relation to Enclosures 1 and 2 is less clear.

While we have until now continued to describe the later structure at Barnluasgan as an 'enclosure', it seems reasonable now to question this classification. At present there is no need to consider the 'enclosure' as anything other than a modification of the original dun structure. The 'enclosure' and the earlier 'dun' both share the same vantage point, both are constructed with similar drystone walling and, while not contemporary, may have had the same function.

The site is probably more akin to the nearby site Dun a' Chaisteil (Canmore ID 39054, RCAHMS 1988: No. 286), lying to the south-west near Castle Sween. This site displays a striking similarity in layout and a similar sequence of events is apparent



Illus 115 Plot of radiocarbon dates from Balure and Barnluasgan duns. (Image by Roddy Regan, © Kilmartin Museum)

although there it is argued the circular dun construction pre-dates the oval structure.

In terms of size, based on internal measurements almost half the listed dun sites in Lorn, Mid Argyll and Kintyre are smaller in size than the 'enclosure' at Barnluasgan including the nearby dun of Druim an Duin. However, the series of similarly classified monuments on the same north-east/south-west oriented ridge along the upper western slopes of Loch Coille Bharr and Loch Barnluasgan (Illus 3, Barnluasgan, Enclosures 1–6) highlights the problems with the earlier classification of site types. This grouping included the 'enclosure' at Barnluasgan; apart from Barnluasgan, none of these monuments have previously been examined by excavation, and beyond the suggestion that they were utilised as stock enclosures (Craw 1930: 144) little is known about their age or function. However, it is highly likely that these monuments represent more than one type of site and period. For example, the 'enclosure' at Kilmory Oib (Canmore ID 39170, RCAHMS 1988: No. 339) appears to be a mound surrounded by a semicircle of upright stones and could actually represent a burial monument. Three of the enclosures have internal diameters between 5 and 11m and would be described as hut-circles elsewhere (Canmore ID 39171, 39191 RCAHMS 1988: Nos. 331(1), 331(2b) and 331(3)). Another 'enclosure' appears to have massive walls and its form might be classified somewhere between a dun and a hut-circle (Canmore ID 39182, RCAHMS 1988: No. 331(2a)). Harder to classify, if that needs to be done at all, is an enclosure defined by upstanding stones with a diameter between 15 and 17m which could represent a roundhouse platform or even perhaps a burial monument (Canmore ID 39192, RCAHMS 1988: No. 331(4)). If we add to this another recently discovered circular 'enclosure' lying below the dun of Druim an Duin (which has no Canmore entry as yet), we have a complex group of geographically linked sites, all of which have the potential to give a more nuanced picture of structural developments in the later prehistoric period in this locale.

Apart from the overall form of dun enclosures, their most apparent feature is the remnants of their enclosing walls. The nature of the walls has been important in defining the dun category itself, and leads to discussion of the age and function of simple through to complex types based on the presence or absence of intramural features such as guard cells, galleries and stairways.

In the late 19th century Thomas devised a classification scheme to differentiate the later prehistoric fortified sites as either a 'dun' or a 'broch tower' and sub-classed the 'duns' according to topographic location (Thomas 1890). Later additional definitions were used to categorise 'dun' sites that encompassed broch-style architectural features, with 'duns' containing intramural galleries, termed galleried duns, and structures with concentric walls with no evidence of an intramural stair or upper gallery, labelled as semi-brochs (Beveridge 1903; Young 1962; Feachem 1963). In the late 1960s, Maxwell (1969) devised a scheme to systematically differentiate 'duns' from 'forts'. This scheme was incorporated by the RCAHMS and used during the archaeological surveys for the Inventory volumes on Argyll produced in the 1970s and 1980s (RCAHMS 1971, 1975, 1980, 1984, 1988) using the arbitrary division between sites capable of serving a 'small community … or only a single family' (RCAHMS 1971: 16). Since then the basis of the categorisation of duns used by RCAHMS has been questioned and redefined. Harding refined the dun classification by separating sites that could potentially be roofed, termed a 'dun house' and up to 15m in internal diameter, from ones that were too large or irregularly shaped to be roofed (Harding 1984). Alcock & Alcock also highlighted the inconsistencies in the size classification between fort and duns. They demonstrated that 66% of known duns in Argyll fell within the criterion of 'dun house' and recognised a smaller-sized subset of sites that may have had a different function (Alcock & Alcock 1987). Armit later simplified the categorisation scheme for drystone structures (including duns, galleried duns, brochs and semi-brochs), devising the Atlantic roundhouse nomenclature, with its complex and simple types, later adapted and modified by Gilmour (Armit 1991, 1992, 2004; Gilmour 1994, 2000).

Around these structural parameters the debate flourished as to the chronological sequencing of duns in Argyll. Nieke postulated that forts in Argyll pre-date duns, based on the excavated examples of Balloch Hill (Canmore ID 38340), Eilean an Duin (Canmore ID 22536) and Duntroon (Canmore ID 39450), which appear to belong to the 1st

millennium BC, and citing Dun Skeig (Canmore ID 38925), where the dun overlies the fort, as part of this argument (Nieke 1990). As such Nieke, along with Alcock & Alcock, has argued that most duns in Argyll are later than the 1st millennium BC, while excavated examples appeared to be occupied in the 3rd quarter of the 1st millennium AD. This, however, has been disputed by Harding, who argued that circular roofable dun-houses were part of the Atlantic roundhouse tradition originating in the 1st millennium BC, with larger often non-round dun enclosures that contain buildings being later, possibly early medieval, in date (Harding 1997, 2004a). Henderson & Gilmour have more recently added to the debate, showing that the dun at Loch Glashan dates to the second half of the 1st millennium BC and belongs to the Atlantic roundhouse tradition along with other Argyll sites such as Rahoy, Dun Mor Vaul and Tirefour (Henderson & Gilmour 2011). They also argue that while other dun sites have produced artefacts of later date, they also had evidence of earlier but poorly dated occupation or constructional phases, for example at Druim an Duin and Ardifuir, and that few of the excavated sites have actually shown reliable 1st-millennium AD dates for their construction, as opposed to occupation.

Henderson & Gilmour have argued that the Atlantic roundhouse nomenclature, which does not rely on architectural details that are not often readily apparent on unexcavated dun sites, should be maintained to discuss field results within clearly understood parameters of the Atlantic roundhouse categories (Henderson & Gilmour 2011: 77).

Where then do Balure and Barnluasgan belong within the current typological framework? Balure might be considered a non-complex Atlantic roundhouse enclosed by outworks. At Barnluasgan both the early drystone enclosure or 'dun' and the later 'enclosure' might similarly be considered non-complex Atlantic roundhouses, although given its oval shape, the earlier dun is not strictly 'round'. So does that add anything to the discussion? Perhaps so, if, as has been shown, the later enclosure at Barnluasgan indicates a development from a more irregular oval shape to a regular circular one. Both sites were occupied from the latest part of the 1st millennium BC and probably continued to be occupied into the very early part of the 1st millennium AD, which reinforces the argument that most dun structures probably date to the latter half of the 1st millennium BC, though many may have been occupied/reoccupied at later dates. However, the later phase of enclosure at Barnluasgan shows that circular stone-built roundhouses were still being constructed at the very end of the 1st millennium BC or early in the 1st millennium AD. This discussion around classification might be more useful if we had more excavated and dated examples of similar sites.

What does seem apparent is that the shape of many of these structures, including those at Balure and Barnluasgan, are primarily dictated by the underlying topography, although there may be a preference towards circularity if the selected location allows it. If considered as a defensive site then the steep escarpment to the west of the dun at Balure would have provided an adequate barrier, negating any need for walling on this side, as there was no evidence for the enclosure wall reaching the vertical edge of the escarpment at the west. Equally, when considered in a non-defensive light, the rock ridge at the west would have provided an adequate 'side' or natural wall to any potentially roofed structure. This arrangement can perhaps also be seen within other dun structures, such as Druim an Duin, for example. The published report on the excavation at Druim an Duin suggests that the escarpment would have provided an 'ample defence', although it goes on to argue that the western side of the dun at Druim an Duin was enclosed by a wall and this had subsequently fallen away (Christison et al 1905: 285–6). This assumption, however, can perhaps be questioned when examining the remains today. While the north wall of the dun structure does appear to continue to the vertical cliff face at the west, it remains questionable whether the wall on the southern side does the same on this side, and it seems more likely that, like Balure, the wall only abutted the steep sloping ridge.

The walls of the structures at both Balure and Barnluasgan were heavily denuded and provided no evidence of any intramural features, although their original presence cannot be discounted entirely. However, the relatively narrow nature of the surviving wall widths at Balure and Barnluasgan, in comparison to other sites where such features are

recorded, suggests these features were unlikely to have been present.

The wider wall footings on the eastern sides of both structures might suggest that the walls were originally battered on these sides, although again this can only be conjecture. Within the core of the wall foundations at Balure there could be discerned several 'median' faces, although these were not consistent enough to suggest the presence of earlier narrower walls. Often these were formed by short alignments of larger stones, sometimes forming 'boxes' retaining smaller stone packing and this appears to be part of the primary construction of the walls. Other Mid Argyll duns where 'median faces' have been noted are at Dun a' Bhuilg (Canmore ID 39057), Ballymeanoch (Canmore ID 39463), Barr Iola (Canmore ID 39978), Cnoc a' Chaisteil (Canmore ID 22764) and Loch Glashan. As discussed by Henderson & Gilmour, the many 'median wall faces' recorded within drystone enclosure sites in Argyll and elsewhere are probably primary structural features built to add stability to walls of the structures, as demonstrated by the excavation of such a feature at Kildonan (Fairhurst 1939: 193; Henderson & Gilmour 2011: 93–5). It is likely then that the 'median' faces at Balure had a similar function designed to counteract internal subsidence or slippage of wall material.

The presence of an external buttress on the eastern side of the enclosure wall at Barnluasgan suggests that subsidence was a real problem, one which may also have been encountered at nearby Druim an Duin, where a small rectangular buttress similar to the one at Barnluasgan is shown and described on its eastern down-slope side in the published excavation report (Christison et al 1905: 286–7, fig 13).

Only the basal courses survive at both sites, which makes it difficult to postulate the height of the original walls, or whether they may have provided support for a roof. Locally, however, the presence of scarcements built as part of the better preserved walls of the duns at Druim an Duin and Ardifuir suggest that these features may have supported a roof, as has been argued for a similar feature at the Black Spout, Perth and Kinross (Strachan 2013). At Druim an Duin and the Black Spout the stones of the wall at the scarcement level slope down slightly towards the internal core of the wall; at Druim an Duin this appears to be a deliberate construction technique rather than slumping or subsidence, and was possibly designed to divert any roof run-off away from the internal wall face. It is possible that the lack of surviving height to the walls is not entirely due to later robbing, and that the upper parts of the walls were of turf, as in post-medieval Hebridean blackhouses. The use of turf for walling is increasingly being recognised in later prehistoric buildings (Romankiewicz 2019). Signs of collapsed turf were seen at Barnluasgan, though this could also have been derived from roofing material. However, both sites exhibited signs of later robbing, making it difficult to make any definitive statements as to the nature of the walling.

That some type of roof structure existed at both Barnluasgan and Balure is also suggested by the presence of post settings. The size and oval shape of the earlier structure at Barnluasgan may preclude that site from being wholly roofed, although the presence of post holes suggests that it was at least partially so. However, it is possible that building shapes were flexibly adapted to the topography and that irregular-shaped buildings could be roofed (Romankiewicz forthcoming). It is believed that the summit enclosure at Dunadd was roofed when it was adapted to a pear-shaped structure, though this was in the early medieval period (Lane & Campbell 2000: 94, illus 3.7). The later enclosure at Barnluasgan (*c* 14m in diameter) could also have been fully roofed but this has to remain speculation. Similarly, the size of the upper enclosure at Balure (Enclosure 1, *c* 12m in diameter) suggests that this could have been roofed and here it is tempting to see the alignment of three post settings within the upper enclosure as remains of a central roof support, while a post pad and post hole in the outer enclosure might suggest the presence of other roofed structures.

Recent excavation work in Argyll has shown a long and widespread tradition of timber roundhouse building. Several Late Bronze Age examples of timber roundhouses have recently been excavated in Argyll, at Killinochonoch (Canmore ID 312124), Glenshellach (Canmore ID 80610), Dunstaffnage (Canmore ID 304920) and Midross (Canmore ID 281534) (Clare Ellis pers comm; Becket 2005). Other timber roundhouse structures dating to the Iron Age have also been excavated, such as the remains of two roundhouses excavated on Tiree in the early 20th century, at Croniag (Canmore

ID 21442) and Balevullin (Canmore ID 21441) (Beveridge 1903; Mann 1906; MacKie 1963). Other Iron Age roundhouses have been uncovered at Ardnadam (12–12.5m diam, Canmore ID 40746), Bruach an Druimein (7.5–10m diam, Canmore ID 39451), Midross (9m diam) and Glenshellach (Rennie 1984; Abernethy 2008; Clare Ellis pers comm). At Glenshellach the large Early Iron Age roundhouse structure had a diameter of 14m, a roof span that would have adequately covered the later enclosure at Barnluasgan and the upper enclosure at Balure.

None of these timber roundhouse sites had above-ground indications of their presence and it is unknown how many other timber Iron Age sites exist in Argyll. Whether or not future excavation reveals these to be relatively common structures across the region, we now have enough evidence to indicate a tradition of constructing large and possibly complex wooden structures in the Bronze Age and continuing into the Early Iron Age period. These timber-working skills, which could have been readily transferred to the construction of duns, are also apparent in crannog construction. It has been estimated that the majority of crannogs were probably constructed between the 9th century BC and the 3rd century AD (Crone 2012: 167, fig 6.2), while radiocarbon dates suggestive of Iron Age occupation or construction have been obtained from two crannog sites in Argyll: Loch Ederline (550–200 cal BC, Canmore ID 22775) (Cavers & Henderson 2005) and Eilean Ban (400–60 cal BC, Canmore ID 22038) (Holley 1994c).

Apart from the entrance to Enclosure 1 at Balure, the site had little evidence of substantial internal paving, apart from patches of gravel or small stones. At Barnluasgan the proximity of the bedrock to the surface of the internal area at the eastern side may have meant no surfacing was needed, although attempts had been made to level out more expansive gaps between the natural bedrock outcrops to the south, and there were remnants of stone slab paving running around the eastern wall of the enclosure, similar to the paving uncovered at Glashan (Henderson & Gilmour 2011: 83). This reflects evidence from other dun excavations in Argyll, where formal stone or slab paving is sparse or absent. Relatively well-preserved duns such as Druim an Duin and Ardifuir, although extensively excavated, had no evidence of substantial internal paved or cobbled areas other than around the entranceways. On these sites it might be argued that any original flooring may not have survived later occupation disturbance and/or robbing, although in the absence of any such surfaces in both earlier and later periods, where not bedrock, any floors consisted of no more than beaten earth or areas of gravel/pebbles. We also have to consider the possibility of the use of wooden flooring. Many dun sites occupy steep rock ridges or knolls, those in North Knapdale mostly oriented south-west/north-east. The majority of excavated sites have shown that the walls of the duns enclose decidedly uneven ground, where some wooden flooring may have provided a more level internal surface, although any evidence of such flooring is unlikely to have survived. It might be argued that the function of the post placements against the upper enclosure at Balure supported such a floor, although this must remain speculation. At nearby Druim an Duin, however, there is a projecting lower scarcement or ledge running along the eastern wall circuit, and while this may be a later addition to the original structure it might also be substantive evidence for the presence of a suspended wooden floor, the under-floor area possibly used for storage.

There is arguably evidence for a raised wooden floor at the vitrified dun at Rahoy in Morvern. The published excavation report describes a 'raised hearth' around which lay uneven ground 'partly filled with large irregular blocks set flat face upwards' supporting burnt posts that 'would serve admirably as supports for beams' (Childe & Thorneycroft 1938: 32), although any such interpretative extrapolation from the published excavation report is not particularly easy and has to be treated with caution.

The outlying square 'cairn' structure at Barnluasgan still defies interpretation, although it can perhaps be discarded as an outwork of the dun. Several possibilities suggest themselves, including that it could be the remains of a demolished shepherd's bothy. In favour of this interpretation are its rectangular shape and the loose nature of much of the overlying stones with little soil matrix, presenting the excavator with a relatively recent appearance/feel. However, the lack of any obvious internal wall face or post-medieval finds may argue against this interpretation, while the loose material might be

explained by previous antiquarian investigation or, more likely, disturbance by previous forestry. As to what else this structure might represent, that is still open to question and to resolve it would require more extensive archaeological work than was afforded during this work.

Hearths were uncovered in both the earlier and later structures at Barnluasgan, associated with deposits that contained quantities of burnt cereal grain, suggestive of cooking areas or perhaps corn drying. Several areas of burning were identified within the upper enclosure at Balure, including a series of superimposed stone hearths, and again charred cereals were recovered from associated deposits around this area, suggesting food preparation or cereal processing.

In relative terms, occupation deposits at Barnluasgan produced a larger quantity of carbonised plant material, while similar evidence from Balure was more limited. The profile of the cultivated crops at Barnluasgan reflects the pattern of crop processing seen across Scotland in the Iron Age, with the predominance of hulled six-row barley (*Hordeum vulgare* var *vulgare*). Secondary crops of oats (*Avena* spp), naked barley (*Hordeum vulgare* var *nudum*) and emmer wheat (*Triticum dicoccum/spelta*) appear to have been grown in small amounts to supplement the main barley crop or for specific purposes. The presence of possible bread/club wheat may hint at certain food produce being brought to the site from further afield. The general absence of chaff and other crop-processing waste from the site suggests that processing took place off-site, the cleaned crop being brought onto site to be dried, stored and ground. Weed species are sparse within the collected samples, with only slightly elevated numbers of weed seeds in samples containing larger numbers of grain. This could suggest that wild taxa, principally a segetal/ruderal element, were either growing around occupation areas or accidentally brought to site with harvested crops. A similar range of cereals was recovered from occupation deposits of the Iron Age enclosure at Dunadd, with Phase 1A occupation (410 cal BC–200 cal BC) producing small quantities of barley, while Phase 1B (120 cal BC–130 cal AD) produced barley with some oats along with emmer/spelt.

At Barnluasgan occasional fragments of hazelnut shell were present across the site and may have been deliberately collected as food or animal fodder or brought on to the site with firewood. Woodland plant species were also exploited, including hazel, birch and oak. This reflects the emerging environmental picture for Argyll in this period, which suggests increased exploitation of woodland (Rymer 1974; Andrews et al 1987). At Rahoy among the mass of burnt material identified, oak was predominant, while hazel, willow or poplar, birch and elm were also present (Childe & Thorneycroft 1938: 41).

At Balure smaller quantities of barley were present within the collected samples, which also produced evidence of the exploitation of local woodland species similar to that at Barnluasgan. Interestingly, the samples most abundant in carbonised barley seeds were from two dumps of material in Enclosure 2 and not directly associated with a hearth or area of burning. Faunal remains at both sites were limited to small fragments of burnt bone, none of which were identifiable to species.

The range and quantity of artefacts from Balure and Barnluasgan, as with other Argyll sites of the period, is limited, although both sites had a similar range of artefact types. It is difficult to compare the sites to others in Argyll as there have been few modern excavations (those mostly small-scale), and many sites have later reoccupation, but a tabulation of the relative quantity of finds from duns, forts and crannogs in the area which had 1st-millennium AD occupation (Crone & Campbell 2005: 120–1, table 4) shows that the Balure assemblage is comparable to other dun sites such as Kildonan, Ugadale and Eilean Righ. If one excludes the occasional imported Roman artefacts, there is little to differentiate the artefactual assemblage of forts, duns and crannogs at this time, apart from the survival of organic material on crannogs. It may be that status was exhibited more in the structures themselves than in the material culture.

Apart from stone artefacts, which had a similar range of types on both sites, Balure had significantly greater range of material, with three glass beads, a possible iron sickle, and a variety of metalworking debris, while Barnluasgan had only one, unidentified, iron object. Most of the finds from Balure, including the unusual ones, came from the uppermost occupation deposits, perhaps indicating a general increase in wealth in the early 1st millennium AD. It may also be that the inhabitants of Balure were

of higher status, or were wealthier, than those at Barnluasgan; they certainly seemed to have access to a wider trade network as indicated by the beads.

Looking in more detail at the artefacts, utilised stones are common on excavated dun sites, with locally collected pebbles used as rubbing stones, whetstones and slickstones, and both sites produced a similar range of these types. Similarly, another ubiquitous activity is the working of slate or schist, to produce discs most likely used as whorls or game counters. However, unlike Barnluasgan, Balure produced a significant quantity of struck lithics (flint and quartz). While in the past this type of material has been dismissed as residual early prehistoric material, there has been increasing acceptance of the possibility small-scale flint working at later periods (Young & Humphrey 1999; Healey in Lane & Campbell, 2000: 200). As most of the Balure material was found in the artefact-rich upper occupation deposits, and as this included raw material, debitage and tools, it seems likely that this represents in situ manufacture in the Iron Age. A single upper stone of a rotary quern was recovered from both sites, the one at Barnluasgan unusual in being decorated with raised banding. The presence of the querns indicated that grain processing took place on site. Both querns appear to have been deliberately broken, and both possibly deposited as part of closure activities at the end of the life of the sites, as they were found in the latest deposits.

At Balure on-site metalworking was indicated by the presence of furnace lining, slag, hammerscale, crucible fragments and a possible mould fragment. Barnluasgan had less evidence, with small fragments of fuel ash slag recovered from the site, although these could have been the result of any process that involved a relatively high heat. There is evidence of metalworking from other excavated dun sites in Argyll, such as the fragment of iron slag from Dunan Breac, although this, as with other evidence of ironworking from dun sites, is not securely dated (Graham 1915).

More unusual was the recovery of three glass beads from Balure, two of which are toggle beads. Research by Martina Bertini and Clare Ellis on the toggle beads from Scotland, the Isle of Man and Ireland has shown the glass toggle beads from Balure are probably of localised manufacture reusing imported Roman glass (Bertini & Ellis 2015; Bertini & Ellis forthcoming). In Argyll glass toggle beads have also been found on other sites, at Dun Fhinn, Ronachan Bay and the fort at Dunagoil. Jordan argues that given the relative rarity of toggle beads in Ireland they may have been considered prestige items (Jordan 2010: 28). If this is the case, their recovery may cast some light on where they have been found. Apart from the Kilninian example, all are fort or dun sites, which indicates these are places where, given the current evidence, prestige items are predominately consumed. The bead recovered from Kilninian on Mull was very likely lost or discarded during the manufacturing process, possibly by an itinerant craftsman who would have supplied the local demand. The Scottish distribution of glass toggle beads, along with those of the Isle of Man and Ireland, suggests a distinct Atlantic bias and indicates functioning trade connections during this period. The use of Roman glass to produce these beads in the pre-Roman Iron Age suggests contacts with areas further south at a time when very few Roman artefacts were reaching Scotland (Hunter 2007: 22).

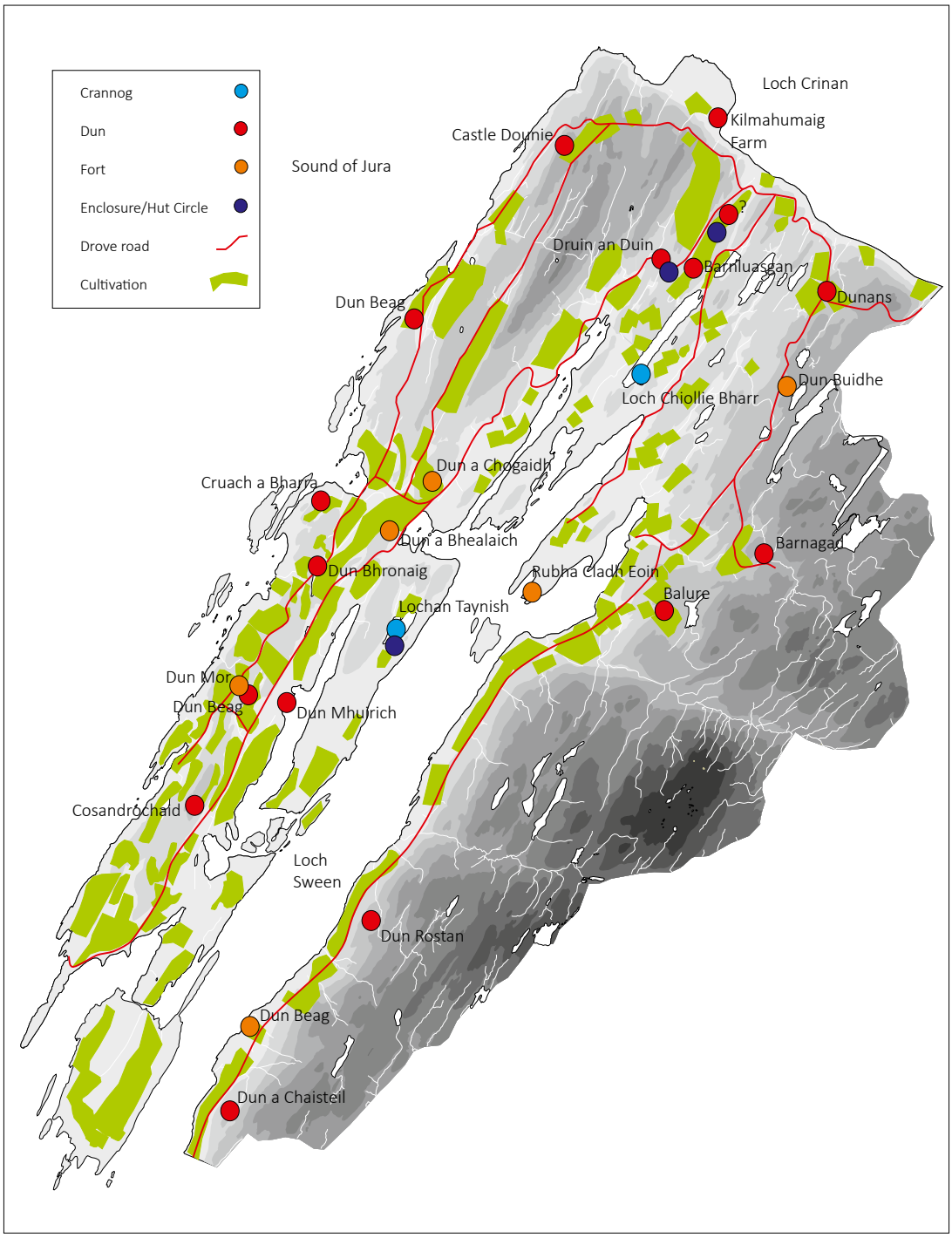
Pottery was absent from Barnluasgan but a small assemblage of pottery was recovered from Balure, representing the remains of least two vessels. The limited size of the assemblage and vessel types can be seen as a reflection of wider ceramic traditions that developed across mainland and southern Argyll in this period. Undecorated pottery has been recovered from a number of dun sites in Argyll, including Dunan nan Nighean (Piggott 1951), Ardifuir (Christison et al 1905), Leccamore South (MacNaughton 1891, 1893), Kildalloig (Bigwood 1964), Kildonan (Fairhurst 1939), Dun Aorain (RCAHMS 1970), Dun Cul Bhuirg (Ritchie & Lane 1980), An Caisteal (Fairhurst 1962), Dun Mhic Choigil (Hedges & Hedges 1977) and Dunadd (Lane & Campbell 2000). The majority of these vessels have coarse fabrics and are often crude in form. Compared to these coarse forms, the fabric of the Balure vessels is relatively fine and very similar to the fabric of pottery sherds recovered from Ardifuir and Dunadd (Christison et al 1905: 269, NMS Nos. GR 25 and GR 27; Lane & Campbell 2000: 104, illus 4.5, NMS No. GP 247). While none of these sherds are from directly dated Iron Age deposits, Campbell & Lane suggest these may be part of a Middle Iron Age tradition found in mainland Argyll.

If so, the pottery from Balure might indicate that this undecorated pottery tradition belongs to the late 1st millennium BC, perhaps underlined by pottery of similar type recovered from a possible roundhouse platform at Carnassarie, which produced a date of 380–190 cal BC (SUERC-31666) (Ellis 2008). The relatively small quantity of sherds recovered, along with limited form types, perhaps suggests a restricted function or use of pottery in this period, with most vessels perhaps being made of wood or other organic materials. This is in contrast to relatively abundant production of decorated Hebridean wares that develops further north and west in the same period and suggests a zonal differentiation across Argyll in terms of ceramic traditions. If the presence of toggle beads throughout the same Atlantic zone in this period can be used to demonstrate active cultural and trading networks across this region, then other reasons perhaps need to be sought for the general presence/absence of decorated Hebridean pottery from other areas in Argyll, beyond the scope of this paper.

Previous palaeoenvironmental research indicates climatic change across Argyll in the Iron Age. From the early 1st millennium BC woodland clearance has been identified, at Aros Moss, Kintyre (Nichols 1967) and later, probably after 300 BC, at Loch Shiel, Ardnamurchan (Tipping 1994). It is argued that both of these pieces of evidence of woodland loss represent clearance for agriculture during this period. By the mid-1st millennium BC, however, there is also evidence from Oronsay and Colonsay of woodland regeneration on previously cultivated land, with woodland regeneration also evidenced in pollen data from Gallanach Beg, Oban (Rhodes et al 1992) and Aros Moss in the second half of the 1st millennium BC. This probably reflects deterioration in climate over this period, becoming increasingly wetter and cooler, but despite this the pollen record shows continuity of crop growing there up till at least the early medieval period (Tipping & Verrill 2011: 167). Estimating population in this period, even if we assumed that the majority of dun structures were contemporary, probably defies realistic estimates given our current knowledge. However, assuming a generally stable population, loss of land to climate deterioration would have led to increased competition for land. This pressure on land tenure may have manifested in violence, leading to a movement away from less easily defendable sites to ones that offered more protection, with perhaps a move away from primarily wooden structures to ones substantially constructed in drystone and built on ground where access could be more readily controlled. Without knowing a fuller picture of how and where the majority of the Iron Age population lived in Argyll it is difficult to make assumptions about who built the dun structures, their social standing within that society or how any dun structure may have reflected it.

Some insights as to their status and possible function might be gleaned by looking at where these structures were built. A study of the distribution and location of dun sites in Argyll shows that the majority of sites are located between sea-level and 120m OD and occupy similar topographic locations, generally on gently sloping ground at southern, south-western and western facing hills (Werner 2007). The distribution of dun and fort sites in North Knapdale (Illus 116) reflects that seen elsewhere in Argyll, where they are generally on elevated ground below the 150m contour, predominantly overlooking and having relatively easy access to the sea. The proximity to and perhaps the control of local resources, whether marine resources, animal pasture or arable land, was undoubtedly a prime consideration in the selection of a suitable site to construct a dun structure.

Today many of the dun sites in North Knapdale and elsewhere in Argyll are not always close to the readily identifiable areas of potential cultivable land or areas of pasture (particularly where commercial forestry plantation now encroaches). Identifying Iron Age land-use patterns surrounding any specific dun site is problematic, given that the available agricultural land in Argyll, as elsewhere in the Highlands, was limited, with any potentially exploitable land utilised by successive generations of farmers. More detailed land-use survey and excavation might identify relict land-use patterns, but this work remains a task for future study. At present the best indications we have for potentially exploitable land is the extent of land cultivated during the population peak of the early 19th century. While this might give an upper limit of arable exploitation, it is more difficult to gain a picture of potential pastoral use. Using historic maps and aerial photographs, a plot of relict agriculture



Illus 116 Dun, fort, enclosure and crannog distribution with areas of later cultivation in North Knapdale. (Image by Roddy Regan, © Kilmartin Museum)

patterns can be produced for North Knapdale and while not definitive, gives some idea of potentially exploitable land.

This late land-use pattern shows a strong correlation of dun sites and potential cultivable land which perhaps one would expect, if duns, as we tend to assume, were built by those controlling the immediate landscape (Illus 116). There also appears to be a correlation between duns and the older established tracks or drove routes through the

area, although whether both functioned at the same time would be hard to prove.

The plot of duns and forts in North Knapdale also suggest there are 'landscape gaps' where one might 'expect' the presence of a dun structure, given the proximity of cultivated or previously cultivated ground. Survey work in the area has 'plugged' several of these gaps, identifying dun structures at Balure itself and at Laganruere/Barnagad (Canmore ID 290104, Regan 2006) and confirming what are probably enclosure structures at Dunans (Canmore ID 39611) and Dun Buidhe (Canmore ID 39411, Regan 2005). Despite this, there remain areas such as the Taynish peninsula and Danna where no dun or fort structures have as yet been recorded. Taynish does have a potential crannog (Canmore ID 39085) and the name of Dun Taynish at the north end of the peninsula hints that a site may still await discovery. The confirmation of what appears to be a large roundhouse near Locahan Taynish, along with the 'enclosures' at Barnluasgan for example, although as yet undated, suggests other types of structure need to be considered when compiling a picture of the Iron Age landscape (ScARF 2017). The dates from Balure and Barnluasgan suggest that many of these sites would have been occupied at the same time, even if they have different morphologies. Whether or not these sites represent the homesteads of single extended families, the close spacing suggests a fairly flat hierarchical structure. However, the investment of resources in building these duns, and the access to traded goods, suggest the inhabitants were above the subsistence level. There may well have been less substantial structures (for example of turf and wattle) for a lower stratum of society, but these structures would be very difficult to identify. The recent excavations of an unenclosed site at Kilninian, Mull may be an example of such a type of structure, and has a radiocarbon date similar to the duns discussed here (Bertini & Ellis 2015).

The work at both Balure and Barnluasgan has firmly placed the construction and occupation of these dun sites in the late 1st millennium BC, continuing into the early centuries AD, and adds to a growing body of evidence that indicates this period might represent a florescence of dun building and occupation. This present work adds to our picture of the Iron Age in Argyll but much still remains to be understood in terms of chronology and function of these structures. Duns, however, are only one structural element in a wider Iron Age landscape about which we still know little and we need to understand more about these and what is happening around and between them before we can more fully address any questions of the place of duns in their contemporary landscape.

8. APPENDIX 1: ANALYSIS OF BLACK RESIDUE ON TWO CERAMIC SHERDS FROM BALURE

Susanna Kirk

Two small ceramic sherds (<100> SF116) from Balure with a black residue on their inner surfaces were analysed non-destructively by XRF to check for inorganic residues. The XRF system used was an Oxford Instruments ED 2000 with Oxford Instruments software ED2000SW version 1.31. The analysed area was irradiated with a primary X-ray beam produced by a Rhodium target X-ray tube. The primary beam was collimated to give an analysed area of about 4 × 2mm. Secondary X-rays were detected with a silicon (lithium) solid state detector. The detection limit varies depending on the elements, matrix and analytical conditions, but typically in the range of 0.05%–0.2%. As the analytical technique has a limited penetration depth, the reported compositions may not represent the bulk of the alloy if there is a chemically distinct surface layer. Spectra were collected under the conditions 'Old XRF'. This uses operating voltage of 46kV and a current of up to 1000μA (set automatically for a 45% dead time) without a primary beam filter to ensure detection of all elements of atomic number 19 or above.

The XRF results show no visible difference in spectra from the residue and the exterior of sherds. There are no elements present that would be unexpected in fired clays. No traces of inorganic residues were found, the analyses of the inside and outside of the fragments being very similar. This suggest that the residues are not inorganic in nature and would require further analysis using different techniques to identify them.

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