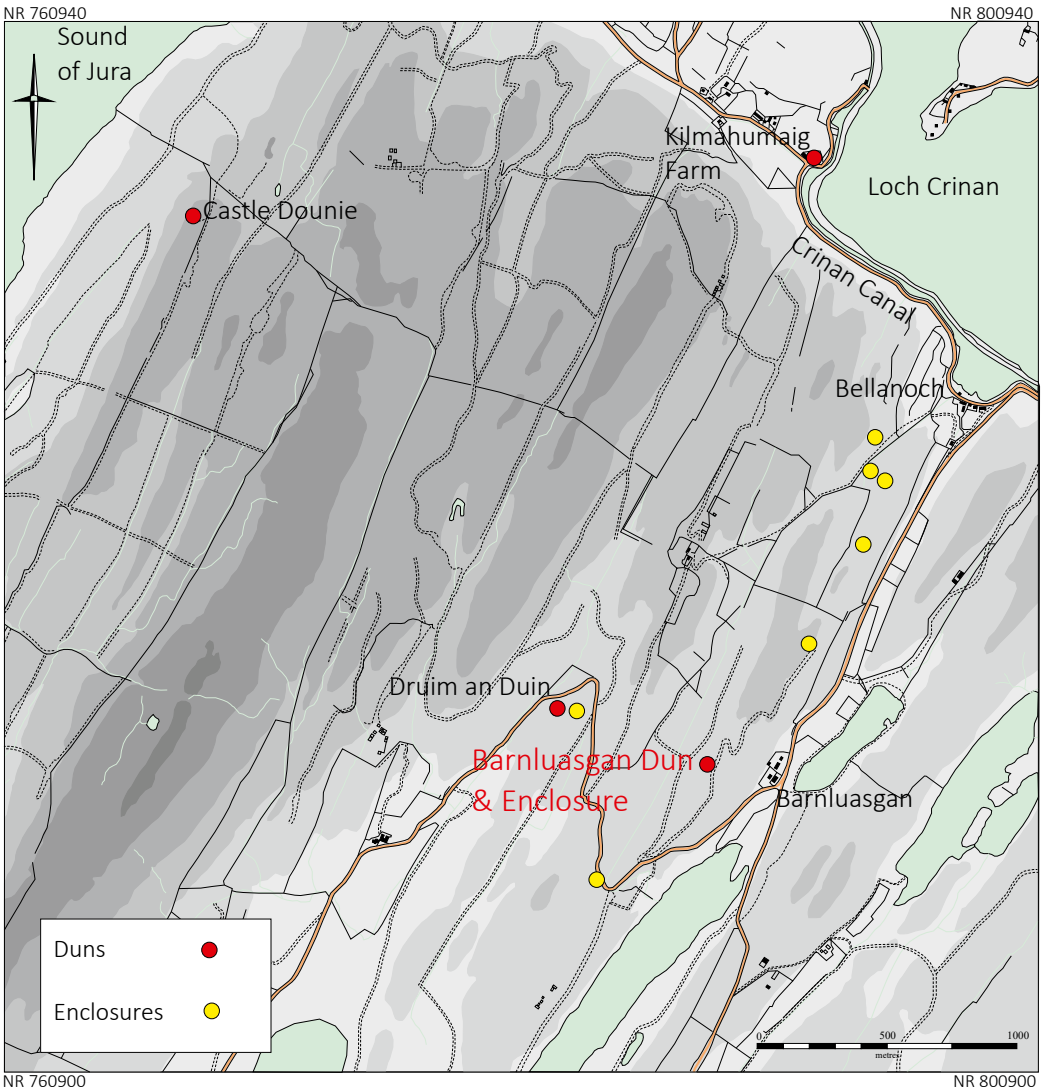
5. BARNLUASGAN DUN AND ENCLOSURE

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).

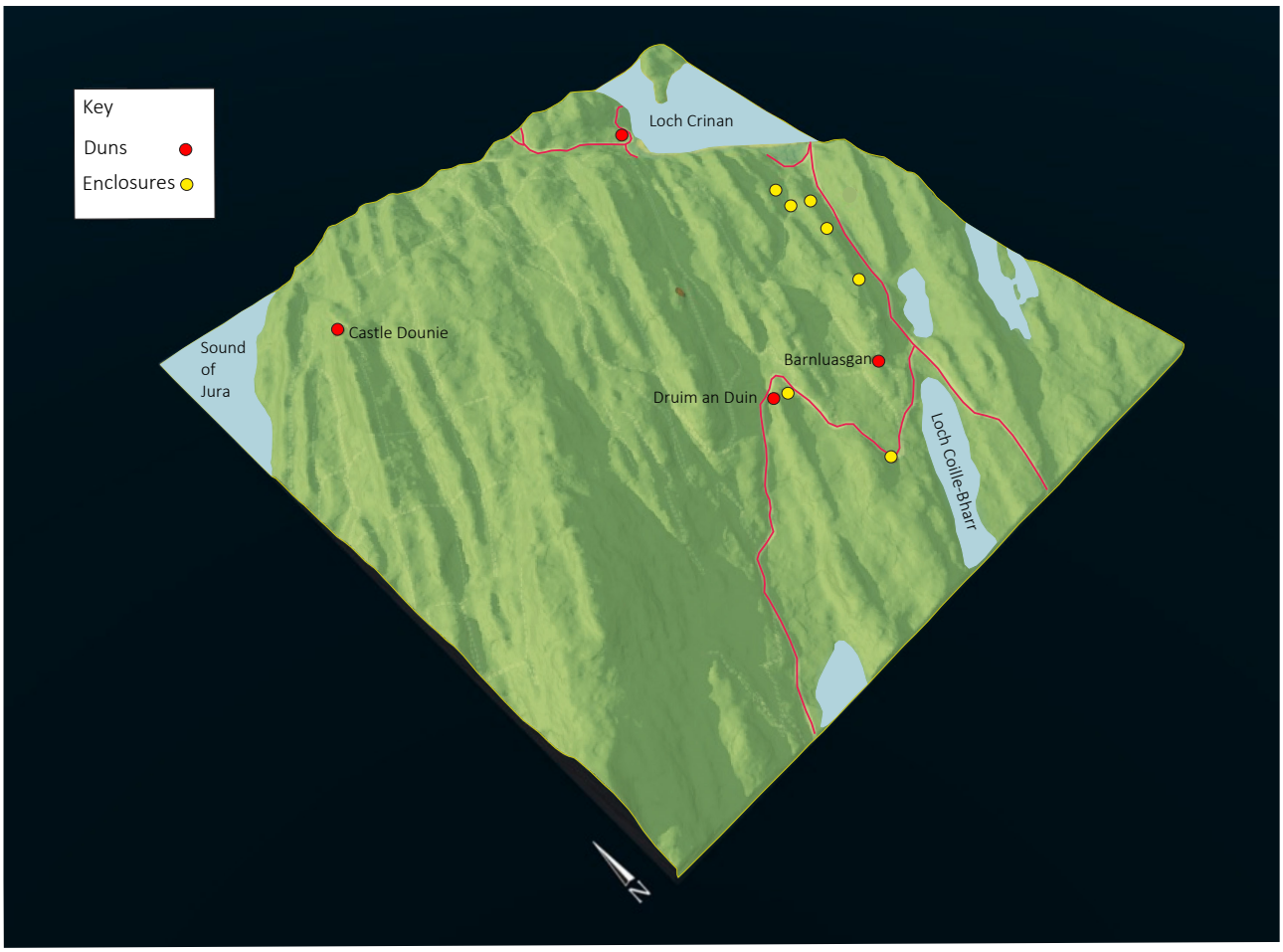
Campbell & Sandeman briefly described the site (Campbell & Sandeman 1964), while a fuller description and survey of the dun and enclosure was undertaken by the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS 1988) and the site was scheduled in 2001.

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)

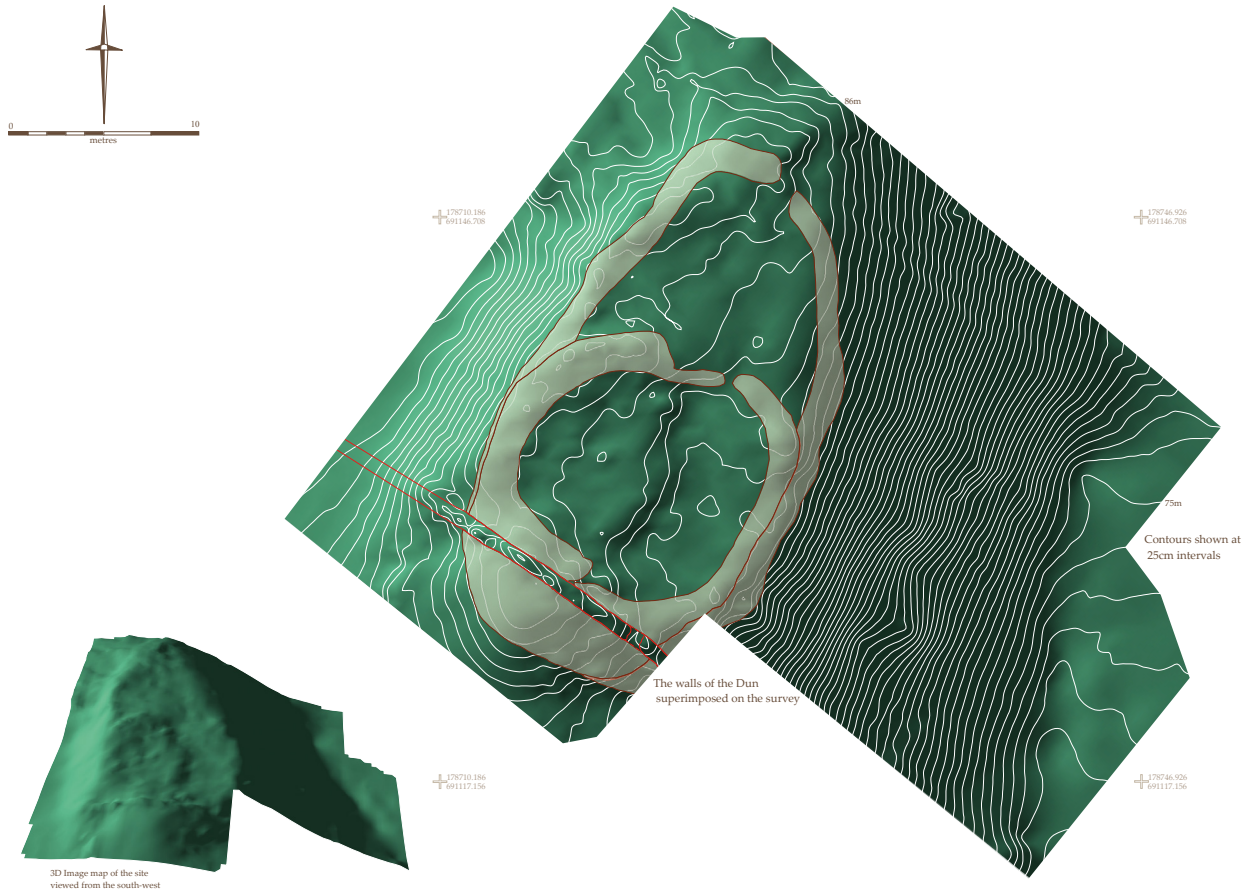


Figure 5: 3D image map of the dun and enclosure

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

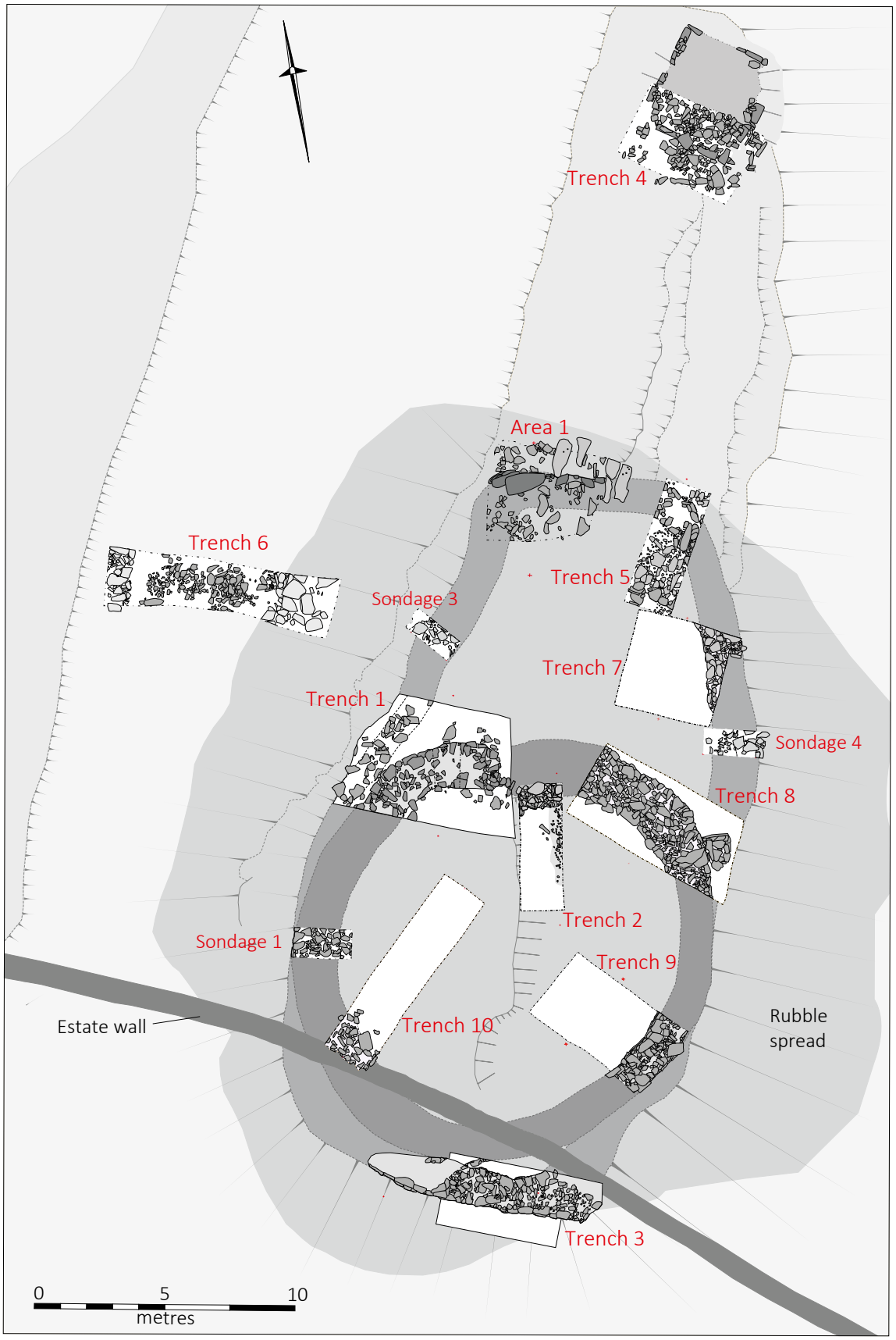
The trenches will be discussed individually from the earliest to the latest deposits encountered. The upper soils in all trenches were badly disturbed by the presence of bracken roots and degraded and recent tree root disturbance from the Sitka plantation that previously covered and surrounded the site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

5.4.1 Trench 1

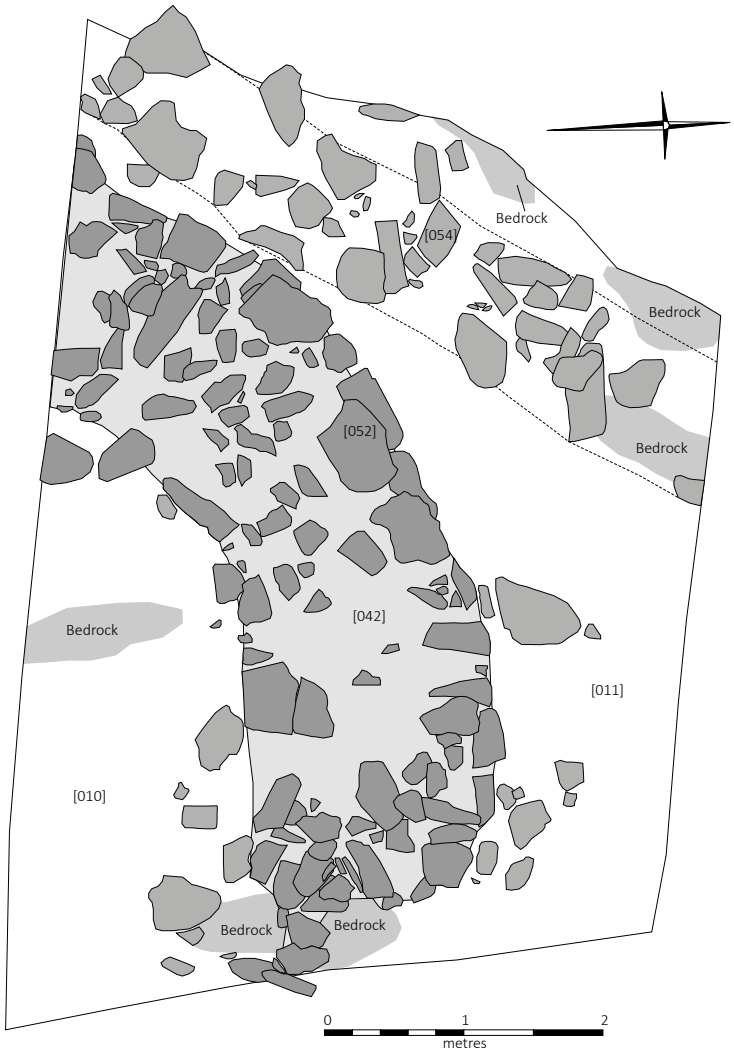
Wall structures

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)

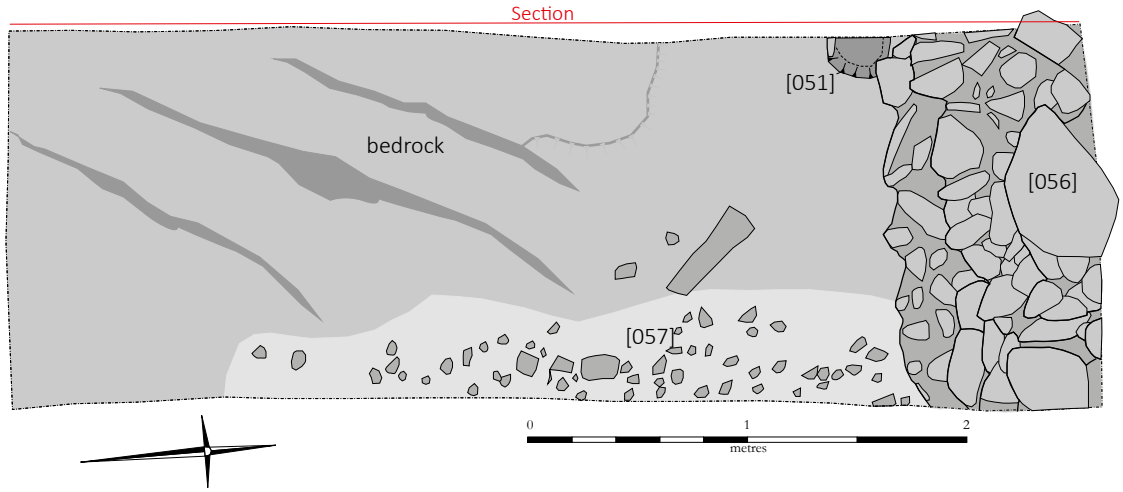
few other finds. This soil was extensively disturbed by roots of trees and bracken, and several degraded tree stumps were exposed in excavation trenches.

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)

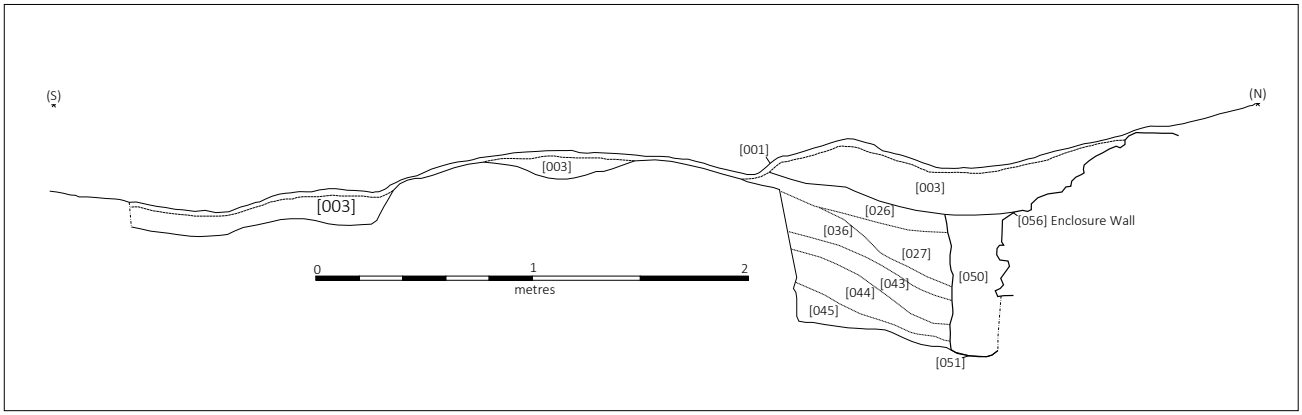
Enclosure construction

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

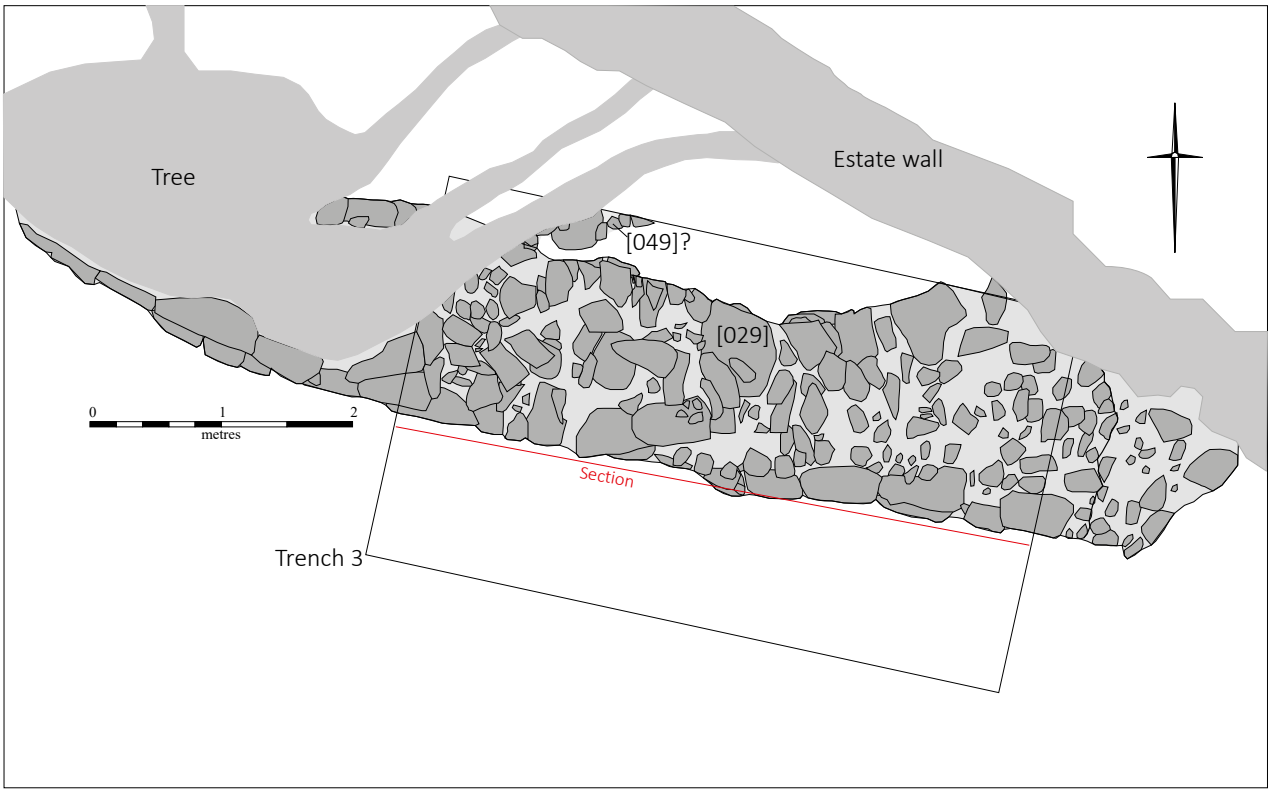
Once the topsoil had been removed from Trench 3 (Illus 14) it became clear that the whole of the trench was occupied by the dun wall (029) and rubble (C023) likely derived from its collapse/demolition. The wall for the most part appeared to be constructed directly on bedrock, with only small patches 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



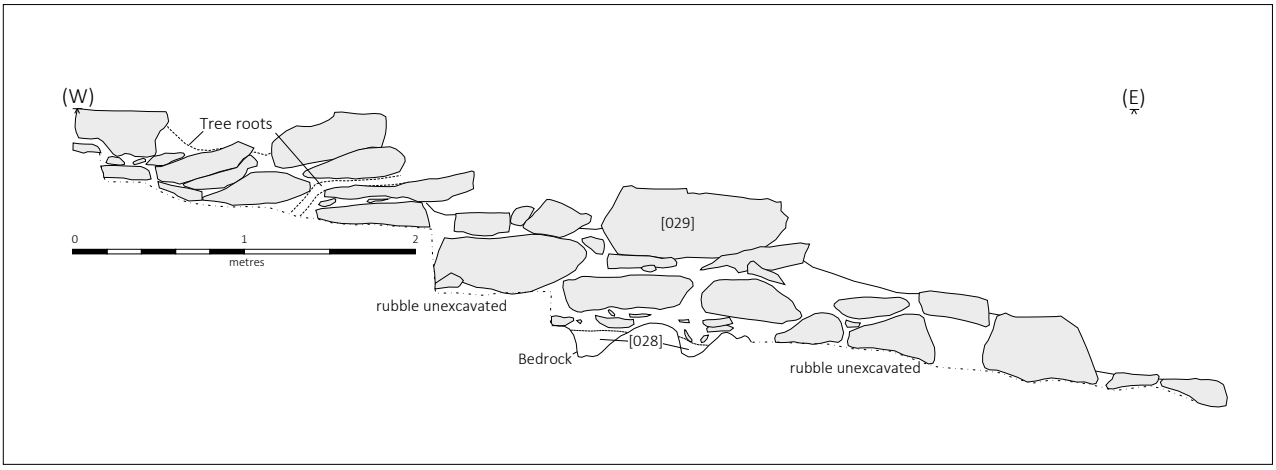
Illus 11 Trench 2, east-facing section with post hole 051 against enclosure wall. (Image by Roddy Regan, © Kilmartin Museum)

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).

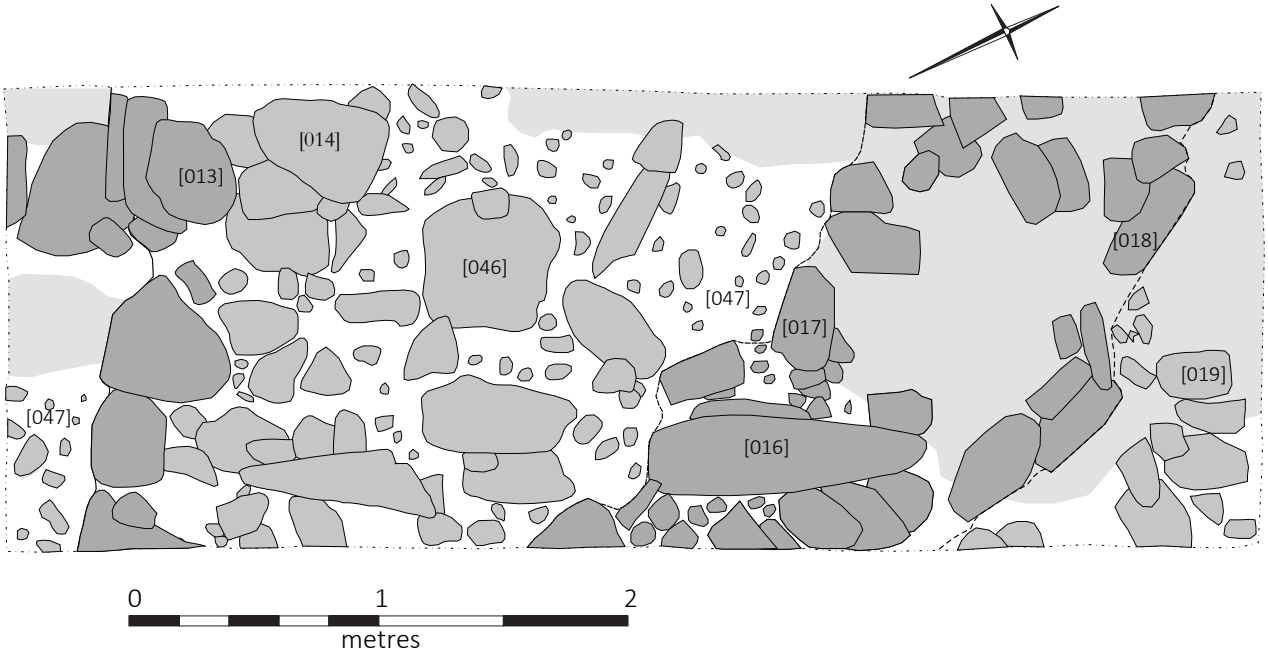
5.4.4 Trench 5

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)

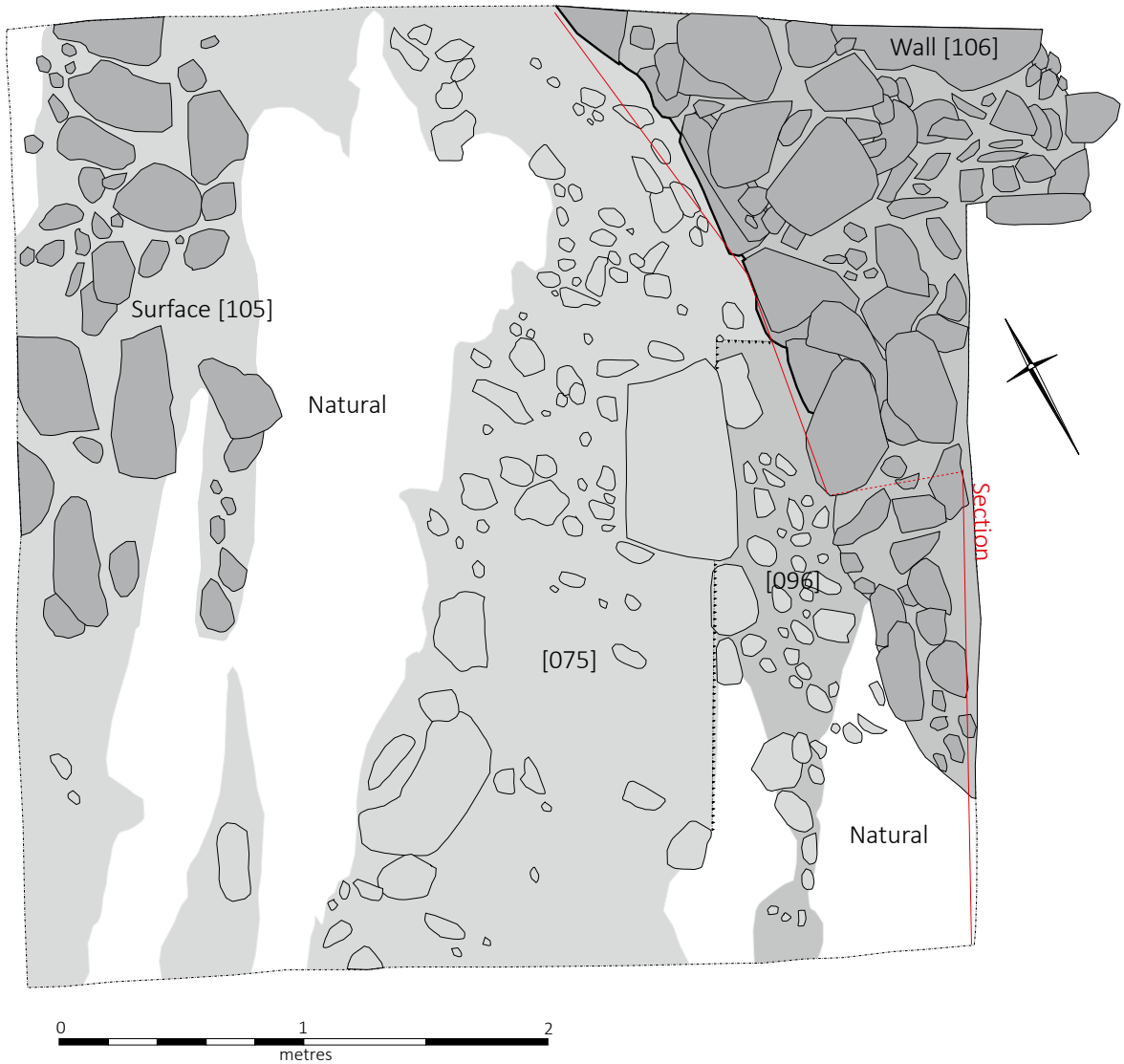
the southern half of the trench were flat stone slabs (C046) and pebble spread (C047) placed in and between dips within the natural bedrock, creating a level surface (Illus 20). At the south edge of this surface was a wall line (013/014), which could suggest the presence of an internal structure, albeit 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).

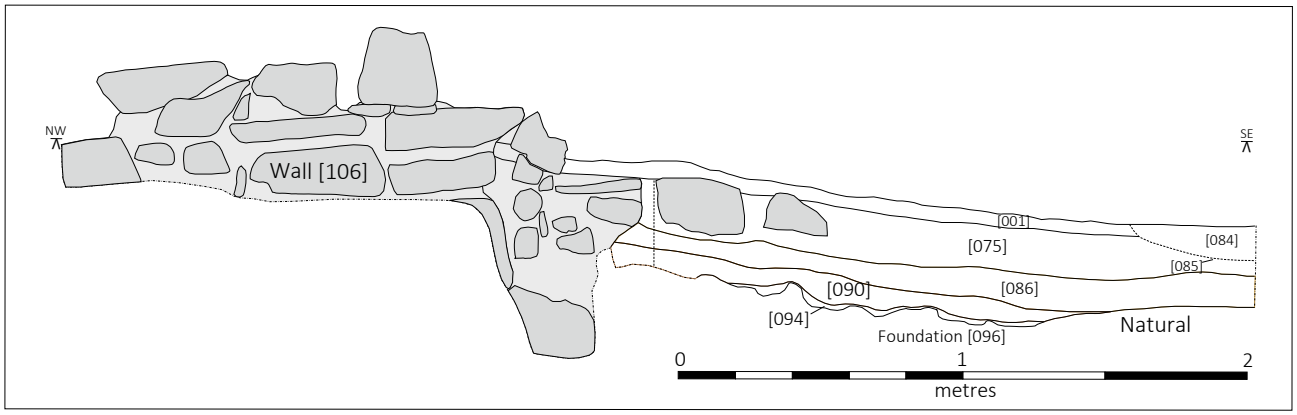
5.4.5 Trench 7

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)

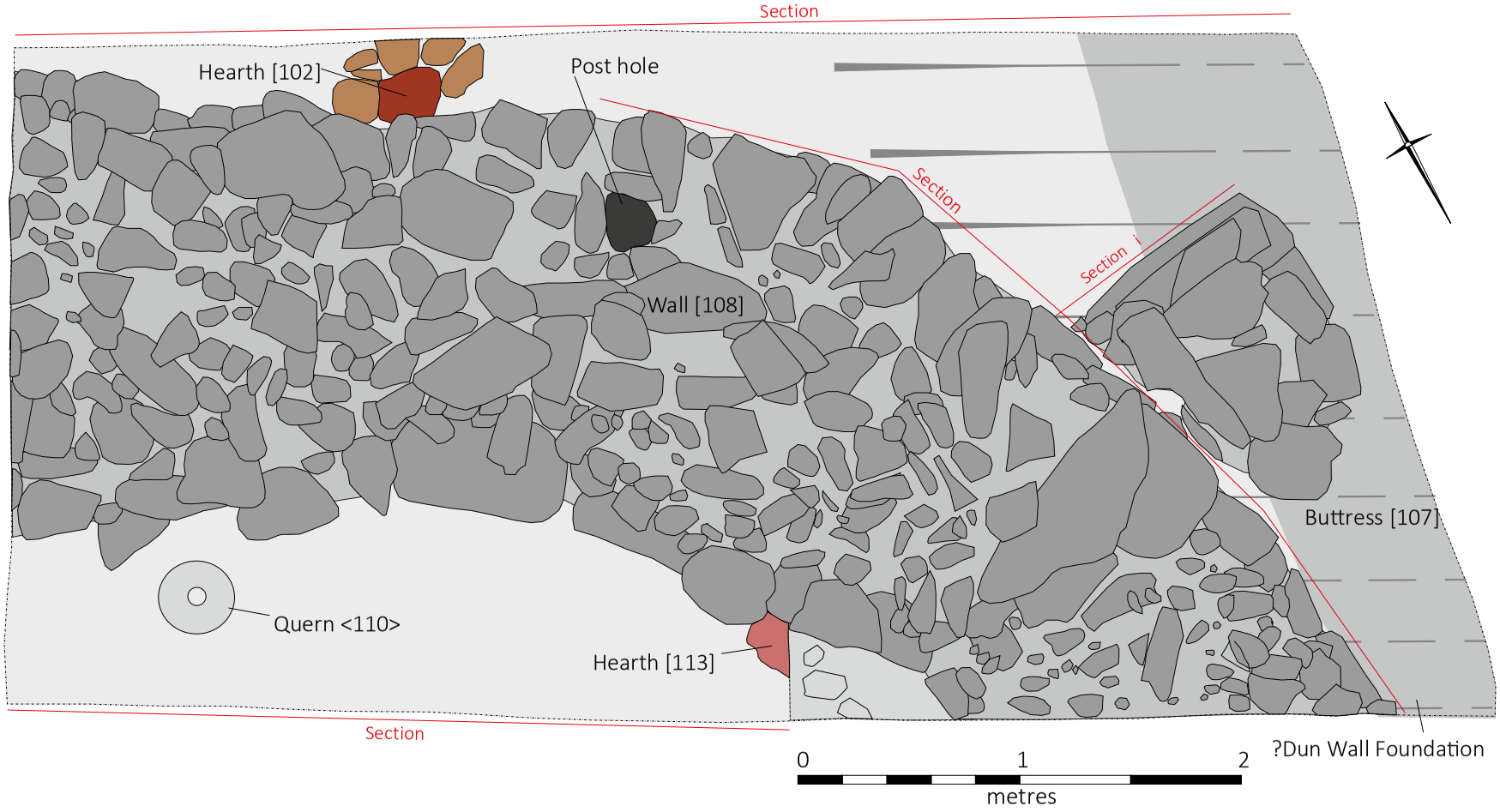
stones discarded when larger blocks were taken from the wall. Context (075) was sealed by topsoil and vegetation cover (C001).

5.4.6 Trench 8

Dun occupation

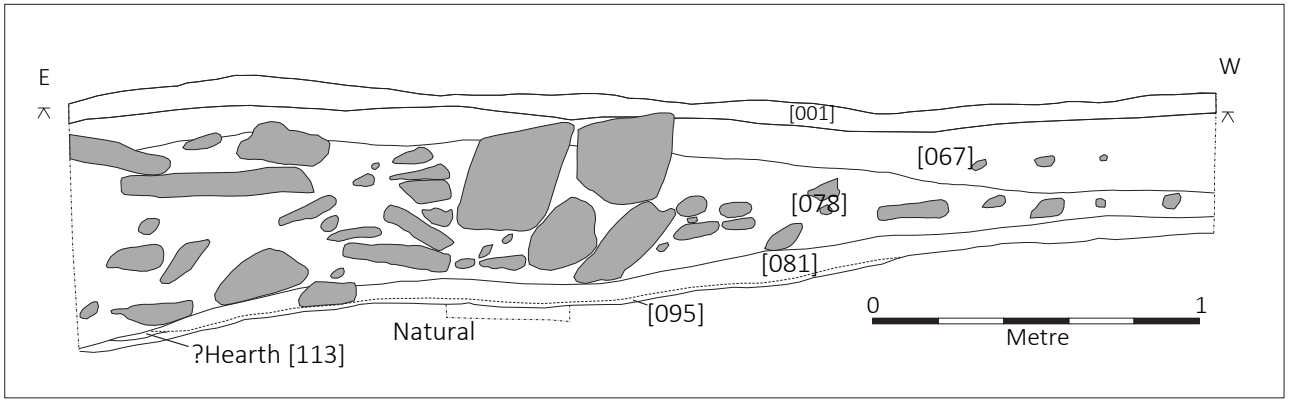
Although natural bedrock was not encountered within Trench 8 (Illus 26), the nature of the excavated deposits suggests a similar stepped profile from west to east as seen elsewhere across the site. The earliest deposits located within the trench appeared to be the robbed or collapsed remains of the original 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

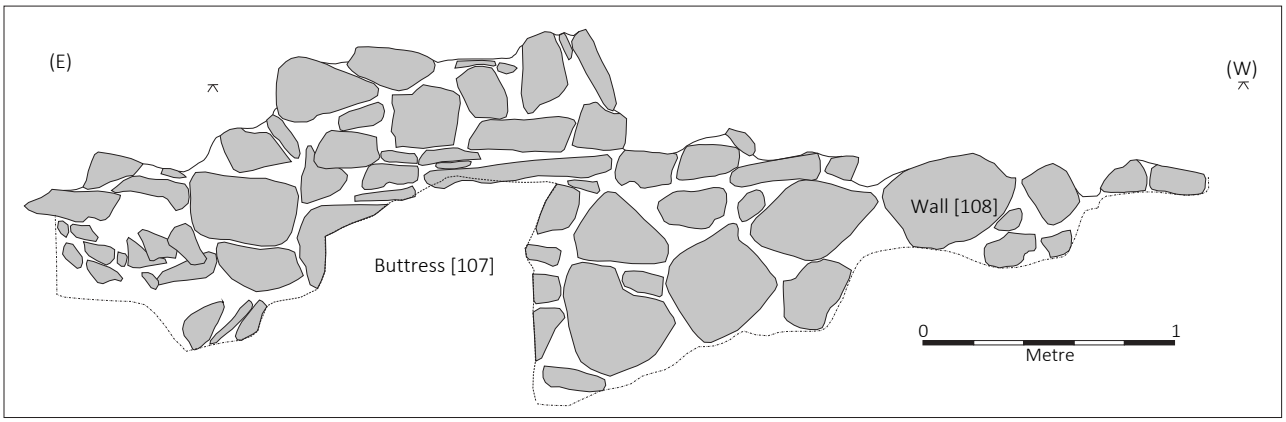
The north-eastern arc of the enclosure wall (108) ran through the trench (Illus 29). The wall measured

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

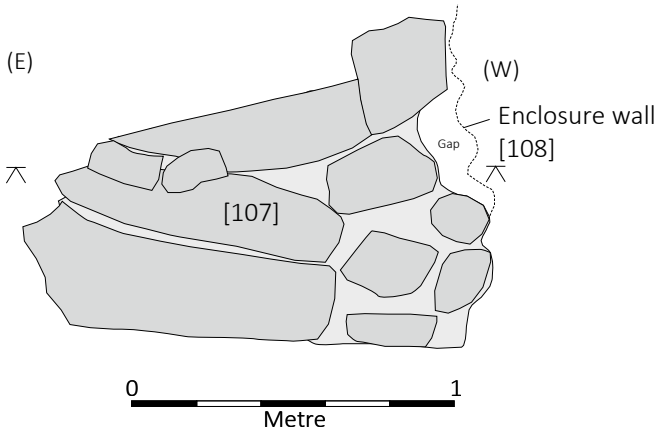
Illus 29 Trench 8, later enclosure wall (108) looking east. (Image by Roddy Regan, © Kilmartin Museum)

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

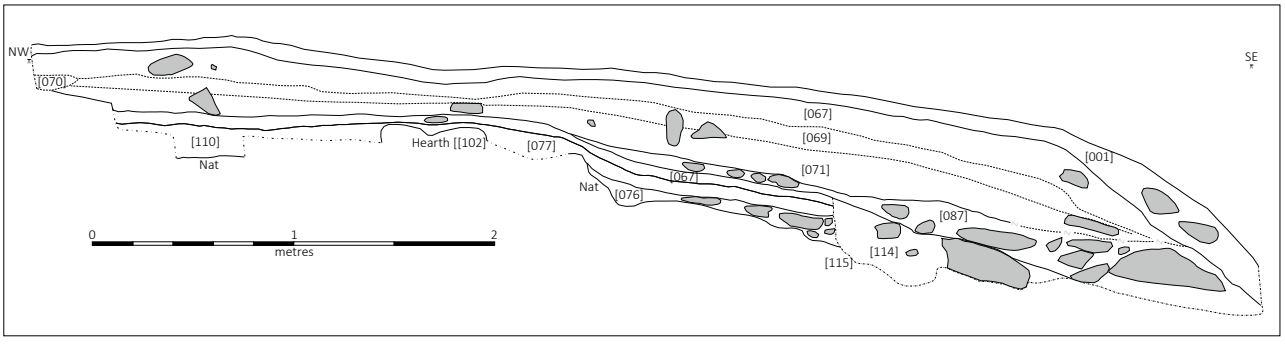
A natural bedrock ridge ran along the western edge of Trench 9 while the enclosure wall defined the east. Between these lay a relatively deep sequence of deposits.

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)

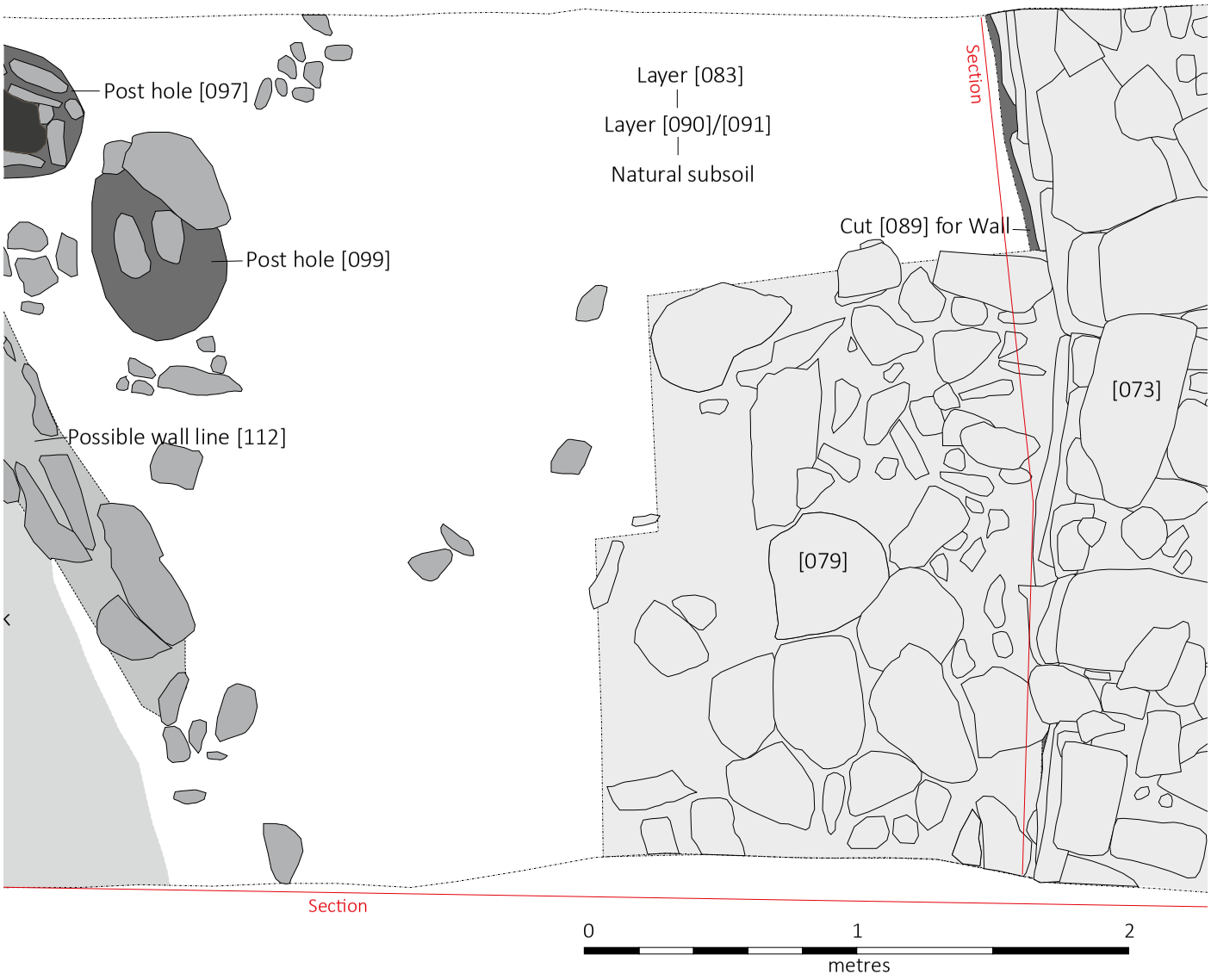
A distinct cut (089) (and fill (C088)) for the enclosure wall truncated the earlier dun occupation deposits (Illus 36, 44). The presence of this construction cut suggests that any earlier dun wall and/or occupation deposits had been cut back or levelled prior to the wall being built or reconstructed 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.

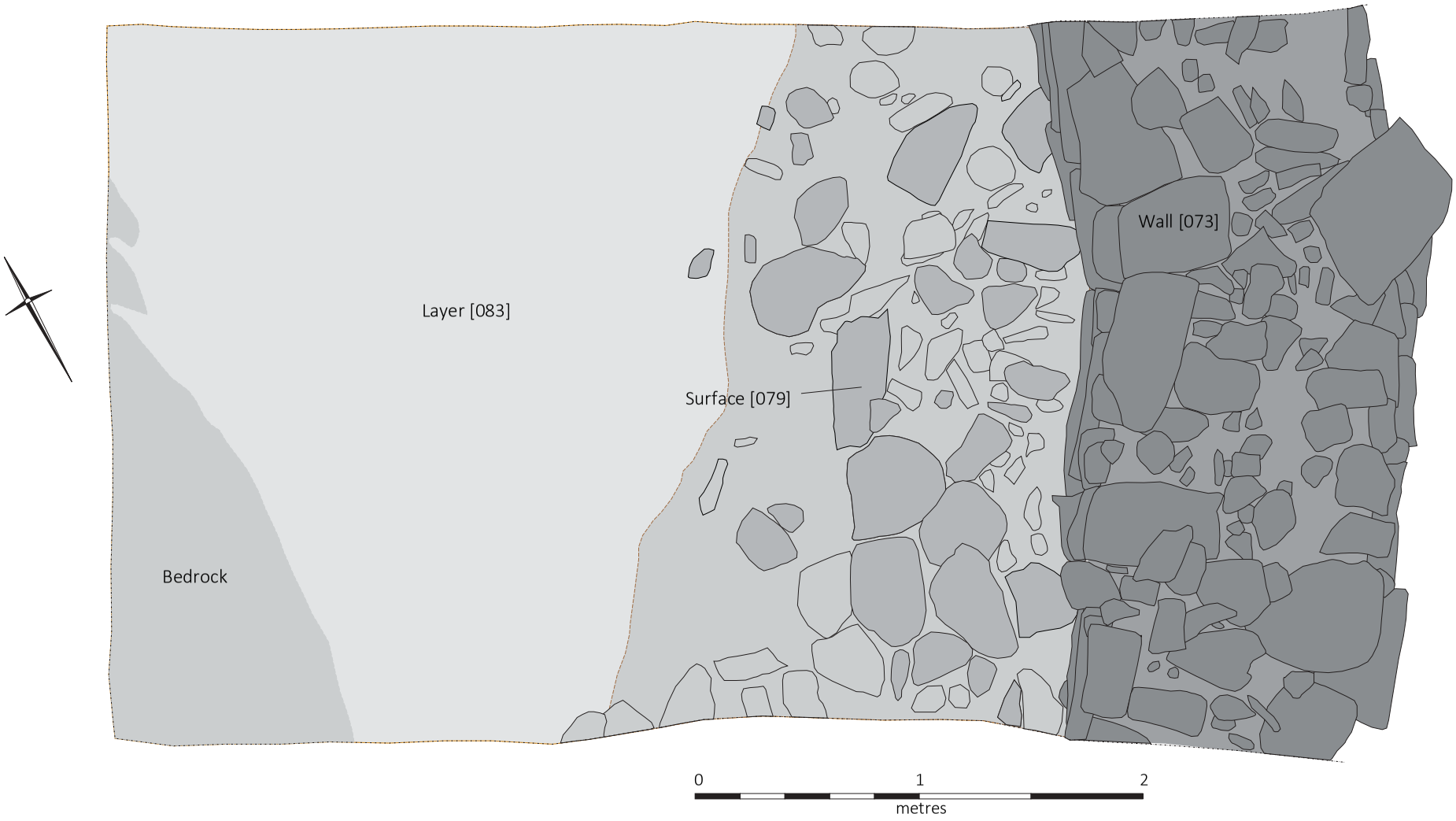
5.4.9 Area 1 (Illus 48)

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).

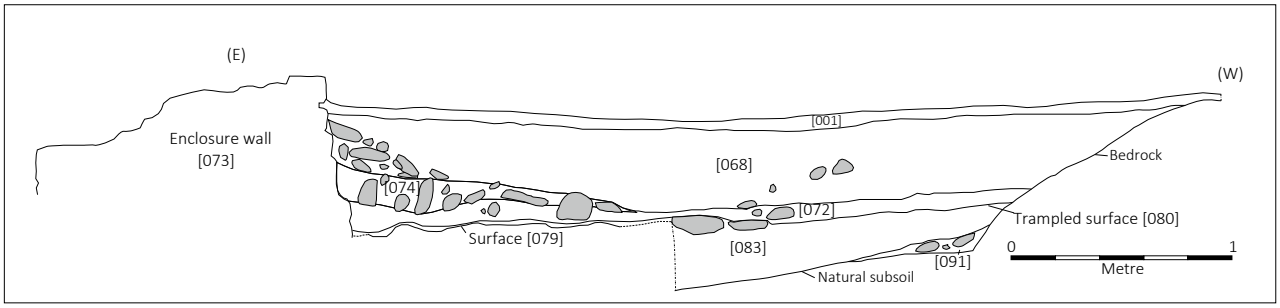
Two panels of bedrock to the north of the dun wall bore cup-marks. The eastern panel (064) displays two clear cup-marks with perhaps traces of two more (Illus 50), while the western panel (065) incorporated two cup-marks (Illus 51).

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.



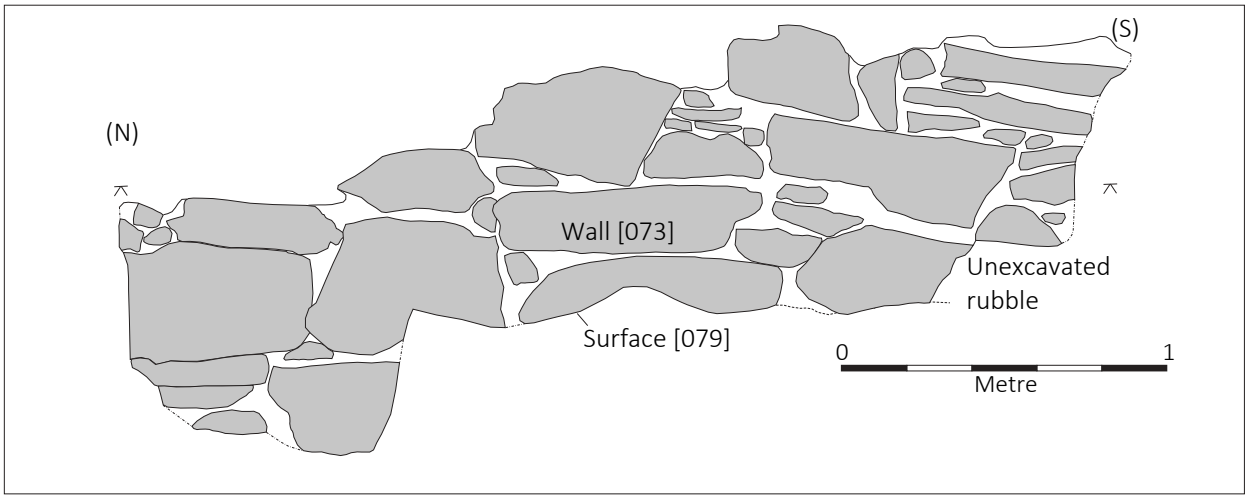
Illus 38 Trench 9, later deposits (079), (083) and wall (073). (Image by Roddy Regan, © Kilmartin Museum)



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.

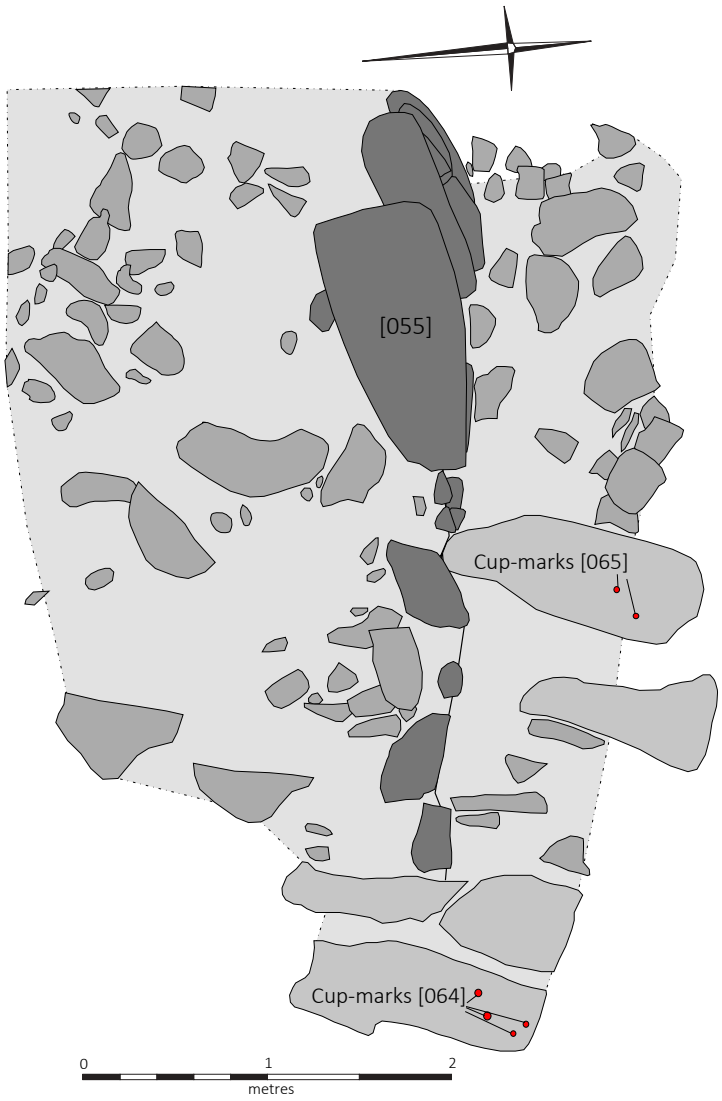
Two further areas were investigated during the first phase of work, both lying outside the dun and enclosure.

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.

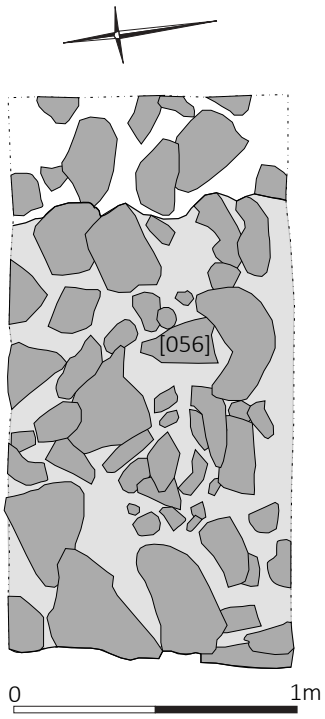
The lowest deposit uncovered within the trench was a grouping of stones that may have been the remnants of a curvilinear wall (038). Sealing these stones was soil (C037), this in turn sealed by what appeared to be the remnants of a rough surface (C035/039) situated at the west of the trench. Sealing 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)

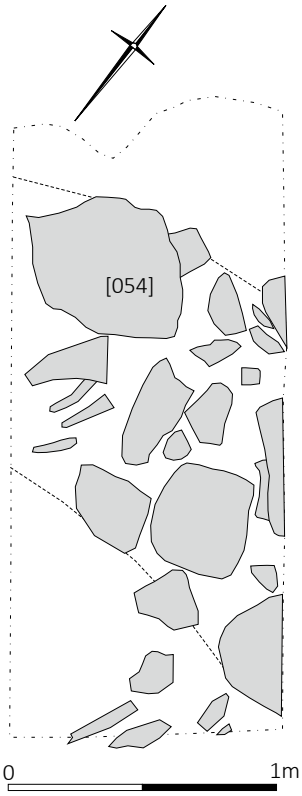
Illus 50 Area 1, cup-marked panel (064) looking south. (Image by Roddy Regan, © Kilmartin Museum)

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

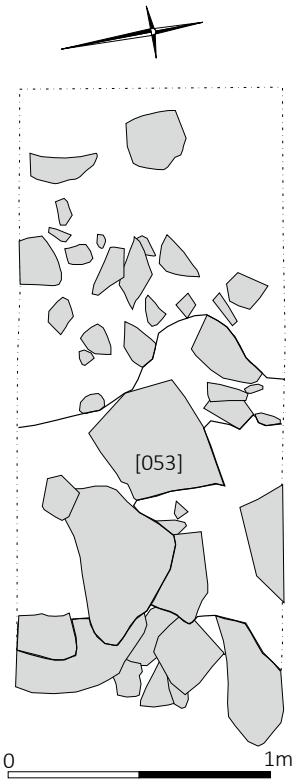


Illus 52 Sondage 1. (Image by Roddy Regan, © Kilmartin Museum)

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

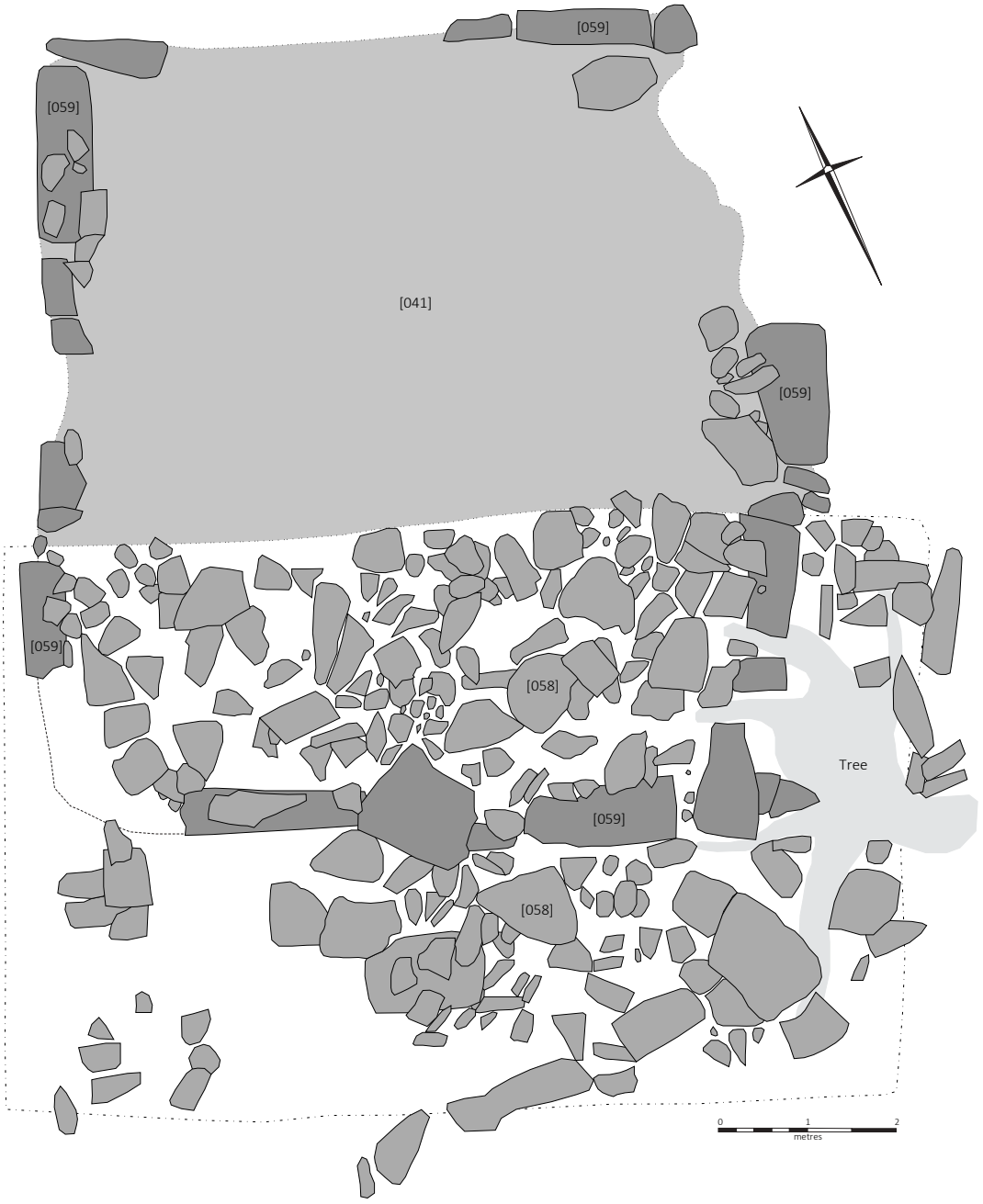
Ewan Campbell

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



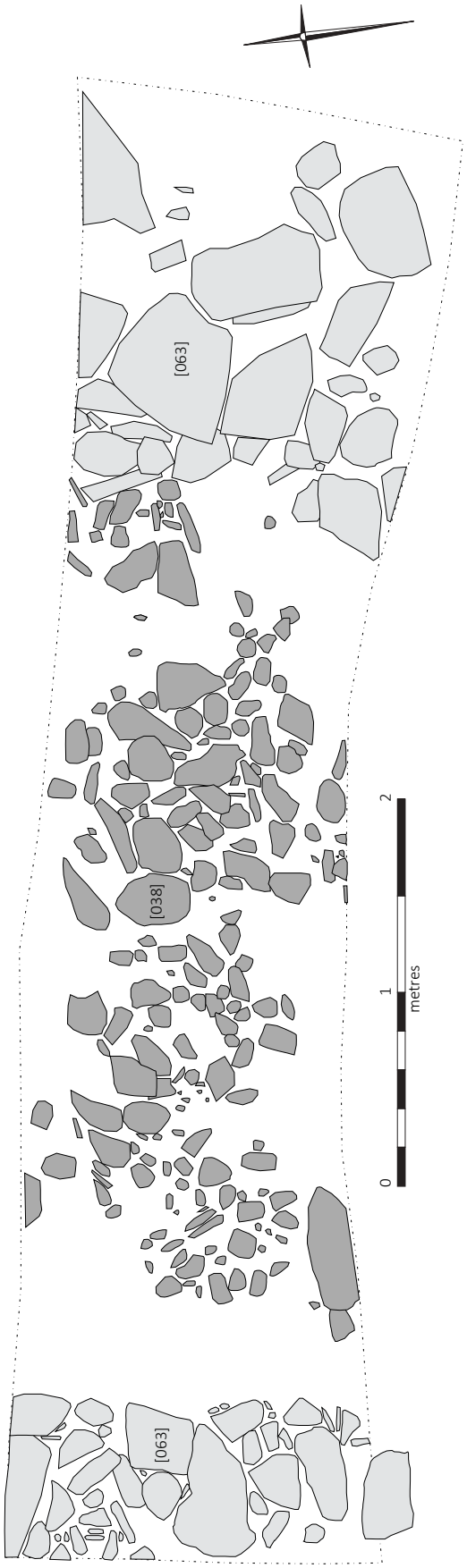
Illus 58 Trench 4. (Image by Roddy Regan, © Kilmartin Museum)

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)

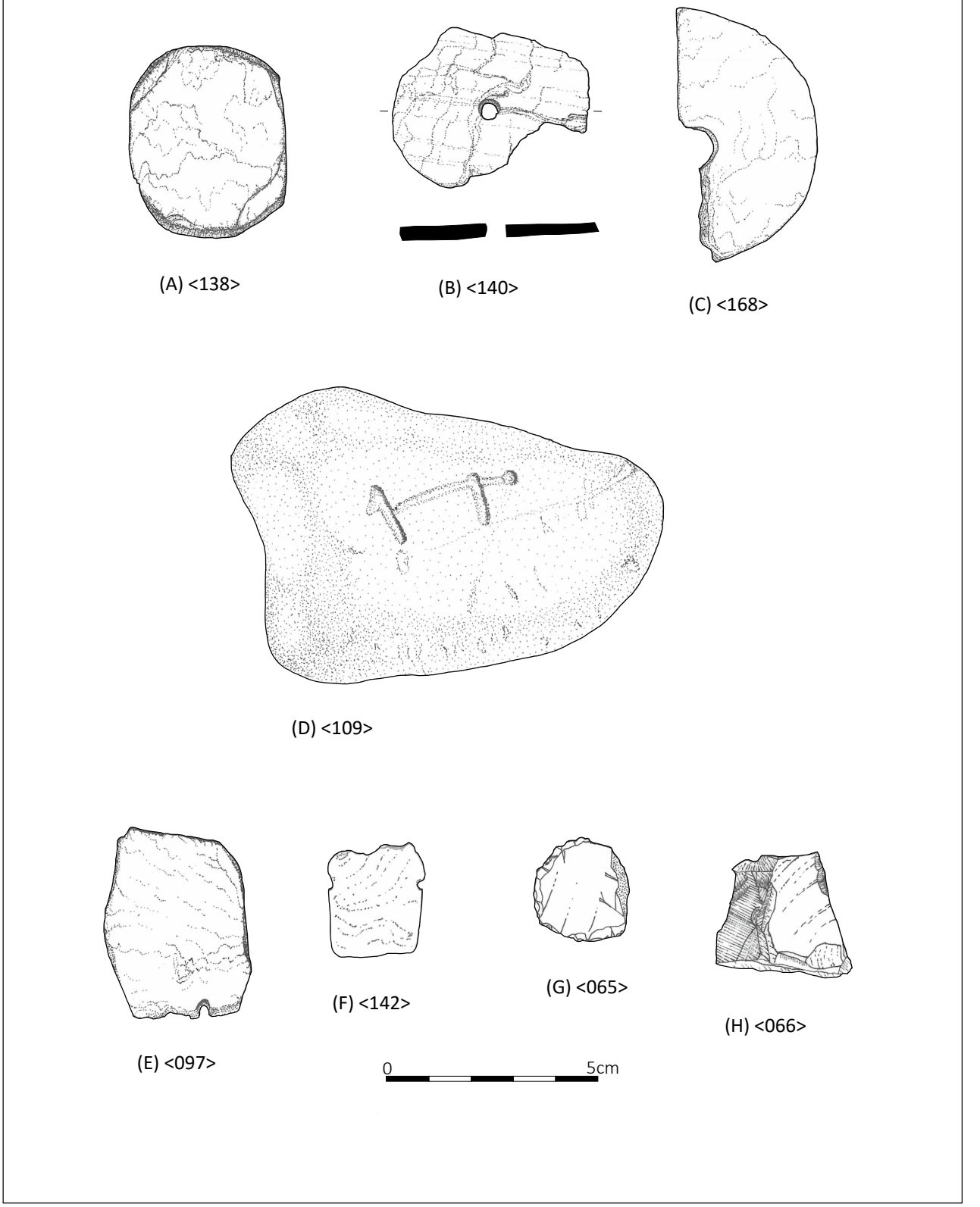
result of prising from outcrops of rock, and may not be functional. One small rectangular piece (Illus 63f, 68) has two opposed notches, but no parallels or use can be given and it seems too small to be functional.

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)

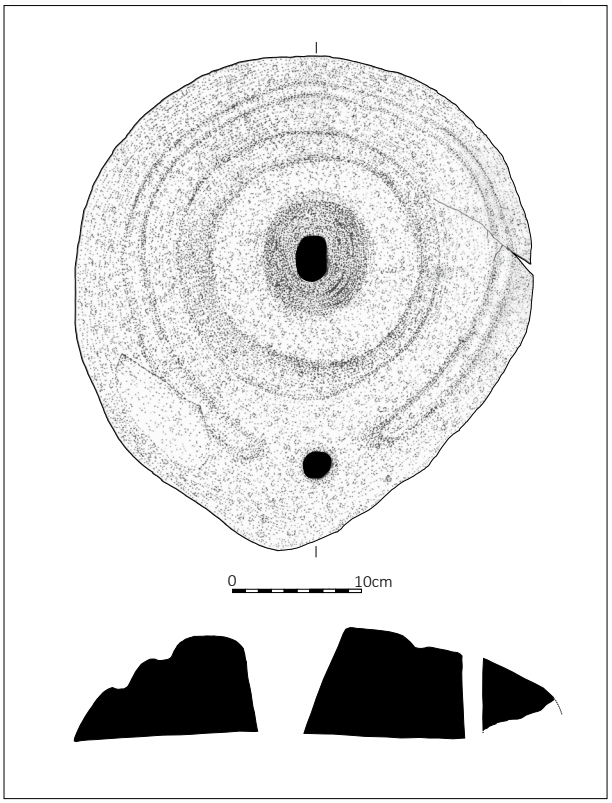
Illus 64 Grooved stone <109>. (Image by Roddy Regan, © Kilmartin Museum)

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