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ARO23: Excavation and Survey at Comar Wood Dun, Cannich, Strathglass, Inverness-shire

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Forestry Commission Scotland
Coimisean na Coilltearachd Alba

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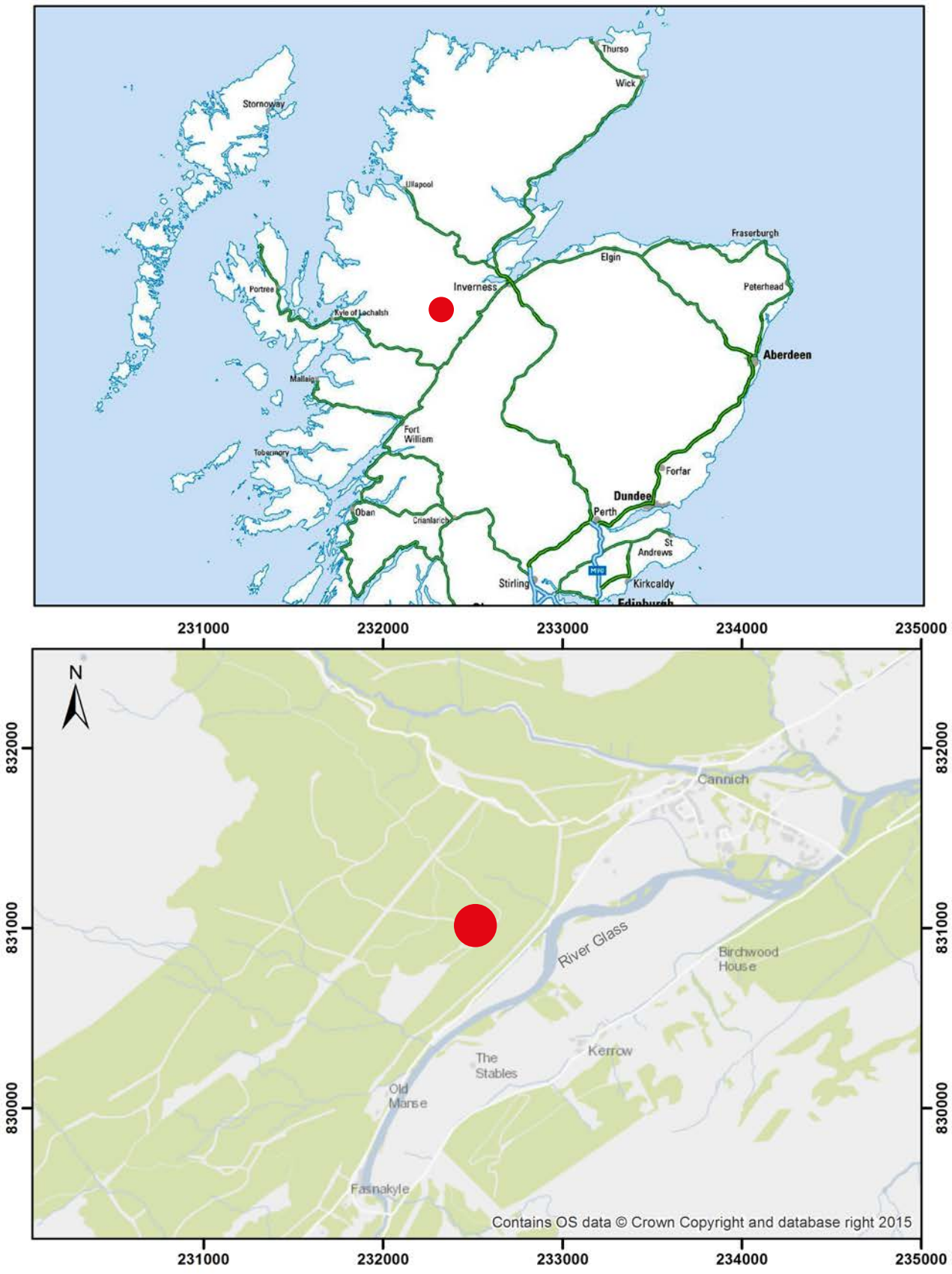

Figure 1: Location of Comar Wood dun.

Abstract

An enclosed dun was discovered by Forest District staff in Comar Wood, Strathglass, 1 km south-west of Cannich, during a pre-felling check on the woodland in the Inverness, Ross and Skye Forest District in 2010. The dun and the area around it were clear-felled by hand in 2013 in a manner which avoided structural damage to the site. Following site clearance, an archaeological survey and evaluation were carried out on behalf of Forestry Commission Scotland to record the site, interpret its form and function, establish both the nature and extent of any surviving archaeological deposits, and any damage caused by afforestation.

The excavation revealed that Comar Wood dun had been constructed during the second half of the first millennium BC. Evidence for two burning events was uncovered, after both of which the site was rebuilt and reused for several centuries before abandonment. The entrance to the site was through the west side of the enclosure wall and dun, and there was evidence for a second passage on the east side of the dun. Posthole alignments in the entrance passage and interior courtyard showed evidence for the construction of timber structures inside both areas. Two successive slab-built hearths were located in the centre of the structure. Other structural evidence uncovered included later interior walling used to constrict the courtyard space. Tree root plate damage had caused substantial destruction to the poorly constructed walls, leaving inconclusive evidence for intra-mural gallery spaces, and causing difficulty for excavation. A small amount of artefactual material recovered included querns, coarse stone tools, charred wooden pegs, bronze fragments, metal-working debris and burnt fragments of animal bone. The excavation results also included evidence for Mesolithic forest clearance on the site and construction of later historic period buildings within the collapsed stonework.

Introduction

Comar Wood dun is situated on a rocky crag on a slight terrace on a south-east-facing hillside above the River Glass. Located 1 km south-west of the village of Cannich, in Strathglass, Inverness-shire, its position, 42 km south-west of Inverness, places it at the watershed dividing the Scottish west coast and the central and eastern Scottish Highlands (Figure 1). The glen runs from the east at the Beauly Firth, which forms the south-western extent of the Moray Firth and flows into the North Sea, and the west at Loch Duich, which feeds into the Inner Sound of Skye, the Minch and the Atlantic Ocean. Comar Wood dun is located almost centrally along this glen and forms one element of a complex prehistoric and historic archaeological landscape centred on the fertile valleys of Strathglass, Glen Moriston and Glen Convinth.

During 2010, in advance of felling operations in Comar Wood, Cannich, a prehistoric enclosed galleried dun was re-discovered by Forest District staff. The only known reference to the site was later found in the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) Emergency Surveys of 1942-3, where a written entry stated knowledge of the site, which was not located during the survey.

At the time of discovery, the site was set within thinned mature conifers and under wind-blown, collapsed trees (Figure 2). Prior to felling, a rapid survey of the dun was carried out by Forestry Commission Scotland, observing a structure 11 m in diameter, with a western entrance enclosed by walling that utilised the natural break of a slope and cliffs to the south-east. The central structure comprised a well-preserved drystone wall that contained three depressions interpreted as possible intra-mural galleries. Several breaks in the enclosing outwork were noted, as were two small buildings within the spread of collapsed stone from the dun and its outwork. In 2013, in order to protect the site from further damage, twenty-three mature trees were removed from it using a soft-felling technique.

Figure 2: Comar Wood dun at the time of discovery in 2010.

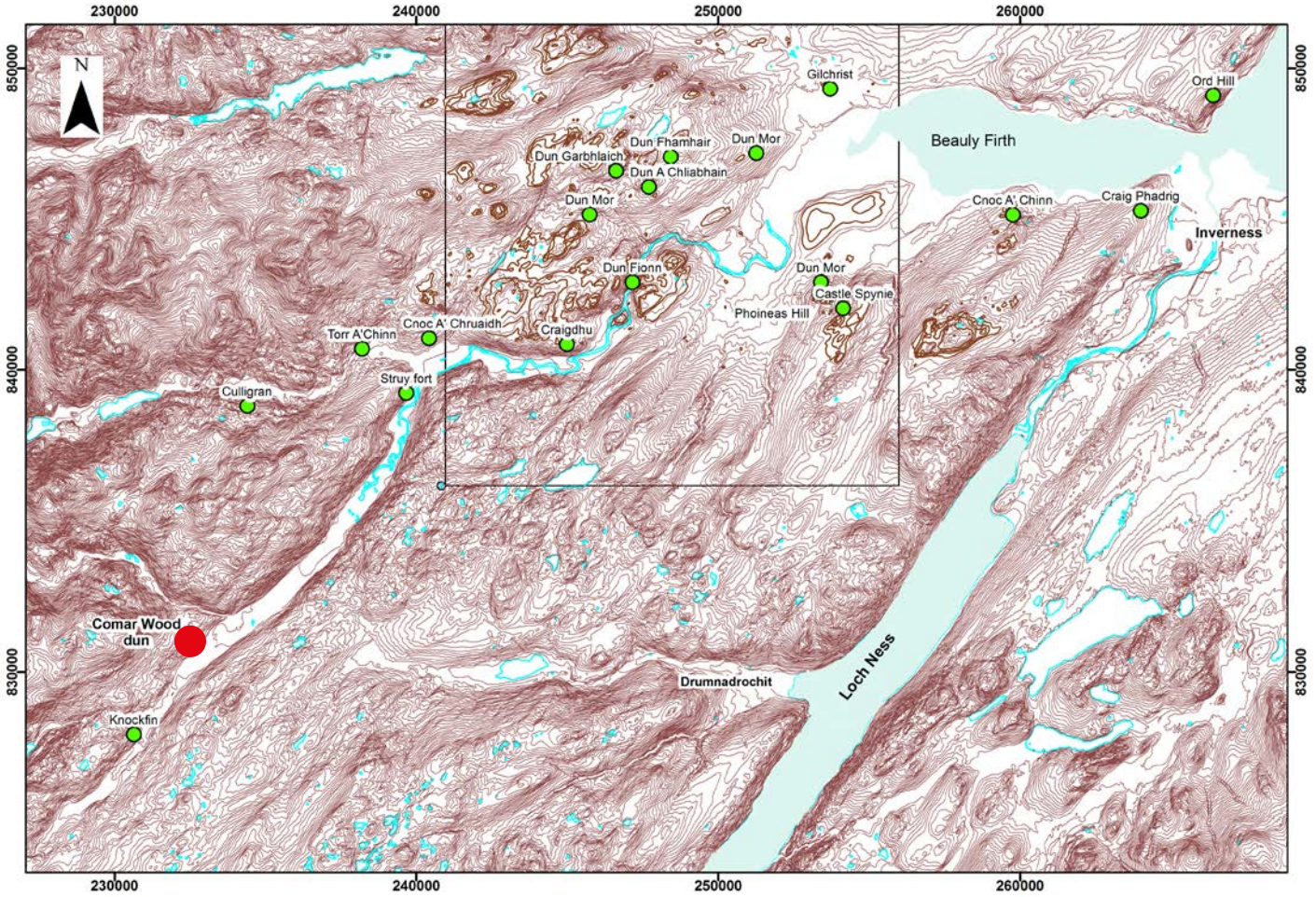

Figure 3: Landscape position of Comar Wood dun and nearby dun / fort sites.

The appearance of the monument before excavations commenced in 2013, with its circular form, evidence for intra-mural galleries or cells and significant amounts of stone, suggested that the site at Comar Wood comprised the remains of a complex roundhouse; possibly a broch or a dun. These stone-built structures have long been a dominant feature in the study of the Scottish Iron Age, and their classification and development has provided much debate. It is difficult to accurately interpret the features of such sites from survey alone and within the surrounding landscape of Strathglass, a wide range of potentially contemporary sites were known, including forts, duns and brochs (highlighted on Figure 3). Few of these sites have been excavated or investigated in any detail, although most have been visited by the RCAHMS and the Ordnance Survey. While initial interpretation of the site at Comar Wood suggested that it could have been similar in form and construction to many of the sites in Strathglass, only excavation could provide evidence to provide conclusive interpretation.

Aims and objectives

Recent work by the *Scottish Archaeological Research Framework* panel (ScARF 2012) had identified the central Highlands as a key 'black hole' in terms of understanding the context of enclosed places. A particular issue being the lack of dating evidence, which is a severe constraint on understanding these sites. The fieldwork objectives were to evaluate the extent and nature of the archaeological remains in order to better understand the structure, to recover securely datable material, and to evaluate the extent of tree root damage.

Survey

A detailed contour and measured survey of the site and landscape features, including the location of tree stumps, was conducted prior to commencement of the archaeological excavation. All visible structural elements of the dun, its defensive outworks, later structures and other archaeological details of the site were surveyed

to a standard consistent with a Level 4 survey as per RCAHMS Survey and Recording Policy (2004). The measured survey was conducted using a Leica 705 Total Station. The contour survey was conducted using a staff-mounted Trimble GeoXR Rover. All survey data was three-dimensionally recorded and referenced to the British National Grid and Ordnance Survey datum.

An aerial photographic survey of the site was conducted before and after the excavation. The survey data allowed for the creation of a baseline record of the site and its landscape setting.

Methodologies

Excavation of the trenches was conducted over a two-week period during September 2013. All artefacts and ecofacts were retained and stabilised for subsequent analysis. All archaeological contexts were sampled in bulk for wet sieving and flotation.

Four trenches were placed over the dun walls and inside the courtyard of the structure, while three trenches were placed to explore external structures (Figure 4). The main objectives of the evaluation were to uncover evidence to interpret the form and function of the dun, and to recover material that could be used to securely date the site. The results would enhance the historic environment record and Forest Design Plan and contribute to the Scottish Archaeological Research Framework (ScARF).

Trench 1 was positioned through the entrance of the structure, measuring 15 m long on an E/W axis by 2.5-3 m wide, and extending to the centre of the courtyard (Figure 5). It was positioned to evaluate the inner and outer wall faces of the dun, the structural elements of the entrance passage and courtyard, the structural features of the courtyard, and the type and depth of deposits below the stone collapse. A number of tree stumps were distributed within the limits of the trench and some tumbled stone was visible within the entrance passage. Trench 7, a small test pit, was located at the eastern end of Trench 1.

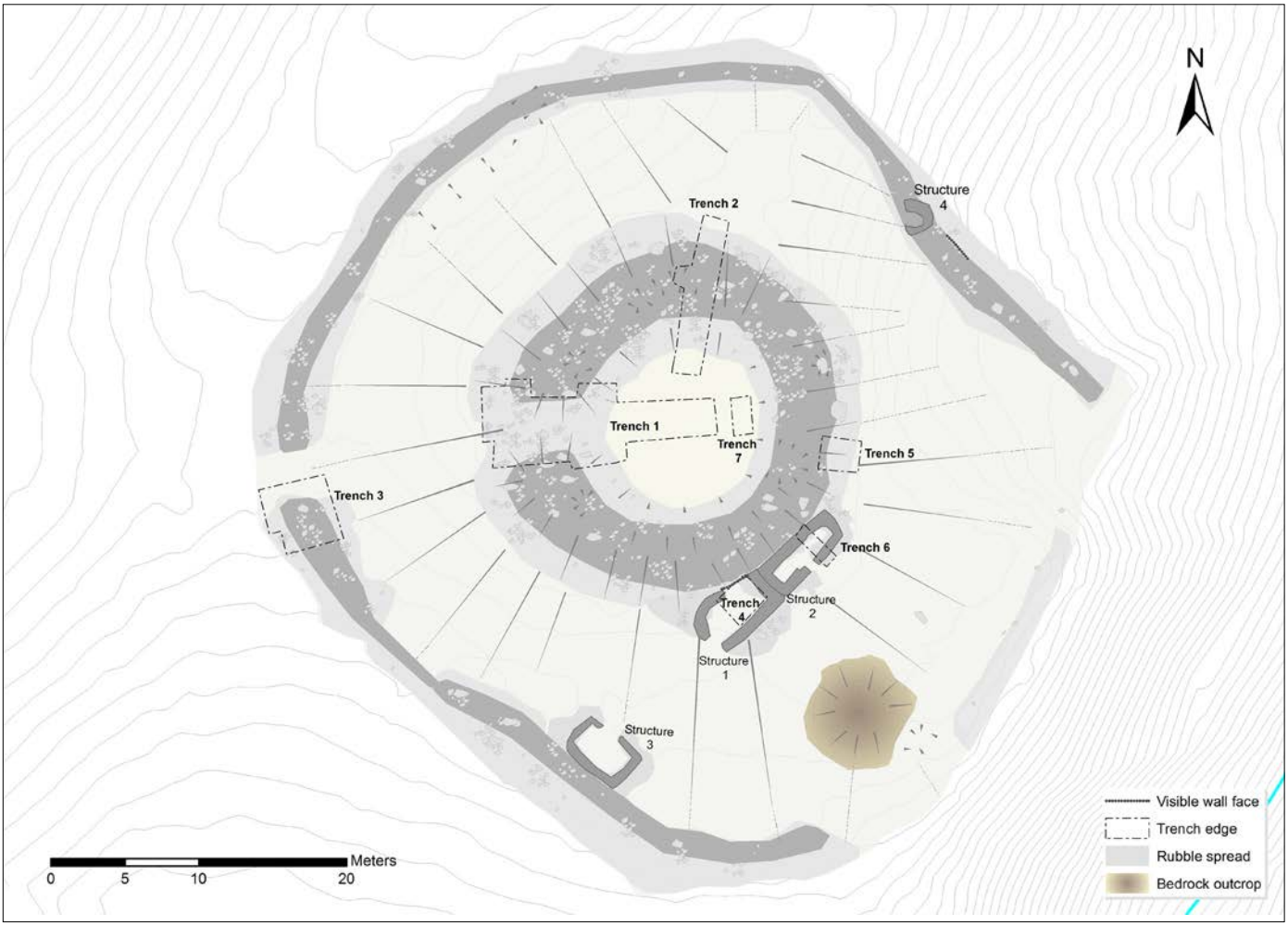

Figure 4: Measured survey plan of Comar Wood dun, showing trench locations.

Figure 5: Trench 1, excavation over the entrance passage, facing east towards the courtyard.

Trench 2 was aligned N/S across the north side of the dun in order to target what appeared to be a gallery or chamber within the dun wall. It measured 10.7 m N/S by 2 m, with a small 1 m-wide extension on the west side of the trench. Trench 3 was located over the enclosure wall entrance to examine evidence of contemporaneity with the dun and a built entrance structure. Trench 5 was positioned against the dun outer wall face on the east side of the structure in order to evaluate a section of the external wall, which appeared to curve inward, and to look for potential dating material below the wall.

Trenches 4 and 6 were placed over two later structures attached to the south-east side of the dun. Trench 4 was excavated inside Structure 1 on the south-west side of the dun to assess the date and function of the building, which utilised the dun wall as its north-west wall, with its south-east wall abutting Structure 2. Trench 6 was excavated inside Structure 2 on the south-west side of the dun to assess its date, function and relationship to Structure 1.

Post Excavation and Laboratory Methodologies

Artefact analysis

All measurements, weights and descriptions of each find and sample were entered into a prepared database in spreadsheet format. Each artefact was described, with identification of its geology or material where possible. For stone, the worked surfaces, ends, edges, and pecked or hammered areas were examined and recorded according to accepted procedures; two metal objects were X-rayed, and the organic objects were examined microscopically.

Bulk sample processing

A programme of bulk sampling, plus spot finds, was undertaken in order to examine the carbonised archaeobotanical remains from the site. The bulk samples were processed by flotation or wet sieving for the recovery of carbonised remains, using standard methods and sieves of mesh diameter 1 mm and 500 µm for flots (and wet sieved samples) and 2 mm and 4 mm for retents from flotation. Dried flots and sorted retents were examined using a binocular microscope at variable magnifications of x4 - x45. For each sample, estimation of the total volume of carbonised material >2 mm and >4 mm was made and modern contaminants were scored using a scale of 1-3 'plus' marks. For each sample, all the charcoal >4 mm was identified unless this proved to be too large an amount, in which case a known percentage of the total charcoal >4 mm was identified. All carbonised seeds were also identified and any other plant macrofossil remains were noted.

Zoo-archaeological analysis

Animal bone fragments extracted from samples were examined in order to determine whether any were identifiable to species or particular bone element, and to look for evidence of butchery.

Results of the Survey and Excavation

The specialist reports have been edited from their original versions for inclusion. The full reports are available from Forestry Commission Scotland, the Highland Historic Environment Record and in the site archive held by the National Monuments Record of Scotland.

Survey Results

After tree-felling, Comar Wood dun was visible as a prominent site overlooking the fertile valley of Strathglass (Figure 6). At the time of the survey, the collapsed stone was mostly moss-covered, although a considerable amount of stone was visible due to displacement by the felling and clearance of trees and vegetation from the site. The central dun structure comprised a circular, drystone wall of hard, sub-angular schist built with inner and outer facing stones, appearing as a large roundhouse. The structure measured 22.8 m N/S by 22 m E/W externally, with the stone spread increasing the size to 27 m N/S by 26.6 m E/W, and standing to at least 1.5 m above

the ground surface. The outer wall face was best preserved in the north-west quadrant with some large facing stones visible. The entrance, located on the west side of the structure, comprised a linear hollow 2-3 m wide that ascended gently to the east where it entered the inner courtyard. No definite features were visible prior to excavation within the entrance or the inner courtyard, which measured approximately 13 m in diameter.

Figure 6: Aerial photograph of Comar Wood dun, looking east-north-east across Strathglass.

The ruins of two later stone buildings had been built against the south-east side of the dun, utilising the outer wall face as part of the building construction. Structure 1, which measured 3.5 m NE/SW by 2 m internally, was a sub-rectangular building comprising rubble-built walls surviving up to 1.2 m at the west end. There were no visible faces noted in the walling, with the exception of the dun outer wall face, which formed the north-west inner face of the structure. Structure 2 was built against Structure 1. It measured 4 m NE/SW by 2 m internally and was the better preserved of the two buildings with double-faced walls 0.7 m wide, which stood up to 1.5 m high in the south corner where it abutted Structure 1. Both buildings must have been accessed by entrances in the south-east wall, although both were obscured by collapse and tree root damage.

The enclosure wall, best preserved on the west side of the site, comprised large stones, boulders and some large slabs standing 0.7-1.2 m high, with an overall width of 2-3 m. The entrance to the enclosure was located on the west side of the dun, but slightly offset from its entrance, with access to the site running from west to east.

A third and later stone building, Structure 3, was built against the inside of the enclosure wall on the south-west side of the site. This double-faced, sub-rectangular building, measured 5 m NW/SE by 3 m externally and 3.8 m NW/SE by 2 m internally. The entrance, partially obscured by collapsed stone, was located in the centre of the north-east wall. A gap in the dun enclosure walling to the north-west of Structure 3 could have been as a result of stone clearance conducted to improve access to these later buildings. A fourth later construction, Structure 4, was built in the north-east corner of the enclosure and consisted of a small, sub-circular rubble bank built into the enclosure wall on the north-east side of the site.

Excavation Results

Walling

Excavation in Trench 1 (Figure 7), located over the entrance passage, revealed extensive damage caused by tree roots. The exterior wall face (101) was visible on the north side of the entrance, while the interior wall face (106) was only visible on the south side of it. The wall core (105) consisted of a loose fill of medium-large stones and smaller clasts with voids. The exterior wall face formed a secondary outer skin of walling against the primary face (102), which consisted of well-set boulders under smaller stonework up to three courses high, standing 0.75 m above the ground level. The rubble-built exterior face comprised large boulders and smaller stones with one to three courses surviving. Vertical pinning stones marked the separation between the primary and secondary wall faces, as noted in the south face of the entrance passage. There was also evidence for another modification to the entrance, in the form of a bank of stone (119) positioned around the outer face, which served to constrict the entrance passage opening.

Running along either side of the entrance passage, two single-coursed stone alignments (166) on the south and (167) on the north, were all that survived of stonework inside the entrance. The walling covered the outer edge of two sets of postholes that had supported an entrance structure, suggesting that posts had been inserted prior to completing the wall construction inside the passage. Early stages of the excavation uncovered an angled stack of eight stones (103) in front of the south passage wall. One interpretation is that the stones had been placed there during a re-building phase but were never used.

Figure 7: Plan of Trench 1, showing structural elements and postholes.

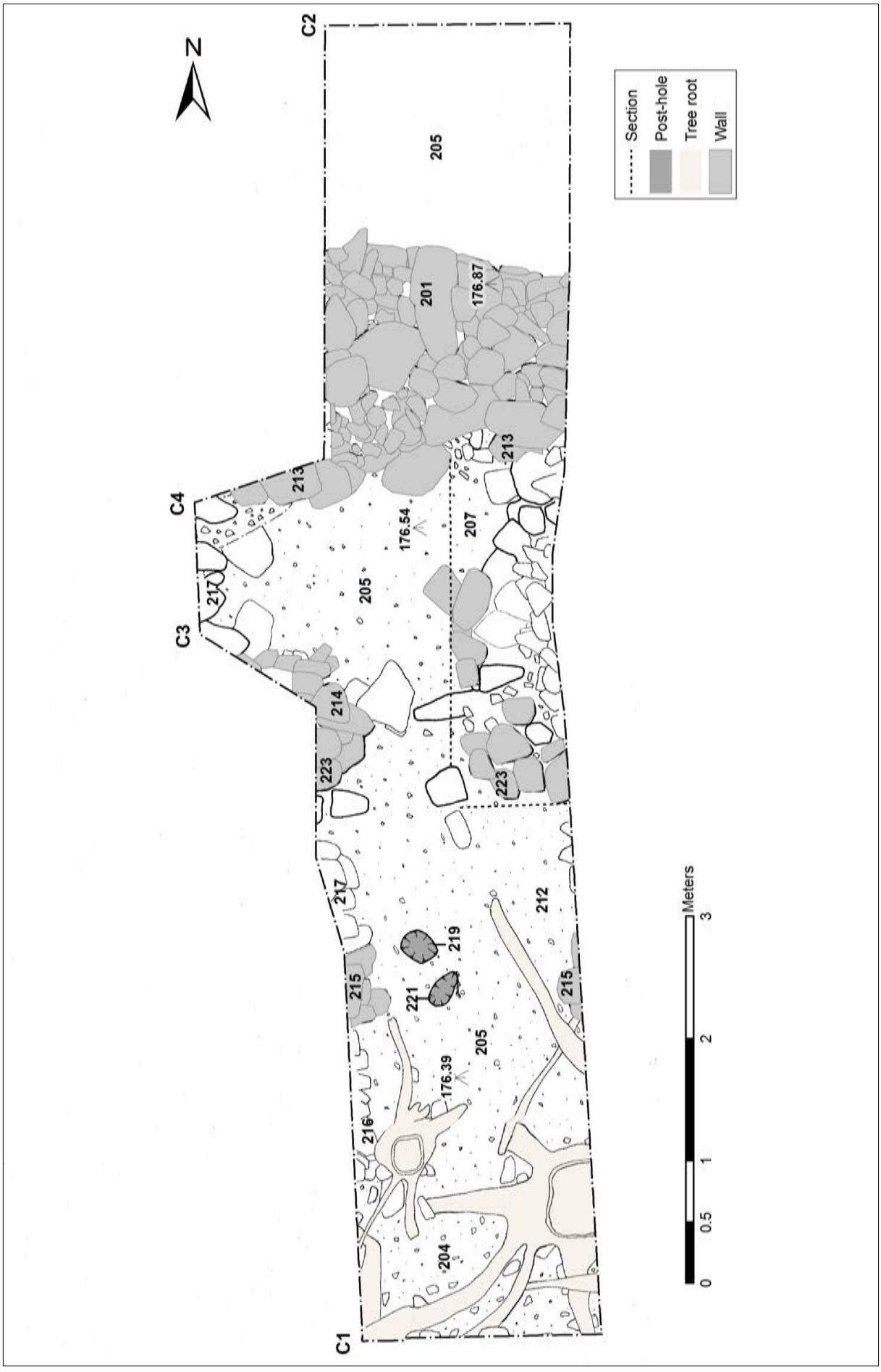

Figure 8: Plan of Trench 2, showing structural elements and postholes.

The excavation in Trench 2 (Figure 8), revealed a well-preserved exterior wall face (201) below a layer of loose stone collapse. The wall survived as two to three courses of sub-rectangular boulders, the lowest of which was packed behind redeposited subsoil (203)(not visible on plan). The wall core comprised loose, large cobbles and clasts (206) on the surface, packed at the base with smaller clasts in a silty matrix (Figure 9).

Figure 9: Looking south-west over the outer wall (201) and Trench 2.

The survey had suggested that the dun wall contained intra-mural galleries or cells. Trench 2 targeted one such area on the north side of the structure, where there was a distinct dipping within the profile of the wall bank. Removal of stone tumble revealed remnants of an inner face (213) to the outer wall, measuring 1.9-2.0 m in width. However, most of the inner facing stones, some of which were upright slabs, had collapsed outwards, exposing the soil-stone fill (208) at the base of the loose stone upper core (206). The presumed intra-mural space contained a layer of stone tumble over a silt floor layer (207) containing charcoal likely related to a burning event (Figures 10 and 11). A layer of recumbent stones around the base of the upright stones may have formed part of a paved surface associated with the intra-mural cell – although this was not clearly identified at the time of excavation. An opposing inner wall face was not clearly defined within the trench. Remnants of stonework flanked by upright stones (214) were interpreted as the termination of a possible wall and passage. Unfortunately, any stonework that could clearly define an intra-mural gallery space had been disturbed by the roots of several trees. A possible face of rubble walling (223) was interpreted as the interior face of the dun, suggesting that the overall wall width was approximately 4.4 m on the north side of the structure. The rubble-built nature of the construction of the site suggested that the structure had not supported a high wall. The poor quality of construction and tree root damage had resulted in the poor survival of structural elements. Unfortunately, within the time allowed for the excavation, it was not possible to conclude if the structure contained intra-mural spaces.

Figure 10: Location of possible intra-mural gallery space in Trench 2, facing WNW; the image shows the inner wall face (213) above the 1 m ranging pole and partially collapsed upright slabs (214) to centre left.

Exposed sections of the outer wall face were also revealed in trenches 4, 5 and 6. In Trench 5, on the east side of the dun, the exterior wall face curved inward where it had been filled in with a 1 m-wide section of wall (506) comprising six courses of stonework abutting the boulders of the outer wall face (504) (Figures 12 and 13). The change in construction was interpreted as a blocked-up passage, not a wall repair, due to the concavity in the wall alignment and its position opposite the main entrance. A surface containing a setting of stepped slabs (513) and fragments of a possible exterior boulder wall (505) uncovered outside of the passage may be related to its use.

Other walling was uncovered in the interior of the main structure. Remnants of a low, rubble-built wall were identified in both trenches 1 and 2. In Trench 1, the wall (110) comprised a single face of stonework three to four courses high. It had been built over a burnt layer containing carbonised timber fragments and roundwood charcoal (168). The stonework served as a retaining wall for collapsed stone from the main structure, covering layers of heat-affected material associated with burning events. It was interpreted as a clearance event, associated with restructuring and reoccupation after destruction. In Trench 2, less substantial remnants of a single-course wall (215) in a similar position were identified.

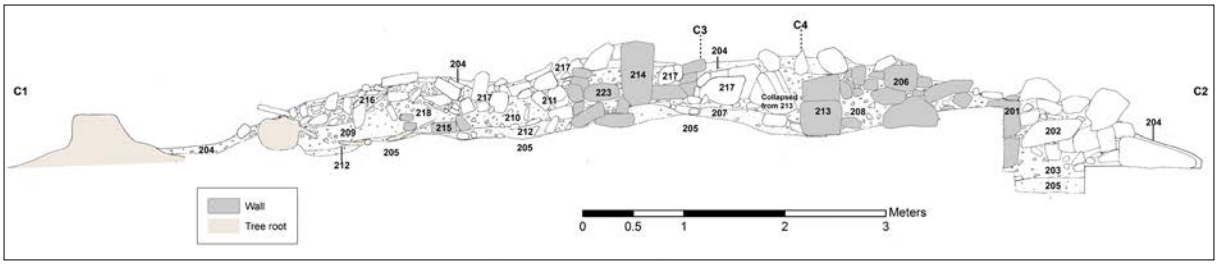

Figure 11: Trench 2 east-facing section drawing.

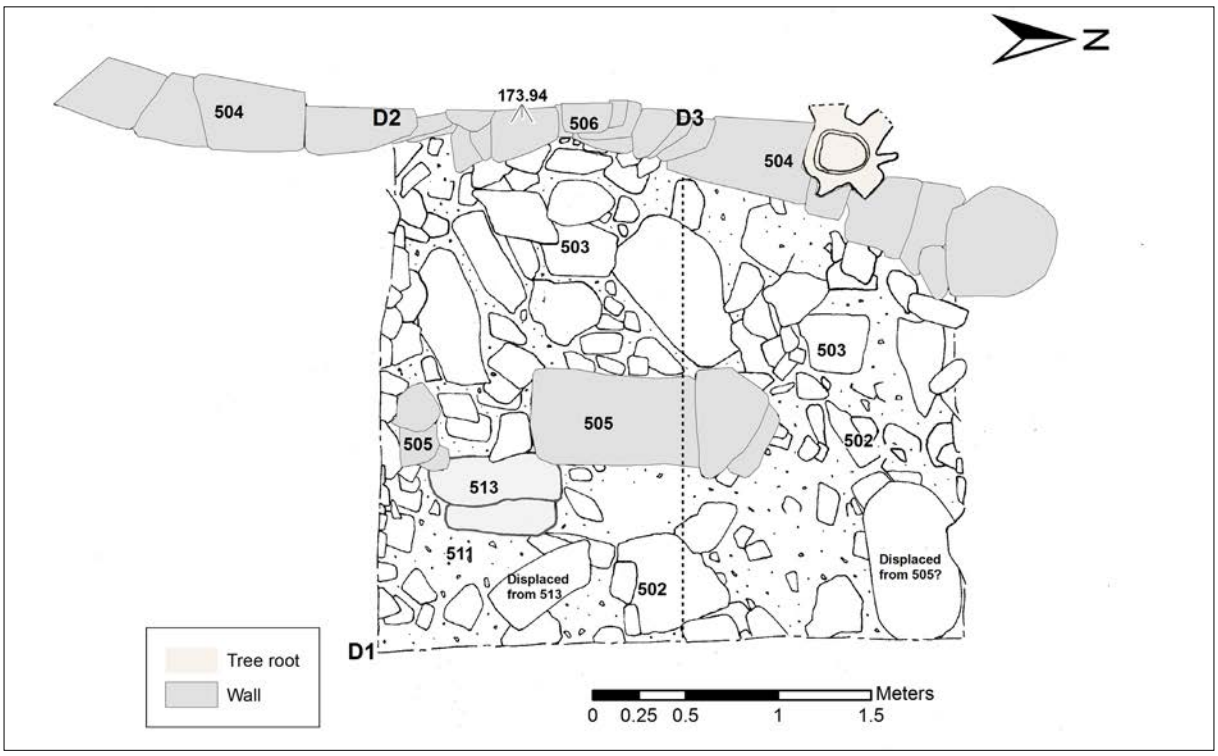

Figure 12: Plan of Trench 5.

Illus 13: Blocked-up passage (506) built into the outer wall on the east side of the dun, facing west; the slabbed steps (513) are visible in the front centre.

Interior features and deposits

The excavation across the central courtyard in Trench 1 revealed a sequence of shallow deposits, representing ash and charcoal layers around a central hearth (118). The burning layers spread through the entrance passage and up to the inner wall face. Alder, birch, hazel and oak charcoal were present in these horizons. Banked up against the inside of the dun, under collapsed stone, was a complex sequence of charcoal-rich lenses and mixed deposits. The layers of material were interpreted as cleared debris following destruction by burning events, and represented more than one phase of reoccupation. The lowest of these comprised mixed stone and sediment covering a charcoal-rich lens (107). This deposit was sealed by a burnt layer (168) that contained predominantly alder charcoal, with birch and oak also present in significant quantities, as well as a small amount of willow charcoal and carbonised hazel roundwood. This layer may have represented a destruction event where wooden structures had burnt down. Collapsed stone (108), a rubble wall (110), later courtyard clearance (109) and eventual silting, formed the remainder of the sequence (Figure 14). While this sequence was visible on the south side of the trench, it did not survive so clearly on the north side, where multiple tree root systems had disturbed the upper layers.

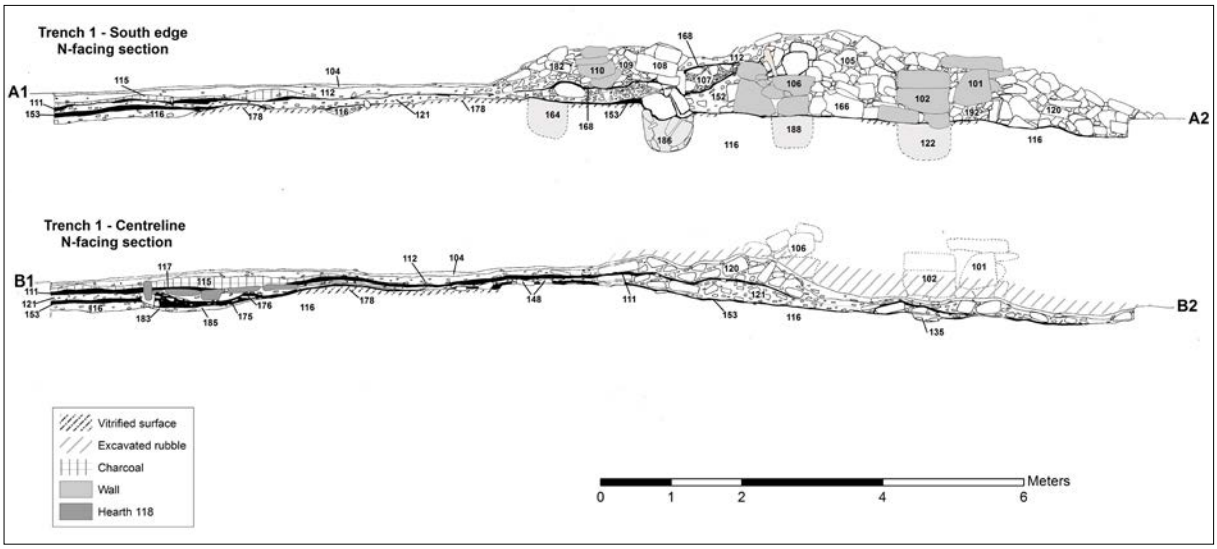

Figure 14: Trench 1 section drawings; south trench edge (top) and section through the centre of the trench (bottom).

The rubble wall (110) appeared to serve as a retaining wall for the collapsed stone and cleared-out material, and demarced the courtyard interior space for a later phase of use. Another section of secondary rubble wall (193) aligned with the northern entrance passage wall, connected (110) to the entrance on the north side of the courtyard. Walls (193 and 110) lay above burnt layer (168). Another possible later phase of re-use was represented by a layer of stone (182) banked up against wall (110), probably representing a further phase of courtyard clearance and structural collapse.

The centre of the dun was relatively free from collapsed stone. Across this level courtyard, a 0.3-0.35 m deep, but fairly continuous sequence of deposits was excavated. Below the upper silting layer (112), a mixed ash and silt deposit (115) overlay a charcoal-rich silt lens (111). Both layers appeared to have emanated from a large slab-built hearth (118) and had spread across the courtyard to either side. The hearth was a rectangular setting of small slabs measuring 2.2 m long (E/W) by 0.8 m wide. Some of the hearth slabs had been formed by fragments of a lower rotary quern (SF 1.03), which along with the west end of the hearth, had been broken up by tree root movement (Figure 15; Figure 16). The slabs were surrounded by a kerb (113) on the north, east and south sides with the hearth opening towards the entrance. One large slab, probably used as a whetstone, extended the length of the kerb on the north side of the hearth. Two alignments of edge-set stones (114), which also contained a rotary quern fragment (SF 1.02) and may have formed part of another earlier hearth setting, continued off the west side of the kerb in alignment with the entrance passage wall.

Figure 15: Aerial view of the east end of Trench 1, showing hearth (118).

Figure 16: View south-east over hearth (118) containing the whetstone slab, quern fragments and demonstrating the tree root damage.

A lens of charcoal-rich silt (117), containing predominantly alder charcoal, built up over the hearth slabs may be directly associated with use of the central hearth (118). Underneath hearth (118) was a smaller slab-built hearth (176),

which lay over an earlier pit (183) dug into the subsoil. Pit (183) was filled with a pale orange ash deposit (185) interpreted as hearth material that marked the separation between it and the hearth settings. Excavation revealed that the uppermost hearth slabs (118) had cut through an intermediate ash layer (175) that sat on top of the intermediate hearth (176). The kerb stones (113) from the uppermost hearth also cut through the lowest burning layer (153) inside the courtyard. The results indicated that a sequence of three superimposed hearths had been built in the centre of the dun courtyard. There was a mixture of alder, birch, hazel and oak charcoal in these layers. A number of small stakeholes, (140, 142 and 146) around the outside of the hearth were probably related to cooking, or screen structures.

Below the outer spread of hearth material (111), a layer containing charcoal, peat ash and small stone clasts (121) covered a layer of large slabs (148). Although the slabs had been disturbed by tree root action, they were interpreted as the remains of primary paving between the entrance and the courtyard. At the very base of the entire depositional sequence were patchy lenses of charcoal-flecked silt (153), which overlay the subsoil (116), an extensive portion of which had been intensely heat-affected (178) in the courtyard. The charcoal-rich lenses (153) on top of the subsoil were interpreted as the spread of debris, containing mostly birch, hazel and oak charcoal and some alder/willow, associated with a primary burning event. A similar horizon was also uncovered in Trench 2 (207 and 212) and Trench 5 (507).

Postholes

In Trench 1, a number of postholes and a beam-slot (Figure 17) were revealed at the lowest horizons inside the entrance passage and inside the courtyard. One, possibly two postholes were also uncovered in Trench 2. Although some of the postholes contained in situ material, many of them showed signs of disturbance from either removal of disused posts, reinsertion of new posts and re-cutting for new postholes (Figure 18).

The entrance passage contained structural posts, as represented by opposing postholes (122/124) and (149/188). On the north side of the west end of the passage, posthole (122) contained packing stones, some of which were still in situ, with a significant amount of oak charcoal fragments and a small amount of calcined bone flecks. The fill of opposing posthole (124) was nearly identical but had also cut through posthole (127), a narrower feature which contained burnt oak timbers that ran into beam-slot (135). The slot, which measured 1.7 m long and 0.5 m wide and 0.12 m deep, linked to posthole (122) on the south side of the entrance. To the east side of the entrance passage, posthole (149) contained two fills with a small amount of birch and oak charcoal fragments and a small amount of calcined bone flecks. The opposing posthole (188) contained a similar fill with some packing stones and a larger amount of burnt bone fragments.

Figure 17: View south-east over the south entrance passage wall, with posthole (122) and beam slot (135) in centre front and postholes (188), (131) and (186) in centre left (from right to left); the external wall face (102) can be seen above the front edge of posthole (122) with the later attached wall (102) abutting it on the right.

The smaller posthole (127) was similar in size to posthole (131), and was located at the south side of the eastern end of the entrance. It measured 0.2 m across and 0.3 m deep and contained predominantly oak charcoal. A dark, charcoal-flecked patch was noted under wall (119), opposite the entrance from posthole (127), but was not investigated. It is possible that it represented another early posthole linked to (127 and 131). It is not known if there had been another posthole opposing (131) on the north side of the passage due to the presence of a large tree root system that prevented excavation. The two postholes may have been associated based on size and placement, and possibly represented an earlier timber structure inside the entrance.

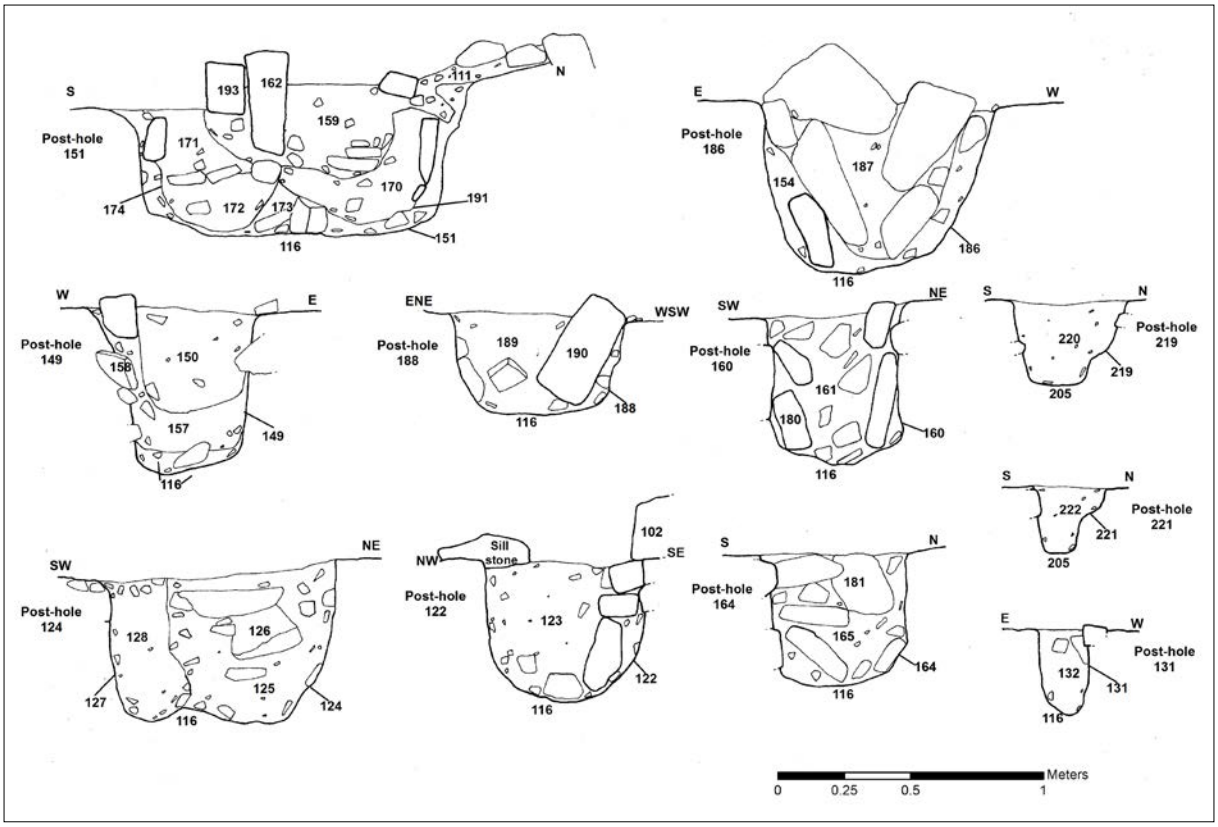

Figure 18: Section drawings of the postholes.

The two sets of opposing postholes (122/124) and (149/188) in the entrance were similar in terms of their position within the passage and their dimensions, varying from 0.60-0.65 m wide and 0.65-0.75 m deep. The entrance passage walls slightly overlay the outside of the pits and each pit contained some fragments of burnt bone. This is in contrast to the smaller postholes (127) and (131) that contained no burnt bone. The larger postholes appeared to represent a timber structure during a secondary phase of construction, given the relationship between later posthole (124) and earlier posthole (127). Analysis of the environmental samples and radiocarbon dates support this interpretation.

There were two sets of opposing postholes uncovered in the courtyard near the inner face. The edges of a wide pit (151) was visible below secondary wall (193). Although the excavation was hampered by the presence of a tree root plate, pit (151) contained evidence for two postholes, (174 and 191). Pit (151), measuring 1.2 m long N/S by 0.95 m wide and up to 0.7 m deep overall, contained a complex of fills. The primary posthole (174) lay directly below the later wall (193) and contained a setting of packing stones at the top and mixed charcoal fragments with some burnt bone in the fill. The secondary posthole (191), which cut through (174) on the north side, contained few packing stones, mixed charcoal fragments of alder, birch, and primarily charcoal and some burnt bone fragments. The later posthole (191) respected the overlying wall (193), and appeared to have been inserted through the burning layer (168) on the north side of the wall. Due to the sequence of excavation of pit (151), the section drawing does not fully depict the settings of packing stones.

Posthole (151) was located on the opposite side of the entrance from pit (186), which lay at a similar level on the south side of the trench. Feature (151) measured 1.2 m long N/S by 0.75 m wide and 0.68 m deep. The mixed fill of the pit comprised a lower deposit with some charcoal flecks and at least two packing stones (154). The upper deposit (187) contained packing stones, a small amount of birch and oak charcoal fragments and burnt bone fragments. Due to the considerable disturbance, the pit was interpreted as a posthole cut by a later one. Although no boundaries defined between them, the size of the feature and the nature of the fills, together

with its position opposite pit (151), supports this interpretation. The two features were interpreted as representing two different phases of a post-built structure inside the dun.

To the east of these postholes were two smaller opposing postholes, (160) to north and (164) to south, underlying the ash layer (121). The two postholes were similar, measuring 0.45 m across and up to 0.6 m deep and with fills containing displaced packing stones and mixture of charred wood species dominated by oak. A small amount of burnt bone fragments was present in posthole (160) only. The placement and similar size of postholes (160 and 164) strongly suggests that they formed part of an interior ring of posts, possibly part of two concentric alignments that included postholes (151 and 186).

The posthole locations indicate that there was a timber-built entrance structure and a timber-built courtyard structure. There were at least two phases of buildings within the dun, indicated by the intercutting of postholes and supported by the residual presence of mixed charcoal species and burnt bone. Both Ramsay (below) and Ballin Smith (below) concluded that the ecofacts and artefacts present in them represent residual material that could have come from any of a number of phases. Despite these caveats, the radiocarbon dates obtained from two charcoal samples selected from postholes (127 and 188) concur with the interpretations above.

In Trench 2, at the base of the archaeological sequence inside the courtyard, two small postholes also support the presence of structural remains inside the courtyard. Posthole (219) measured 0.35 m in diameter and 0.35 m deep while a posthole (221) next to it measured 0.25 m in diameter and 0.3 m deep.

Enclosure wall

The enclosure wall surrounding the dun terminated at two points against the edge of the steep outcrop on the south-east side of the site. Trench 3 was positioned on the west side of the enclosure to assess the position of a probable entrance opposite the dun entrance. The enclosure wall measured 2.5 m across and survived to a maximum height of 0.75 m. The extent of the rubble suggests it may have stood up to 1.5 m high. Unfortunately, a large root plate had disturbed the wall face of the north entrance terminal. Despite this, a short section of wall survived that may have formed a door check or entrance cell.

The wall construction was similar to the dun. The battered interior face (306) comprised large cobbles and stones supporting the wall core, while the exterior face (305) comprised mostly slab-type boulders set into the subsoil. The excavation against the wall faces revealed that the enclosure had been built over a layer of smaller stones within the subsoil, which contained a small amount of charcoal flecks (309). This layer appeared similar to the charcoal-flecked subsoil below the dun wall in Trench 5.

Although a large tree stump and its root system had disturbed the south side of the enclosure entrance, one course of surviving stonework (310) indicated that there had been a built feature within the north terminal. The alignment of boulders, set in from the inner/outer wall faces formed a 1 m-wide section of wall, which may have been part of an internal cell or door check for the entrance (Figures 19 and 20). The similarity in construction technique and location of the enclosure entrance opposite the dun entrance suggested to the excavators that the outwork was contemporary with the dun.

Figure 19: North terminal and evidence for entrance structure on the enclosure wall, facing south.

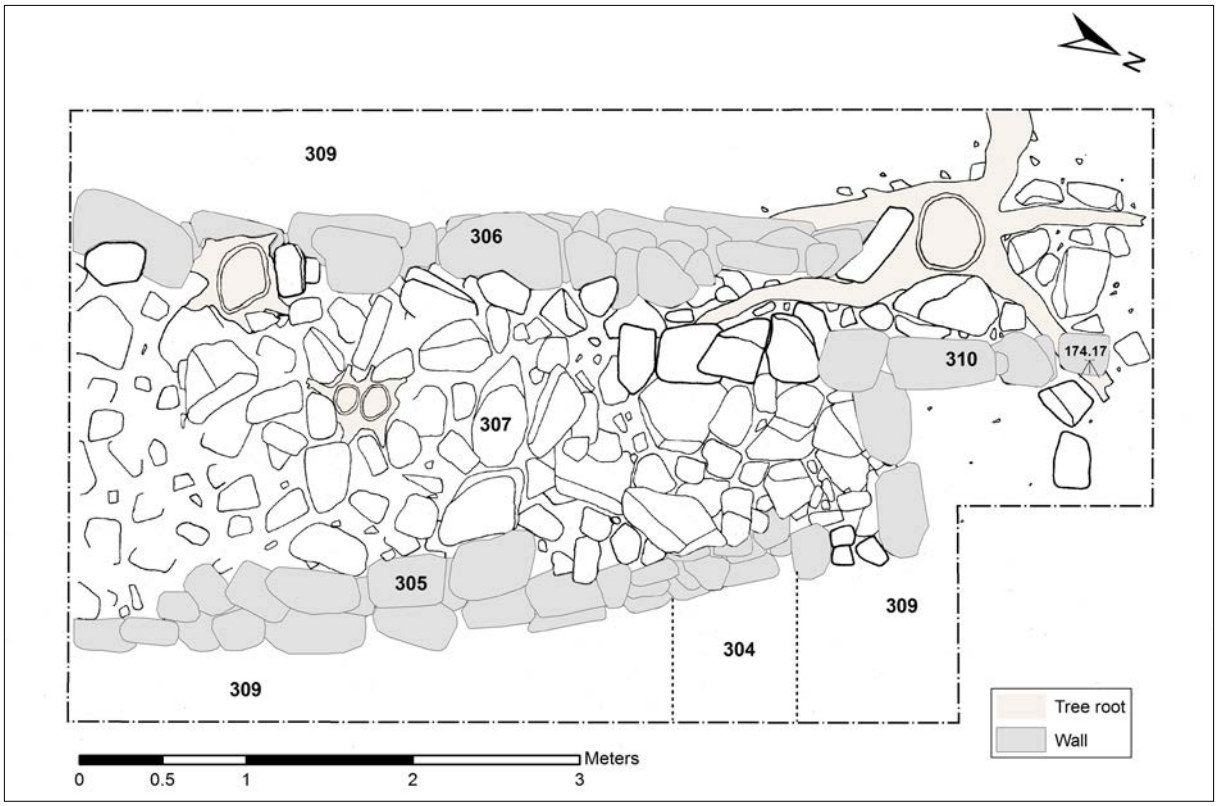

Figure 20: Post-excavation plan of Trench 3.

Later structures

Trenches 4 and 6 were placed over Structures 1 and 2, sub-rectangular drystone stone buildings located on the south-east side of the dun. The evaluation failed to find any evidence for the date and function of these later buildings constructed within the collapsed stone from the dun.

Both buildings utilised the dun wall as their north-west wall, while the south-east wall of Structure 1 was abutted by Structure 2, the later of the two to be built. Within Trench 4, a small post-setting (405) was uncovered in the east corner of the building and the remains of small paving stones (402), some of which had been disturbed by tree root movement, were uncovered on the floor of Structure 1. Below the paving were floor surface deposits revealing evidence for burning (403), including reddened and charcoal-rich patches with some fire-cracked stone. The walls of both buildings sat on layer (403), suggesting that a burning event took place before construction of the buildings. Post-setting (405) respected Structure 1, and its charcoal-rich fill interpreted as (403) could have been residual material. There were no paving slabs uncovered in Trench 6, suggesting that the two buildings served different functions. The amount of collapsed stone in them indicated that the outer wall of the dun must have survived to a greater height at the time of their construction.

Tree disturbance

During the measured survey, the location of 210 tree stumps, mostly Douglas Fir with some Silver Birch, were recorded on the site. Although it appeared that no ploughing had taken place, some of the tree root systems were extensive, although relatively small when compared to the height of the harvested trees. A significant number of trees had been planted within the inner courtyard of the dun, within the entrance passage, over the walls and enclosure wall, and the later buildings. According to Forestry Commission personnel, thinning of the Douglas Fir crop would have taken place on several occasions, requiring mechanical machinery, prior to the site being soft-felled in 2013.

Significant sections of standing wall had been reduced to the foundation stones and in some instances even these large boulders had been displaced. It was obvious during excavation that one reason for the failure of the dun outer wall was due to poor preparation of the

ground, poor stone quality, and low quality of construction methods. However, movement of mechanical vehicles over the site would also have caused damage, evidence for which was noted over the mostly-flattened enclosure wall. Further destruction was caused by invasive tree root systems. Over time, as the roots grew and expanded, they infiltrated walls and soils, probably encouraged by rich deposits in certain areas. Root movement had caused the collapse of structural elements and the mixing of stratified layers, and this was particularly noticeable in Trench 1, at the east end of the entrance passage where the stumps of five trees were recorded. In this area, the roots had disturbed what may have been an area of paving extending from the entrance.

Considering the tree root damage identified in some areas of the site, much of the archaeology survived remarkably well. The root systems of Douglas Fir are relatively small compared to the standing elements of the tree; they generally form shallow root plates with little in the way of tap roots. Therefore, much of the disturbance inflicted on the underlying archaeology has been confined to the upper horizons. Certainly, the soft-felling technique employed by the foresters in 2013 was absolutely essential to the preservation of the monument. It was also fortunate that no significant 'wind-throw' events had taken place in the past. Under such circumstances, the damage to any underlying archaeology would most likely have been catastrophic. As well as the tree planting and felling, the poor construction quality and subsequent collapse were major contributing factors in the difficulty encountered in understanding the site during excavation.

Post-Excavation Analysis

The radiocarbon dates (Tables 1 and 2, discussed in *Phasing* and *Discussion and Conclusions* below) show that the site was in use during successive periods over the space of approximately 300-600 years. This supports the archaeological evidence for two burning events and three phases of structural changes, indicating that there were at least three to four different phases of re-use of the main structure.

A small amount of artefacts (Table 3), carbonised plant remains (Tables 4-6) and burnt animal bone fragments (Table 7) were recovered during excavation and sample flotation. The analysis of the materials, which came mostly from layers spread across the dun courtyard and entrance passage, and into postholes and pits, has provided important information to aid the interpretation of the excavation results. The results of both the palaeoenvironmental and faunal assessments revealed the use of local woodland resources and the presence of domesticated livestock on the site. Analysis of the small finds, which included coarse stone tools, fired clay, metal, metal-working debris and wood objects, concluded that while many of the items could be associated with manufacturing activities, the scarcity of material recovered seems to suggest limited occupation of the site, possibly indicating that it had a specific non-domestic use.

Ramsay's assessment (2014) provides a detailed analysis of the carbonised remains recovered from the pits and postholes and all stratified layers. The charcoal assemblages included large quantities of alder, birch, hazel and oak, together with a small quantity of willow (in context 168) only, and a minor quantity of Scots Pine. While the evidence points to oak being the main timber used for internal structural support posts, at least during the first two phases of building, birch and hazel appear in significant quantities and were probably also utilised for structural purposes.

Opposing postholes (122 and 124) at the west end of the entrance contained identical charcoal assemblages, dominated by a considerable amount of oak charcoal, while some birch was present too. Also within the entrance, the smaller postholes (127 and 131) contained large amounts of oak charcoal with some birch present. Inside the courtyard, opposing postholes (160 and 164) also contained large quantities of oak charcoal, with significant amounts of birch and hazel charcoal also present in posthole (164). The higher oak charcoal content was found only in the postholes that had not been disturbed by later recuts – with the exception of small posthole (127), which had only been narrowly truncated by the secondary posthole (124).

Lab Code	Description	Samples (all charcoal)	δ13C%	Dates BP	Calibrated dates ± 2δ
SUERC-54232 (GU-34494)	Sample 002, Context 212	Corylus cf avellana roundwood 12 rings;	-25.90%	2213 ± 30	371-201 cal BC
SUERC-54233 (GU-34495)	Sample 003, Context 117	Betula sp roundwood	-27.90%	1976 ± 30	45 BC-80 cal AD
SUERC-54237 (GU-34496)	Sample 007, Context 115	Corylus cf avellana roundwood 15-20 rings	-26.30%	1962 ± 30	41-120 cal AD
SUERC-54238 (GU-34497)	Sample 024, Context 220	Salix sp	-26.40%	2197 ± 30	365-184 cal BC
SUERC-54239 (GU-34498)	Sample 026, Context 508	Pinus sylvestris type	-27.00%	6815 ± 30	5740-5645 cal BC
SUERC-54240 (GU-34499)	Sample 036, Context 189	Betual sp;	-26.50%	1875 ± 30	70-224 cal AD
SUERC-54241 (GU-34500)	Sample 045, Context 128	Betual sp;	-25.60%	2213 ± 30	371-201 cal BC
SUERC-54242 (GU-34501)	Sample 059, Context 107	Corylus cf avellana roundwood 3 rings;	-26.60%	2228 ± 30	382-204 cal BC
SUERC-54243 (GU-34502)	Sample 060, Context 153	Corylus cf avellana roundwood 5 rings;	-25.80%	2221 ± 30	376-203 cal BC
SUERC-54247 (GU-34503)	Small Find 1.13, Context 168	Corylus cf avellana roundwood;	-28.70%	1903 ± 30	27-212 cal AD

Table 1: Radiocarbon dates from Comar Wood dun.

Site	Radiocarbon dating lab & no.	Context	2 sigma calibrated dates
Comar Wood Dun	SUERC-54237 (GU-34496)	Context 115, ash layer over context 177, which overlies hearth slabs context 118	41 cal BC - 87 cal AD (92.6% probability)
Comar Wood Dun	SUERC-54247 (GU-34503)	Contexts 168, destruction layer considered secondary	48 - 176 cal AD (89% probability)
Langwell Dun	GaK-4862	Timber on the dun base, possibly predating the dun construction	620 - 30 cal BC
Langwell Dun	GaK-4860	Charcoal from posthole at entrance to guard chamber	640 cal BC - AD cal 110
Applecross Broch	SUERC-35373 (GU-24486)	Secondary organic deposit abutting broch wall in courtyard	80 - 240 cal AD
Applecross Broch	SUERC-35369 (GU-24485)	Dark red-brown granular sticky soil overlying small hearth slabs, Feature 2	340 - 540 cal AD
Applecross Broch	SUERC-35368 (GU-24484)	Charcoal-rich metal-working deposit within Feature 4 hearth, considered a primary(?) deposit	210 - 40 cal BC

Table 2: Comparative radiocarbon dates at Comar Wood dun, Langwell dun, and Applecross broch.

Stone Tools									
SF Nr	Trench	Context	Weight (g)	ML (mm)	MW (mm)	MT (mm)	Diameter (mm)	Stone type	Tool type
0.01		u/s	406	89	72.5	42.3		Quartzite	Polisher/rubber
0.02		u/s	208	68.5	62.2	31.8		Quartzite (fine-grained)	Polisher/rubber
1.02	1	114	3814	280	155	60	380	Granite	Upper quern
1.03	1	118	3818			54	c.530	Mica-schist with gneiss (?)	Upper quern
1.06	1	123	28.5					Pumice	Worked pumice
1.1	1	170/151	140	62.6	61	23.7		Quartz	An edge rubber?
1.14	1	168	1130					Quartzite	Double ended pounder/hammer
2.04	2	212	262	68.2	67.2	35		Quartz?	Polisher/rubber
7.01	7	702	356	89.8	56.2	47		Quartz	Double ended pounder
7.02	7	702	196	100.5	35.1	35.3		Banded sandstone	Possible hone
Metal and Metal Working Debris									
SF Nr	Trench	Context	Weight (g)	ML (mm)	MW (mm)	MT (mm)	Diameter (mm)	Material	Type
1.09	1	170	< 1					Copper-alloy	Cut pieces
1.01	1	104	236					Iron	Wrought piece
1.11	1	107	24.1					Iron slag	Slag
1.05	1	123	17.3					Iron slag	Slag
053S	1	165	3					Slag	Slag
Fired Clay									
1.06	1	123	8.1					Clay	Irregular lump
Organic Objects									
1.12	1	168	-	25			18	Wood charcoal	Peg?
1.13	1	168	-	40-48			14	Wood charcoal	Peg?

Table 3: Artefacts from Comar Wood dun.

Hearth and burning layers	Context	107	111	115	117	153	168	169	177	175
	Sample	059	008, 021, 047	004, 007, 013, 014	003	030, 055, 060	057, 064	049	051	065
	Description	Inner bank of material against the dun inner wall face - first phase of courtyard 'clearance'	Charcoal-rich spread of material from around the hearth down the entrance passage	Spread of ash from hearth [113]	Charcoal-rich layer over hearth slabs - primary use of hearth	Charcoal-rich lower deposit within Trench 1	Burning layer related to wooden structure collapse during phase 2 of dun occupation	Partially vitrified surface below hearth slabs [118]	Charcoal-rich layer to W of hearth [113]	Ash layer below hearth paving [118]
Volume of charcoal 2-4 mm		470ml	300ml	-	150ml	300ml	240ml	50ml	<<2.5ml	<<2.5ml
Volume of charcoal >4 mm		400ml	225ml	165ml	500ml	170ml	500ml	35ml	10ml	<<2.5ml
% charcoal >4mm identified		25%	60%	70%	20%	65%	30%	100%	100%	100%
Charcoal	Common name									
Alnus cf glutinosa	alder	-	8 (4.33g)	72 (12.09g)	70 (16.01g)	1 (0.07g)	88 (34.98g)	-	4 (0.11g)	-
Betula spp	birch	36 (12.53g)	47 (11.05g)	33 (3.21g)	9 (1.63g)	57 (10.91g)	35 (5.90g)	50 (3.74)	-	1 (<0.01g)
Corylus cf avellana	hazel	45 (10.58g)	31 (8.25g)	8 (2.57g)	-	28 (16.00g)	5 (1.16g)	1 (0.06g)	-	-

Table 4: Botanical results from hearth and burning layers at Comar Wood dun.

Hearth and burning layers	Context	107	111	115	117	153	168	169	177	175
	Sample	059	008, 021, 047	004, 007, 013, 014	003	030, 055, 060	057, 064	049	051	065
Quercus spp	oak	11 (2.35g)	25 (8.92g)	6 (0.19g)	1 (0.18g)	31 (2.93g)	23 (2.79g)	34 (2.10g)	13 (1.79g)	-
Salix spp	willow	-	-	-	-	1 (0.07g)	11 (1.62g)	-	-	-
Cereals										
Hordeum vulgare sl	barley	-	-	-	-	1	4	-	-	-
cf Hordeum vulgare sl	cf barley	-	9	-	-	-	-	-	-	-
Cereal indet	indet cereal	-	-	-	8	-	-	-	-	-
Carbonised seeds										
Corylus avellana nutshell frag	hazel nutshell frag	-	-	-	-	1 (0.04g)	-	-	-	-

Table 4 continued: Botanical results from hearth and burning layers at Comar Wood dun.

Postholes	Context	123	125	128 & 130	132	156	159	161	165	170	179	181	187	189
	Sample	038	044	043, 045	023	039	048	058	053	052	062	022	033	036
	Description	Fill of post-hole [122] inside dun entrance passage	Fill of post-hole [124] inside dun entrance passage	Charcoal-rich fill of post/stake hole [127]	Charcoal-rich fill of post/stake hole [131]	Fill of large post-hole [149] = (150)	Upper post-pipe fill of post-hole [191]	Fill of post-hole [160]	Fill of post-hole [164]	Outer (primary) fill of post-hole [191]	Burnt/collapsed roof/structural timbers within dun	Packing stones within post-hole [164]	Packing stones and fill inside post-hole [186]	Fill of post-hole [188] inside dun entrance passage
Volume of charcoal 2-4 mm		-	-	320ml	525ml	-	-	90ml	120ml	100ml	100ml	180ml	-	-
Volume of charcoal >4 mm		30ml	20ml	135ml	320ml	15ml	10ml	50ml	180ml	30ml	1500ml	140ml	10ml	10ml
% charcoal >4mm identified		100%	100%	100%	25%	100%	100%	100%	100%	100%	33%	50%	100%	100%
Charcoal	Common name													
Alnus cf glutinosa	alder	-	-	-	3 (0.40g)	1 (0.39g)	-	-	5 (0.57g)	2 (0.05g)	-	3 (0.16g)	-	-
Betula spp	birch	3 (1.22g)	2 (1.78g)	16 (1.55g)	4 (0.57g)	1 (0.36g)	-	26 (1.78g)	7 (1.43g)	36 (1.97g)	39 (85.16g)	57 (7.33g)	1 (0.53g)	7 (1.33g)
Corylus cf avellana	hazel	-	-	-	-	-	1 (0.46g)	3 (0.16g)	39 (4.53g)	-	24 (84.74g)	-	-	-
Pinus sylvestris type	Scots pine type	-	-	-	-	-	-	1 (0.06g)	1 (0.08g)	-	-	-	-	-
Quercus spp	oak	52 (10.09g)	15 (3.13g)	663 (29.28g)	172 (18.92g)	5 (0.62g)	6 (0.38g)	247 (8.07g)	133 (8.85g)	100 (3.92g)	-	72 (6.29g)	4 (0.84g)	4 (1.38g)
Salix spp	willow	-	-	-	-	-	-	-	7 (1.03g)	-	-	-	-	-
Cereals														
cf Hordeum vulgare sl	cf barley	-	-	-	-	-	-	-	-	-	-	5	-	-

Table 5: Botanical results from postholes at Comar Wood dun.

Trenches 2-5		Trench 2		Trench 3	Trench 4	Trench 5			
	Context	212	220	303	403	503	507	508	512
	Sample	001, 002, 015	024	063	009, 011	017	020	026	025
	Description	Charcoal-flecked occupation layer inside dun	Fill of posthole [219]	Charcoal-rich patch at E end of trench that extends to S	Occupation deposit	Dun rubble but may be later wall core	Charcoal-rich deposit - surface occupation deposit	Charcoal-flecked, redeposited natural	Old ground surface below Feature 505
Volume of charcoal 2-4 mm		400ml	20ml	-	170ml	-	-	-	-
Volume of charcoal >4 mm		480ml	25ml	5ml	105ml	10ml	10ml	2.5ml	5ml
% charcoal >4mm identified		c. 60%	100%	100%	c. 60%	100%	100%	100%	100%
Charcoal	Common name								
Alnus cf glutinosa	alder	-	2 (0.09g)	-	-	5 (1.25g)	5 (1.12g)	-	-
Betula spp	birch	94 (3.98g)	-	-	100 (7.82g)	-	-	-	3 (0.56g)
Corylus cf avellana	hazel	158 (30.97g)	5 (0.19g)	-	-	2 (0.64g)	-	-	-
Pinus sylvestris type	Scots pine type	-	-	-	-	-	-	2 (0.05g)	-
Quercus spp	oak	14 (0.67g)	2 (0.14g)	2 (1.28g)	57 (3.33g)	-	-	1 (0.09g)	1 (0.07g)
Salix spp	willow	9 (1.90g)	52 (3.18g)	-	-	-	-	-	-
Cereals									
Hordeum vulgare sl	barley	-	1	-	-	-	-	-	-
Carbonised seeds									
Corylus avellana nutshell frag	hazel nutshell frag	-	7 (0.08g)	-	4 (0.04g)	-	-	-	-

Table 6: Botanical results from Trenches 2 - 5 at Comar Wood dun.

Sample	Context	Species	Description	Fragment size range (mm)	Weight (g)	Notes
8	111	IM	c. 70 calcined fragments	8-12	2.2	
16	111	IM	c. 50 calcined fragments	3-13	2.2	
46	111	cf Cattle	sesamoid; calcined	15	<1	bone 'spot' sample
46	111	cf Cattle	2nd phalange; distal fragment	16.5		
46	111	IM/LM	c. 70 calcined fragments	8-29	49	
46	111	MM	1 calcined shaft fragment			
54	168	IM	10 calcined fragments	4-9	0.6	
29	115	IM	c. 27 calcined fragments	4-34	6	bone 'spot' sample
29	115	LM/MM	cf rib shaft with knife cuts			
37	123	IM	1 calcined fragment	8.5	<0.1	
38	123	IM	1 calcined fragment	12	0.2	
44	125	LM/MM	1 calcined fragment			bone 'spot' sample
44	125	IM	c. 25 calcined fragments; 3 reduced	5-19		
60	153	cf Cattle	tooth fragments; molar/ premolar	6-29	4.5	
60	153	Sheep/goat	1st phalange; proximal; calcined	13		
60	153	IM	c. 15 calcined fragments			
31	153	IM	2 calcined fragments	8-10.5	<1	charcoal 'spot' sample
40	156	Cattle	L mandible fragment; calcined	27		bone 'spot' sample
40	156	MM	cf rib shaft	18		
40	156	IM	c. 40 calcined fragments	4-27	12	
41	156	IM	c. 20 calcined fragments	3.5-18	1.6	
48	159	LM	5 calcined fragments	4-22		from charcoal & bone 'spot' sample
58	161	LM	2 calcined fragments			
58	161	IM	c. 60 calcined fragments	2-21	6.3	
49	169	IM	c. 22 calcined fragments	2.5-10	1.4	
52	170	IM	c. 70 calcined fragments	3-19	7.6	
52	170	Ungulate	tooth enamel fragments	19.5		
52	170	LM/MM	2 shaft fragments			
22	187	IM	c. 12 calcined fragments	3-18	1.1	
33	187	IM	1 calcined fragment	11.5	<1	from charcoal & bone 'spot' sample
34	187	IM	c. 16 calcined fragments	3-12.5	1.1	
35	189	IM	c. 30 calcined fragments	2.5-18.5	1.4	
36	189	IM	1 calcined ?tarsal fragment	11.5	1	from charcoal & bone 'spot' sample
19	507	IM	1 calcined fragment	6	<0.1	
57	168	cf Cattle	calcined sesamoid	15.5	<1	
57	168	LM	1 calcined shaft fragment		<1	
57	168	IM	c. 30 calcined fragments	4-24	7.4	
42	128 & 130	IM	4 calcined fragments	3-3.5	<0.1	
43	128, 130	IM	1 calcined fragment; reduced	12.5		from charcoal & bone 'spot' sample

Key to abbreviations
IM = indeterminate mammal
MM = medium mammal
LM = large mammal

Table 7: Catalogue of animal bone from Comar Wood dun.

Evidence for wattle or hurdle fencing or partitions was recorded in the intermediate destruction layer (168/179) where intensely burnt deposits contained carbonised hazel roundwood with hazel wood pegs or trenails also present (SF 1.12). In the same layer where birch was also significantly present, it was noted by Ramsay that birch timbers might have been associated with a roof structure. Although the type of wood used for hearth fuel was inconclusive, the ash layer (117) directly overlying the upper hearth slabs contained charcoal dominated by alder, and could suggest that this wood was used primarily for fuel.

A further possible pattern may be present with regards to the lack of willow and Scots Pine charcoal in all posthole fills and deposits interpreted as part of secondary phases. Willow charcoal dominates in the small posthole from Trench 2, and is also found in small quantities in the first phase deposits (107, 153 and 212), and could suggest that willow was present only during the first phase of occupation.

The other posthole fills and surface deposits contained mixed species with no single wood type dominating. This is not surprising given the interpretation of two burning events on the site, associated with multiple periods of posthole re-use and restructuring of the interior. Other carbonised material present in the samples included very small amounts of mammal bone fragments, hazel nutshell, barley and indeterminate species of cereal grains. The presence of burnt cereal grains (with at least barley present) and hazel nutshells has provided some evidence for economy and food consumption. As does the small quantities of burnt animal bone fragments, representing at least domesticated cattle and sheep or goat, with evidence for butchering shown by the presence of knife cutmarks on a rib bone from the hearth ash layer (117) (Smith, below). Further bone fragments were recovered from (169) between the upper and lower hearth settings. The degraded state of the burnt grain and bone also indicates that the material was subject to several periods of burning, not just associated with hearth use or cooking. This is not unexpected given the evidence for at least two substantial conflagration events on the site.

There was also a pattern in the recovery of burnt bone fragments in Trench 1, which appeared in a much higher quantity from the fills of secondary phase postholes and the upper floor deposits. The highest quantity of burnt bone came out of the upper horizons (i.e. 111 and 168 as opposed to 153 and 507). However, the spread of the material across the floor deposits and posthole fills was mixed and conclusions are limited on this basis.

The small assemblage of stone tools from the site is characteristic of those from other Iron Age sites (Ballin Smith, below). The fragments from two different querns (SF 1.02 and 1.03) provide evidence for food processing on the site, and this is supported by the presence of stone pounders/hammerstones (SF 1.14 and 7.01) found close to the hearth. The presence of five other stone tools from inside the dun (including pumice, SF 1.06, that was brought to the site from elsewhere) provides some evidence of activities that may have taken place on the site. Pottery manufacture, animal skin processing, wood tool working and possibly metal-working could be indicated by the presence of fired clay waste (SF 1.08), iron slag (SF 1.05 and SF 1.11), wrought iron waste (SF 1.05), small fragments of bronze sheeting (SF 1.09), and shaped hazel roundwood (SF 1.12). However, the material was found in such small amounts that this assessment is not conclusive. While the presence of metal objects and metal-working debris is interesting, there is no evidence to prove that this was taking place on-site – the material could have been brought in from elsewhere or it could have been manufactured outside of the main structure. It is possible that the lack of further finds, coupled with the small amount of food plant remains and bone waste, suggests that the site was occupied sporadically or that it had a specialised function. The recovery of the items from residual deposits suggest that these activities took place during the site's primary phase of use – possibly indicating that the later phases of use were intermittent or for a different purpose. Of even greater interest is the lack of ceramic artefacts on the site.

Artefactual analysis

Beverley Ballin Smith

Worked stone

The 12 stone artefacts located during the excavation fall into five categories (Table 3). There are in addition three unworked stones. The artefacts exhibit the use of a variety of stone resources from the complex geology of the area (British Geological Survey 2017). These including the local metamorphic rocks: micaceous schists of various types and hardness, quartz, quartzite and sandstone. Another identified rock is granite possibly from a boulder from glacial or alluvial deposits along the River Glass. The only piece that is imported is pumice, possibly a single large cobble. This was likely to have been brought to the site from either the west or the east coasts as the site is situated approximately half way between the Sound of Sleat and Loch Alsh to the west, and the Moray and Cromarty Firths to the east. No other non-local stones were found during the excavation.

Querns

Two querns were found in close association with each other within a setting of hearth slabs (118) and within a stone setting (114) that extended the south side of the hearth. Both stones are fragments of upper stones of rotary querns and neither of the completed stones was particularly regular in shape.

The largest, SF 1.03 (Figure 21) comprises eight fragments of a relatively soft but coarse mica-schist that is prone to lamination, which together accounts for about 75% of the completed stone. Six of the eight fragments fit together, and the remaining two also join, but not to the rest. When found it had a substantial tree root growing through it that may have caused its fragmentation (Figure 16). The quern probably broke during use and was discarded to be reused in the kerbing by the hearth. Part of edge of the stone is missing and the edges of the largest fragment have also broken away. The largest piece contains the central splayed perforation, which in the reconstructed quern is not central. Given the type of rock the stone is made from it is quite likely that it was reshaped during use when its edges chipped or broke away. It is estimated that the stone was c. 540 mm in diameter. The upper surface of the stone is convex with rounded edges where they survive, and the stone varies in thickness from 31 to 54 mm. The lower, working surface retains evidence of pecking that roughened it not long before it was discarded. Several pieces of the reconstructed quern indicate that near its edges, the generally flattened worked surface became slightly dished or concave through use. Close to the perforation, the working surface was, slightly domed. The perforation is splayed on both surfaces measuring c. 50 mm in diameter. A handle slot or hole was not present in the surviving pieces. The upper surface is slightly pink in colour in areas, indicating that it might have been burnt prior to its reuse in the hearth kerbing/paving. When found its lower surface was uppermost.

The other quern SF 1.02 (Figure 22) is tooled from granite and broken across the spayed central perforation. This slightly dome-shaped stone thins towards its edges from a maximum thickness of 50 mm at its centre. The edges of the stone are rounded and the upper surface is worn through use. The central perforation is splayed and would have measured c. 60 mm in diameter. In addition, it has a small but intact splayed handle perforation, 30 by 32 mm in diameter that is positioned close to one edge. The base of the stone is mostly flat, but it is slightly hollowed around its central perforation and worn towards its surviving edge. Like the previous stone, the base was roughened by pecking not long before it broke and was discarded. The overall diameter of the quern was c. 380 mm.

Pounders/hammerstones

Two stones were used as pounders or pestles. SF 1.14 is a large quartzite cobble, 1130 g in weight, which has both ends facetted through use by pecking or pounding. One end also has a flaking scar though its use as a hammer. It was found in a bank of dumped material against the inside wall of the dun. SF 7.01 is a quartz chunk or short bar, 365 g in weight, which was trimmed to fit the hand. The shaft has smoothed edges, even though the faces of the stone are rough. Both ends of the tool have facetted wear caused by the stone being used for pecking or pounding. Both ends have two worn facets. The tool was found in the top of a disturbed occupation context just below the topsoil in the centre of the dun.

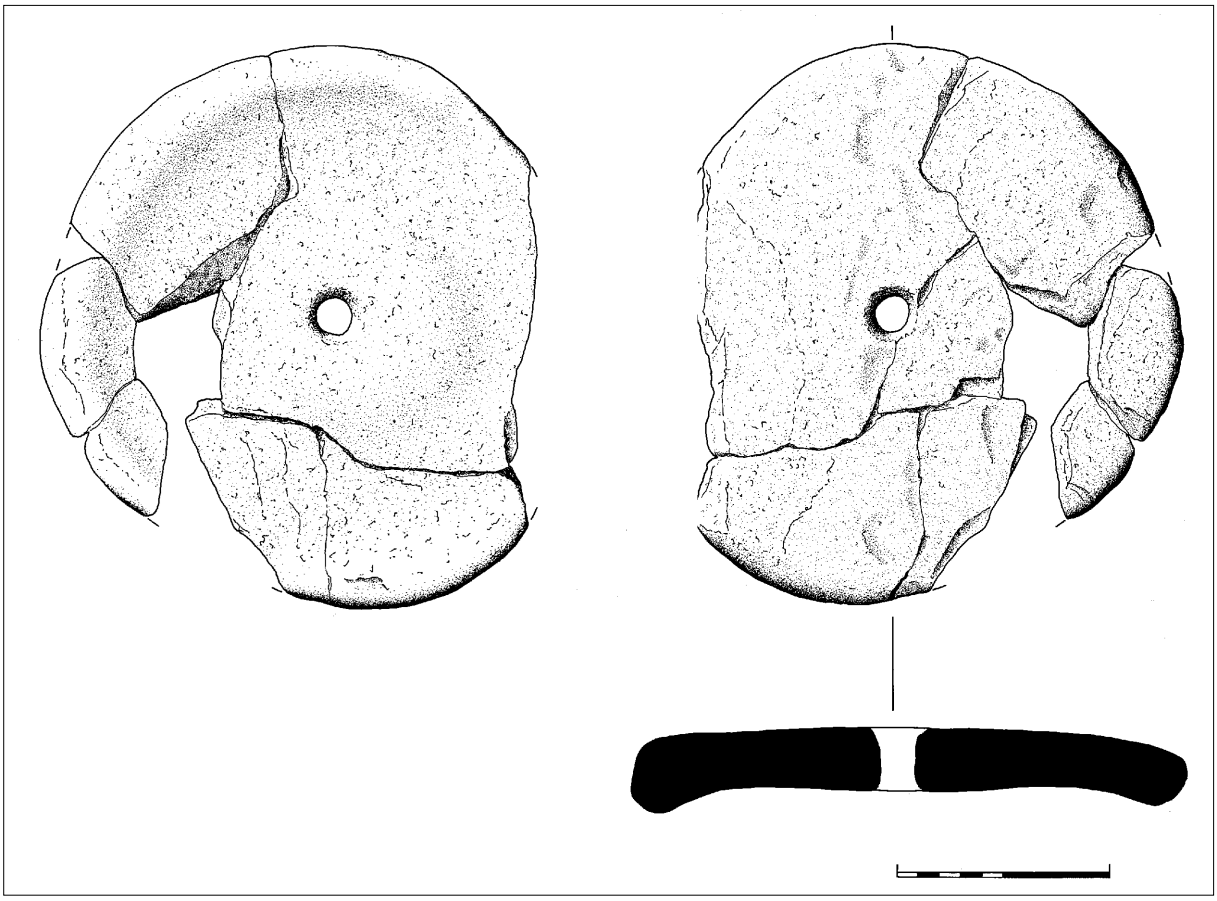

Figure 21: Quern SF 1.03 upper surface (left), lower surface (right).

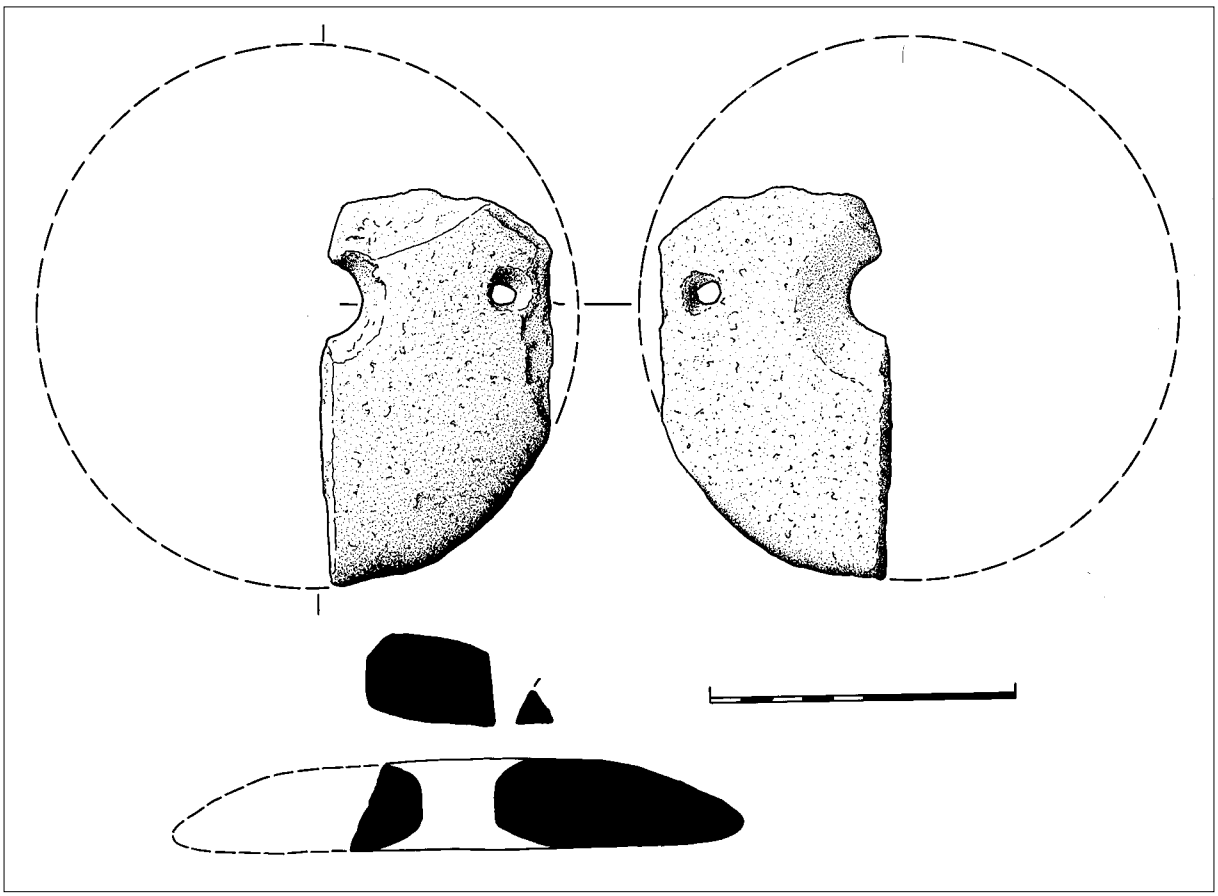

Figure 22: Quern, SF 1.02 upper surface (left), lower surface (right).

Polishers/rubbers

Four rounded water-worn stones, two of quartz and two of quartzite, have been identified as rubbers or polishers. SF 0.01 is a pebble, which is domed on one face and flat on the other. The middle of the flatter face has a smoothed area c. 45 by 38 mm where it has possibly been used as a polisher or rubber. Both this piece and SF 0.02 are unstratified. SF 0.02 is a small pebble, with one domed surface. The other is flatter with a distinct area of polish in its centre measuring 36 by 36 mm. SF 1.10 has a narrow band of slight facetted wear around parts of its circumference. It also has soot or other discolouration around its edges, suggesting it may have been used by a smith. It was found within a deposit of ash from hearth context 113. SF 2.04 is possibly unworked but some discolouration on one surface suggests use as a smoother/polisher. It was found on the surface of the occupation layer (212) within the courtyard in Trench 2.

Hone

A single, elongated pebble, SF 7.02 is identified as a possible hone. Its edges are rounded and one surface is flattened and smoothed through slight use. This piece was found in the top of a disturbed occupation context just below the topsoil in the centre of the dun.

Pumice fragments

SF 1.06 comprises four pieces of pumice. One is a rough bar, two are small fragments probably broken off the latter, and one has two smooth surfaces, possibly the outer skin of the pumice pebble. This piece is shaped like the rim or base edge of a piece of pottery, but the surface and shape are natural. All four pieces have impurities and probably derive from the same pebble. The pieces were found in the fill (123) of a posthole (122) inside the dun entrance passage.

Discussion of stone tools

This small assemblage of stone tools is typical of those found at other Iron Age sites, where the manufacture of iron tools and implements was rare, excepting the occasional blade or knife (Nisbet 1996). The reliance, therefore, on stone for most domestic and industrial purposes remained a necessity for survival during this period. On Iron Age sites where the geology permitted, certain stones were used for specific tasks (see Ballin Smith 1994): fine-grained sandstones for hones and whetstones, quartz and other dense but fine-grained rocks for smoothing and polishing, heavy cobbles, usually fine-grained for manual hammering, pounding and grinding, and the occasionally pumice piece for sanding and smoothing. The assemblage from Comar Wood is not exceptional, in that the best available stones were chosen for the purpose to which they were intended, but from locally available resources such as rock outcrops, and most likely the bed of the River Glass (as the cobble and pebble tools indicate). Quartzite, quartz and schist were commonly used at Langwell Dun, Strath Oykel, Sutherland (Nisbet 1996, 64), but that site produced many artefacts but mostly of the types identified at Comar Wood.

Two querns, apparently contemporary and found in close association with a hearth were made from different stones - granite (hard) and mica-schist (soft). As noted above, a granite boulder may have been used for one, and a block of mica-schist quarried for the other. Mica-schist querns are commonly found across the highland region of Scotland and further afield. However, as in the example of SF 1.03, the rock is prone to lamination and fragmentation. Flour ground from grain with a stone of this poor quality would have been extremely gritty and unpleasant to eat.

The occurrence of probably one cobble or pebble of pumice, later broken, is relatively rare on an inland Iron Age site, and suggests that the piece was deliberately brought to the dun. Pumice is more typically found on coastal sites, one example being Applecross Broch on the west coast of Wester Ross, where several pebbles of this material were found during the excavations (Peteranna 2012).

The stone assemblage indicates that food processing took place (querns and pounders), that iron knives were sharpened (the hone), and that the manufacture of wooden tools, leather goods and pottery required finishing (smoothers/polishers, pumice), and occasionally a large cobble was used as a hammer, possibly in metalworking.

Vitrified stone

Two samples of vitrified stone SF 1.07 and 1.11 were located in a dump of material (107) formed from the clearance of the courtyard, which lay against the inner wall face of the dun. Their combined weight is a little over 2 kg and these irregular lumps of fused material include mainly sandstone as well as micaceous schist and other local rocks. Some of the rock has melted into an icing of flowing pale slag which has fused with other hot rocks during the vitrification process.

Recent scientific research by Friend et al (2007) on two duns in north-west Scotland, suggest that vitrification of their stonework probably took place at temperatures of c. 850°C, because of the presence of mica and quartz. Earlier research suggested temperatures of 1000°C would have been needed for the process (MacKie 1969). Although further comparative analysis is need when referring to the Comar Wood dun, the geology of the Cannich area (mica schists) is not too dissimilar to that of the Morar and Moidart areas - both metamorphic rocks (British Geological Survey- igeology 2014), and therefore the processes of vitrification and temperatures attained may have been similar. The causes of vitrification have not been explored in this analysis.

Metal and metalworking debris

Iron

Metal objects were rare on the site as only three iron objects and one of copper-alloy were found during the excavations. The most recognisable iron object was SF 1.01, a fragment of modern chain link, which was found in the topsoil. This piece was not analysed further (Table 3).

A badly corroded lump of iron SF 1.05, was X-rayed and partly cleaned to aid identification. It was noted that large pustules had formed on its surface and it was identified as a small, irregularly-shaped lump of probably wrought iron. Its irregularity suggests it is most likely an off-cut from a manufacturing process and not a functional designed item (pers. comm. Will Murray, Scottish Conservation Studio). This piece was found in the fill of a posthole (122) inside the dun entrance passage.

An X-ray of SF 1.11 confirmed that it was a rounded and irregular lump of slag. It was found within a bank of material dumped against the dun wall in the courtyard. A small piece of slag was found during the processing of soil sample 053 from the fill (165) of a posthole (164) within dun courtyard, lying to the east of the south side of the entrance passage. The slag was not analysed further.

Copper-alloy

SF 1.09, two small copper-alloy fragments were found in the primary fill of the re-cut (191) of a posthole (151) which may have been a roof support in the entrance passage to the dun. The fragments appear to be that of an irregular oval copper-alloy washer with two broken perforations on the long axis (D 3-4 by 5 mm). The measurements of the largest piece are 14 by 11 by 0.4 mm (Table 3). The larger perforation may have been enlarged by use-wear and has broken recently; the smaller one broke in antiquity. The find would not be unexpected on an Iron Age site, but is in no sense diagnostic and could be later (Hunter 2014).

Figure 23: SF 1.09, copper alloy sheet with perforation (scale in mm).

Discussion of metal and metalworking debris

The presence of a single iron object, two pieces of slag and a very small amount of copper-alloy within the dun does not indicate prolific activity associated with metal working. The low numbers of metal and slag, and its occurrence within the building can be due to a variety of reasons. Metalworking in the form of smithing of wrought iron could have taken place within a small furnace confined, for example, to a hearth such as 118 with its extended kerbing. The occurrence of hammerscale in soil samples would be firm evidence of this, but the single iron object is not. The small fragments of slag,

may also be evidence of iron working rather than iron production, as the latter could have been carried out some distance away from the building. If the copper-alloy fragments are the result of local manufacture, they too could have been the result of metalworking, possibly on the same furnace/hearth where smithing was taking place. The present evidence however, does not allow firm interpretation of the occurrence or use of iron or copper-alloy on the site, and it is worth considering that these finds may have been brought to the dun from other areas.

One interesting fact is the presence of metal and metalworking debris in the fill of postholes associated with both the entrance passage and the inner post-ring of the building. It suggests that both metal and slag are residual items, possibly derived from a phase prior to that of the placing or replacing of timber in the postholes. Small fragments of slag and metal could easily have been dropped on the floor of the dun to later become incorporated in subsequent alterations of the building.

Fired clay

A single irregular piece of fired clay SF 1.06, weighing 8.1 g was found within the fill of a posthole (122) inside the dun entrance passage (Table 3). This may be a fortuitous piece of clay burnt during the vitrification of the dun, as its shape is irregular. The lack of other pieces of burnt clay mitigates this find being a piece of daub.

Organic objects

Identifications by Susan Ramsay

Two organic samples SF 1.12 and 1.13 were found within burnt deposits (168) that lay across the inner courtyard of the dun and through its entrance passage. The composition of the deposits included hearth and destruction debris, possibly from a second phase of occupation of the structure.

The samples were charcoal of hazel (Corylus cf avellana) roundwood with another hazel piece that was not roundwood. SF 1.12 (Figure 24) has 13 growth rings and intact bark, and is a cut and shaped piece, which is broken. Its maximum diameter is 18 mm and is length 25 mm. Three pieces of hazel wood comprise SF 1.13. One piece is roundwood and is 40 mm in length with some bark present. It has 12 growth rings with a maximum diameter of 13-14 mm. The second fragment of roundwood has five growth rings and a maximum diameter of 12-14 mm and is 48 mm in length, again with some bark present. The third piece of hazel charcoal was irregular in shape and it was not from small roundwood. Tool marks were not identified on any of the pieces (Table 3).

Figure 24: SF 1.12, possible wooden peg or trenail (scale in cm).

Discussion of organic objects

These small pieces of carbonised hazel wood, mostly roundwood are a rare survival on an Iron Age (non-waterlogged) site, where their preservation is most likely the result of the firing and vitrification of the dun. Wooden objects of this period are most often found on crannog sites, such as that dug in 1960 at Loch Glashan (Crone and Campbell 2005). At that site a large variety of artefacts was recovered including large turned pieces, stave-built containers and smaller pegs, tools, spoons etc. Roundwood of c. 15-20 mm in diameter was used for trenails (structural pegs) mostly often made from ash, but hazel, alder and oak wooden pieces were also found on the site (ibid 42-43), suggesting the use of local woodland resources, as most likely happened at the Comar Wood dun.

Another Iron Age crannog in Ayrshire produced a similar range of artefacts to that at Loch Glashan, where roundwood was used for pegs, spatulate tools and pins. It was noted that 'small objects such as the awl and spatulate tools were whittled

out of small twigs and branches of hazel and holly' (Crone 2000, 128).

At the later site of the Biggings, Papa Stour Shetland, wooden pegs were used for structural purposes associated with its wooden Norse building. All pegs were headless (Morris 1999, 190 and Figure 107) but some had shaped ends. The cut end of SF 1.12 is similar to these and this may indicate that it was a wooden peg or trenail. The smaller pieces of roundwood SF 1.13 from Comar Wood could be pins, but other possibilities are that they were intended to be used as wattle or as charcoal in a hearth or small furnace.

General discussion of artefacts

The finds are distributed across the dun and from the lowest to the latest phases of the site. The potentially earliest group of finds, a quartz rubber SF 1.10 and the small copper-alloy cut pieces SF 1.09, are those found in the fill of posthole 151. Although the posthole is thought to date to Phase 1, the earliest of the site, it is likely that the artefacts were incorporated when it was re-cut in Phase 3, and therefore they could be any date from phases 1 through to 3.

Phase 2 finds, from the burning event, include the burnt wood SF 1.12 and SF 1.13, a piece of iron slag SF 1.11 and a double ended quartz pounder/ hammerstone SF 1.14. This group of finds suggest activity around the hearth that could have been industrial in nature such as smithing, with the hammerstone being used in metal working activities, and the slag derived from those activities. The wood charcoal could have been structural (pins, trenails, even wattle) or possibly charcoal to stoke a small metalworking hearth.

The two broken and worn querns SF 1.02 and SF 1.03 are associated with the hearth 118 and its extension. Their reuse in the kerbing indicates they are probably of earlier date than the hearth, most likely Phase 1. SF 1.05, the piece of wrought iron, which was found in the fill of posthole 122 inside the entrance passage in Phase 2 could have derived from the hearth and possibly adds weight to the interpretation of the use of this feature for metalworking.

The fills (123 and 165) of post holes (122 and 164) are considered to be related to a second phase building, and are associated with the entrance passage or the supporting inner ring of wooden posts in the centre of the dun. The artefactual evidence suggests this was debris from the floor of the dun: iron and slag pieces (SF 1.05 and 053 sample), and an irregular lump of burnt clay SF 1.06. The fragments of a pumice pebble SF 1.06 could have been discarded and included in the posthole filling as packing. An alternative possibility could be that the items had been placed in the postholes prior to post reinsertation.

Two stone tools SF 7.01 and SF 7.02 (a double-ended pounder and a possible hone) were located in disturbed occupation deposits associated near the hearth in Trench 7. SF 2.04 was associated with an occupation layer in the possible cell excavated in Trench 2. The majority of evidence is associated with activities in the centre of the dun and in its entrance passage, suggesting that waste materials were regularly taken out of the building for disposal, with occasional smaller fragments accidentally dropped onto the floor. Some of these became incorporated in the fills of postholes when the wooden supports of the dun were replaced.

There is nothing outstanding in either the distribution of finds or the range of finds from the dun. The numbers are small, reflecting the limited archaeological intervention at the site, but also perhaps the limited activities that took place there. The cultural evidence mirrors to some extent other Iron Age and later sites such as the crannogs (Crone 2000, Crone and Campbell 2005), brochs, as well as other dun sites, such as Langwell (Nisbet 1996). In contrast to the range and number of finds of the much larger cultural assemblage at Dun Ardtreck, Skye, excavated in the 1960s (MacKie 2000), the assemblage from Comar Wood is very narrow. What is surprising though is the total lack of pottery from the site, which contrasts remarkably with, for example, Dun Ardtreck. However, this might not be unusual when compared to the finds assemblages from Langwell, Rahoy and Dun Lagaidh (Nisbet 1996, 68), where pottery was not recovered from any of these sites. It might be worth considering whether vitrified duns had specialised functions, and the limited range and number of finds is a result of this.

Archaeobotanical results

Susan Ramsay

The charcoal finds from the hearth contexts and from the posthole fills of the entrance passage produced a range of radiocarbon dates, which suggests that the site had been in use for several centuries (Table 1). It is not possible to determine whether this represents a continuous period of habitation or whether there were several discrete episodes of use. Earlier fragments of charcoal seem to have become incorporated into later posthole fills making it difficult to date the individual features and to determine which features are contemporaneous.

The charcoal assemblages from the hearths indicate that the inhabitants were utilising locally available woodland resources for fuel (Table 4). The fuel types represented were oak, hazel, birch, willow and alder, although the abundance of oak in domestic hearth waste is not common on Scottish sites after the Bronze Age. The results may simply indicate that oak was still a common woodland resource in the area, unlike the situation in central and southern Scotland. It may also be that elements of structural timbers have become incorporated into these hearth deposits during the destruction episodes that took place within the dun. However, a further possibility is that oak was being deliberately collected for hearths where high temperatures were required e.g. for small scale metalworking (Gale and Cutler 2000). However, this suggestion would require further evidence in the form of metalworking waste or a concentration of metal finds from the site.

Very few food plant remains were recovered from this site, with only very small quantities of carbonised barley grains and fragments of hazel nutshell recorded. The barley grain that was recovered was extremely poorly preserved and looked as if it might have been subjected to several episodes of burning. The lack of food plant remains on this site might suggest that it was either not occupied by significant numbers of people or that it was only occupied sporadically. The presence of barley does not help to narrow down the main period of occupation since barley has been the commonest cereal type in much of Scotland from the Neolithic to the medieval period (Dickson and Dickson 2000).

Several of the posthole fills, particularly those associated with the entrance passage, showed evidence for the presence of structural remains (Tables 5 and 6). Oak dominated, as would be expected from large posts that had to support a substantial structure. However, significant amounts of birch and hazel were also present, which might suggest the presence of wattle hurdle panels or dividers within the structure itself. The range of radiocarbon dates obtained from these features makes it difficult to determine whether the oak is contemporaneous with the other charcoal types. The birch and hazel charcoal may be from an earlier period of occupation. It is also possible that the birch was, in some way, associated with the roof structure but it is difficult to be any more than tentative with this suggestion. There was no evidence for burnt turf, heather, reeds or straw which might have indicated roofing material within any of the mixed deposits.

Animal bone

Catherine Smith

The bone samples consisted of highly fragmented mammalian material, all of which had been subjected to high temperatures to the extent that the bones were calcined and had lost most of their organic component. All of the bone samples seen came either from hearth, hearth-related or destruction layers relating to burning of the dun and posthole or beam slot fills (Table 7).

Most of the fragments were unidentifiable due to heat damage but, as is common with this type of material, small elements such as sesamoid bones survived intact due to their small size and dense structure and were identifiable to species. Two samples contained cattle sesamoids, from a spread of hearth material (111) and (107). Other cattle remains identified were a fragment of mandible with tooth alveoli from which the incisor teeth were missing, from a fill of a large posthole (156), and a distal fragment from a cattle second phalange or toe bone from (111). Some ungulate tooth enamel fragments, most likely from cattle, were also preserved, if poorly. Tooth fragments were present in (153), a lower spread of hearth material, and a posthole fill (170).

One bone, a much shrunken fragment from the proximal end of a first phalange, from sheep/

goat was also noted in (153). A possible mammal rib shaft fragment from (115) still bore traces of knife cuts on the surface of the bone. Two paired parallel sets of two short cuts were observed, running diagonally to the long axis of the bone. These cuts would have been inflicted during butchery, specifically filleting, of the meat. The identical pairing of the cuts implies the same implement made both sets of marks.

The analysis of this material demonstrates that even the most unpromising of archaeological samples may contain identifiable fragments. Despite the low rate of identification it can be stated that the bones of domesticated livestock were present in the assemblage and that at least two species, cattle and sheep/goats, were being utilised by the occupants of the site. Much of the burning was probably related to the destruction of the dun by fire, for example in (111), from which probable cattle remains were retrieved. Where hearth material was present it is possible that burning of the bones may have been deliberate, as a method of disposal of the remains of meals, although the catastrophic destruction wreaked by fire over the whole site is a more likely explanation. Bone fragments may have been accidentally incorporated into the fills of postholes during clearing of the site in secondary phases and the fragments themselves provide no evidence that they were introduced deliberately.

Phasing

The earliest archaeological evidence noted on the site was the presence of small charcoal fragments present in redeposited natural subsoil (508) below the base of the dun outer wall face in Trench 5. A radiocarbon date derived from Scots Pine charcoal fragments produced date range of 5740-5645 cal BC (SUERC-54239)(Table 1). This could be related to early forest clearance during the Mesolithic period, well before the period discussed in this paper.

The primary dun comprised a subcircular, double-faced stone-built wall with rubble core measuring approximately 3.2-3.3 m wide around the entrance, as defined by wall faces (102) and (106), enclosing an area approximately 18 m N/S by 15 m E/W. On the north side of the dun, the wall measured 2.1-.2.2 m wide with potential, but inconclusive, evidence for an intra-mural cell, represented by (201, 213 and 214). The entrance passage, located on the west side of the structure, measured 1.6 m across and may have contained a slabbed surface (148). A timber structure, possibly a porch and door frame, was represented by postholes (127 and 131), and beam slot (135). There may also have been an opposed entrance (506) on the east side of the building. In the interior, a timber structure could have supported a roof or other structure, as represented by opposed postholes (174 and 186), and a further setting of opposed postholes (160 and 164). There would have been a hearth at the centre of the courtyard, represented by pit (183) or slab setting (176).

The first phase of the building appeared to have ended after a fire, represented by a wide-spread burning layer (153/212/507) and the vitrified subsoil (178/184) below it. Associated with this event was a bank of charcoal-rich material (107), containing heat-affected stone clasts and vitrified stone (SF 1.07), piled against the inner wall face above layer (153). Hazel roundwood charcoal from the burning layer, the lowest archaeological horizon (153) in Trench 1, produced a radiocarbon date of 376-203 cal BC (SUERC-54243) while the lowest archaeological layer (212) overlying the subsoil in Trench 2 produced an almost identical radiocarbon date of 371-201 cal BC (SUERC-54232) for hazel roundwood. These dates are almost identical to the radiocarbon date, 382-204 cal BC (SUERC-54242), obtained from a hazel roundwood charcoal sample from the bank of material (107) against the inner wall face. Two further radiocarbon dates from charcoal taken from postholes interpreted as part of the phase 1 structure fell within the same period: willow charcoal fragments from posthole (219) in the dun interior in trench 2 produced a date of 365-184 cal BC (SUERC-54238) and birch charcoal fragments from a posthole (127) in the entrance passage produced a date of 371-207 cal BC (SUERC-54241). Although the fills from these postholes may have contained residual material from post removal, the contents of these two features appeared homogenous and did not appear significantly affected by later re-cutting. The primary dun structure had almost certainly been built prior to or within the early fourth to second centuries BC.

A later phase of the structure included the addition of a secondary exterior face to the dun,

represented by wall face (101), which widened the wall to 3.8 m wide. Further stone (119) added around the outside of the entrance constricted the opening to a width of 1.1 m. A second timber structure inside the entrance passage was represented by opposed postholes (122 and 124) and by (149 and 188). On the opposite side of the dun, the passage through the wall (506) was blocked up, with the blocking stone built over the first phase burning horizon (507). In the interior, a second structure may have been built or repairs undertaken to the previous one, represented by opposed postholes (191) and the secondary re-cut of (186). It was not possible to determine if the main structure contained intra-mural gallery spaces, although presence of a possible inner face (213), entrance flanking stones (214) and further stonework (223) overlay the lower burning horizon (212). Although it is not possible to say if these changes were all contemporary, they all appear to be secondary to the earlier elements of the site discussed previously.

Birch charcoal from the fill of posthole (188) produced a radiocarbon date of cal AD 70-224 (SUERC-54240) and provides an indicative date range for a period of secondary occupation. This date range is very similar to one obtained from charcoal within an upper burning layer (168/179). This deposit contained carbonised timbers below a later interior wall (110) and over the earlier clearance layer (107) and lower floor deposit (121). Carbonised timbers from the fire debris (SF 1.13) produced a radiocarbon date of cal AD 27-212 (SUERC-54247), indicating that the interior, rubble walls in the courtyard were built after this event. Posthole (191) was potentially cut through this layer or a burnt post from it was removed after the fire. Therefore, it is probable that interior structure represented by these postholes was built prior to this burning event.

A radiocarbon date obtained from birch roundwood charcoal in an ash layer (117) overlying the upper hearth slabs (118) at the centre of the courtyard produced a radiocarbon date of 45 cal BC – cal AD 80 (SUERC-54233). This date is very similar to one obtained from hazel roundwood charcoal in the overlying ash layer (115), which dated to 41 cal BC – cal AD 120 (SUERC-54237). The dates above and the stratigraphic relationship between the hearth features and the vitrified subsoil (178) indicate that earlier slabbed hearth (176) and hearth pit (183) were in use during the first phase. These also show that upper hearth (118) must have been in use after this period. A large stone, which showed wear as a possible whetstone, located at the western end of the hearth setting, may have been removed from its original position at the western kerb of the hearth. It appeared to have been realigned on an E/W orientation, in effect opening up the hearth to the entrance. This stone was set into the upper ash later (115) and may have been moved at the same time as the broken quern was incorporated into the hearth. The alignment of small upright stones (114) on the south side of the later hearth setting also incorporated a broken quern. This might have been remnants of the earlier, robbed out hearth setting (176) or part of another setting. There was clearly multiple period of use of a central hearth inside the main structure.

Prior to excavation it was apparent that the courtyard area was remarkably clear of stone rubble and debris. The uppermost archaeological layer (111) and the ash layer (115) inside the courtyard and extending from the central hearth probably represent a spread of raked-out material. The cleared area was delineated by internal, rubble walls (110 and 215) that retained collapsed stone and burnt debris and marked a constricted space inside the dun to approximately 11 m in diameter. The rough construction of the wall bank suggest that it was built rather quickly as a front edge to retain the cleared-out debris piles, still respecting the original entrance passage, as marked by the connecting wall (193). Another inner bank of material (182) formed on the inside of the wall (110) may represent an even later period of courtyard clearance, suggesting there was continued infrequent and informal occupation of the site after the second burning event.

It was probably during a much later time period that the abandoned site was reoccupied, when the external rubble buildings (Structures 1-4) were built within the dun collapse. There were, however, no artefacts recovered to provide a date for them, but it is likely that they represent shielings built during the late medieval or post-medieval period based on construction style. The structures, which all appear of similar build, were not shown on the 1872 Ordnance Survey of the site.

Interpretation

The interpretation of Comar Wood dun is not certain. The condition of the site, after at least two dramatic burning events, along with the mixing of layers from re-occupation and considerable tree root disturbance, offers good reason to exercise caution in the interpretation of certain features. Detailed analysis of the fieldwork and post-excavation results has shown that it was occupied throughout various structural phases, the relationships between many of which were difficult to establish.

The stone-built, subcircular structure was built prior to the first burning event, represented by the lowest layer of burnt material spread through the entrance and interior of the courtyard and built up on the inside of the inner wall face. Five consistent radiocarbon dates indicate that it was built before the early fourth - second centuries BC. The structure was probably built to about 1.5 m high, with double-skinned walls partially revetted into the subsoil. The western entrance passage contained a timber structure with a possible opposing passage through the wall to the east. A timber structure within the interior may have supported a roof covering the whole of the courtyard or a lean-to against the inner wall face. A hearth was located at the centre of the courtyard. There was limited evidence to suggest that the wall contained intra-mural galleries. The main structure was enclosed by a 2.5 m-wide wall that probably stood 1.5-2 m high. The enclosure ended abruptly at the edges of the steep knoll and was entered through a passage opposite the dun entrance. This outwork may have contained a door or guard cell.

During the secondary phases of use, the fire and occupation debris was raked out and piled against the interior wall face of the dun. The entrance passage was elongated and a new or repaired timber structure erected inside it. This have occurred at the same time when the opposed eastern passage was blocked up. A new or repaired timber structure was also built within the courtyard and a central hearth was still in use. These secondary phases came to an end probably during the latter part of the second century AD or third century AD. Hurdle or wattle panels also appear to have been used inside the courtyard. Following this period, another re-occupation is represented by the construction of an interior rubble-built wall that retained raked-out debris and collapsed stonework and constricted the courtyard space.

The chronology for the dun use falls within a period of approximately 600 years, and evidence for various phases is demonstrated by the sequence of radiocarbon dates falling between fourth century BC to AD third century, the middle to late Iron Age. The only evidence for earlier settlement was pine charcoal that provided a single radiocarbon date of 5740-5645 cal BC (SUERC-54239).

Much later reoccupation of the site took place after abandonment and collapse of the dun. The later buildings constructed within the rubble of the enclosure wall and dun are reminiscent of medieval or post-medieval shieling sites. The ready source of stone found on prehistoric sites made them useful locations for siting of shieling settlements, with Altbreck Broch (SM 1829) and Carn Liath long cairn (SM 4752) being two examples. Unfortunately, it is difficult to ascribe a date to these later structures, without artefactual or documentary evidence.

Discussion and Conclusions

The site at Comar Wood lies close to the watershed dividing the Atlantic Scottish west coast from the Central and Eastern Highlands. The overall landscape position places the site centrally in the glen that connects the east coast at the Beauly Firth and west coast at Loch Duich and there are many similar site-types in the glen and wider landscape. The position of Comar Wood dun at the edge of a steep-sided knoll overlooking the strath leaves no doubt as to the strategic siting of the structure. It would have been a permanent site in the landscape for centuries, possibly marking guardianship over the land. The permanence of the monument was proven during the evaluation, showing that clear phases of occupation and re-occupation took place within this substantial stone building and enclosure outwork. It was built to be seen, but not to be accessed freely. As such, its position could have placed it prominently within prehistoric territorial or landscape boundaries.

Although portrayed as simple in form, the duns are a very diverse class of monument, possessing

a variety of ground plans, which include the possible roofed 'dun-houses' as well as the much larger 'dun enclosures' that were almost certainly unroofed and were more like the much later Irish ring forts (Harding 1984). A good interpretation for this site would be that it was a dun-house – a substantial monument that is too small to be a fort and could have been roofed – with a defensive enclosure. The location was deliberately selected as was the adoption of an enclosure wall – strongly supporting the case for a defensive structure with a display of prominence. The longevity of use is also clear, with evidence for lengthy occupation by a culture reinforcing their presence on a landscape, be it for defence or display of power, both of which must certainly be linked. Comar Wood, along with most of the other prehistoric settlement sites in the area, overlooks the fertile river plains where the most reliable agricultural ground was located. Firmly located within these agricultural landscapes, it is possible to see the enclosed dun at Comar Wood as overlooking and being embedded in these resources.

A close parallel for the type of site at Comar Wood is a vitrified dun at Langwell in Strath Oykel, Sutherland, excavated in 1973 and 1974 (Nisbet 1996). Langwell dun, measuring between 15 and 15.5 m internally with walls averaging 5 m thick, contained evidence for a roofed structure, a timber entrance structure and rebuilding and reoccupation after a primary burning and vitrification event. The surviving walls had been well-built, in contrast to those recorded at Comar Wood, but the layout of the entrance passage at Langwell, including the locations of the postholes, is remarkably similar to Comar Wood dun. The Langwell postholes were recessed into the stonework in the entrance, and may have provided the structural support for horizontal timbers to support the stonework, whilst also being inserted prior to the entrance stonework being laid (Nisbet 1996). The dun at Langwell contained a well-built guard cell running off the entrance passage, but no other intra-mural spaces were identified or excavated. Interestingly, the vitrification of the subsoil was described as reddened to a depth of more than 0.15 m (Nisbet 1996, 55). Although the heat effects did not permeate as deeply at Comar Wood, the vitrification infiltrated the subsoil to a depth of 20-50 mm, which suggested that burning of a collapsed timber structure took place. Comar Wood dun also produced some vitrified stone, although this was confined to the postholes in the entrance and over the courtyard surface where there were timber structures. However, the dun did not provide any indication of timber-lacing of its walls. Similarly to Langwell dun, the occupation deposits surviving inside were shallow, containing very small fragments of bone and no pottery. Bone from a midden deposit below the outer wall also contained sheep and cattle, the only two species which were identified at Comar Wood. In the secondary phase of Langwell, they did not repair the wall prior to re-occupation, but constricted the space after clearing the entrance completely. As at Comar Wood, they banked up deposits around the foundation stones of the wall but kept the central area clean. Radiocarbon dates taken on samples from the site produced results ranging from 500 cal BC to cal AD 140 (Table 2).

Another site in the West Highlands of Scotland showing some similarities to Comar Wood dun, is that of Rahoy in Morvern, Argyll excavated by Childe and Thorneycroft (1938). This roughly circular stone-built dun had been heavily vitrified, which presented difficulties for the excavators in finding surviving elements of the inner and outer walls. The structure measured approximately 21 m externally and 13 m internally, giving a wall thickness averaging 4 m. The structure included a large rectangular central slab-built hearth, but as with Langwell and Comar Wood, few small finds were recovered.

At Loch Glashan, Argyll, in 2003, a single evaluation trench was placed over the wall and courtyard of the Atlantic roundhouse, or dun, in an effort to assess the damage caused by vegetation and to obtain dating evidence (Gilmour and Henderson 2011). The Atlantic roundhouse measured 28 m in external diameter, with the main wall approximately 3.5 m wide. As at Comar Wood, Loch Glashan contained a secondary rubble-built internal wall concentric with the main wall, and post-dating the main phase of occupation. A deposit, containing burnt material abutting the primary inner wall face and overlying the subsoil, produced two radiocarbon dates of 393-205 cal BC (SUERC-5478) from charred grain and 363-108 cal BC (SUERC-5478) from a hazelnut shell. A layer below the later wall produced similar radiocarbon dates from hazelnut shells, while

the context itself yielded a yellow opaque glass bead typologically dated to between the second century BC and second century AD (ibid). Hazel charcoal from a similar layer at Comar Wood produced a radiocarbon date of 382-204 cal BC (SUERC-54242).

In 2013, a structure of similar proportions and morphology to Comar Wood dun was excavated at Easter Rarichie on the Tarbat Peninsula in the north-east Highlands. Located on a heavily fortified hill, it was built and in use from c.400-200 BC (Hatherley pers comm). Further excavation by Hatherley in 2014 in the same area, has produced similar evidence for construction and reuse during the same periods as Comar Wood dun, particularly Tarlogie roundhouse, constructed c. 360-170 BC and re-used c. AD 25-130 and again c. AD 240-330 (Hatherley pers comm).

The reuse and rebuilding of structures is consistent with other Iron Age Atlantic roundhouse sites, Langwell, Loch Glashan and Tarlogie being just a few examples of this. The complex roundhouse of Applecross Broch is also a prime example (Peteranna 2012 and Table 2). Comar Wood dun contains similar interior features to Applecross Broch, such as quern re-use in slabbed features, unusual angled stacks of stone and multiple rectangular hearth settings with small upright stone kerbs. However, in stark contrast to Applecross Broch, the excavations at Comar Wood failed to produce any dateable small finds. This lack of finds is also reflected at Langwell, Rahoy, Loch Glashan and Easter Rarichie. In particular, Loch Glashan and Comar Wood were both noted as aceramic, although fired clay from Comar Wood may represent a by-product of ceramic manufacture.

The lack of material culture suggests either that the occupants thoroughly cleaned out debris in a methodical manner, before or after abandoning such sites, or that they were only used temporarily, possibly as places to retire to in times of strife. These circumstances make it difficult to assign any particular domestic or defensive function to sites such as Comar Wood. At the same time, two querns were found reused within the hearth setting at Comar Wood, incorporating disused domestic tools into a practical living area. This is a practical and simple reuse, commonly seen in floor surfaces and paved areas of Atlantic roundhouse sites (Mackie 1971-2). The reuse of these sites and lack of considerable artefactual material suggest that these sites were nothing to do with elite settlements, but probably related to more autonomous farming communities establishing a presence and control over territory. The reuse indicates successive groups returning to the same site, although, for what purpose, it is unclear. It seems apparent that the second phase of rebuilding involved more careful reconstruction, while the third phase was a rather rapid constriction of the space for very temporary use. Perhaps the latest reuse, which appears to have taken place after the start of the first millennium AD, represents a non-domestic use and is reflective of later social changes taking place.

Therefore, one idea is that Comar Wood dun evolved from a chieftain's defended roundhouse into a meeting place, a monument located centrally that could have been visited occasionally. The fact that so few artefacts were recovered and such little domestic debris was encountered may support this hypothesis. Such an interpretation might also offer an explanation as to why so much secondary destruction debris was banked up against the inside of the structure rather than being cleared out completely as would be expected in a permanent settlement structure.

The overall relationship between defensive Iron Age sites, such as forts, simple duns, galleried duns, complex roundhouses and brochs remains to be considered. Like most of the fort, dun and broch sites distributed along the length of Strathglass, the monumental roundhouse at Comar Wood was built in a location to take full advantage of an extensive view-shed; whether to work on established lines of sight between contemporary structures, to provide a defensive location, or to represent a symbol of status within the wider landscape. With its impressive dimensions, including a possible towering conical roof, contemporary outworks and its location set on the edge of rocky knoll whose slopes fall quickly towards the valley floor, the monument would certainly have displayed identity and prestige.

It has been suggested that the adoption of enclosure was a deliberate choice. Armit and Ralston (2003, 193), for example, suggest that a

perceived trend to enclose a space could have been associated with factors such as an increasing emphasis on pastoral farming brought about by climatic deterioration, or a result of social change. The construction of enclosing works could also be associated with a wide potential range of practical and symbolic meanings (Collis 1996; Ralston 2006, 10-11), such as defining communities, as social defences, displaying status or isolation, and as expressions of power through the mobilisation of labour (Hingley 1992, 39). Perhaps, it is possible that the occupants of these enclosed sites, including any associated monumental buildings, were displaying identity, prestige and independence (Hingley 1992, 14-17; Armit 1997, 27), although this remains an assumption based on current models of Iron Age society.

Further excavation of this site and other similar sites would certainly reveal much more information to establish a chronology for structural development and regional models. However, the evaluation at Comar Wood has shown that such 'keyhole' investigations, designed to assess archaeological potential and recover information to a pre-determined plan, can provide valuable information and usefully increase the current corpus of knowledge. A carefully constructed research design and effective trench placement gained the optimum amount of information from a small area. The evaluation also proved that it is difficult to assign a monument-type based on field survey alone; such monuments should be approached with an open-mind and can only be truly categorised through excavation. It was shown that what was thought to be a well-preserved, galleried dun was, in fact, a poorly preserved monumental roundhouse with a timber structure in the entrance.

The site has been reinstated and backfilled and remains in the care of Forestry Commission Scotland.

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