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The excavation of a prehistoric settlement at Lower Slackbuie, Inverness

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1. ABSTRACT

The expansion of Inverness southwards has led to the uncovering of a landscape rich in archaeological activity, dating from the Neolithic period onwards. The abundance of archaeological evidence has been interpreted as indicating that the area was a hub for prehistoric activity (Hatherley & Murray 2021). The excavation of an area at Lower Slackbuie by Headland Archaeology in 2019 revealed evidence for Neolithic activity overlain by a series of seven roundhouses and a palisade enclosure. The later prehistoric activity likely occurred from the middle-late Bronze Age through to the Iron Age. The site at Lower Slackbuie can be linked to neighbouring sites, adding to an increasingly vibrant picture of prehistoric activity that took place south of Inverness.

2. INTRODUCTION

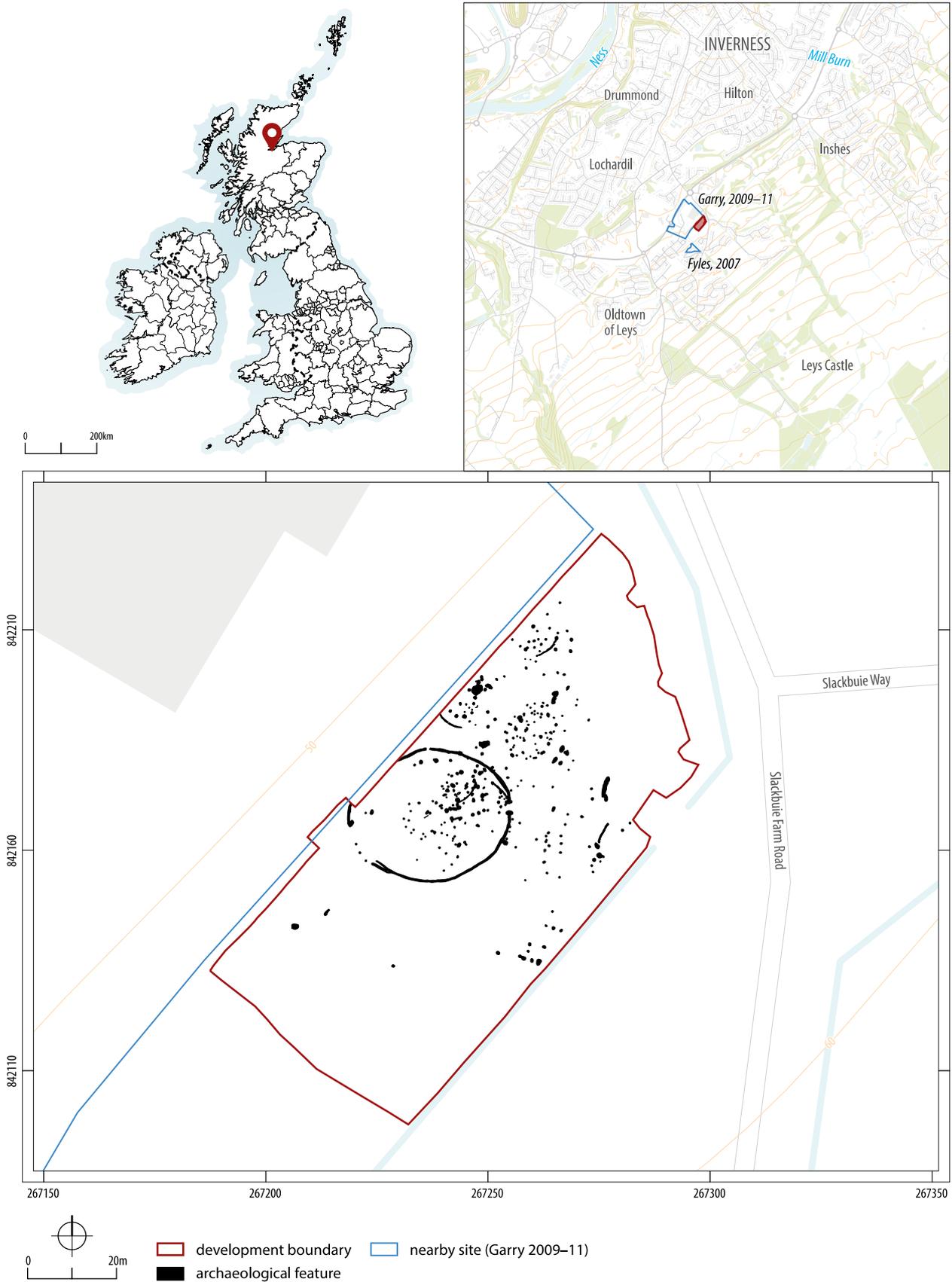
Inverness, Highland, is located at the heart of a key landscape where cultural, burial, monumental, and settlement traditions met throughout prehistory (Cunliffe 2005; Bradley et al 2016; Hatherley & Murray 2021). Over the past 20 years, development-led archaeology in advance of housing and infrastructure developments has revealed evidence for extensive prehistoric activity to the south of Inverness. Evidence for earlier prehistoric activity has centred on scatters of artefacts, pits and burials, with several chambered cairns recorded in the area. The remains of later prehistoric settlement and activity, at varying scales and intensities, have been uncovered during numerous excavations. These features primarily date from the Bronze Age and Iron Age, with indications of a wide range of settlement and architectural forms, longevity of occupation, activities and land use patterns. The recent publication of the exceptional Iron Age craft-working site at Culduthel provides a particularly vibrant picture of the activities that took place in the later Iron Age (Hatherley & Murray 2021). The site at Lower Slackbuie, excavated by Headland Archaeology (UK) Ltd in 2019, sits within this rich landscape.

Headland Archaeology was commissioned by Robertson Partnership Homes to undertake a programme of archaeological works in connection with a housing development at Lower Slackbuie, Inverness. The development area lays immediately to the south-east of the Asda superstore at Slackbuie and approximately 4km to the south of the centre of Inverness (NH 6721 4211; Illus 1). The sub-rectangular development area, measuring 240m by 90m, was largely flat with a small hillock towards the north-east end. The area was investigated in two phases, with the initial trial trench evaluation in November 2017 uncovering a series of prehistoric features concentrated on the higher ground towards the north-east end of the site (Dalland 2017). The evaluation also uncovered a pit containing a Neolithic polished stone axe and sherds of possible Grooved Ware pottery (ibid). The results of the evaluation prompted the monitored topsoil stripping of the north-east half of the site followed by a programme of excavation and recording of the exposed features, conducted from 8 April to 28 May 2019.

2.1 Archaeological background

As noted above, the site at Lower Slackbuie sits within a rich archaeological landscape, with sites in the immediate area revealing features dating from the Neolithic to the Iron Age (see Illus 16). Typical evidence of Neolithic and Bronze Age activity in the form of pits and burials has been uncovered at sites such as Knocknagael Farm (Kilpatrick 2016; Canmore ID [320610](#)) and Slacknamarnock Quarry (Murray 2009; Canmore ID [296073](#)). Evidence of earlier prehistoric activity is often hidden within extensive later prehistoric settlements. Sites excavated surrounding the development area at Lower Slackbuie revealed numerous post holes, possible structures and features dating from the Middle to Late Bronze Age into the Iron Age.

Neighbouring the Lower Slackbuie development area to the west, the excavations carried out from 2009–2011 prior to the development of the large Asda supermarket revealed archaeological remains dating from the Mesolithic to the present (Garry 2015; Illus 1 & 16). In total over 700 features were excavated including two ring ditches and a possible prehistoric cairn (ibid). This activity likely extended further west towards the site at Slackbuie, north of the A8082 (Farrell 2010; Canmore ID [13520](#)). This site at Slackbuie, first identified on aerial photographs as a possible pit circle and ring ditch, is designated as a Scheduled Ancient Monument (SM5218). Investigation of the scheduled area and its surrounds in 2010 uncovered a series of large post holes, two of which were radiocarbon dated to the Iron Age, that potentially defined multiple structures along with a pit complex (Farrell 2010). To the south-east, 150m from the site at Lower Slackbuie, excavations conducted by SUAT Ltd uncovered numerous pits and post holes representing several Late Bronze Age to Iron Age structures (Fyles 2007). Work undertaken in advance of the flood relief channel at Slackbuie Way also revealed numerous features, including evidence for settlement of a similar Late Bronze Age to Iron Age date (Kilpatrick 2010; Canmore ID: [305344](#)). To the north, the evaluation at Fairways, Castleheather, uncovered a limited number of features with a single pit that indicated prehistoric activity (Hastie 2004; Canmore ID [273707](#)). To the south-west, the multiperiod site at



Illus 1 Site location. (© Headland Archaeology (UK) Ltd)

Culduthel, excavated in several phases, represents the most coherent spread of features with evidence for intensive Iron Age activity. An earlier Iron Age settlement and palisade became a major craft-working centre in the Middle Iron Age, with evidence for metal and glassworking taking place on the site (Hatherley & Murray 2021; Canmore

ID [296069](#)). The artefactual evidence indicates that the occupants were participating in extensive trade networks where the site was the regional centre of activity during the Middle Iron Age (ibid). The site at Lower Slackbuie lies within this busy landscape, with features directly related to those uncovered on the neighbouring sites.

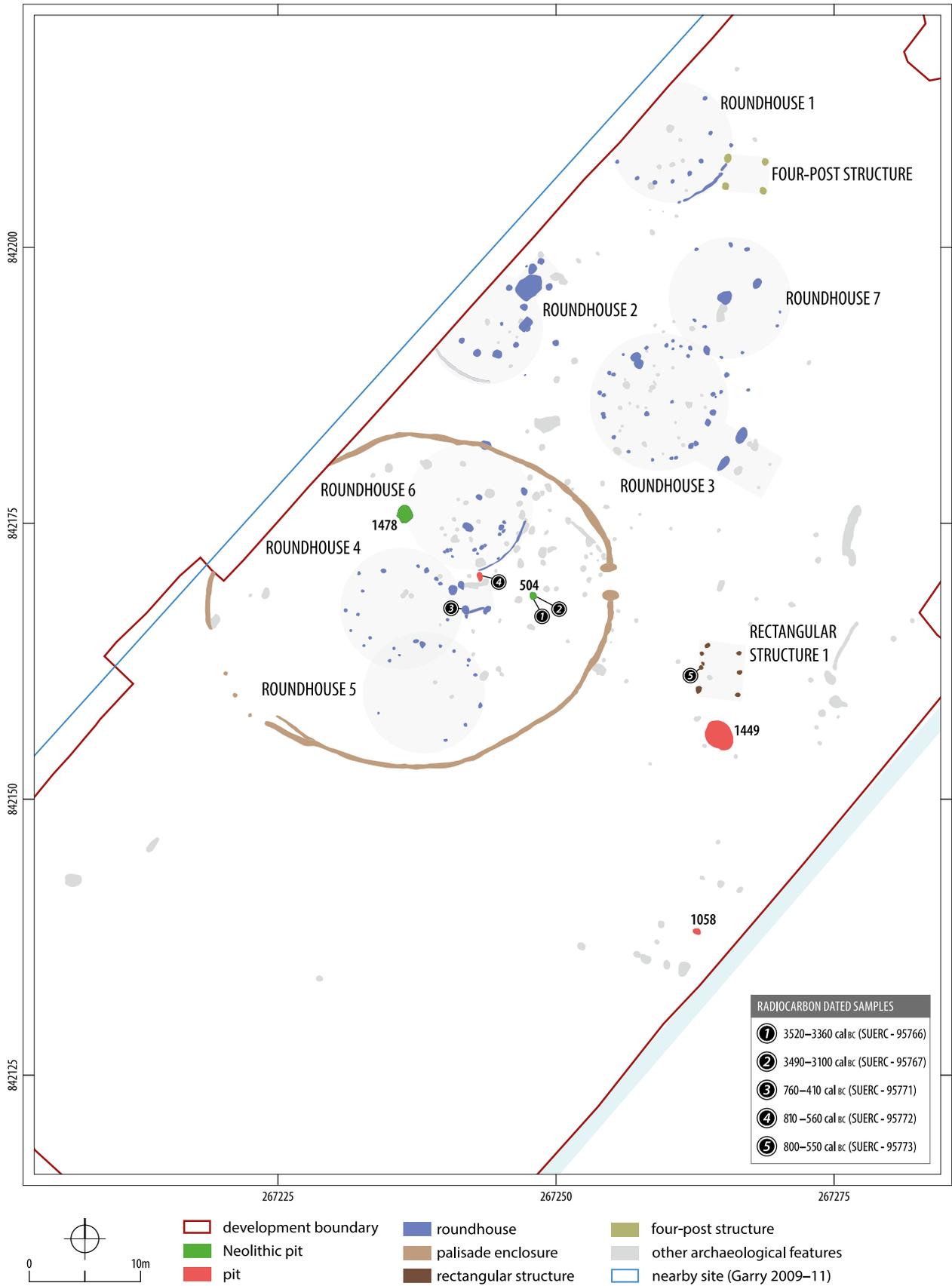
3. THE EXCAVATIONS AT LOWER SLACKBUIE

The excavations at Lower Slackbuie uncovered pits, a palisade enclosure, seven roundhouses and two rectangular structures. The features were cut into the underlying geology of glaciofluvial deposits, orange-grey silty sand and gravel, which overlies bedrock geology of Middle Old Red Sandstone of the Inverness Sandstone Group (NERC 2021). The finds assemblage and a programme of targeted radiocarbon dating revealed activity dating from the Neolithic to the Iron Age (Table 1). The interpretation of a series of post holes within the palisade enclosure as a possible Neolithic rectangular structure during the initial assessment informed the radiocarbon dating strategy (Dalland 2020). Charcoal samples from pits and possible post holes associated with this feature were primarily selected for radiocarbon dating. The radiocarbon dating of key features across the site was limited due to suitability of material, lack of survival and poor preservation. Two of the pits were found to be Neolithic while the remaining samples, including one from the putative Neolithic rectangular structure, were dated to the Iron Age (Illus 2). The two pits date from the early-middle and later Neolithic respectively, and a distinctive polished stone axe was also recovered from the earlier Neolithic pit.

Later prehistoric and Iron Age activity was identified across the site, with the central feature being the oval palisade with a central roundhouse (Roundhouse 4). A total of seven roundhouses were identified across the site by the patterns of post holes and gullies forming partial or complete rings. Two rectangular structures were also defined which appear to be broadly associated with this phase of activity. A detailed chronological sequence could not be defined for the later prehistoric and Iron Age phase of activity due to the limited artefactual evidence and the lack of clear stratigraphic relationships. However, the features can be grouped spatially as aspects of their morphology are comparable. Where stratigraphic relationships exist, these are presented and explored to provide some indication of possible phases of development. The numbers assigned to the roundhouses have been preserved from the earlier reports to allow for continuity and do not represent the chronological sequence.

Table 1 Radiocarbon dates from Lower Slackbuie calibrated in OxCal 4.4.2 (Bronk Ramsey (2009); r5 Atmospheric data from Reimer et al (2020); rounded by 10 with dates within the text presented at 95.4% probability)

Date	Feature	Context	Sample	Material dated	Lab code	$\delta^{13}\text{C}$ relative to VPDB	Radiocarbon age BP	Radiocarbon date cal BC
1	Pit 504	503	42	Cereal grain: <i>Hordeum sp.</i>	SUERC-95766 (GU56203)	-23.7 ‰	4664 ± 26	3520–3360 cal BC
2	Pit 504	503	42	Charcoal: <i>Betula sp.</i>	SUERC-95767 (GU56204)	-25.6 ‰	4570 ± 26	3490–3100 cal BC
3	Post Hole 1740 (Roundhouse 4)	1741	48	Charcoal: <i>Betula sp.</i>	SUERC-95771 (GU56205)	-26.9 ‰	2455 ± 26	760–410 cal BC
4	Pit 1529	1530	41	Charcoal: <i>Betula sp.</i>	SUERC-95772 (GU56206)	-26.5 ‰	2564 ± 26	810–560 cal BC
5	Post Hole 1408 (Rectangular Structure 1)	1409	46	Charcoal: <i>Betula sp.</i>	SUERC-95773 (GU56207)	-28.7 ‰	2545 ± 26	800–550 cal BC



Illus 2 Site plan. (© Headland Archaeology (UK) Ltd)

3.1 Neolithic pits

Two Neolithic pits were identified (Illus 2), although it is likely that other dispersed undated features across the site also date to this phase of activity. Pit 504 was excavated during the initial evaluation phase and found to contain a rich artefact and environmental assemblage. The circular pit with a single fill measured 0.7m in diameter and 0.15m deep. The fill contained sherds of a modified Carinated Bowl, dated to the early-middle Neolithic, and a distinctive polished stone axe (Illus 3).



Illus 3 Polished stone axehead in situ in Pit 504. (© Headland Archaeology (UK) Ltd)

Flax seeds, barley grains and charcoal were also recovered from the fill, with two samples of grain and charcoal radiocarbon dated to the Middle Neolithic (Table 1). Flax seeds are rare in Neolithic contexts while the polished stone axe is a distinctive example of this object type. The assemblage from the pit is possibly the result of the curation of materials; the symbolic deposition of materials in pits, including complete and broken axeheads, is a relatively common feature of the Neolithic across Britain (Anderson-Whymark & Thomas 2012).

A further Neolithic pit was located to the north within the footprint of the later Roundhouse 6. Pit 1478 measured 1.3m long by 1.6m wide by 0.35m deep and had sloping sides and a bowl-shaped base (Illus 4). This pit contained five fills comprising a basal layer of redeposited natural subsoil overlain by a layer of mottled grey sandy silt with frequent charcoal fragments. A single sherd of Impressed Ware and the sherds from four Grooved Ware vessels were recovered from this layer. A further three sherds of Grooved Ware were recovered from the layer above, and the feature was capped by a final dark brownish-grey sandy silt deposit that contained frequent charcoal flecks and rare flint fragments.



Illus 4 Neolithic Pit 1478. (© Headland Archaeology (UK) Ltd)

3.2 Later prehistoric and Iron Age activity

The Neolithic features sit within a landscape with significant later settlement activity that potentially truncates and masks more widespread earlier features. Possible later Bronze Age activity was indicated by the finds from Pit 1058, located to the south-east of the palisade (Illus 2). Pit 1058 measured 0.7m long by 0.6m wide by 0.2m deep, with a single fill of firm, fine mid-greyish brown sandy silt from which a small, rounded rim sherd and a small fragment of bangle made from an organic-rich black sedimentary stone were recovered. The sherd is a possible crucible fragment, and the bangle potentially dates from the Late Bronze Age into the Iron Age. The pit is surrounded by a series of pits and post holes, which may indicate the presence of associated features. This possible earlier phase of activity may relate to some of the roundhouses to the west, but there is limited evidence to link them.

The principal phase of activity appears to date to the Iron Age; this includes the construction of a palisade enclosure, seven roundhouses, a rectangular structure and a four-post structure. There is limited evidence to refine the phases of this later activity, but the features can be grouped spatially and display a variety of structural characteristics. The oval palisade with a central roundhouse, Roundhouse 4, is a recognisable Iron Age settlement form and, as such, these features have been interpreted as contemporary (Hingley 1992; Pope 2007; Harding 2009; Rennie 2014; Johnstone 2021; Hatherley & Murray 2021). Two further roundhouses were also located within the palisade, Roundhouse 5 and Roundhouse 6 (Illus 5). It is unclear if these pre- or post-date the construction and use of the palisade. The roundhouses across the site display a variety of structural features and characteristics which can be compared. The results of the excavation of the palisade enclosure and central roundhouse will be presented; this will be followed by a description of each roundhouse and rectangular structure.

3.2.1 Palisade enclosure and central roundhouse

The central feature of the site was the oval palisade enclosure measuring 30m by 36m defined by a narrow ditch 0.25–0.56m wide by 0.15–0.43m deep (Illus 5). The palisade was aligned east to west

and the 1.6m-wide east-facing entrance was flanked by two oval-shaped pits, both of which contained evidence for post holes cut into their bases (Illus 6). There is tentative evidence for the presence of posts around the circumference of the palisade; in some sections packing stones that were set on edge along the sides of the cut were identified. A series of three equally spaced post holes (1729, 1731, 1733) were found along the projected line of the palisade at a 9.8m wide break in the south-western side. The gap was not due to truncation and appears to be an element of the original design. There is a slight dogleg to the palisade ditch on the western side where a narrower branch continues for a similar distance along the inside. This may indicate the recutting or realignment of the palisade at some point during its lifespan.

Palisade enclosures date from the Neolithic to the Iron Age. A single sherd of heavily abraded possible Grooved Ware pottery was recovered from the palisade ditch along with intrusive modern pottery. However, the arrangement of the features within the palisade, including the central roundhouse, Roundhouse 4, with an entrance aligned to that of the palisade, suggests that these features are contemporary. Roundhouse 4 was located at the centre of the enclosure and was defined by an inner post ring of six equidistant posts that encircled a space 7.2m in diameter (Illus 7). A second concentric circle of nine post holes formed the outer post ring, defining an area 9.6m in diameter with an entrance on the eastern side. A group of four post holes (1707, 1712, 1740, 1744) defining a square feature were located a short distance from the projected line of the roundhouse. Two shallow wall grooves connected the post holes, possibly defining a porch or entranceway to the roundhouse that was aligned with that of the palisade enclosure. Their distance from the structure may, however, indicate that this feature is a stand-alone structure. Charcoal recovered from the fill of one of the porch post holes provided a radiocarbon date of 760–410 cal BC (SUERC-95771; Table 1). Pit 1529 immediately to the north was also radiocarbon dated, providing a date of 810–560 cal BC (SUERC-95772; Table 1), indicating wider activity within the palisade that dates to the Early Iron Age.



Illus 6 View of Palisade looking west. (© Headland Archaeology (UK) Ltd)

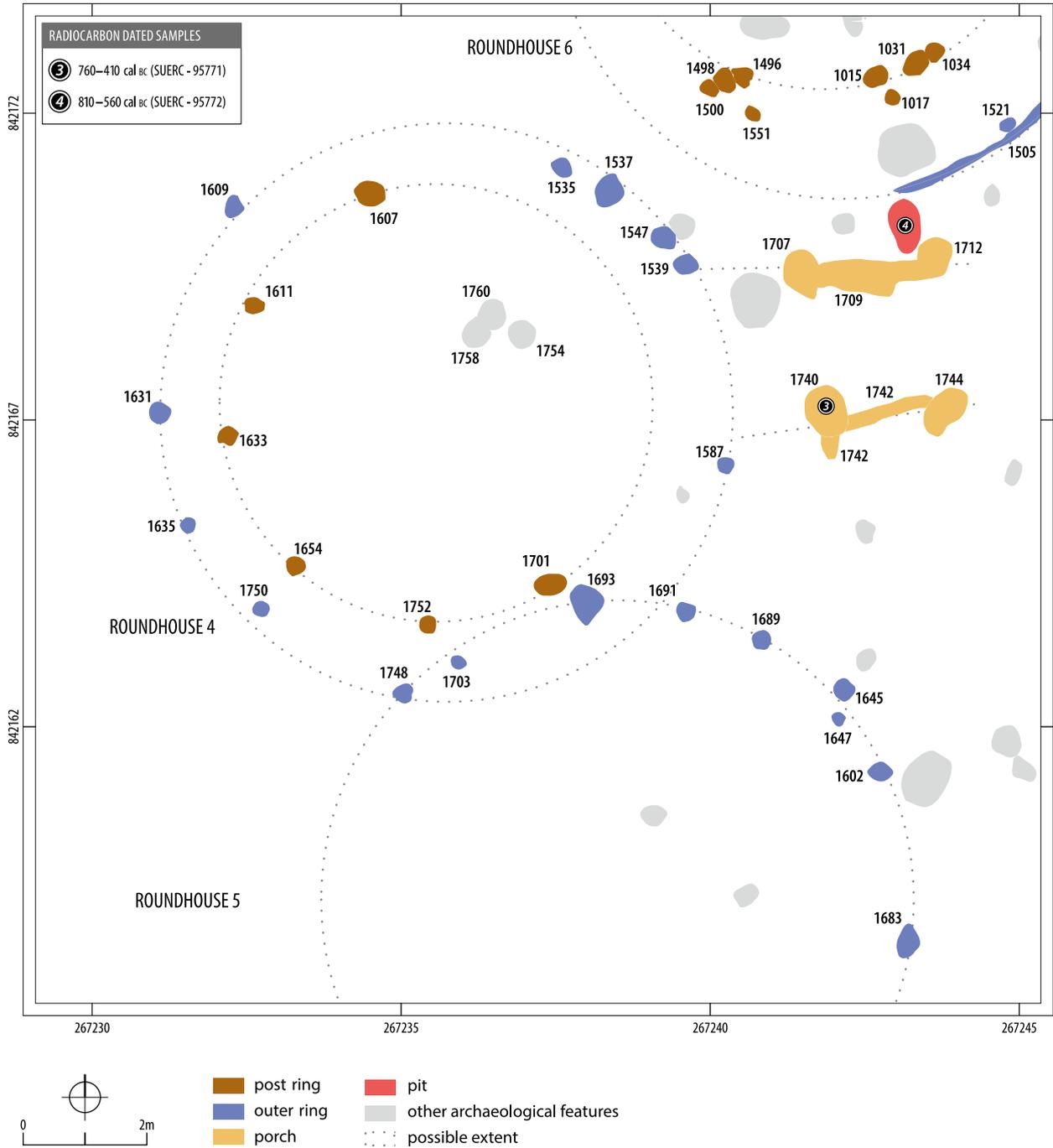
3.2.2 Roundhouses and rectangular structures

Two further roundhouses were located within the palisade enclosure with Roundhouse 6 to north possibly pre-dating the enclosure. To the south, the proposed outline of Roundhouse 5 overlaps with that of Roundhouse 4, but no clear stratigraphic relationship could be established. Four further roundhouses were located to the north-east of the palisade enclosure, displaying a variety of structural forms. The comparison of the structural characteristics and relationships between the roundhouses within and beyond the enclosure may indicate some inter-site phasing. Each roundhouse, the four-post structure and the rectangular structure will be described individually to explore structural features and expand on any stratigraphic relationships.

Roundhouse 6

Roundhouse 6 was located within the palisade enclosure to the north-east of Roundhouse 4 (Illus 5).

It was defined to the south-east by an external ring groove and an internal post ring composed of clusters of post holes. A 6.5m length of the ring groove, measuring 0.1–0.2m wide and 0.1m deep, has survived, before petering out to the south-west. The proposed space defined by the ring groove measures 11.6m in diameter when using two steep-sided pits to the north to define the proposed wall line. It is unclear if these form part of the structure, but a similar outer ring groove with post holes was also observed in roundhouses 1 and 2. If they are considered to form part of the roundhouse, the pits may indicate that Roundhouse 6 pre-dates the palisade as one of the pits, Pit 1629, was truncated by the palisade ditch. The internal post ring consisted of three equidistant groups of four post holes forming an arc of a circle that would have been 7.8m in diameter. The clustering of the post holes may indicate several episodes of repair with the repeated replacement of the posts. The location of the entrance could not be defined, and no porch was identified. Despite 14 pits being uncovered



Illus 7 Plan of Roundhouse 4. (© Headland Archaeology (UK) Ltd)

within the footprint of the structure, no hearth was identified, and it is unclear if the pits relate to the use of the structure.

Roundhouse 5

Roundhouse 5 was located immediately to the south of Roundhouse 4 and was defined by a single ring of post holes (Illus 5). The post ring potentially overlaps with that of Roundhouse 4 indicating that the two may not be contemporary. The north-east portion of the structure was the best preserved, with the projected wall line defining a structure 9.2m in diameter. The 11 post holes were shallow but had well-defined steep sides and flat bases. Few features were identified within the structure save for two pits or post holes, which do not seem to represent a structural element of the roundhouse.

Roundhouse 7

Roundhouse 7 was located outside the palisade enclosure and was similar in form to Roundhouse 5 (Illus 8). The poorly preserved remains of the roundhouse were defined by eight unevenly spaced post holes, 0.10–0.16m deep, forming a circle *c* 10.8m in diameter. The two intercutting pits that lay at the centre of the structure contain large flat stones laid horizontally. There was no evidence of in-situ burning, suggesting that these did not form a hearth. The outline of Roundhouse 7 overlaps with that of Roundhouse 3 and, as with the previous example, the chronological relationship is unclear.

Roundhouse 3

Roundhouse 3 was located immediately to the south of Roundhouse 7 and was far more complex in its construction (Illus 8). An inner post ring defined an area 10.4m in diameter; a further four post holes indicate the presence of a possible concentric outer post ring. The post holes which formed the inner post ring were often found in pairs, possibly indicating the replacement or repair of the posts throughout the life of the structure. The south-east facing entrance was defined by two large oval pits, and two further sets of post holes defined an elaborate porch. Pits 1398 and 1363 measured 1.5m long by 0.4m wide by 0.6m deep and flanked the entranceway. The second set of large post holes (1388 and 1205, both *c* 0.8m

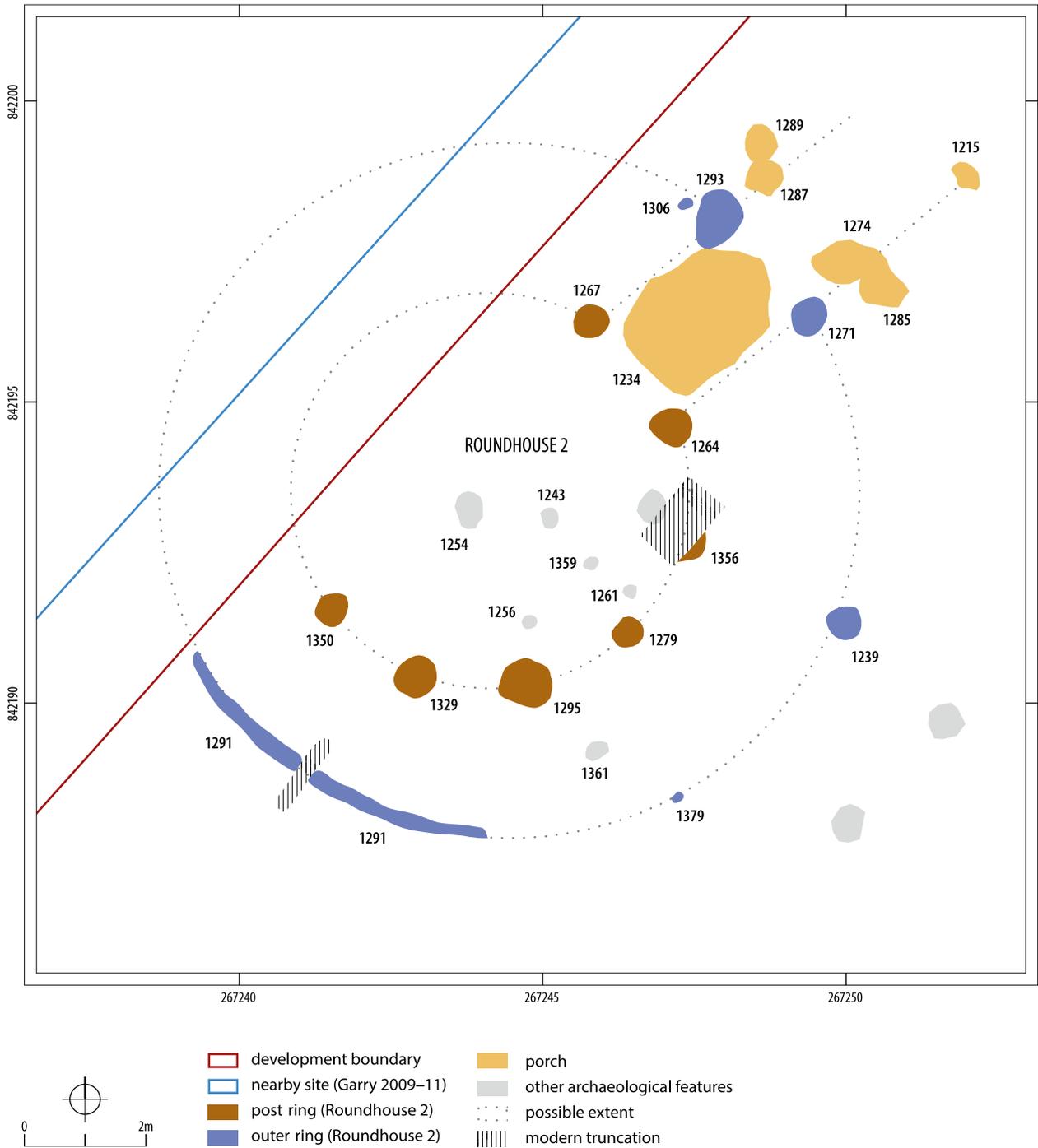
long by 0.6m wide by 0.35m deep) extended the porch, with intercutting post holes on the north side potentially indicating the support or repair of Post Hole 1205. The final set of post holes (1237, 1385), located over 2m from the possible outer post ring, measured 0.30–0.35m wide and 0.10–0.15m deep. The porch appears to have been constructed from posts of increasing size leading towards the roundhouse entranceway.

The four small post holes which potentially indicate an outer post ring were located to the north of Pit 1398, extending the wall line from the large entrance posts. No evidence of a ring groove was identified, but the form of the porch is reminiscent of Roundhouse 2, which is defined by post holes and a ring groove (Illus 9). The proposed outer ring of Roundhouse 3 would have defined a structure 16.2m in diameter. It is likely that a number of the pits and possible post holes uncovered within the structure relate to internal features and supports. However, no coherent patterns could be identified, and no hearth was found.

Roundhouse 2

Roundhouse 2 was only partially excavated as it lay at the north-western edge of the excavated area (Illus 2). Roundhouse 2 was defined by an inner post ring comprising seven large post holes, 0.5–0.9m deep, four with post-pipes, enclosing an area 6.6m in diameter (Illus 9). A concentric ring groove was located 1.8m from the post ring. It survived most clearly to the south-west. The surviving ring groove measured 5.3m long by 0.25m wide by 0.1m deep, with very ephemeral traces suggesting it continued for a further 3m following the curvature of the post ring. The outer ring groove defined an area 11.6m in diameter. Two further cuts were located on the alignment of the ring groove; these cuts may represent structural features associated with the roundhouse.

Two large post holes (1293, 1271), paired with Post Holes 1267 and 1264 of the inner post ring, defined a north-east facing entrance. The porch was similar in design to that of Roundhouse 3. Large posts defined the entrance to the roundhouse and pairs of post holes of ever decreasing size led away from the structure (Illus 10). The farthest away post hole (1215), located *c* 2m from the structure, measured 0.45m wide by 0.39m long



Illus 9 Plan of Roundhouse 2. (© Headland Archaeology (UK) Ltd)

by 0.16m deep, and had steep sides and a concave base. The expected corresponding post hole to the north-west was not identified. Two pairs of large, intercutting post holes (1289/1287, 1274/1285) were found closer to the roundhouse leading to the entrance. A sub-rectangular depression, Context 1234, 2.6m long by 1.95m wide by up to 0.23m deep, was located at the entrance between the inner post ring and outer ring. The depression contained a very dark charcoal-rich basal deposit overlain by a dumped layer containing fist-sized stones. The depression did not appear to have been cut but rather formed through wear. The upper deposit may have been an attempt to level and reinforce this area.

The features uncovered within the roundhouse consisted of two pits and four post holes. The four well-defined post holes (1243, 1359, 1261 and 1256) may have formed internal structures within the roundhouse. As with the other roundhouses, no hearth was identified.

Roundhouse 1

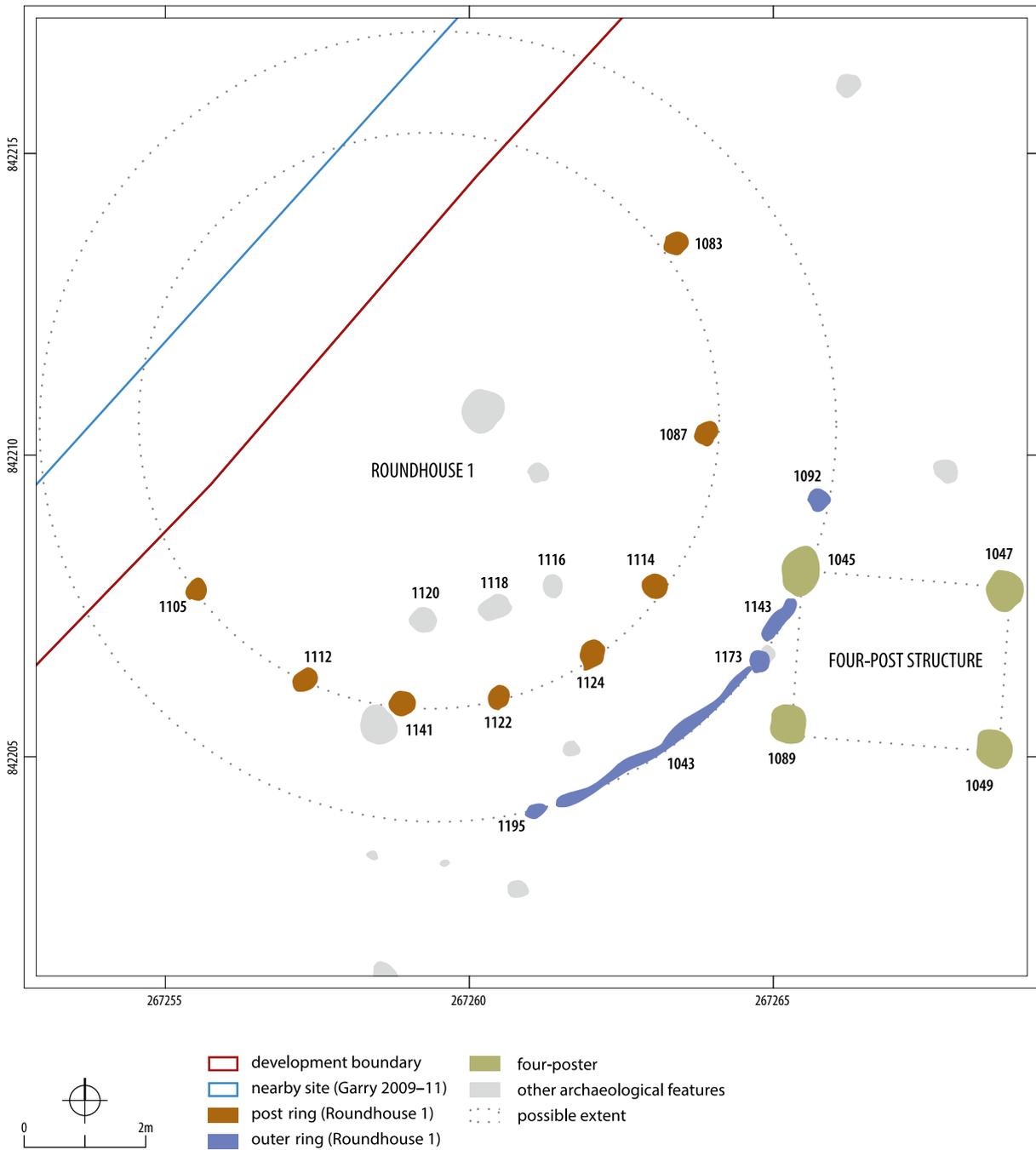
Roundhouse 1 was also located at the north-western edge of the excavated area to the north of Roundhouse 2 (Illus 2). The inner post ring comprised eight regularly spaced post holes which enclosed an area with a projected diameter of 9.6m (Illus 11). A narrow curving gully, 4.8m long by 0.2m wide by up to 0.1m deep, was located 1.8m outside the post ring (Illus 12). The curve of the gully was concentric with the post ring and therefore highly likely to be part of the ring groove, indicating the line of the outer wall. Three post holes (1195, 1173 and 1092) were set in line with the gully. Based on the curvature of the ring groove, the roundhouse measured 13.1m in diameter.

Four-post structure

Four post holes (1045, 1047, 1049 and 1089) marked the corner of a rectangle, aligned east to west, that measured 3.4m by 2.7m (Illus 11). All of the post holes were approximately 0.6m in diameter



Illus 10 View towards porch of Roundhouse 2, facing southwest. (© Headland Archaeology (UK) Ltd)



Illus 11 Plan of Roundhouse 1. (© Headland Archaeology (UK) Ltd)



Illus 12 View of outer ring groove of Roundhouse 1, facing northeast. (© Headland Archaeology (UK Ltd))

and 0.23m to 0.6m deep with steep sides and a flat base. The post holes contained a fill of mid-brown sand with rare small charcoal flecks. Post Hole 1045 at the north-west corner lay on the projected line of the ring groove in Roundhouse 1 and possibly post-dated the building, although there was no direct stratigraphic connection between the two features.

Rectangular structure

Another structure located to the south-east of the site was defined by eight post holes forming a rectangle

3.4m by 4.0m and aligned north to south (Illus 2). The well-defined post holes survived to a depth of 0.2m and half contain packing stone. Birch charcoal from the fill of Post Hole 1408 was radiocarbon dated to 800–550 cal BC (SUERC-95773; Table 1), indicating that it may be broadly contemporary with the Early Iron Age Roundhouse 4 and the palisade. Immediate to the south of the structure was a large pit, Pit 1449, that contained sub-rounded fist-size stones in a matrix of dark fine sand, along with occasional charcoal and rare small fragments of burnt bone.

4. FINDS AND ENVIRONMENTAL EVIDENCE

The limited finds assemblage and the environmental evidence provide both some chronological resolution and an indication of activities taking place on site. The majority of the finds date to the Neolithic and were concentrated within a small number of features. The earlier prehistoric finds include a ceramic assemblage containing both Early and Late Neolithic vessels which have been analysed in detail. Alongside the environmental assemblage, which indicated the presence of spelt in the Neolithic period, this evidence enables a fuller picture of the earlier prehistoric activity to emerge.

4.1 Prehistoric finds

The finds assemblage from the site included prehistoric pottery, lithics, coarse stone tools and a small quantity of industrial waste (Table 2). The lithic assemblage, totalling 67 pieces, was composed primarily of red-brown, yellow-brown, grey and cream flint. The majority of the pieces were small undiagnostic chips, and only four tools could be identified. Two scrapers, a piece with an edge retouch and a denticulate piece were recovered. Only the denticulate piece, recovered from Pit 1478 along with sherds of Grooved Ware, is chronologically distinctive, dating to the Neolithic (Koonce & Lochrie 2020: 12). In addition to debitage, three stone tools were also recovered from the site. The distinctive polished stone axe from Pit 504 is discussed in more detail below (see 4.3 ‘Polished stone axehead’); a possible stone rubber was also recovered from this context. The grey fine-grain sandstone or mudstone rubber had a rectangular section and possible traces of wear on one face. The third stone tool was a sub-triangular piece of coarse stone which was recovered from Post Hole 1365 of Roundhouse 3. This has been interpreted as a possible fragment of saddle quern, but there are no traces of wear, and it was clearly used as packing in this context (ibid: 14). The most significant find was a small fragment of bangle made from a black organic-rich stone recovered from Pit 1058 (Illus 13). The curving fragment has a probable lentoid section and was too small to accurately measure the diameter. This type of



Illus 13 Pit 1058. (© Headland Archaeology (UK) Ltd)

bangle is typical of the Late Bronze Age to Iron Age (ibid). Other than the bangle, the assemblage lacks any chronologically distinct later prehistoric finds, and there is only very limited evidence for nearby metalworking in the form of possible hammerscale and slag spheres retrieved from magnetic residues. This material, created through iron smithing, was found in such low concentrations that it cannot be viewed as indicative of metalworking on the site. Several pieces of modern pottery and glass were found across the site, with some likely to be intrusive (ibid: 15).

4.2 Prehistoric pottery

Owain Scholma-Mason

The ceramic assemblage weighed 2.361kg and included 361 sherds and 230 fragments (under 10mm). Three different pottery traditions and four broad periods of activity were represented (Table 3).

The earliest pottery from the site was recovered from Pit 504, which contained sherds of a ‘modified’ Carinated Bowl (Vessel 1). A total of five later Neolithic Grooved Ware vessels (Vessels 3–7) were recovered from Pit 1478, located to the north-west of Pit 504, alongside a sherd from a middle-late Neolithic Impressed Ware vessel (Vessel 2). A single possible Grooved Ware rim sherd (Vessel 8) was recovered from a section of the palisade enclosure (Palisade 1722). Finally, a small probable crucible sherd dating to the Bronze Age or later, associated with the fragment of black stone bangle, was recorded from Pit 1058.

Table 2 Summary of finds by feature

Feature	Context	Pottery	Lithics/Stone	Industrial waste	Other finds
Prehistoric pits	Pit 504	Carinated Bowl	Polished stone axehead. Stone rubber.	<0.5g fuel ash slag	
	Pit 1478	Impressed Ware Grooved Ware	46 pieces of debitage including a possible denticulate.	<0.5g fuel ash slag & possible hammerscale	
	Pit 1058	Crucible Fragment	1 piece of debitage.		1 bangle fragment
Palisade	1559 (E)	1 sherd modern Whiteware		<0.5g fuel ash slag	
	1677 (E)			<0.5g fuel ash slag	
	1722 (SE)	Grooved Ware and fragments	2 pieces of debitage.	<0.5g fuel ash slag & possible slag sphere	
	1795 (W)	1 sherd modern Red Earthenware	1 piece of debitage.	<0.5g fuel ash slag	2 small fragments green glass. 1 black glass bead. Both modern.
Features within the palisade	Pit 1529		2 pieces of debitage. Burnt.		
	Gully 1543		1 piece of debitage.	<0.5g fuel ash slag	
	Pit 1575		2 pieces of debitage. Burnt.	1g fuel ash slag & possible hammerscale.	1 light blue glass sherd. Modern.
	Pit 1627		1 piece of debitage. Burnt.	<0.5g fuel ash slag	1 very small light blue glass fragment. Modern.
	Post Hole 1652		1 small sub-circular scraper.		
	Pit 1705		1 piece of debitage. Burnt.	<0.5g fuel ash slag	

Feature	Context	Pottery	Lithics/Stone	Industrial waste	Other finds
Roundhouse 1	Ring Groove 1043			<0.5g fuel ash slag & possible hammerscale	
	Ring Groove 1143			<0.5g fuel ash slag & possible hammerscale	
	Post Hole 1114			<0.5g fuel ash slag & possible hammerscale	1 degraded fragment of possible brick/ tile
Roundhouse 2	Entrance Deposit 1234			<0.5g slag. Undiagnostic.	
	Post Hole 1279		1 piece of debitage.	<0.5g fuel ash slag	
	Post Hole 1287	1 sherd (body) prehistoric coarseware.		<0.5g fuel ash slag	
	Post Hole 1329			<0.5g possible hammerscale	
Roundhouse 3	Interior Layer 1231			<0.5g fuel ash slag	
	Pit 1277	4 body sherds prehistoric coarseware. Fragment modern Whiteware.	1 piece of debitage.	<0.5g fuel ash slag	
	Post Hole 1365				Possible fragment of saddle quern
Roundhouse 4	Post Hole 1707		2 pieces of debitage.	<0.5g fuel ash slag	
	Post Hole 1740			<0.5g possible hammerscale	
	Wall Slot 1742		2 pieces of debitage.		
Roundhouse 6	Interior Pit 1502		A small scraper and flake.	<0.5g possible slag sphere	

Feature	Context	Pottery	Lithics/Stone	Industrial waste	Other finds
Roundhouse 7	Central Pit 1133			1g fuel ash slag & possible hammerscale	
	Central Pit 1135		1 piece of debitage.	3g fuel ash slag & possible hammerscale	Small fragment of green glass. Modern.
Four-Post Structure	Post Hole 1049				1 very small fragment of colourless glass
Rectangular Structure 1	Pit 1408	1 sherd prehistoric coarseware			
Pits	Pit 1070				Iron nail.
	Pit 1167	1 sherd modern Whiteware		<0.5g fuel ash slag	
	Pit 1422			<0.5g fuel ash slag	
Other	Unstratified.				Victorian type A3 shilling
	Subsoil 1001				Iron strap

Table 3 Summary of the prehistoric pottery assemblage by vessel

Vessel	Context	Feature	Type
V1	Fill 503	Pit 504	Carinated Bowl
V2	Fill 1480	Pit 1478	Impressed Ware
V3	Fill 1480	Pit 1478	Grooved Ware
V4	Fill 1480	Pit 1478	Grooved Ware
V5	Fill 1480	Pit 1478	Grooved Ware
V6	Fill 1479, 1482	Pit 1478	Grooved Ware
V7	Fill 1480	Pit 1478	Grooved Ware
V8	Fill 1723	Palisade 1722	Rounded rim? Grooved Ware?
V9	Fill 1059	Pit 1058	Crucible

4.2.1 Methodology

The pottery analysis was carried out using a hand lens and was recorded according to standards set out by specialist bodies (PCRG 2010). Vessel numbers have been used to indicate when multiple sherds belong, or may belong, to the same pot. Given the highly fragmentary state of the assemblage, it has not been possible to assign all sherds to a vessel number. Measurements are in millimetres (mm) and grams (g) unless stated otherwise with estimated rim diameter abbreviated to ERD.

4.2.2 Early-middle Neolithic pottery

Vessel 1, from Pit 504, comprised 11 sherds and around 50 further crumbs, all from the body of a 'modified' Carinated Bowl. The exterior of the vessel had been burnished and decorated with multiple incised lines. The vessel was thin walled, *c* 4mm, with a generally fine fabric. Carinated Bowls date to the Early Neolithic, with 'modified' Carinated Bowls, emerging during the second quarter of the 4th millennium (Sheridan 2007, 2016). The lack of diagnostic sherds prohibits close comparison with other examples within the tradition. Concentrations of Carinated Bowl pottery have been recorded in recent years through the commercial work around Culduthel, 1.3km to the south-west of this site (Hatherley & Murray 2021; Peteranna 2011; Murray 2008). Radiocarbon dating of birch and cereal charcoal from the pit gave a range of 3520–3100 cal BC (SUERC-95766 & SUERC-95767; Table 1), which is in line with the general currency of Carinated Bowls (Sheridan 2016: 193).

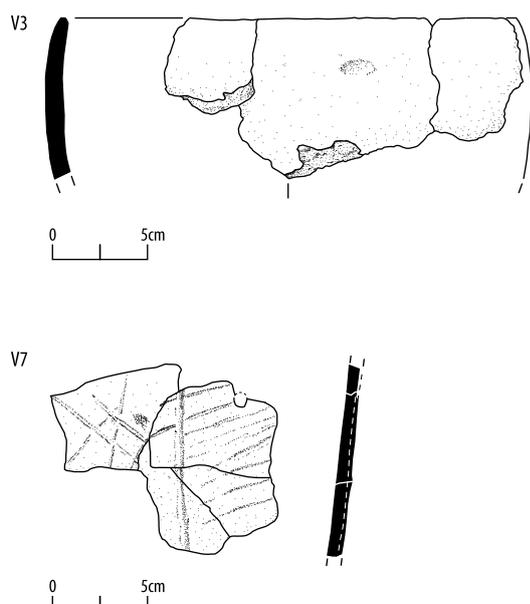
Three sherds from the rim of an Impressed Ware vessel with an ERD of 140mm, Vessel 2, were recovered from the central fill (C1480) of Pit 1478. The rim was formed by applying a second piece of clay to the exterior to create a thickened exterior bevel. Comparable rims are known among the Impressed Ware tradition and are generally dated to 3300–2900 BC (MacSween 2008: 181). The term Impressed Ware itself encompasses a range of distinct regional variations (MacSween 2007; Sheridan 2016). Examples of Impressed Ware, while rare, are known from the region, including at Kinbeachie on the Black Isle (Barclay et al 2001)

and Culduthel, 1.3km to the south-west of this site (van Wessel 2012).

4.2.3 Middle-late Neolithic pottery

Sherds from a minimum of five Grooved Ware vessels (Vessels 3–7) were recorded from Pit 1478. The vessels were recovered from the central fill (C1480), where the description of the context noted that the sherds appeared to be laid horizontally within the deposit. Vessel 3, represented by 19 sherds (and four further crumbs) constituting the rim and part of the body, had been a large, tub-shaped thick-walled vessel (up to 12mm thick) with an ERD of *c* 240mm (Illus 14). It had a rounded rim, and the exterior of the sherds was plain. Vessel 4, represented by five sherds, was similar in form to Vessel 3 but had a pointed rim, with an ERD of 240mm and an average wall thickness of 12mm. As with Vessel 3, no signs of decoration were noted on the exterior, though traces of wiping marks, where the surface had been wiped with grass or straw prior to firing, were found. The surfaces may have been covered in a thin slip through which fragments of rock temper protrude. Thin slips were noted among sherds of Grooved Ware from Culduthel (Peteranna 2011: 38). Vessel 5, represented by nine sherds, comprised the upper body and part of the rim of a bucket-shaped vessel with a gently squared-off rim that had an ERD of 260mm. Below the rim are two shallow horizontal grooves. Vessel 6 was highly fragmentary, with three sherds from a probable pointed rim and a single body sherd decorated with a pinched-up cordon. The rim was too fragmentary to measure. The final vessel, Vessel 7, comprised eight sherds with traces of a pinched-up cordon and incised diagonal lines, forming a probable lattice, recorded from the same pit (Illus 14). Given the fragmentary nature of the assemblage for Vessel 7, it is possible that the sherds could belong to one of the other Grooved Ware vessels from the pit. There is a post-firing perforation just below the cordon; this feature would have been one of a pair of holes through which a cord would have passed to prevent a crack widening.

Another possible Grooved Ware vessel, Vessel 8, was recovered from the fill of the palisade ditch and is represented by a thick rounded rim fragment.



Illus 14 Vessel 3 and Vessel 7. (© Headland Archaeology (UK) Ltd)

The fabric of the sherd is similar to those recorded from Pit 1478 but is otherwise undiagnostic.

Grooved Ware typically dates to the later 4th and early 3rd millennium BC and generally comprises a range of decorated and undecorated bucket- and tub-shaped vessels. Grooved Ware is well represented within the Inverness region (see Scholma-Mason 2018: 131–6 for an overview). A number of examples have been excavated from across the region, including at Culduthel (Peteranna 2011; Hatherley & Murray 2021); Raigmore (Simpson 1999), 3.4km to the north-east of the site; and Milton of Leys (Conolly & MacSween 2003) 2.6km to the east.

4.2.4 Other pottery

Vessel 9 recorded from Pit 1058 comprised a small rounded rim sherd. Given the association between Vessel 9 and the fragment of black stone bangle, it is probable that this vessel dates to the Bronze Age or later and may be from a small crucible. Small fragments of crucibles and evidence of metalworking were recorded at Culduthel (Hatherley & Murray 2021) and Seafeld West (Cressey & Anderson 2011). Six sherds of undiagnostic pottery, with an average weight of 1g, were also recovered from features associated with the roundhouses (Table 2).

4.2.5 Discussion of prehistoric pottery

The pottery assemblage from Lower Slackbuie demonstrates that the site was in use during the late 4th to early 3rd millennium BC. The earliest pottery found on site are the sherds of ‘modified’ Carinated Bowl from Pit 504. The abraded and fragmentary nature of these sherds suggests that they had been moved around or were open to elements before slumping or being placed in the pit along with fuel ash slag and a polished stone axe. The sherds of Impressed Ware indicate activity in the middle-late Neolithic, although it is unclear if this reflects continuous occupation or if there was a hiatus in activity following the Early Neolithic.

The final ceramic phase is represented by sherds of Grooved Ware vessels from Pit 1478. Grooved Ware is found in a variety of contexts, often associated with timber and stone circles as well as large-scale gatherings and feasts (MacSween 1995; Sheridan 2004; Thomas 2010). The spread of Grooved Ware in the early 3rd millennium BC, alongside other distinct forms of material culture, reflects the broad interregional networks across Britain and Ireland (Edmonds 1995: 29; see also Copper 2020). Current radiocarbon dates suggest that Grooved Ware was in use after 3000 BC with Grooved Ware from Culduthel dated to 2910–2670 BC (Murray 2008; Copper 2020).

Grooved Ware has traditionally been split into four sub-styles: Woodlands, Clacton, Rinyo and Durrington Walls (Wainwright & Longworth 1971), although the veracity of this classification has been called into question in recent years (Garwood 1999; MacSween 2007: 371, 2016: 248–9; Copper 2020). The decorated sherds from Pit 1478 are reminiscent of the Durrington Walls style, which is characterised by the use of incised decoration and vertical or horizontal cordons (Gibson 2002: 86). Similar motifs were noted among the Grooved Ware from Milton of Leys, which includes examples of vessels decorated with vertical lines and twisted cord (MacSween 2003). At least two of the recorded vessels from Lower Slackbuie appear to be undecorated, although given the high degree of fragmentation, the possibility that these sherds derive from decorated vessels cannot be wholly ruled out. The occurrence of undecorated Grooved Ware alongside decorated Grooved Ware, though,

is not unusual, with other examples of mixed assemblages recorded across Inverness (Scholma-Mason 2018: 180–88). This includes the occurrence of undecorated Grooved Ware at Raigmore. There, as at Lower Slackbuie, sherds of undecorated Grooved Ware were found alongside examples of decorated vessels (Simpson 1999).

No Early Bronze Age pottery was recorded from the site, although finds of Beaker pottery have been noted from around Culduthel, including probable domestic examples (Hatherley & Murray 2021; see also Scholma-Mason 2018: 369–442). The only evidence for later prehistoric activity comes in the form of a small sherd, possibly from a crucible, which could indicate small-scale metalworking on site.

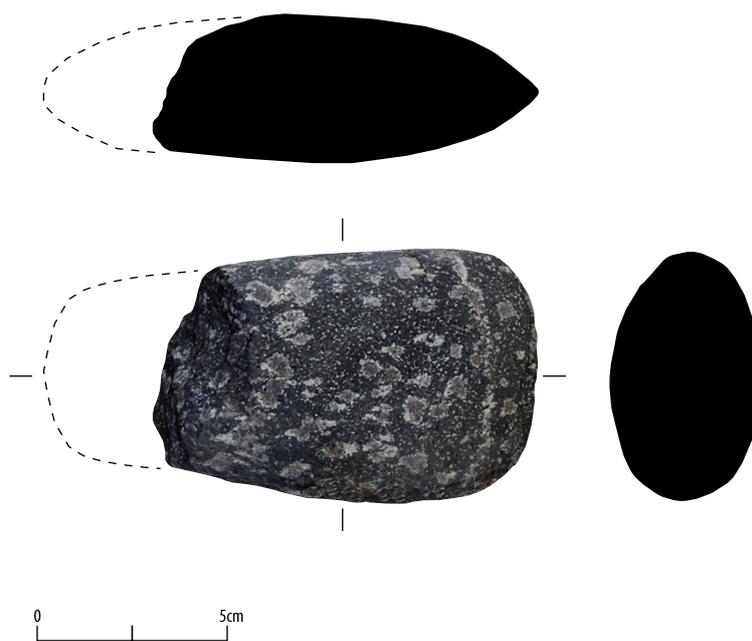
4.3 Polished stone axehead

Hugo Anderson-Whymark

The excavation of a small pit, Pit 504, revealed a polished stone axehead (Illus 15) positioned at the base of the pit, and sherds of modified Carinated Bowl were recovered from the surrounding fill (Illus 15). Charred material from the fill provided an earlier Neolithic radiocarbon date for the feature (Table 1). The axehead is manufactured from a visually striking, high temperature (granulite facies) mafic rock with retrograde symplectic textures

around the garnet porphyroblasts (Rachel Walcott pers comm). This rock outcrops in north-west Scotland, with exposures at Ness, Lewis and around Scourie on the mainland. Bedrock exposures extend intermittently from Scourie to the south of Ullapool, and cobbles of this rock are more widely spread in glacial deposits. However, glacial movement in the region went towards the west, indicating that the raw material must have been obtained from the north-west coast, some 75–115km to the north-west of Lower Slackbuie, or perhaps further afield in Lewis.

The axehead is broken at its butt-end, but the surviving fragment represents approximately two-thirds of the original artefact; it measures over 81.3mm long by 61.9mm wide at blade edge, tapering to 50.5mm wide at break, by 35.3mm thick, and it weighs 359.5g. The axehead has an ovoid cross-section with slight edge facets. The surface is finely ground to a moderately bright polish, removing all trace of earlier manufacturing techniques; however, the blank must have been formed by pecking, as this rock is not suitable for flaking. The facets are more coarsely ground than the rest of the surface, particularly toward the break, probably reflecting adjustments for hafting during the artefact's life.



Illus 15 Polished stone axehead. (© Headland Archaeology (UK) Ltd)

The fracture is preserved in exceptionally fresh condition, indicating that it is likely to have occurred shortly before deposition. The angle of the break indicates the break resulted from an impact to the side of the artefact, but it is not possible to determine if this was deliberate damage or an accidental break against the haft caused by a misdirected blow during use.

4.3.1 Discussion

This axehead is not manufactured from one of the common rocks that have been classified by the Implement Petrology Group, and no other axeheads of this distinctive rock are known to the author (Clough & Cummins 1979, 1989; Davis & Edmonds 2011). Contemporary parallels for the use of this rock type are not known, but five Late Neolithic maceheads from Orkney of various forms are manufactured from an identical granulite (Anderson-Whymark et al 2017). Two of these maceheads are only broadly provenanced to Orkney (Thames Pestle form, Stromness Museum A286; Ovoid 'B' form from James Walls Cursiter's Collection), and one is a topsoil find that was located to the north-west of the Stones of Stenness (Orkney Pestle). The two remaining examples were found on archaeological excavations of Late Neolithic occupation sites. A fragmentary Ovoid 'C' macehead was recovered from the later Neolithic Phase 1 deposits at Tofts Ness (Clarke 2007: 311), while an unfinished cushion macehead was found in Late Neolithic midden at the Ness of Brodgar (Trench X, SF 39562 in Anderson-Whymark 2020a, 2020b). As with the axehead under consideration, the direction of glacial movement indicates that the maceheads in Orkney were transported by people, either as finished maceheads or raw material. However, we should be wary of drawing a straight line between the source of this granulite on the north-west coast and Inverness or Orkney. The movement of these tools from source to place of deposition is unlikely to have been direct and undertaken in a single event.

The use of such a visually striking rock sourced from a distant location is an indication that axeheads and maceheads were not just functional tools. Aesthetics mattered and the biography of each object – its journey and the hands it passed through – was no doubt passed on as oral history through

the artefact's life. It is unclear if the breakage of this axehead was accidental or deliberate, but the freshness of the break indicates that it occurred shortly before deposition of the axehead at the base of a pit or post hole. Such deposits, including complete and fragmentary axeheads, are a common feature of Neolithic pits across Britain and Ireland, and they reflect the intimate relationship of daily practice and beliefs among Neolithic communities (Anderson-Whymark & Thomas 2012).

4.4 Landscape and environment

Laura Bailey

The archaeological site of Lower Slackbuie is located on the outskirts of Inverness. It sits at the foot of the north-west facing slopes of Drumrossie Muir along the prominent sand and gravel Culduthel ridge. The terrace is formed by the edge of the Great Glen fault and is a continuation of the bank of Loch Ness (Hatherley & Murray 2021). This area enjoys fertile soils and a microclimate that belies its northerly latitude. Mountains to the south and the west take the worst of the prevailing weather (ibid) and provide conditions favourable for agriculture (Richards 1999: 9–10). The samples taken from the site at Lower Slackbuie contained cereal grain, weed seeds, hazelnut shell fragments and wood charcoal.

The Neolithic environmental assemblage from Lower Slackbuie was dominated by naked barley (*Hordeum vulgare* var. *nudum*) and hazelnut (*Corylus avellana*) shell (Table 4), which fits in well with the common subsistence strategy observed in the Neolithic economy of Scotland (Bishop et al 2010). Naked barley was the dominant cereal crop cultivated in Neolithic Scotland, and it has been recorded on a large number of sites across Scotland (ibid). The archaeological investigation undertaken at the neighbouring Asda supermarket development site (Garry 2015) provided a similar archaeobotanical assemblage, where high concentrations of hazelnut shell, carbonised cereal grain and evidence for possible burnt grain stores were recorded. In addition to barley and hazelnut shell, four flax (*Linum usitatissimum*) seeds were recovered from Neolithic Pit 504 at Lower Slackbuie. A further feature, Fill 1168 of Pit 1167, also yielded flax seeds. The presence of modern pottery from this feature, however, suggests that it was disturbed during later

Table 4 Summary of the environmental assemblage from the prehistoric pits

Context	Fill	Sample	Cereals	Weeds	Other	Charcoal
Pit 504	503	42	Barley (<i>Hordeum vulgare</i>) & Naked Barley (<i>c.f. Hordeum vulgare</i> var. <i>nudum</i>)	Sedge (<i>Carex sp.</i>), Common hemp nettle (<i>Galeopsis tetrahit</i>) & Flax (<i>Linum usitatissimum</i>)	Hazelnut shell (<i>Corylus avellana</i>)	Oak & Non-oak
Pit 1478	1479 1480 1482	32 30 31	Barley (<i>Hordeum vulgare</i>) & Bread/club wheat (<i>Triticum aestivum</i> subsp. <i>compactum</i>)	Goosefoots/Oraches (<i>Chenopodium sp./ Atriplex sp.</i>) & Common hemp nettle (<i>Galeopsis tetrahit</i>)	Hazelnut shell (<i>Corylus avellana</i>)	Oak & Non-oak
Pit 1058	1059	5	-	-	-	Oak & Non-oak

agricultural activity, and the date of these flax seed remains is therefore uncertain. Nevertheless, we can be confident that flax was present at Neolithic Lower Slackbuie.

Flax occurs rarely on Neolithic sites, but instances have been occasionally recorded, such as in the timber halls at Balbridie (Fairweather & Ralston 1993), at Lockerbie (Hastie 2011) and at Achnasavil in Kintyre (Carter et al 1991). In the local area, 14 flax seeds were recovered from Early Neolithic pits at the Fortrose and Rosemarkie Waste Water Works (Fraser 2014). The presence of flax in Neolithic assemblages is very rare, so its recovery at Lower Slackbuie, albeit in small quantities, is of great importance. Flax was one of the first domesticated plants, being part of the first ‘wave’ of crops that spread out from Southwest Asia as part of the expansion of a Neolithic way of living (Harris 2015). Often overlooked in discussions of early crop agriculture owing to its rarity in the archaeological record, flax is a testament to the versatility of Neolithic crops – it provides oil and fibre suitable for a range of uses (Bond & Hunter 1987: 181; Dickson & Dickson 2000; Hastie 2011; Zohary et al 2012: 100).

The cultivation and processing of flax is time consuming and laborious (Andrews 1872; Hastie 2011: 23) requiring greater levels of management than other crops and thus indicating a considerable level of agricultural sophistication (Bishop et al 2010: 82). Flax was harvested by pulling the entire

stem, it was then stoked in the fields or hung to dry. The seed boles were then removed and could be dried and stored as needed (Bond & Hunter 1987: 179). Fibre is obtained by submerging and weighing down the stems in water, or retting, for two to three weeks, to partially rot the stem and loosen the outer bark from the bast (the inner bark). This was commonly done using retting pits, but flax could also be soaked in ponds and rivers or laid out on fields to utilise the moisture from the morning dew. Bast fibres are the part of the plant used for linen production, and their preparation required several operations of ‘scutching’, or beating (Dickson & Dickson 2000: 253). Flax does not need to be dried by direct heat (Bond & Hunter 1987: 176). Indeed, fire drying flax has been described as a ‘pernicious practice’ that is very detrimental to the quality of the flax, by robbing it of its oily nature and producing a dry, harsh fibre (Andrews 1872: 20). A consequence of this lack of exposure to fire is that there is a low chance of flax seeds being preserved by charring, which in turn may partially explain the rarity of flax in the archaeological record. Flax seeds also have a narrower range of heating conditions under which they will be preserved when compared to some other common seeds, such as cereal grains, further reducing the likelihood they will survive intact on archaeological sites (Märkle & Rösch 2008).

Only a small number of flax seeds were recovered from Lower Slackbuie, and it is therefore difficult to

ascertain their intended use. It is possible that flax seeds may have become charred after falling from flax stems hung up to dry after the retting process (Dickson & Dickson 2000: 254). No direct evidence for linen production was found on site and such evidence is extremely rare in the archaeological record of Neolithic Scotland. Although stem fragments have been recovered from retting pits, flax fibres do not preserve well in the archaeological record (ibid: 253). No tools associated with linen production, spinning or weaving, such as spindle whorls for example, survive within the excavated area. Therefore, other explanations for the presence of flax might be considered. Finds of flax seeds around hearths have been interpreted as representing domestic use (ibid: 254). Although the flax seeds were not found around any hearths at Lower Slackbuie, it is possible that they may have been accidentally charred on a domestic hearth during pressing and processing of linseed oil and that they became incidentally or perhaps deliberately incorporated into the pit (Bishop et al 2010: 80).

The Neolithic features at Lower Slackbuie appear to be an extension of the Neolithic activity in the wider landscape. The scale and importance of local flax production during the Neolithic is impossible to ascertain from the meagre remains, but the fact any flax remains were found at all may indicate that flax had some degree of significance at Lower Slackbuie. The incidence of flax, with the later possible cereal grain stores seen at a neighbouring site (Garry

2015), suggests a sophisticated and diverse economy at Lower Slackbuie.

The environmental assemblage associated with later contexts contained small quantities of a variety of cereals, including barley and oat grains along with oak and non-oak charcoal. Cereal was particularly abundant in both Pit 1133 and Pit 1135, located at the centre of Roundhouse 7, with both hulled (*Hordeum vulgare*) and naked barley (*Hordeum var. nudum*) identified. Occasional bread/club wheat (*Triticum aestivum* subsp. *compactum*), oats (*Avena sp.*) and emmer wheat (*Triticum dicoccum*) were also present. Animal bone preservation was poor across the site, with unburnt bone recovered from only four contexts. Heavily fragmented and indeterminate bone was recovered from both Pit 1408 and Post Hole 1418 of Rectangular Structure 1 and Post Hole 1740 of Roundhouse 4. A deer tooth was recovered from the fill of Pit 1058, from which the bangle and the crucible sherd were also recovered. Heavily fragmented and unidentifiable burnt bone, ranging from partially charred to fully calcined, was recovered in varying quantities from features across the site. A pig molar was recovered from Pit 1066, immediately south of Pit 1058, and a rib fragment was hand collected from Pit 1449 (Illus 2). The prehistoric communities at Lower Slackbuie appear to have made use of the fertile, well-drained soils, which may have provided excellent conditions for arable farming, including early flax production (Bond & Hunter 1987: 177).

5. DISCUSSION

5.1 Neolithic pits: axes, aesthetics and activity

The earliest evidence for activity at Lower Slackbuie that dates to the Early Neolithic are the sherds of Carinated Bowl and a distinctive polished stone axe recovered from Pit 504. The role of pits in prehistory has long been debated and discussion focused on their potential as proxies for settlement and symbolism (Anderson-Whymark & Thomas 2012; Brophy & Noble 2012; Carver 2012; Noble et al 2016). Collative research on pits has repeatedly highlighted the diversity of depositional practices and the difficulties in equating 'structured' deposition with symbolic significance (Noble et al 2016: 190). At Lower Slackbuie the material within Pit 504 appears to have been curated, with the abraded nature of the sherds suggesting that they had a long biography before being placed in the pit. The condition of the pottery is in contrast to the distinctive stone axehead placed at the base of the pit, which was probably only broken a short time before deposition. The contents of Pit 504 indicate wider connections and the curation of material possibly linking belief and daily practice (Anderson-Whymark & Thomas 2012).

The environmental assemblage from the pits provide an insight into surrounding activity when considering the cereal grain and four flax seeds recovered from the fill. As discussed above, flax seed is rarely recovered from Scottish Neolithic sites, with only timber hall sites yielding any significant quantities (Fairweather & Ralston 1993; Hastie 2011). More locally, flax seed, along with bread wheat, was also recovered from pits excavated at the Fortrose and Rosemarkie Waste Water Works (Fraser 2014). The greater level of management required to cultivate flax may indicate an adoption of sophisticated agricultural practices. Flax has a variety of functions, but the small number of seeds from Lower Slackbuie and the lack of evidence for associated activities limits our understanding of their significance. The evidence for cultivation, along with the continued use of wild resources indicated by the presence of hazelnuts, is typical of this period (Bishop et al 2010). The fertile soils in the region would have afforded opportunities for diverse subsistence practices throughout prehistory,

with flax also recovered from later features at the neighbouring site of Slackbuie (Garry 2015).

The Neolithic activity at Lower Slackbuie did not occur in isolation; both early-middle Neolithic pottery and Grooved Ware were recovered in a spread and from pits at the Slackbuie site immediately to the west (Garry 2015: 12). The Grooved Ware vessels recovered from Pit 1478 at Lower Slackbuie were all incomplete, with indications that some sherds had been laid in the pit. Grooved Ware has been found in the Inverness region at several sites associated with monumental and domestic activity, such as Milton of Leys (Conolly & MacSween 2003) and Stoneyfield, Raigmore (Simpson 1996, 1999). Six pits were uncovered during work on the Flood Relief Channel with one, like at Lower Slackbuie, containing the remains of multiple vessels; the fill of this pit was radiocarbon dated to 3087–2905 cal BC (4365±30 BP; Peteranna 2011: 17). The vessels at Culduthel show evidence of having been used for the preparation of foodstuffs and may have lain around before being deposited in the pits (Sheridan 2011: 38). It is unclear if deposits in pits at sites such as Lower Slackbuie are associated with wider activity that was lost due to the intensity of later occupation or if they represent isolated acts. The style of Grooved Ware at Lower Slackbuie shows local influence but also, as with the distinctive axehead, links the occupants of the site into wider cultural networks.

5.2 Later prehistoric settlement and structures

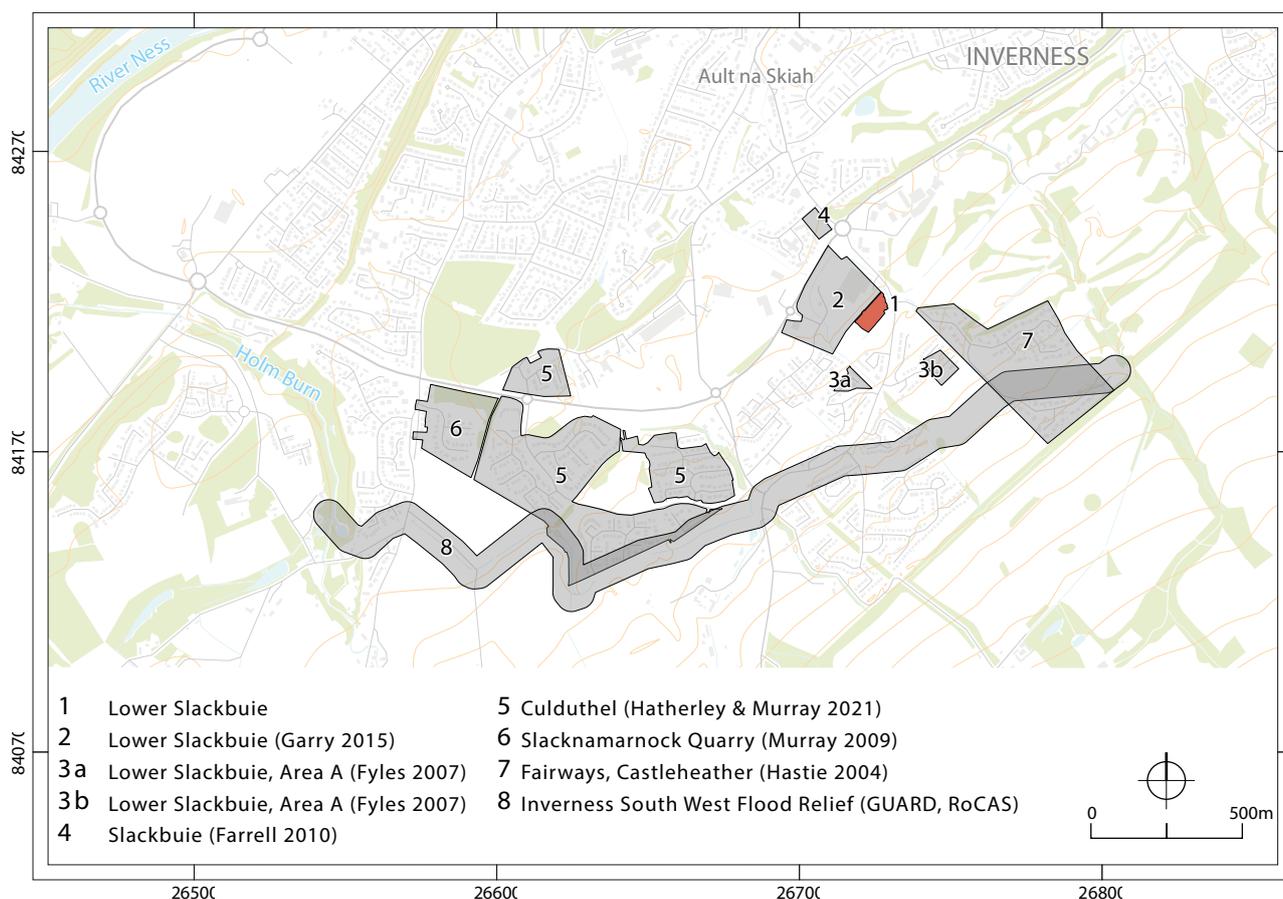
The roundhouses at Lower Slackbuie display a variety of architectural styles, from single post rings to more substantial constructions with elaborate porches and entranceways. The palisade and central roundhouse, Roundhouse 4, likely date from the Early Iron Age, and there are some indications that Roundhouse 6 belongs to an earlier phase of activity since the projected outline of Roundhouse 6 is potentially truncated by the palisade enclosure. The relationship between the structures uncovered is difficult to define due to the lack of direct stratigraphic relationships. Roundhouses 5 and 7, which are both defined by simpler single post rings, do appear to truncate or be truncated by more substantial structures. Post-built structures date from the Early Bronze Age onwards, increasing in

size to an average of *c* 9m in diameter after 1200 BC and becoming increasingly circular into the Late Bronze Age (Pope 2015: 171). Ring grooves, such as in Roundhouse 6, were traditionally considered to be an Iron Age development (Feachem 1965; Jobey & Tait 1966). However, Bronze Age examples are known, and typological schemes have increasingly come into question in recent years (Pope 2015: 173). Unfortunately, no chronologically distinct artefacts were recovered from the structures at Lower Slackbuie. Yet Bronze Age activity was noted in the southern portion of the site due to the a crucible sherd and fragment of bangle recovered from Pit 1058.

The two sites which neighbour Lower Slackbuie had extensive evidence of Bronze Age activity. The excavation of the area immediately to the west, now the Asda superstore, revealed a large stone tool assemblage consistent with a Bronze Age domestic assemblage, including Late Bronze Age querns (Garry 2015: 23; Illus 16). The environmental assemblage

also contained oat which is more indicative of later Bronze Age – Iron Age activity (ibid: 24). Further evidence for Bronze Age settlement was uncovered at Lower Slackbuie to the south. There, two areas were excavated to reveal a cooking pit, a hearth and scattered post holes that indicated the presence of structures, including a roundhouse in the southern area (Fyles 2007: 5; Illus 16 3b). The artefactual assemblage indicated a middle-late Bronze Age date for many of the features (ibid: 6). The evidence from neighbouring sites supports dispersed Bronze Age activity within which some of the structures, potentially Roundhouses 5 and 7, at Lower Slackbuie may be situated. The phasing evidence at Lower Slackbuie is limited but the suggested stratigraphy, the few Bronze Age finds and the evidence from neighbouring sites would support activity prior to the main Iron Age phase.

The larger roundhouses and the palisade and central roundhouse, Roundhouse 4, have been interpreted, based on form and limited radiocarbon



Illus 16 Location of key sites mentioned in the text with approximate area of investigation shown. (© Headland Archaeology (UK) Ltd)

dates, as belonging to a phase of Iron Age activity. The chronological relationship between features cannot be defined, and it is unclear if any of the structures are contemporary. The alignment of Roundhouse 4 and the palisade enclosure suggest that the two are contemporary, as comparable sites are found across Scotland. The palisade at Lower Slackbuie comprised a ditch with large post holes that flanked the east-facing entrance. Packing stones within the ditch and post holes continuing the alignment across a gap in the ditch to the south-west indicate that the ditch may have held upright timber posts. Roundhouse 4 was located at the centre of the enclosure with its entranceway aligned to that of the palisade. A sample from the entrance post hole was radiocarbon dated to the Early Iron Age (754–415 cal BC, Table 1).

Palisade enclosures across Scotland have been dated from the Neolithic onwards and appear to serve a variety of functions (Johnstone 2021). The palisade at Lower Slackbuie is comparable to neighbouring examples excavated at Balloan Park (Wordsworth 2000), located 500m to the north of the site, and Culduthel (Hatherley & Murray 2021), situated 1,160m to the south-west, both interpreted as Early Iron Age in date. Several examples of palisade enclosures with central roundhouses have been identified across the region through aerial photography, such as at Aldourie Farm further south (Harden & Bone 1990; Jones et al 1993; Hatherley & Murray 2021). Comparable excavated examples are concentrated in the south of Scotland, such as at Ravelrig Quarry, Edinburgh, where an oval-shaped palisade enclosing a central roundhouse with aligned entranceways was also dated to the Early Iron Age (Rennie 2014: 141). The site at Ravelrig was termed a 'palisaded homestead'; it is likely to have had a domestic function and may have been occupied for several generations as evidenced by the repair of the palisade (*ibid*: 145). The palisade at Lower Slackbuie displayed evidence for at least one phase of repair or realignment during its lifetime. Palisades likely served a variety of functions, such as to define space for livestock, events and perhaps even as conspicuous displays of community wealth and endeavour, as has been argued for Culduthel (Hatherley & Murray 2021). While the alignment of the entrance of Roundhouse 4 and the palisade may be coincidental, the division or screening of

space and the importance of entranceways is a recognised Iron Age architectural tradition (Hingley 1992; Pope 2007; Harding 2009).

It is difficult to determine the relationships between the roundhouses external to the palisade, as very little material was recovered from the structures. The most northerly roundhouse, Roundhouse 1, is similar in form to Roundhouse 6 and extends beyond the excavated area to the north-west. Roundhouses 2 and 3 are more similar in style to Roundhouse 4, with each having a more elaborate entranceway. Roundhouse 2 displayed evidence for the possible subdivision of the interior and a depression across the entranceway. The north-east facing entranceway was flanked by two large posts with the post holes that decreased in size as the porch extended away from the outer wall of the roundhouse. The same pattern was witnessed at Roundhouse 3, which was the largest structure excavated on site. Roundhouse 3 also displayed evidence for the possible replacement of the internal posts, perhaps indicating greater longevity of occupation.

A range of roundhouse forms have been identified at nearby sites, with some having evidence for elongated or elaborate porches, such as at East Beechwood (Engl 2011) and Seafeld West (Cressey & Anderson 2011). The structures at the above sites have been interpreted as largely dating from the middle-late Bronze Age to the Iron Age based on the artefactual evidence and radiocarbon dates. Rectangular or four-post structures were found alongside roundhouses at several sites and have been interpreted as stores for grain or other material (Engl 2011; Cook 2016; Johnstone 2021: 63). Four-post structures with surrounding post rings, have been dated to the later Neolithic, such as at Greenbogs, Aberdeenshire, where the charcoal-rich fills were radiocarbon dated to 2890–2490 cal BC (Noble et al 2012). However, no comparable surrounding post ring could be identified at Lower Slackbuie, and no chronologically distinctive artefact or material suitable for radiocarbon dating was recovered from the four-post structure. At Lower Slackbuie, material from a post hole of the rectangular structure was radiocarbon dated to 800–552 cal BC (95.4% Probability; SUERC-9577) with the four-post structure overlying the edge of Roundhouse 1 suggesting it is not directly contemporary. The roundhouses at Lower Slackbuie also likely date from

this period, though there is limited chronological resolution. The radiocarbon strategy did explore the possibility of Neolithic structures, with the resulting dates leading to the reinterpretation of the post holes surrounding Pit 504 as the porch of Roundhouse 4. The radiocarbon dates from the Iron Age features indicate activity in the Early Iron Age but unfortunately fall on the Hallstatt plateau (800–400 BC), thus limiting their resolution (Hamilton et al 2015).

The site at Lower Slackbuie also produced a very small artefactual assemblage. A limited amount of vitrified slag was retrieved from the site along with a very small amount of hammerscale and slag spheres – not sufficient to indicate metalworking on site. However, it may indicate an association with the ironworking evidence uncovered at the adjacent

site. Evidence of metalworking was found in three areas: a pit with possible flue, a series of pits with smelting evidence, and a shallow bowl-like pit from which slag from iron smelting and a fragment of crucible were recovered (Garry 2015). The limited range of artefacts at Lower Slackbuie is not wholly unexpected given that this is typical for many later prehistoric sites, which appear to be largely aceramic (Harding 2000: 20). This contrasts with the abundance of material recovered from Iron Age wetland and crannog sites, underlining that the surviving assemblages are not likely to be representative of material available to and used by the occupants during this period (Cavers & Crone 2018; Crone et al 2018). This makes any interpretation of wealth, status, access to materials, and activities conducted incomplete.

6. CONCLUSION

The excavations at Lower Slackbuie revealed a site that undoubtedly formed part of a busy wider prehistoric landscape. The Neolithic pits give an insight into depositional practices and the possible curation of material. The distinctive polished stone axehead and the later Neolithic Grooved Ware indicate links to and participation in wider cultural networks. The evidence for early flax cultivation is rare in Scotland, with the occupants making use of the fertile soils in the region. The later prehistoric phase is a palimpsest of activity, with a possible earlier phase of settlement overlain by a central roundhouse and palisade. The lack of stratigraphic and chronological resolution makes a detailed

analysis of the phasing problematic. The small number of radiocarbon dates fall on the Hallstatt plateau but nevertheless indicate activity in the earlier Iron Age. A comparison of the roundhouses from the site with others from across the region supports the interpretation that the majority of features date from the later Bronze Age to the Iron Age. There is extensive evidence for Bronze Age and Iron Age settlement at neighbouring sites. The features excavated by Headland Archaeology at Lower Slackbuie are likely linked to those immediately to the west at Lower Slackbuie (Garry 2015), further west of the A8082 at Slackbuie (Farrell 2010) and to the east (Fyles 2007), indicating a thriving later prehistoric community.

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