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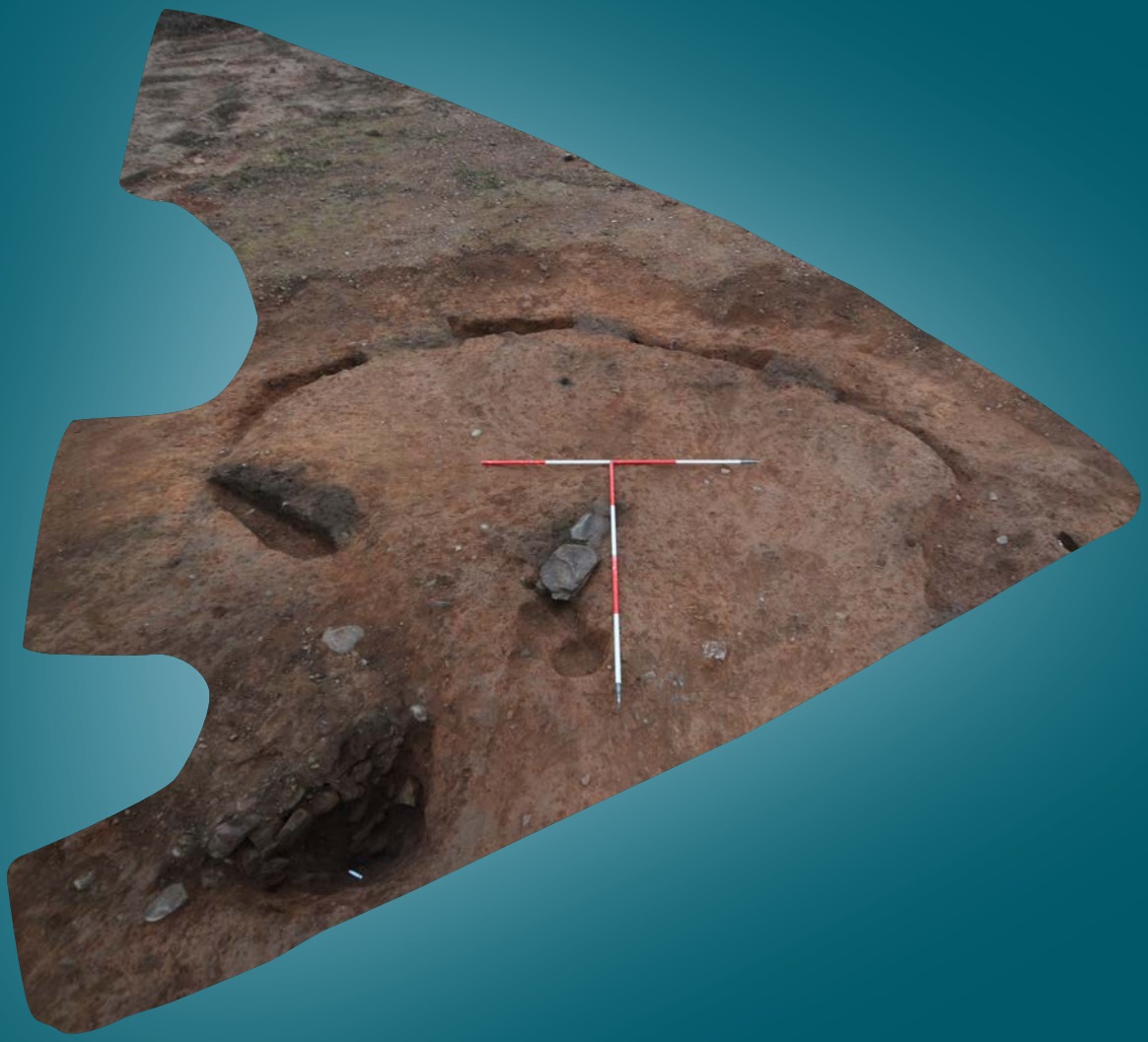

ARO49: Mesolithic evidence and a middle-Bronze Age settlement at East Lodge, Ury Estate near Stonehaven, Aberdeenshire

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ARO49: Mesolithic evidence and a middle-Bronze Age settlement at East Lodge, Ury Estate near Stonehaven, Aberdeenshire

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Contents

List of Figures

List of Tables

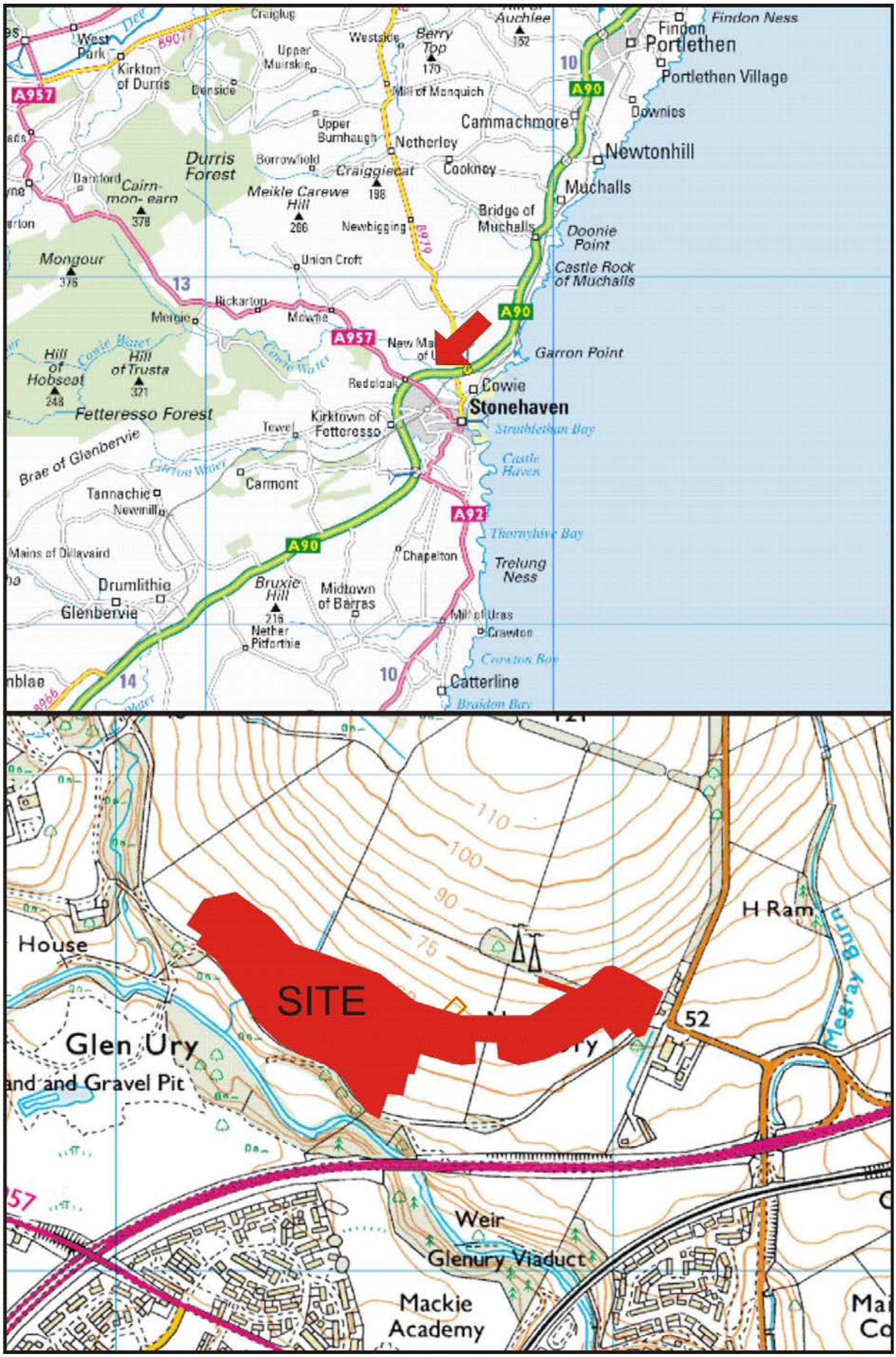

Figure 1: Location plan (Contains Ordnance Survey data © Crown copyright and database rights 2021)

Summary

A 7% archaeological evaluation and targeted excavation carried out during the summer of 2015 at East Lodge, Ury, Stonehaven, by Robert Lenfert, Alison Cameron and Stuart Farrell of Cameron Archaeology, revealed the foundations of three prehistoric structures, including two middle Bronze Age hut circles or roundhouses adjacent to one another, with a simple shelter or temporary structure some 15 m to the SW. In addition, a number of refuse or storage pits and shallow deposits were identified.

Most notably, excavations revealed a remarkable double-sided, double-carved portable cup and ring-marked stone, which this research thus far indicates to be unique within a Scottish, if not European, context. Other significant finds include a small unusual, oval-shaped coarseware vessel with a rounded bottom and a largely complete flat-rimmed vessel or 'barrel urn' with three pinched cordons below the rim, from what is believed to be a rudimentary pottery kiln which contained unworked raw clay to one side, ready for shaping.

Other artefacts include a near-complete saddle quern, both finished and unfinished square stones with bevelled central holes drilled or pecked (likely robust loom-weights), a cobble pounder, and a small number of flint tools.

Introduction

The site (Figure 1) is located to the north of Stonehaven, Aberdeenshire and on the north side of the A90, west of its junction with the B979 Netherley Road, and north-east of the Cowie Water. It is centred on NGR: NO 86609 87458, at 40-80 m OD, on land that slopes gently downhill from the NNE. The work was commissioned by Scott Leitch, Halliday Fraser Munro for FM Ury Ltd.

Background

The East Lodge excavation area occupied a gentle to moderately sloping hillside around c. 40-50 m OD, which crests NNE of the site around 120 m OD. Historical land use in the area is predominately agricultural or pastoral in nature. At the time of excavation, Area 1 was fallow and Area 2 (Figure 2) was sown with barley. The fast-moving Cowie Water to the south-west passes within 200 m of the site before entering Stonehaven Bay.

On first impressions, East Lodge appeared to be a somewhat exposed choice for settlement, albeit with fine views, yet time spent on site reveals that it is largely sheltered from prevailing winds by higher ground to the north/north-west, with heavy weather and higher winds often funnelling down the valley on the opposite south-western side.

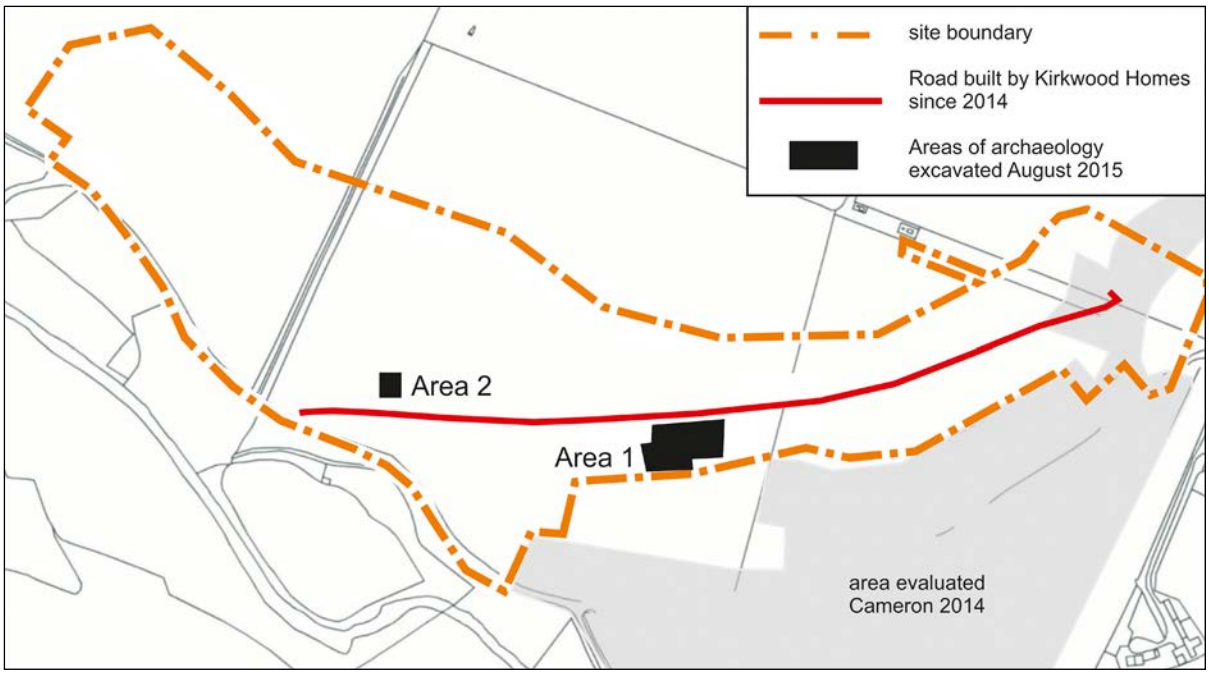

Figure 2: Excavation areas (© Kirkwood Homes)

The location affords extensive views consisting of three general aspects: coastal vistas towards nearby Stonehaven Bay and Downie Point; towards the Kirkton of Fetteresso Neolithic/ Bronze Age/Iron Age/early medieval site, which is situated on the opposite side of the valley at eye level at a near identical elevation (Lenfert and Cameron 2019); and finally inland towards the summits of Cairn Mon Earn (9.5 km distant, 378 m OD, prominence of 278 m) and Kerloch (17 km distant, 534 m OD, prominence of c.250 m). This viewshed would have remained largely intact regardless of past forestation levels, particularly towards the coast and across to the opposite side of the valley around the Kirkton of Fetteresso site.

During the winter solstice, the East Lodge site's SSE facing aspect (and the entrances to Structures 1 and 2) is neatly aligned with the sunrise over the North Sea next to the prominent Downie Point, a large headland which forms the southern terminus of Stonehaven Bay. If nothing else, under clear skies this elevated location receives the winter sunrise over the North Sea as it moves south towards the winter solstice, pauses, then begins to move north again, while yielding maximum solar benefit and warmth throughout the day, and still retaining some degree of shelter from prevailing winds. Another pragmatic aspect is the site's relatively close location to the fast-moving Cowie Water, now some 200 m downslope to the SSE, which enters Stonehaven Bay which would have provided a reliable water supply to the site and attracted game and fowl, as well as wild salmon.

Prehistoric sites in and around the site

The area immediately surrounding Stonehaven is fairly rich in prehistoric finds and features, including the Scheduled Monument at Kirkton of Fetteresso (SM5449), where cropmarks identified in aerial surveys have revealed both enclosed and unenclosed prehistoric settlements and features, including ring ditches, hut circles, a souterrain and a pit-alignment.

Another recently discovered site at Kirkton of Fetteresso (albeit outside the scheduled area) which was again excavated by Cameron Archaeology (Lenfert and Cameron 2019) revealed a palimpsest of human activity spread over four and a half millennia from the early Neolithic to the early-medieval period, all within a compact 0.6 hectare site. A total of 25 features were identified, including a partial ring ditch, pits, postholes, and at least one human cremation. In addition 67 flints, a small quantity of Iron Age pottery, and part of a copper alloy buckle were found. The most notable feature from this site was a pit containing 306 sherds of early carinated Neolithic pottery radiocarbon dated to 3766-3952 cal BC at 2-sigma probability (SUERC-67591), and indicating this is some of the earliest pottery discovered in Scotland.

Adjacent to Kirkton of Fetteresso, the construction of the A90 dual-carriageway and modern housing to the east appears to have destroyed a later prehistoric burial ground containing an unknown number of human bones, urns and cist burials. Beyond the three cists previously noted on the 1892-1903 25-inch OS map, 'Camp Hill' is annotated with '*Human bones and urns found in various places on the south side of this hill*'.

A large prehistoric burial cairn still partially exists at Malcolm's Mount, Farrochie (NO88NE 6) some 430 m ENE of Kirkton of Fetteresso and 1.5 km south-west of East Lodge. It survives as a heavily disturbed cairn discovered sometime in the early- to mid-1800s (Stuart 1855), and contained an unknown number of urns holding cremated human remains near a large cist chamber with a 'whinstone' lid measuring 2.1 m by 1.2 m. The cist contained a single flexed human burial wrapped in an intricate woven fibre or a textile mat. Also present in the cist was a badly decomposed human skull with abundant red hair resting on a vegetation-filled pillow, perhaps stuffed with some type of hops or similar plant matter. Amongst the burial goods was a three-cordoned vessel, which from source descriptions, sounds remarkably similar to SF 28/29 the unusual, three pinched cordoned vessel from East Lodge, described below. However, a radiocarbon date for human remains found within one urn in the area returned a 2-sigma date of 2137-1930 cal BC (Gr-A 28623), on the Beaker-early Bronze Age transition, which is some half a millennium earlier than the middle Bronze Age dates for East Lodge, discussed below. This does not date the cist burial itself however, and more research is needed to examine both vessels for closer stylistic similarities.

Some 800 m south-west of East Lodge, aerial photography from 1982 has identified numerous cropmarks including possible hut circles within a field system at Redcloak (NO88NE 384), along the A957 Slug Road leading to Banchory from Stonehaven. Modern sand and gravel works have likely destroyed part of this field system, as evaluation trenching in this area by the co-author (Lenfert 2015) for another construction project did not reveal any features in this area though modern disturbance but debris was noted – most likely associated with backfilling of the quarry operations once they ceased.

An early first-millennium AD find of an urn with over 200 Roman denarii ranging from Galbus to Severus was made some 1.1 km to the NE of East Lodge at the Hill of Megray. It was discovered by labourers digging trenches in 1852. This area remains undeveloped agricultural land.

Finally, at NO88 NE13 'Ury House', some 950 m NW of East Lodge, *"two cist burials were found in 1861 about 0.75m below ground; the cists were aligned from E to W and had pebble floors. In each there was an urn containing a cremation; one of the urns, which was preserved in Ury House but is now lost, is illustrated in the Name Book and was probably a Beaker*" (Canmore).

The Excavation

After the evaluation revealed archaeological deposits, excavations were opened up in two areas (Figure 2). The first, Area 1, was broadly rectangular in shape, measured 64 m by 39 m and was positioned at NGR: NO 86633 87398[1]. It contained two hut circles or roundhouses (Structures 1-2) along with a small D-shaped shelter (Structure 3), together with two areas of postholes and pits (Structures 4 and 5), within an area covering c. 2100 m^2.

A smaller site, Area 2 was positioned 210 m WNW of Area 1 at NGR: NO 86420 87460 and at c. 42 m OD (Figure 2). It comprised a cleared area of c. 340 m^2, which measured 19 m by 18 m and contained two features: a reused tree bole (54/43) with an irregular base containing charcoal deposits, and a shallow pit (53/52), containing pottery sherds.

The Mesolithic period (Figure 3)

Two Mesolithic dates were returned from East Lodge; the first and oldest, was a single late Mesolithic date of 4852-4727 cal BC (GU-48948), from a charred hazelnut shell *Corylus avellana* within the fill (136) from an elongated and partially stone-lined pit 137, which was cut by a later posthole 126. This was part of Structure 1. The second Mesolithic date (4233-4045 cal BC; GU-48939), was from a piece of hazel *Corylus avellana* charcoal from context 64, a grey-black silty-sand deposit within the interior of Structure 2. Both features and dates represent a similar situation, either as trace remains of earlier human activity on the site or as earlier material introduced into Bronze Age features. It would seem most likely that they are the remains of discrete Mesolithic deposits which have survived the reworking of the area in the Bronze Age period.

Area 1 (Figure 4)

Structure 1

This structure consisted of a ring-ditch with *in situ* stonework and a primary outer ring of large postholes with a group of interior smaller postholes, and an off-centre hearth. It measured c. 8.5 m east/west by c. 10 m north/south (Figure 5).

Stone foundations Ditches (contexts 131 and 132) were dug into the subsoil, and the levelled platform for Structure 1 comprised brown silty-sand, a darker version of the subsoil (Figure 6).

Charcoal inclusions and charcoal flecks were slight to moderate in most of the fills of the foundational features, with the exception of pit 83/130 (see below) in the eastern half of the structure which was later reused as a kiln. The infilling of these features with large stones was consistent but the detrimental effects of ploughing were clear. The stony upper levels of the foundations were extensively disturbed to a depth of 0.5 m (check depth), while the lower levels and bases of features were undisturbed. Foundation stones were deposited in an irregular, unsorted manner without signs of a coherent stone coursing (Figure 6).

1 Both national grid references for Areas 1 and 2 are recorded at their SW corners.

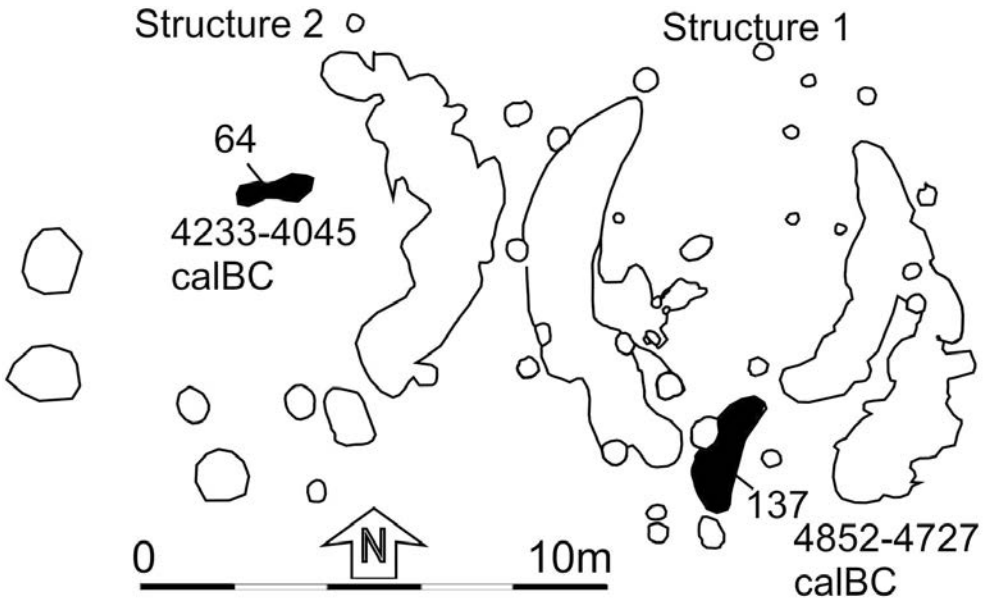

Figure 3: Plan showing dated Mesolithic deposits

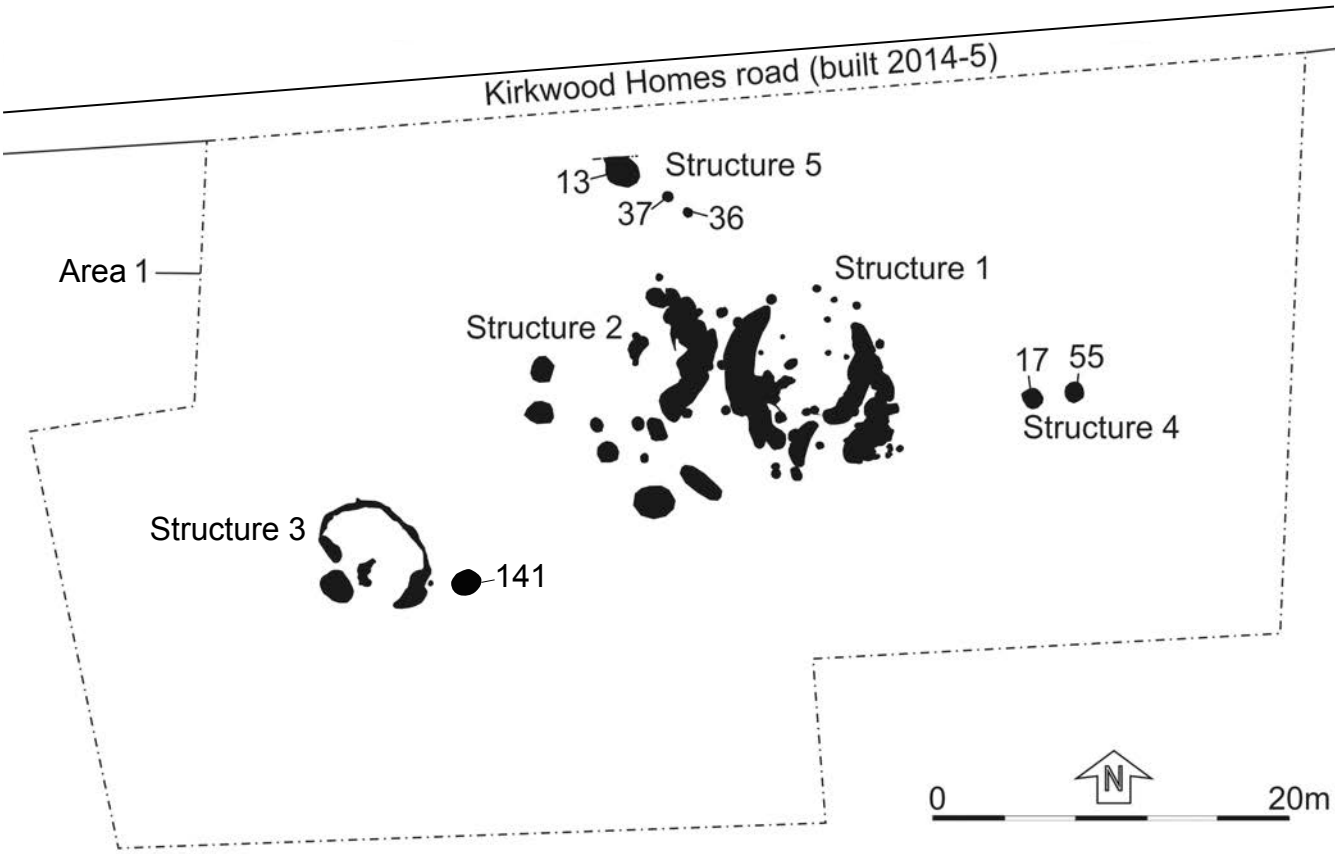

Figure 4: Plan showing Structures 1-5

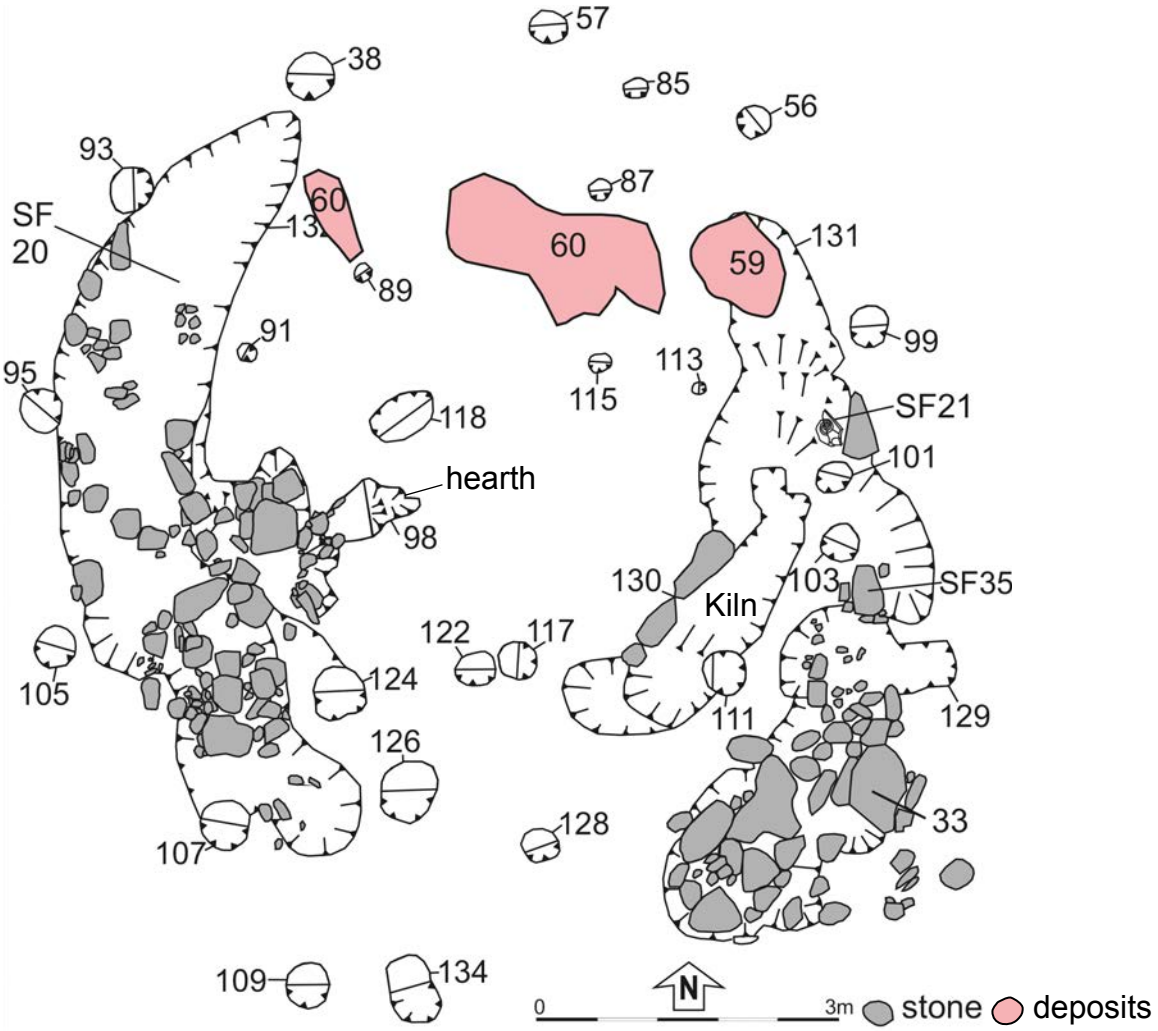

Figure 5: Plan showing features and contexts of Structure 1

An external stone platform or foundation (33) within ditch (129) on the south-east side of the structure measured 2.1 m by 6 m and was 0.23 m deep (Figures 5, 6 and 7). The stones forming context 33 with their fill (62), probably represent an external structure such as a porch, which may be a separate or slightly later phase from the main structure. It is also possible that the stones (33) together with kiln (130) could also represent a final or post-abandonment phase of the structure.

Postholes The main structure consists of at least 13 main postholes. Running clockwise from the north, these were contexts 56, 57, 99, 101, 103, 111, 128, 126, 107, 105, 95, 93 and 38, and a possible entrance (109, 128, 126 and 134). The bases of the postholes were 0.4-0.45 m in diameter and they generally survived up to 0.25 m deep (Figures 5 and 8). Most had a single homogeneous fill of dark sandy-silt with no evidence of post-pipes. Two possible postholes (109 and 134) were only 0.13 m deep and may have been part of the entrance to the structure. Two larger shallow postholes or pits (128 and 126) could either be associated with the entrance or formed part of the interior furnishings (Figures 9 and 10).

The spacing and sizing of the postholes were largely uniform, with nine of them spaced c. 2.1-2.2 m apart. Together they represented a circular structure with an internal diameter of approximately 7.8 m (Figure 5).

Interior features In the interior of the structure, the bases of nine postholes (85, 87, 89, 91, 113, 115, 117, 118 and 122) were noted which probably represent internal partitioning or fittings. Feature 118 is the truncated remains of a pit or it may have been a natural stone hole. Features 122 and 117 were shallow (0.07 and 0.11 m deep) and may have been the bases of truncated postholes associated with the entranceway (Figures 5, 6, 8 and 10).

Figure 6: Post-excavation view of Structure 1 with part of Structure 2 (right); facing south

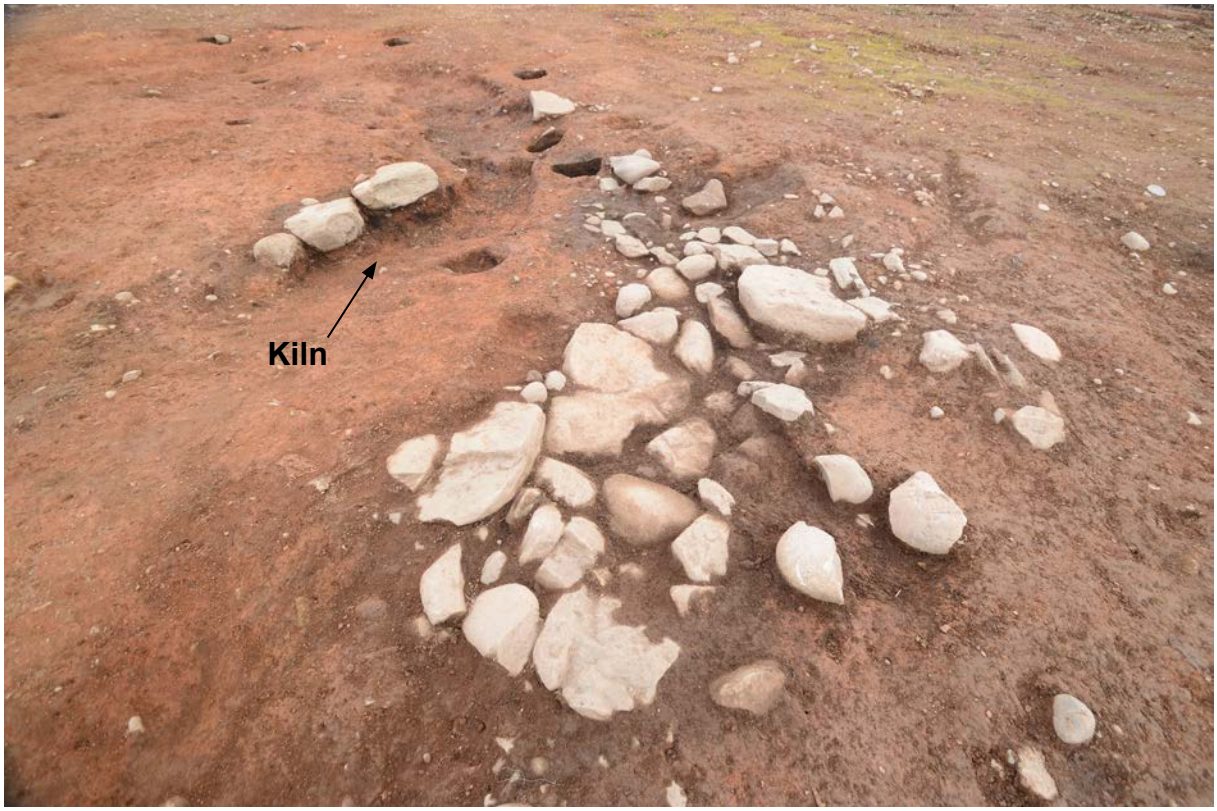

Figure 7: Stones 33 and 129 (centre right); facing north

The remains of a possible hearth (98), offset c. 1.2 m south-west from the centre of the structure measured 0.56 m by 1.1 m by 0.12 m deep. It had a fill of heavily mottled and mixed ashy, greyish-brown/black sandy-silt, which contained flecks of charcoal and rounded and angular stones that were fire-cracked.

On the eastern periphery of the structure, a shallow feature (context 130) that measured 1.4 m by 0.6 m and 0.15 m deep was filled with charcoal (Figure 7), and was identified as a possible kiln. A sizable lump of unfired clay, some 150 mm in length lay on the subsoil, while several large pottery fragments (SF 28) were located c.0.25 m west along the edge of the feature. The remains of a vessel possibly fired *in-situ* (SF 29) were discovered along with a fragment of a flat stone slab likely used as a base support during firing (see Figures 24 and 25).

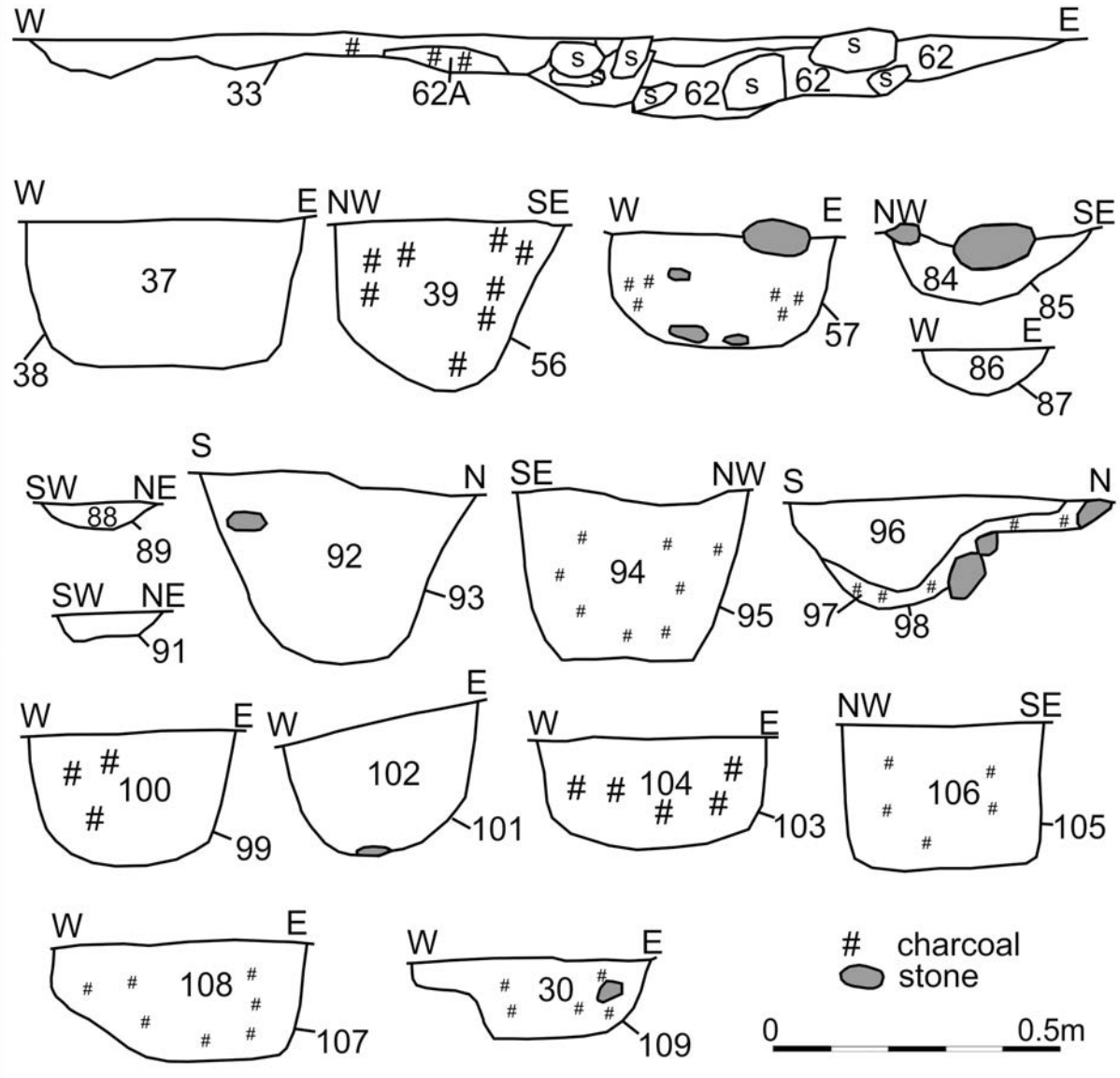

Figure 8: Sections through Structure 1 contexts

Figure 9: SSW posthole bases 109 (left foreground) 134 (right foreground); facing NNE

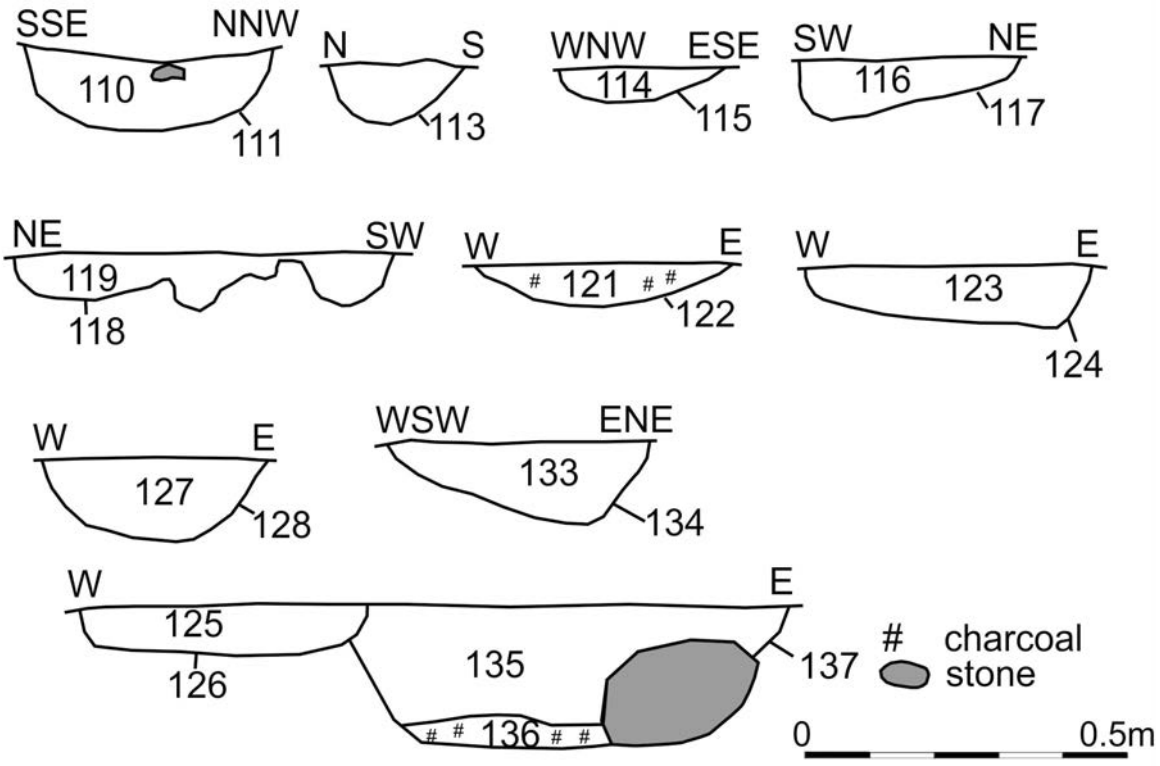

Figure 10: Sections through Structure 1 contexts

Structure 2 and pits 15, 27, 28, 138 and 140 (Figures 4 and 11)

Immediately west of Structure 1, Structure 2 is a more poorly preserved, heavily truncated and perhaps slightly earlier counterpart to Structure 1. The surviving foundations exist as a truncated arc of a ditch (68) measuring 5.8 m north/south by 1.6 m east/west by 0.25 m deep. Several small sherds of pottery were recovered from this context. In comparison to Structure 1, the fill of the foundation trench for Structure 2 was largely rock or stone-free suggesting that perhaps Structure 2 was first abandoned and robbed of its stone for rebuilding efforts on a newer Structure 1, several metres to the east. This hypothesis appears to be supported by the slightly earlier radiocarbon dates from contexts 63 and 65. Despite being heavily ploughed out on the western periphery, Structure 2 remained fairly well-defined on the eastern half, with postholes 82, 80, 78, 74, 72, 76 and 66 being recorded at loosely consistent intervals of c.1.8 to 2.2m apart. The entrance to the structure probably faced SE and was identified by the paired postholes 72 and 76, and 66 with pit 141. The later was the deepest feature of this structure attaining a depth of 0.8 m (Figure 12) and had three stony fills.

Despite being heavily ploughed out on the western periphery, the bases of two postholes/ pits 15 and 140 were found, the latter included charcoal and stones, but both were shallow and neither contained any material cultural evidence. Feature 70 to the immediate east of the entrance was a shallow stony area. Elongated pit 138 to the south-west contained two fills with stone and is likely to have been a feature that post-dated the activity. Circular pit 28, fill 29 contained a small fragment of flint, but it is not clear if it has any relevance to the structure, or like pit 138 is a later feature.

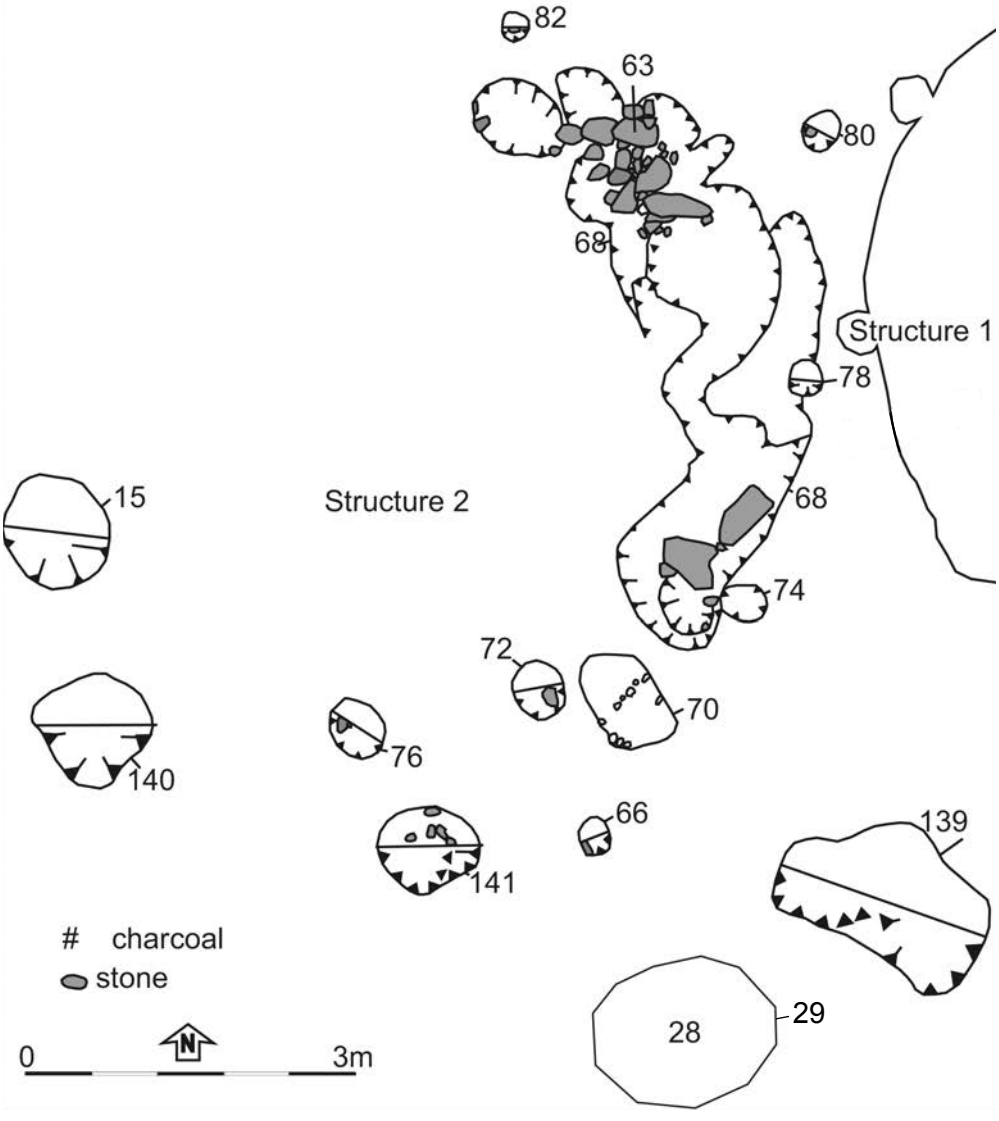

Figure 11: Plan of Structure 2

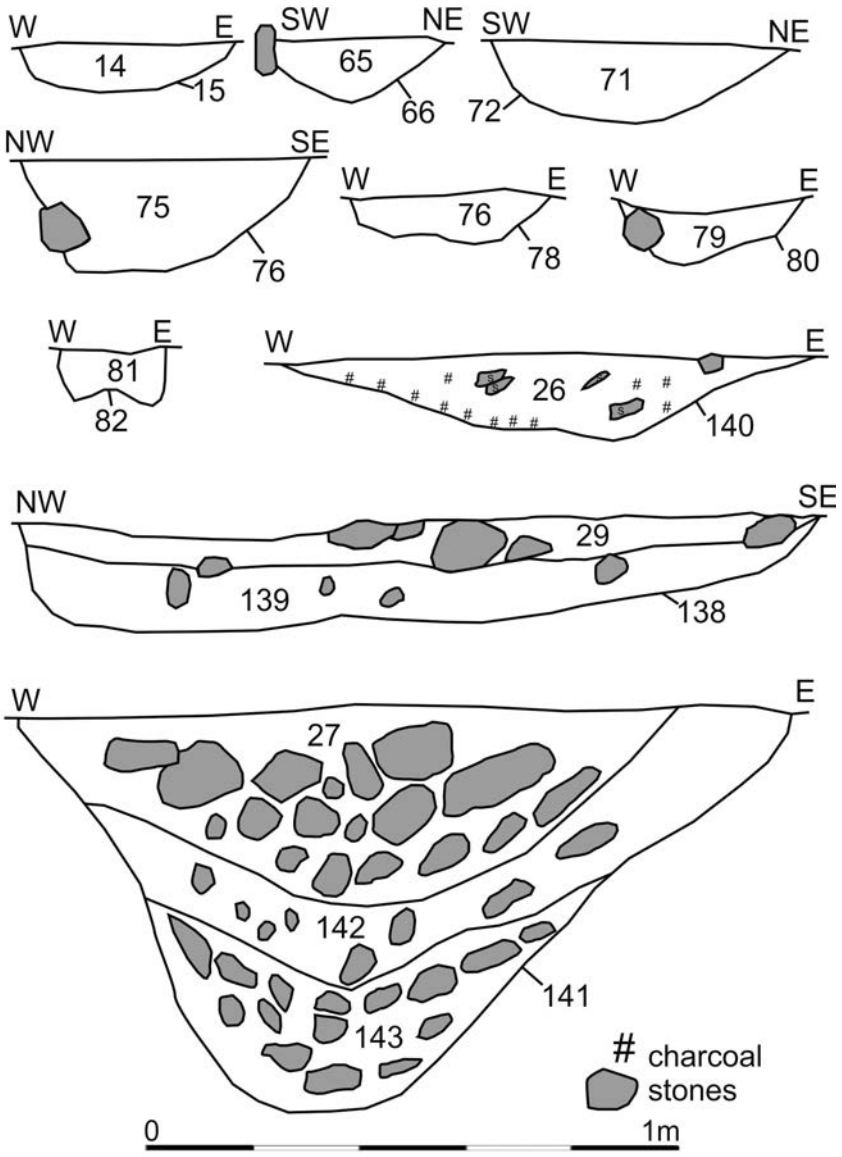

Figure 12: Sections Structure 2

Structure 3, hearth 146 and posthole 148 *(Figures 4, 13 and 14)*

Located in the far south-western corner of Area 1, Structure 3 represents a marked stylistic departure from the previous two roundhouses and may have been more of a shelter for industrial or domestic activity rather than a dwelling. This less robust structure is characterised by a D-shaped northern arc (145), measuring 6.8 m in a NW/SE orientation with a narrow foundation trench averaging some 0.25 m in width and dropping to below 0.10 m in areas. The terminals of this small enclosure flares out at each end.

The south-east terminal of the ditch (145) was revealed to be a shallow feature measuring 0.54 m north-west by 6.5 m south-east by 0.16 m in depth. Its fill (18) included light charcoal flecking and a number of upright tabular stones. The north-west terminal was more elongated and contained noticeable charcoal flecks and small stones in its fill.

Positioned between the terminals but slightly to the west was a sub-oval pit (144) measuring 1.48 m east/west by 0.66 m north/south. The upper part of the pit fill (20) was 0.19 m deep and contained abundant charcoal remains, which were sampled, and a possible worked stone, SF 33. The lower portion of pit 144, was much more substantial, with a maximum diameter of 1.6 m. It was completely filled with fire-cracked stone to a depth of 0.75 m, but pottery or lithics were noted in its fill. Its use was possibly that of a fire-pit for activities within the enclosure.

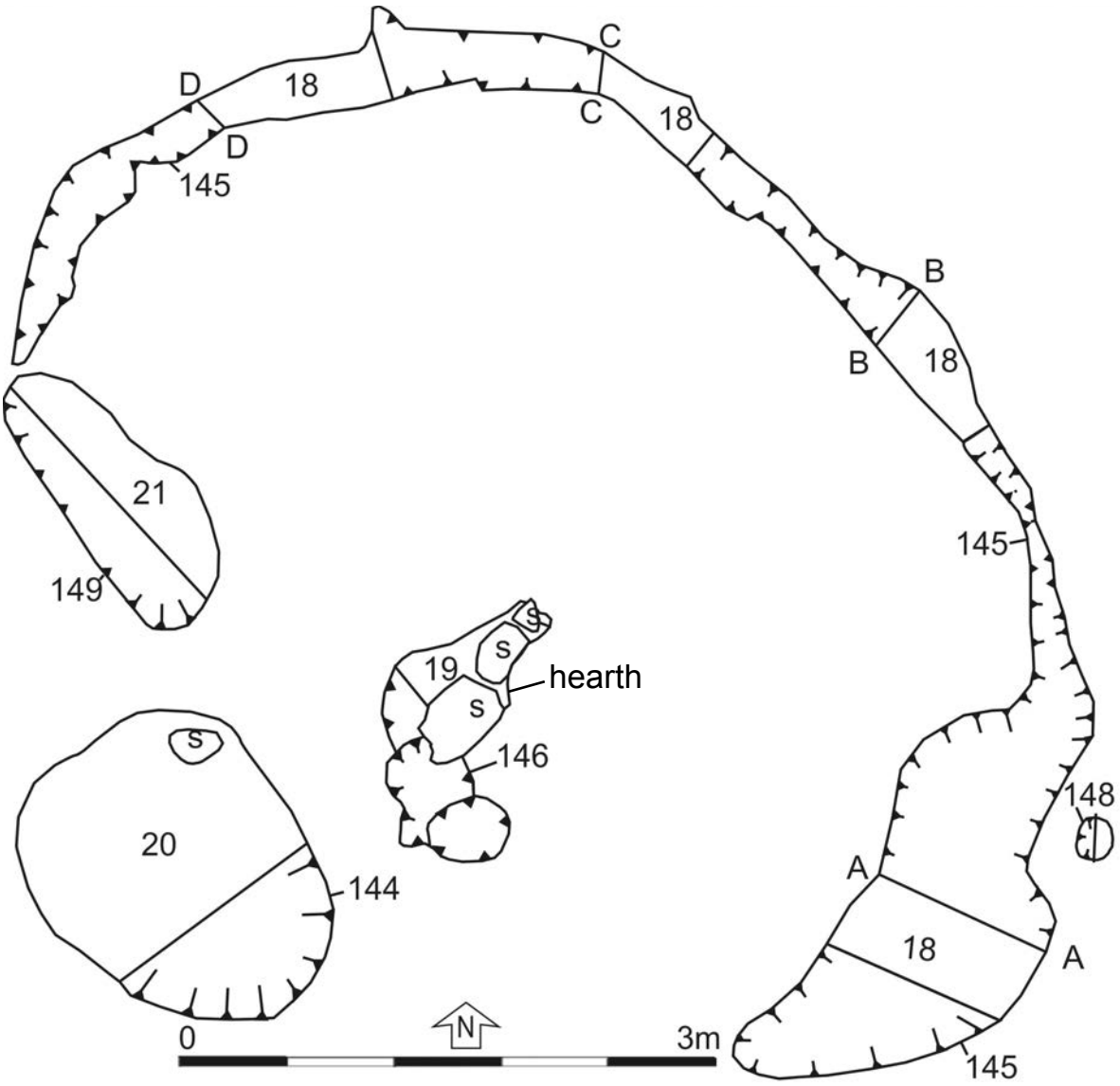

Figure 13: Plan of Structure 3

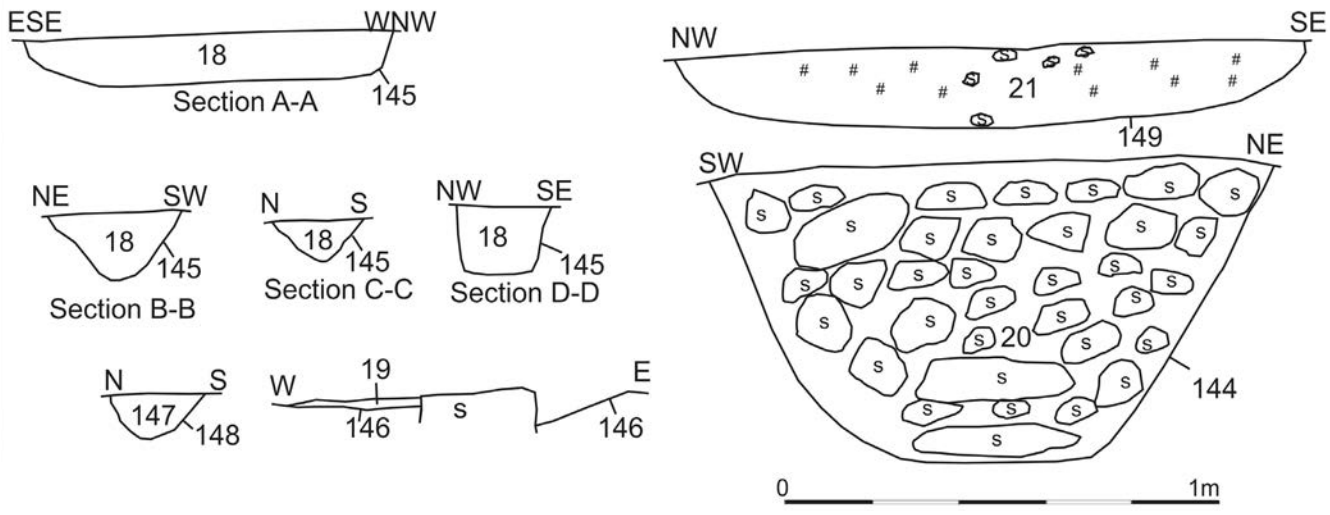

Figure 14: Structure 3 sections

A possible hearth (146) was identified situated half way between the terminals and constructed of stone with surviving deposits of grey-black sandy silt and charcoal inclusions. A small posthole (148) was situated outside the eastern arc of the ditch close to the expansion for its southern terminal (both Figures 13 and 14).

To the east of Structure 3, pit 141 (Figures 15 and 16) was strikingly similar to 144, with two fire-cracked stony fills (27 upper and 143 lower) interspersed with a layer with fewer stones (142). It had also smaller quantities of charcoal than pit 20/144 that were located against the side of the pit. The feature measured 1.55 m east/west by 1.25 m north/south and was 0.80 m deep.

Figure 15: 141 half-sectioned; facing north

Structure 4 *(Figure 4)*

Two pits were found east of Structure 1, which were identified as Structure 4. Pit 55 was sub-circular in shape, and measured 0.6 m NW/SE by 1 m NE/SW and was 0.15 m deep. Its fill (35) consisted of a brownish-black silty-sand overlying a deposit of several fire-cracked stones up to 0.2 m across. There was no noticeable evidence of in-situ burning (Figure 17). The pit was irregular in shape and no finds were recovered from it, suggesting it was possibly a natural stone-hole.

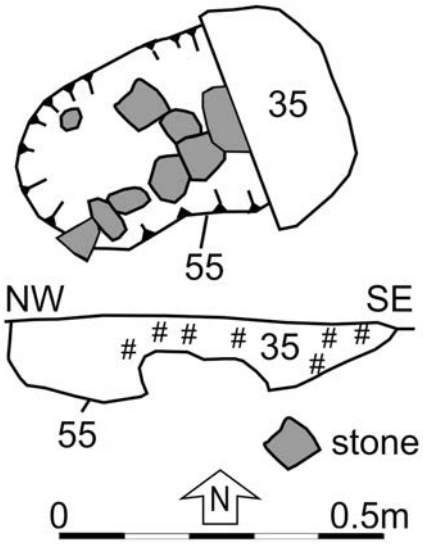

Figure 17: Structure 4 plan and section

Figure 16: Structure 3 in SW corner of Area 1. Note large stone-filled pit (144) to lower left

Pit 17 measured 0.9 m in diameter and was filled with brownish-black silty-sand (16) with gritty-gravel inclusions with no finds. This feature had a clearer, more defined outline than 035, with steep sides to a flat base (no figure).

Structure 5

Pit 13 was possibly a shallow depression filled with topsoil which may be a natural feature (Figure 4).

Postholes 36 and 37 measured 0.40 to 0.45 m in diameter and 0.20 to 0.26 m in depth. Both had straight sides and a rounded base, and were filled with dark brown sandy silt with consistent charcoal flecking. This structure is isolated, though its location near the temporary road built by Kirkwood homes in 2014 may have removed additional features.

Area 2

During the evaluation phase two separate features (53 and 54) were excavated beneath an hour-glass shaped deposit. The northern half was considered to be a tree-throw hole (54) as it had an irregular, uneven base and its fill contained moderate charcoal deposits (44). It was sub-circular in plan and measured 1.8 m north/south, by 1.6 m east/west with a maximum depth of 0.21 m (Figure 18).

The southern half of the deposit was identified as the base of a shallow or heavily truncated pit (53). The pit was sub-circular and measured 1.7 m north/south by 1.5 m east/west and was 0.13 m deep (Figure 18). The pit had an irregular base with very shallow sides and its fill contained prehistoric pottery, SF 2 and SF 53.

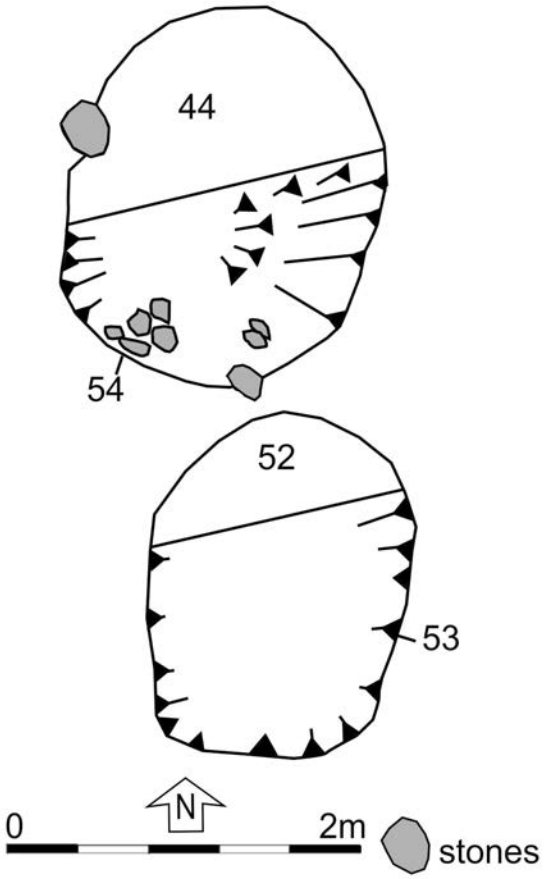

Figure 18: Area 2 plans of features 53 and 54

The Specialist Reports

The environmental report, stone and pottery reports have been carried out by Headland Archaeology and the lithics report by Torben Ballin.

Finds and environmental assessment

By Julie Holden[2] and Tim Lochrie[3]

Both hand-collected and retent finds and environmental material was assessed. The finds are described and discussed first, followed by the environmental material.

Finds assessment

The assessed finds assemblage comprises: 132 sherds (4.177 kg) of prehistoric pottery, fired clay weighing 9 g, and 13 stone finds. Of the 13 stone finds, five were natural or highly likely to be natural. A catalogue of the pottery and stone finds can be found in Table 1.

The stone finds date from the late Neolithic to the middle Bronze Age, while all the pottery dates to the middle Bronze Age. Noteworthy finds in the assemblage include a cup and ring marked stone and a large proportion of a ridged-neck pottery vessel.

Methodology

The report includes both hand-collected finds and those from sample retents. The finds were collected, processed and packaged for long term storage in accordance with professional guidelines (CIfA 2014 revised 2020; Watkinson and Neal 2001). The finds were assessed and recorded by appropriate specialists. The pottery was examined visually, using x20 magnification where necessary. It was recorded in accordance with guidance and standards set by the Prehistoric Ceramics Research Group (PCRG 2010).

The pottery was assessed by small find number but it should be noted that these do not represent vessels and the minimum number of vessels (MNV) has not been calculated.

Stone

The eight stone artefacts are described below and with their detail in Table 1.

Decorated stone SF 21 is a stone decorated with iconic cup and ring marks that was found within Structure 1 (33/62). Cup and ring marked stones are well known in Scotland and are attributed to the late Neolithic and early Bronze Age but the marks are more often found on bedrock.

This stone is a relatively thin slab, which had cracked in two in situ, but several edges showed earlier, worn breaks. The stone is decorated on one face with a well-executed cup and ring motif, comprising a central and off-centre cup, five concentric rings and a radial line which extends along the face and around its edge. The reverse face has a more poorly executed cup and ring motif with a central cup and three concentric rings (Figures 19-21). The stone weighs 5.2 kg. Damaged edges suggest it may once have been larger but in its current form it is small and light enough to be portable. It is also a little too thin to have ever been a free-standing stone. Its most likely use was as a cist slab (Tertia Barnett, Scotland's Rock Art Project pers. comm.).

The most interesting aspect of this stone is its location within a middle Bronze Age structure. The site dates up to a millennium later than the traditional date for this type of rock art. The unusually late dating and evidence for ancient damage suggests it has been brought from elsewhere and it may have been removed from an earlier cist and repurposed. In this context the two different standards of execution of the decoration on each side of the stone is of note. It is possible that the finer side represents the original rock art and the rougher side is a later copy. This idea has interesting implications for the meaning of these symbols for people in later periods.

Tools

SF 35, a saddle quern for grinding grain was found in context 62 of Structure 1 (Figure 20). It is a large, non-portable well-used quern. A small, palm-sized cobble, SF 33 was found in context 20 of pit 144 of Structure 3, with evidence of use as a possible pounder, hammerstone and polisher.

2 Finds

3 Environmental

SF No.	Sample No.	Structure/ feature	Feature/ fill	Qty	Wgt (g)	Material	Object	Description	Spot Date
10		Str 1	9/10	1	449	stone	Perforated stone	Sub-square shaped fragment with two hour-glass shaped perforations. One is has rotary wear, the other is pecked and partial as the stone broke at this point. The stone was thin and rectangular in shape. A sectioned, and would have likely been rectangular probable weight. (Figure 22)	-
20		Str 1	9/10	1	392	Schist?	Perforated stone	The piece is broken through the perforation, and there are no other signs of manufacture or use wear. The perforation is hourglass shaped and shows an uneven surface indicating it has likely been manufactured by pecking and has some rotary wear. (Figure 22)	-
21		Str 1	33/62	1	5241	stone	Decorated stone	Flat, stone broken into 5 conjoining pieces, these are fairly recent breaks. Decorated on both faces. One face has a cup mark surrounded by five concentric rings and a single radial line from the cup mark, extends beyond the fifth ring and continues along the side and very slightly on the obverse face. The fifth concentric circle is only partially present, to the sides of the radial line it meets the fourth line, on one side of the radial line it Is barely visible. There is a second cup mark which is an elongated oval in shape and is positioned through the fifth ring, at a 90 degree angle away from the radial line. The obverse face has a cup mark surrounded by three concentric rings, positioned in a very similar location to the cup and rings on the alternate face. There is evidence that the edges near the elongated cup mark and where the radial line extends is an original or modified edge; it is rounded and may have some peck marks and the decoration from the radial line shows it has not broken through the design but is the original edge. (Figures 20-22)	LN-EBA
24		Str 1	33/62	1	526	Schist?	Hollowed stone	Fragment with a pecked hollow on either side, likely to be an abandoned attempt at perforation. (Figure 22)	-
27		Str 1	60/61	1	3198	stone	Hollowed stone	Stone with pecked hollow, no trace of any shaping. (Figure 20)	-
33		Str 3	144/20	1	302	stone	Cobble tool	Small palm-sized cobble one face has a small facet of peck marks caused through use as a pounder. There are also two fractures at one edge, some dark red-brown discolouration may be due to use.	-
35		Str 1	33/62	1	17800	stone	Quern	Large saddle quern. One side is natural and unworked, one face has been modified though use wear. The quern has a thicker end and a thinner end, leaving a roughly wedge-shaped profile which would have both aided grinding and have been created by it. The ground surface is very concave. with borders along the two sides. Similar in shape to a trough quern but not deep enough. The thinner end is almost broken through and is also where there is a broken edge. (Figure 20)	Bronze Age (as recovered from foundation of Str 1)

Table 1: Finds catalogue

SF No.	Sample No.	Structure/ feature	Feature/ fill	Qty	Wgt (g)	Material	Object	Description	Spot Date
51		Str 1	9/10	1	346	Schist?	Perforated stone	Fragment with pecked, hourglass shaped perforation. (Figure 22)	-
5		Str 1	10	1	1	pottery	coarseware	Small body sherd	MBA
7		Str 1	62	1	4	pottery	coarseware	Small body sherd	MBA
11		Str 1	10	1	20	pottery	coarseware	Small body sherd	MBA
28		Str 1	83	14	1873	pottery	coarseware	Four large rim sherds, seven medium body sherd and three small body sherds. They are from a large vessel with internally bevelled rim, slightly shouldered profile and three pinched cordons directly below the rim exterior. Large, flat-based vessel with ridges. In three boxes. (Figure 23)	MBA
29		Str 1	83	1	1107	pottery	coarseware	Large, flat base, in fairly good condition. Weighed with a large percentage of dirt adhering. Could be the base of rim and body sherds from context 83 (SF 28). Accompanying this base was a large block of heated soil which contained large pieces of charcoal and some small pieces of either fired clay or pottery. This comprise pot contents or remains from a hearth. (Figure 23)	MBA
36		Str 1	62	8	81	pottery/ fired clay	coarseware	Five small to medium body sherds and three pieces of fired clay, possible linear impression on one	MBA
37		Str 1	10	5	41	pottery	coarseware	Small body sherds	MBA
38		Str 1	10	6	192	pottery	coarseware	Small rim sherd and six small to medium body sherds. Rim sherd is flattened, pushed more towards the exterior, leaving an exterior lip	MBA
39		Str 1	10	4	81	pottery	coarseware	Small to medium body sherds	MBA
40		Str 1	60	2	88	pottery	coarseware	Small and medium body sherd	MBA
41		Str 1	62	1	20	pottery	coarseware	Internally bevelled rim sherd, interior has been pushed down and left a lip	MBA
42		Str 1	60	1	9	pottery	coarseware	Small body sherd	MBA
43		Str 1	60	3	6	pottery	coarseware	Two small body sherds and a fragment. Interior residue	MBA
44		Str 1	60	1	10	pottery	coarseware	Body sherd	MBA
45		Str 1	62	1	19	pottery	coarseware	Lower body sherd with interior residue	MBA
49		Str 1	62	1	8	pottery	coarseware	Small body sherd	MBA
50		Str 1	60	1	7	pottery	coarseware	Small body sherd	MBA
	2	Str 1	10	8	13	pottery	coarseware	Three body sherds and five fragments. Small amount of interior residue	MBA
	13	Str 1	62	4	2	pottery	coarseware	fragments	MBA

Table 1: Finds catalogue (continued)

Table 1: Finds catalogue (continued)

SF No.	Sample No.	Structure/ feature	Feature/ fill	Qty	Wgt (g)	Material	Object	Description	Spot Date
	19	Str 1	62	3	4	pottery	coarseware	Three small body sherds	MBA
	26	Str 1	60	16	38	pottery	coarseware	Nine small body sheds and seven fragments	MBA
	44	Str 1	127	1	3	pottery	coarseware	Small body sherd	MBA
6		Str 2	64	4	28	pottery	coarseware	Small body sheds	MBA
	5	Str 2	64	3	16	pottery	coarseware	Two small body sherds and a fragment. Interior residue	MBA
	16	Str 2	71	1	7	pottery	coarseware	Small body sherd	MBA
	16	Str 2	71	2	3	pottery	coarseware	Small body sherd and fragment	MBA
34		Str 3	147	2	20	pottery	coarseware	Small, thick internally bevelled rim and a small body sherd	MBA
	53	Str 3	18	2	1	pottery	coarseware	Small body sherd and fragment	MBA
	55	Str 3	18	5	10	pottery	coarseware	Four body sherds and a fragment	MBA
	61	Str 3	147	1	1	pottery	coarseware	Small body sherd	MBA
46		unstratified	un-stratified	1	175	pottery	coarseware	Very fine sandy fabric, reduced on interior and oxidised on exterior. C 75% of a small oval dish, irregular in shape, base is not flat but is rounded. Pottery or craft manufacture? (Figure 23)	MBA
2		Pit/tree bole	44	3	55	pottery	coarseware	Internally bevelled rim sherd and ridged exterior (interior wipe marks); plus two small body sherds	MBA
3		Pit/tree bole	44	4	22	pottery	coarseware	Small body sherds	MBA
4		Pit/tree bole	44	11	41	pottery	coarseware	Small body sherds	MBA
53		Pit/tree bole	43	7	125	pottery	coarseware	Small to medium body sherds with interior finger smoothing marks	MBA
	6	Pit/tree bole	43	2	49	pottery	coarseware	Medium body sherd and a fragment	MBA
	11	Str 1	33	1	2	CBM	fired clay	Small sub angular abraded piece of fired clay	MBA
	54	Pit	19	8	4	CBM	fired clay	Small fragments of fired clay, small abraded sub angular pieces, one has a piece of charcoal embedded within	MBA

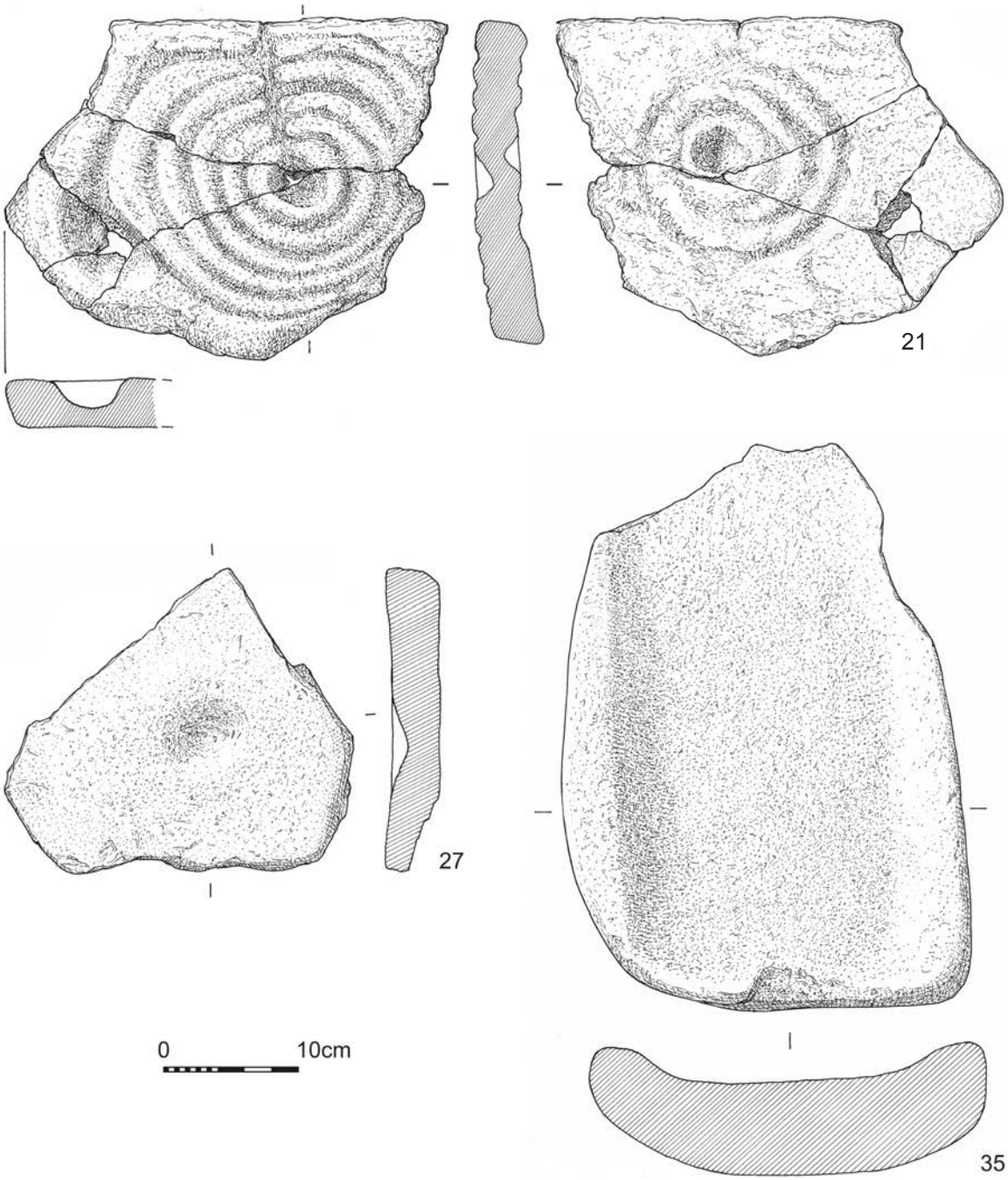

Figure 19: Finds illustrations: SFs 21, 27 and 35

Figure 20: SF 21 side A

Figure 21: SF 21 side B

Perforated stones (Figure 22)

A group of five perforated or pecked stones were recovered, which initially appeared to be related to the cup and ring marked stone, but upon assessment have been classified as perforated stones used as probable weights. Fully perforated stones include SF 10, SF 20 and SF 51 which were all found in context 10/9 in Structure 1, their proximity in the same contexts suggests this is where they were stored or where they were used. SF 10 has evidence of rotary wear which could have occurred during manufacture or possibly use. SF 24, from Structure 1, context 62, is not perforated but has a pecked hollow upon both faces, matching the same location on each face, this is likely the first step in creating a perforation.

A final stone, SF 27, which could equally be plausible as an early perforated stone or cup-marked rock art (Figure 19) was found in Structure 1 context 60/61. This has a single, pecked cup mark and no other trace of manufacture or use.

The finding of so many perforated stones suggest they had a specific use at this site, possibly as loom weights or roof weights.

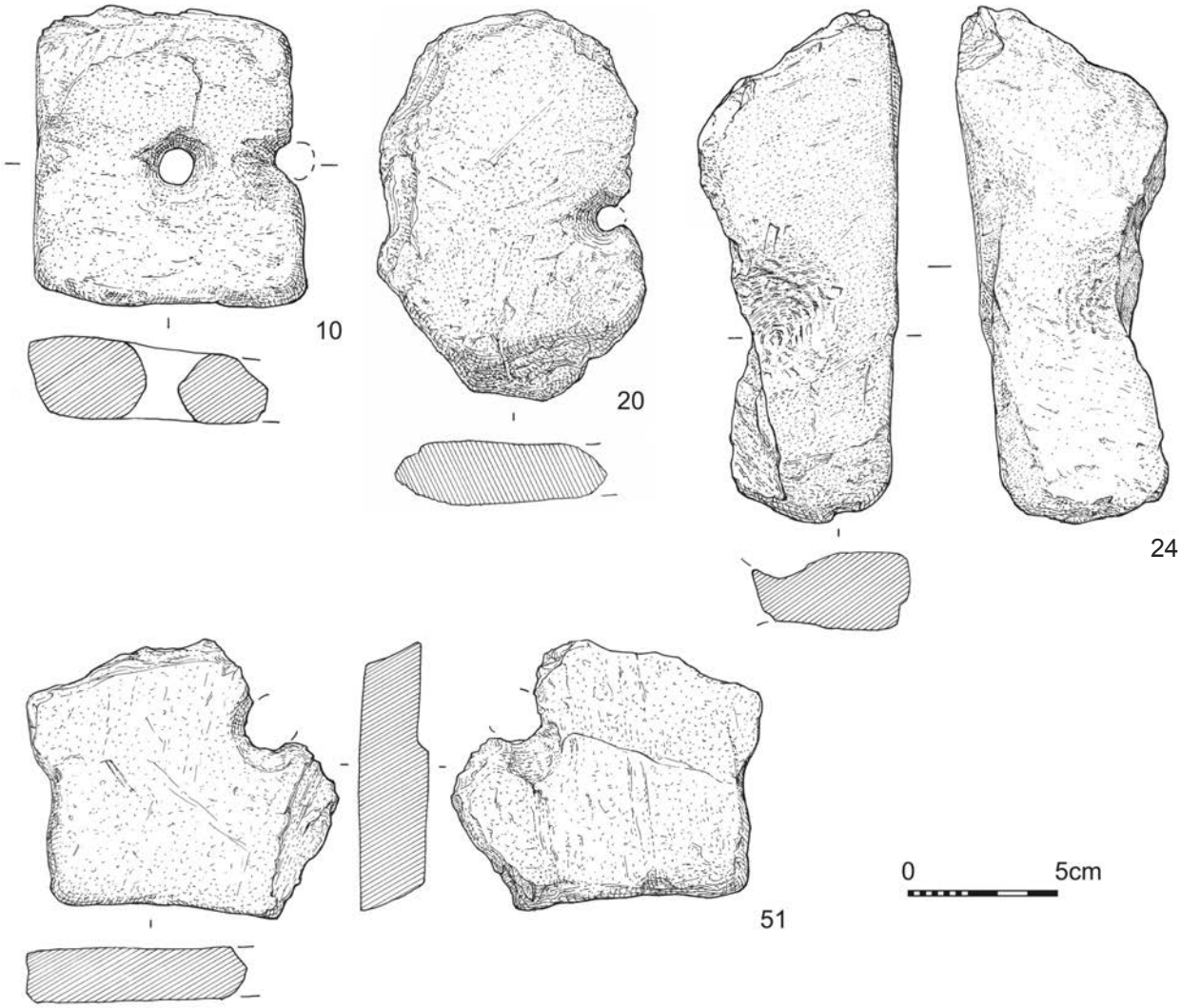

Figure 22: Finds illustrations: SFs 10, 20, 24 and 51

Prehistoric Pottery

The prehistoric pottery assemblage comprises 132 sherds (4.177 kg) and is all of a type commonly termed flat-rimmed ware. Despite its name, the rims are often bevelled or embellished in other ways. There are two particularly remarkable finds within the pottery assemblage, a small shallow vessel, SF 46, and an almost complete ridged vessel SF 28 and SF 29 (both Figure 23).

The small shallow vessel is oval in plan, with in-turned sides and a rounded base. It is broken and around 75% remains. It is made of a very fine sandy fabric with no visible inclusions and it leaves a chalky residue when handled. It is similar in fabric to fired clay or ceramic moulds, which are not tempered in the same way as pottery but it does not have the form or function of either of these. As this vessel was found unstratified in a palaeochannel its date is unclear and no comparanda could be found.

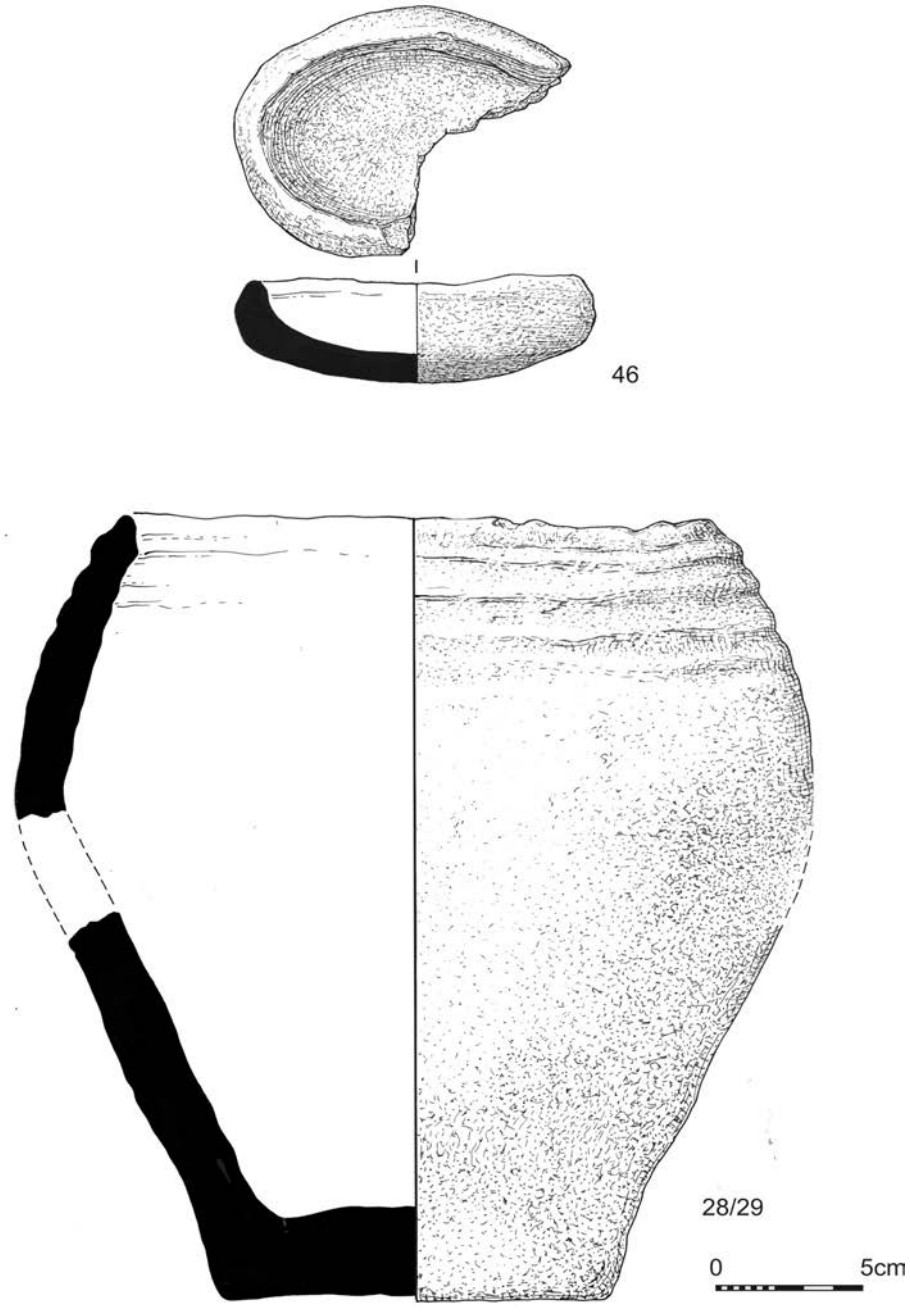

Figure 23: Finds illustrations: SFs 28/29 and 46

The vessel comprising SF 28 and SF 29 is from the fill (83) of feature 130 in Structure 1 (Figures 24 and 25), and represents a complete or almost complete flat-based pot with internally bevelled rim and three pinched cordons on the exterior, immediately below the rim. This large vessel is certainly a cooking pot, as it has internal residue adhering within. It was found with a large, semi-solidified piece of burnt earth with charcoal pieces embedded within, which perhaps represents the firing process from feature 130, which is interpreted as a rudimentary kiln. A second ridged vessel was found as a single rim sherd, SF 42, from contexts 60/61 in Structure 1.

Figure 24: Feature 130 with charcoal fill 83 with pottery and unfired grey clay lump with stone; facing west

Figure 25: Pottery base with stone SF 29 in situ feature 130; facing north

Most of the other pottery from the assemblage consisted of body sherds, though at least four other internally bevelled rims were found - SF 41, Structure 1 (33/62); SF 42, Structure 1 (60/61); SF 34, Structure 3 (148/147); and SF 38. Structure 1 (9/10). The pottery assemblage is very similar to the assemblage found at Old Meldrum in Aberdeenshire, particularly the ridged Vessels from House 2 (White *et al.* 2010, 11).

Fired Clay

A small quantity of fired clay weighing a total of 9g, possibly deriving from daub walls, hearth lining or other clay structures was found in Structure 1 (33/62), (59) and Structure 3, context 146, pit (19).

Finds Discussion

The site has revealed an interesting narrative of human occupation. Whilst no finds within this assemblage were older than the late Neolithic, radiocarbon dates show occupation dating back to the Mesolithic period.

The radiocarbon dates and the finds point towards occupation during the middle Bronze Age and includes typical finds for the period in the form of pottery and stone tools. The perforated stone weights are an interesting addition and may relate to craft activities or to the structure itself.

The cup and ring marked stone is a significant find. It would appear to be earlier than the structure within which it was found but seems to have had significance for the inhabitants which merits further study.

Environmental assessment

Samples were taken from a range of features, 62 in total, and this assessment was to assess the presence, preservation and abundance of any environmental remains in the samples.

Methodology

The samples were subjected to flotation and wet sieving in a Siraf-style flotation machine. The floating debris (the flot) was collected in a 250 µm sieve and, once dry, scanned using a binocular microscope. Any material remaining in the flotation tank (retent) was wet-sieved through a 1 mm mesh and air-dried. The sample was scanned using a stereomicroscope at magnifications of x10 and up to x100. Identifications, where provided, were confirmed using modern reference material and seed atlases including Cappers *et al.* (2006).

Where preservation allowed, charcoal was categorized as oak or non-oak at this assessment stage.

Results

Results of the assessment are presented in Table 2 (retents) and Table 3 (flots). Material suitable for AMS (Accelerated Mass Spectrometry) radiocarbon dating was identified within the tables and sent out for analysis. The dating results are presented in Table 4.

Most samples contained quantities of uncharred root fragments, worm eggs, fungal sclerotia, and insect remains. The condition and character of these indicate that they are modern in origin. A small quantity of burnt animal bone was also collected. The charred plant material was generally well-preserved with weeds seeds and cereal grains as well as nutshell and wood charcoal present. Most samples contained some charred wood charcoal.

Cereals

Cereal grains were recovered in low numbers for approximately 50% of samples. Hulled barley was the dominant cereal, but a small proportion of grains were thought to be naked barley. This latter taxon is most commonly encountered in Neolithic and Bronze-age deposits although it is likely that there is a degree of regional variation.

A proportion of the samples contained occasional oat grains. While oats do not become a common crop until the later Iron Age they are found in earlier contexts as a weed of other crops. Their significance here is therefore uncertain.

Given the small number of grains found in most samples little spatial analysis is possible. However, contexts 59 and 33/62 do contain higher than average numbers of cereal grain. These are both from deposits in Structure 1 so have some bearing on the use of that area.

Other plant remains

Charred 'seeds' (*sensu lato*) were recovered from a relatively high proportion of the samples, but they were not particularly abundant, and there species were not diverse. They were almost exclusively from species commonly found in agricultural fields and waste places e.g. *Galeopsis* (hemp nettle), *Silene* type (campions), *Chenopodium* (fat hen family), *Plantago* (plantain) or from hedgerows e.g. *Pisum/Vicia* (pea/vetch), *Galuim* (cleavers), *Rubus* (bramble). 'Seeds' of this nature can become charred in a variety of ways. They could represent material brought to site along with the cereal crop and discarded onto the fire as waste. They could equally have been collected along with kindling or fire wood or been burned *in situ.* In any event there is no suggestion that they had any direct functional relationship with the features in which they were found.

A single 'pip of *Malus/Pyrus* (apple/pear) was encountered in pit 134/133. Whether this was the result of incidental inclusion via, for example, bird droppings or discarded food remnants is impossible to say.

Fragments of hazelnut nutshell were recovered from the retents of a several samples. It seems likely that these are the remains of nuts consumed as food.

Wood charcoal

Wood charcoal was recovered from the majority of samples. Oak seems to be present throughout albeit in low concentrations.

Burnt Animal bone

Small fragments of burnt bone were present in the retents but beyond reinforcing the suggestion that some of these samples might contain domestic debris, this is not suitable for further analysis.

Discussion

While barley is common in all periods in Scotland, the hulled variety is found from the Bronze Age onwards (Greig 1991, 302) and tends to dominate in the later periods. Naked barley is generally restricted to the earlier periods and largely absent in post-Iron Age sites (Boyd 1988). The presence of predominantly hulled barley with some naked is therefore in keeping with middle Bronze Age radiocarbon dates.

Apart from the barley grains and hazel shell, it is difficult to interpret the remaining charred remains with any precision. Once incorporated into negative features charred remains tend to survive well but, as in this case, their inclusion is often incidental, and the materials have no direct relationship to the features themselves.

Sample No	Context No	Sample Vol (l)	Pottery	Daub	Lithics	Industrial Waste Fe slag	Burnt animal bone	Charred cereal grain	Charred nutshell	Qty	Max Size (mm)	Sufficient for AMS?	Cinders	Comments
1a	16	15	-	-	++	-	-	-	-	++	18	Charcoal +	-	Mainly non oak, occasional oak ++
1	44	10	-	-	+	-	-	-	+	++	19	Charcoal +	-	Mainly non oak ++, occasional oak +, Mineralised.
2	14	20	++	-	+	-	+	-	+	++	11	Burnt Bone +, Nutshell +, Charcoal +	-	Mainly non oak ++, occasional oak +
3	10	5	-	-	-	-	-	-	-	+	9	Charcoal +	-	Non oak ++
4	11	10	-	-	-	-	+	-	-	++	15	Charcoal +, Burnt Bone +	-	Mainly non oak ++, occasional oak +
5	8	10	+	-	-	-	-	-	-	++	20	Charcoal +	-	Non oak ++
6	43	20	+	-	+	-	-	-	+	++	11	Nutshell +, Charcoal +	-	Mainly non oak ++, occasional oak +

Key: + = rare (0-5), ++ = occasional (6-15), +++ = common (15-50) and ++++ = abundant (>50), NB charcoal over 10mm is sufficient for identification and AMS dating

Table 2: Retent samples results

Sample No	Context No	Sample Vol (l)	Pottery	Daub	Lithics	Industrial Waste Fe slag	Burnt animal bone	Charred cereal grain	Charred nutshell	Qty	Max Size (mm)	Sufficient for AMS?	Cinders	Comments
7	52	5	-	-	+	+	-	-	-	++	10	Charcoal +	-	Non oak ++, Mineralised
8	35	10	-	-	-	-	-	-	+	++	18	Charcoal +, Nutshell +	-	Mainly non oak ++, occasional oak +
9	39	10	-	-	-	-	-	-	-	++++	18	Charcoal +++	-	Mainly non oak ++, occasional oak +
10	57	10	-	-	-	-	-	-	-	+++	21	Charcoal ++	-	Non oak ++
11	59	10	-	+	+	-	-	-	-	++++	25	Charcoal ++++	-	Non oak ++
13	33	10	+	-	-	-	+	-	-	+++	15	Charcoal ++	-	Non oak ++
14	33	10	-	-	+	-	-	-	-	++	11	Charcoal +	-	Non oak ++
15	62	5	-	-	-	-	-	-	-	+++	24	Charcoal ++	-	Non oak ++
16	7	20	+	-	-	-	-	-	-	+	9	-	-	Mainly non oak ++, occasional oak +
17	63	10	-	-	+	+	+	-	-	+	12	Charcoal +	-	Burnt bone not retained, Mainly non oak ++, occasional oak +
18	64	10	-	-	++	-	-	-	+	+	10	Nutshell +, Charcoal +	-	Non oak ++
19	62	20	+	-	++	-	-	-	+	+++	14	Charcoal ++. Nutshell +	-	Mainly non oak ++, occasional oak +
20	65	5	-	-	+	+	-	-	-	+	6	-	-	Worm Egg present, Non oak ++
21	67	10	-	-	+	-	-	-	-	+	7	-	-	Mainly non oak ++, occasional oak +
22	75	10	-	-	-	-	-	-	+	++	15	Nutshell +, Charcoal +	-	Mainly non oak ++, occasional oak +, Mineralised.
23	79	5	-	-	+	-	-	-	-	+	10	Charcoal +	-	Mainly non oak ++, occasional oak +
24	60	20	-	-	+	-	-	-	+	++	12	Charcoal +	-	Mainly non oak ++, occasional oak +
25	83	5	-	-	-	-	-	-	-	++++	18	Charcoal +++	-	Mainly non oak ++, occasional oak +

Key: + = rare (0-5), ++ = occasional (6-15), +++ = common (15-50) and ++++ = abundant (>50), NB charcoal over 10mm is sufficient for identification and AMS dating

Table 2: Retent samples results (continued)

Table 2: Retent samples results (continued)

Sample No	Context No	Sample Vol (l)	Pottery	Daub	Lithics	Industrial Waste Fe slag	Burnt animal bone	Charred cereal grain	Charred nutshell	Qty	Max Size (mm)	Sufficient for AMS?	Cinders	Comments
26	61	20	+++	-	+	-	-	-	+	+++	11	Charcoal ++	-	Mainly non oak ++, occasional oak +
27	61	20	-	-	+	-	-	-	-	+++	19	Charcoal ++	-	Mainly non oak ++, occasional oak +
28	92	10	-	-	+	-	-	-	+	++	15	Charcoal +	-	Mainly non oak ++, occasional oak +
29	94	10	-	-	-	-	-	-	-	++	28	Charcoal +	-	Mainly non oak ++, occasional oak +
30	83	2	-	-	-	-	-	-	-	+	10	Charcoal +	-	Non oak ++
31	96	10	-	-	+	-	-	-	+	+	8	Nutshell +	-	Non oak ++
32	99	5	-	-	-	-	-	-	-	+	10	Charcoal +	-	Mainly non oak ++, occasional oak +
33	102	5	+	-	-	-	-	-	-	++	12	Charcoal +	-	Mainly non oak ++, occasional oak +
34	104	5	+	-	-	-	-	-	-	++	16	Charcoal +	-	Non oak ++
35	106	5	-	-	-	-	-	-	-	++	14	Charcoal +	-	Mainly non oak ++, occasional oak +
36	108	5	-	-	-	-	-	-	-	++	18	Charcoal +	-	Mainly non oak ++, occasional oak +
37	30	10	-	-	-	-	+	-	-	++	13	Charcoal +	-	Mainly non oak ++, occasional oak +
38	110	5	-	-	-	-	-	-	+	+	12	Nutshell +, Charcoal +	-	Non oak ++
39	116	4	-	-	-	-	-	-	-	+	4	-	-	Charcoal not retained
40	19	10	-	-	-	-	-	-	+	+	6	-	-	Charcoal not retained
41	121	5	-	-	-	-	-	-	-	++	16	Charcoal +	-	Oak +, occasional non oak +
42	123	5	-	-	+	-	-	-	+	+	7	Nutshell +	-	Mainly non oak ++, occasional oak +
43	125	5	-	-	+	-	-	-	-	+	10	Charcoal +	-	Mainly non oak ++, occasional oak +
44	127	5	+	-	+	-	-	-	+	+	4	Nutshell +	-	-

Key: + = rare (0-5), ++ = occasional (6-15), +++ = common (15-50) and ++++ = abundant (>50), NB charcoal over 10mm is sufficient for identification and AMS dating

Table 2: Retent samples results (continued)

Sample No	Context No	Sample Vol (l)	Pottery	Daub	Lithics	Industrial Waste Fe slag	Burnt animal bone	Charred cereal grain	Charred nutshell	Qty	Max Size (mm)	Sufficient for AMS?	Cinders	Comments
45	133	10	-	-	-	-	+	-	-	++	17	Charcoal +	-	Mainly non oak ++, occasional oak +
46	129	5	-	-	-	-	-	-	-	++	19	Charcoal +	-	Non oak ++
47	135	10	-	-	+	-	-	-	+	+	6	Nutshell +	-	Charcoal not retained
48	136	5	-	-	-	-	-	-	+	++	13	Nutshell +, Charcoal +	-	Mainly non oak ++, occasional oak +
49	29	5	-	-	++	-	+	-	++	++	22	Nutshell ++, Burnt Bone +, Charcoal +	-	Mainly non oak ++, occasional oak +
50	26	10	-	-	-	-	-	-	++	+	10	Nutshell +, Charcoal +	-	Oak +
51	27	20	-	-	+++	-	++	-	++	++	15	Nutshell ++, Burnt Bone ++, Charcoal +	-	Mainly non oak ++, occasional oak +
52	20	10	-	-	-	-	+	-	+++	++	11	Hazel Nutshell ++, Burnt Bone +, Charcoal +	-	Mainly non oak ++, occasional oak +
53	18	20	+	-	+	-	+	-	+	++	10	Hazel Nutshell +, Charcoal +	-	Mainly non oak, occasional oak +
54	19	10	-	++	+	-	-	-	++	++	15	Hazel Nutshell ++, Charcoal +	-	Mainly non oak, occasional oak +
55	18	20	+	-	+	-	+	+	+	++	9	Cereal Grain +, Charcoal +	-	Mainly non oak, occasional oak ++,
56	21	5	-	-	+	-	-	-	+	++++	20	Hazel Nutshell +, Charcoal++	-	Non oak
57	24	5	-	-	-	-	-	-	+	++	20	Nutshell +, Charcoal +	-	Mainly non oak, occasional oak ++, charred barley +, burned bone +.
58	25	5	-	-	-	-	-	-	+	+	6	Nutshell +	+	Charcoal not retained
59	38	3	-	-	-	-	-	-	-	+	10	Charcoal +	-	Mainly non oak, occasional oak ++
60	39	5	-	-	-	-	-	-	-	+	6	-	-	Charcoal not retained
61	147	2	+	-	-	-	-	-	-	-	-	-	-	-

Key: + = rare (0-5), ++ = occasional (6-15), +++ = common (15-50) and ++++ = abundant (>50), NB charcoal over 10mm is sufficient for identification and AMS dating

Sample No	Context No	Total Flot Vol (ml)	Charred Oat Grain	Charred Barley Grain	Charred Weed Seeds	Indet Charred cereal grain	Charred Hazelnut shell	Other Charred plant remains	Qty	Max size (mm)	Sufficient for AMS?	Comments
1a	16	20	-	-	-	-	-	-	++	3	N	fungal sclerotia+, insect remains +
1	44	5	-	-	++	-	-	-	-	-	N	Charred Silene +, charred >2mm grass seed +, charred persecaria +
2	14	20	+	+	-	+	-	-	+++	10	Y	naked barley +, , fungal sclerotia +
3	10	10	-	-	+	+	-	-	+	5	N	charred Fumaria officinalis +
4	11	150	+	++	++	+	-	-	+++	10	Y	Charred Silene +, Persecaria + & Galeopsis +, Fungal sclerotia ++
5	8	15	-	+	+	-	-	-	++	10	Y	grass seed >2mm +, insect remains +, hulled barley +
6	43	20	-	-	+	+	-	-	+++	10	Y	Charred Silene +, charred bud indet +, uncharred insect remains +, Fungal sclerotia ++
7	52	5	-	-	-	-	-	-	-	-	N	Fungal sclerotia +
8	35	20	-	-	+	-	-	-	+++	10	Y	charred Silene +, insect remains +, worm eggs +, fungal sclerotia+
9	39	40	-	-	++	-	-	-	+++	22	Y	charred Silene +, charred persecaria +
10	57	15	+	+	++	+	-	-	++++	30	Y	hulled barley +, charred Rumex+, Silene ++, Galeopsis +,
11	59	10	-	+++	+	+++	-	-	+++	10	Y	hulled barley ++, cf naked barley +, charred Silene +, insect remains + Grain v degraded
13	35	10	+	-	-	-	-	-	+++	20	Y	-
14	33	10	-	-	+	-	-	-	++++	30	Y	-
15	62	>5	-	+	-	-	-	-	-	-	N	hulled barley +
16	7	30	-	-	+	+	-	-	-	-	N	charred Galeopsis +, fungal sclerotia++, insect remains +
Key: + = rare (1-5), ++ = occasional (6-15), +++ = common (16-50) and ++++ = abundant (>50), NB charcoal over 10mm is sufficient for identification and AMS dating												

Table 3: Flot samples results

Sample No	Context No	Total Flot Vol (ml)	Charred Oat Grain	Charred Barley Grain	Charred Weed Seeds	Indet Charred cereal grain	Charred Hazelnut shell	Other Charred plant remains	Qty	Max size (mm)	Sufficient for AMS?	Comments
17	63	>5	-	+	+	+	-	-	+	2	N	hulled barley +, , charred Galeopsis +, fungal sclerotia++
18	64	5	-	+	-	-	-	-	-	-	N	hulled barley +
19	62	20	+	+++	-	+	-	-	+++	15	Y	hulled barley ++, cf naked barley +, charred oat +,
20	65	5	-	-	-	-	-	-	+	4	N	-
21	67	>5	-	-	-	-	-	-	+	2	N	-
22	75	5	-	-	+	-	-	-	+	5	N	charred Silene +, charred >2mm grass seed +, uncharred insect remains +, fungal sclerotia+
23	79	>5	-	-	-	-	-	-	-	-	N	-
24	60	10	-	+	+	-	-	-	+	5	N	charred Silene +, charred Potentilla +, hulled barley +, fungal sclerotia++
25	83	25	-	++	++	+	-	-	+++	15	Y	hulled barley ++, charred Silene ++ fungal sclerotia++
26	61	100	+	+	+	+	-	-	+++	25	Y	hulled barley +, charred Silene +, charred Persicaria +, uncharred insect remains +
27	61	100	+	+	+	-	-	-	+++	10	Y	hulled barley +, charred Persecaria +, Rubus +, Silene + & Galeopsis +,fungal sclerotia ++, uncharred insect remains +
28	92	120	+	+	+	++	-	-	+++	30	Y	hulled barley +, charred Silene ++, fungal sclerotia ++
29	94	200	+	++	+++	++	-	-	++++	35	Y	hulled barley ++, charred Silene +++, Galeopsis +, Rumex +, Persicaria +, fungal sclerotia ++

Key: + = rare (1-5), ++ = occasional (6-15), +++ = common (16-50) and ++++ = abundant (>50), NB charcoal over 10mm is sufficient for identification and AMS dating

Table 3: Flot samples results (continued)

Sample No	Context No	Total Flot Vol (ml)	Charred Oat Grain	Charred Barley Grain	Charred Weed Seeds	Indet Charred cereal grain	Charred Hazelnut shell	Other Charred plant remains	Qty	Max size (mm)	Sufficient for AMS?	Comments
30	83	25	-	+	-	+	-	-	+++	31	Y	hulled barley +, uncharred insect remains +
31	96	20	-	-	-	+	-	-	++	10	Y	uncharred insect remains +, fungal sclerotia +
32	99	75	+	+	++	+	-	-	+++	40	Y	hulled barley +, charred Silene ++ & Persicaria +, uncharred insect remains +
33	102	10	-	-	+	+	-	-	+++	10	Y	charred Silene +,
34	104	150	-	+	+++	-	-	-	+++	15	Y	hulled barley +, charred Galeopsis + & Silene +++, fungal sclerotia ++
35	106	50	-	++	+++	-	-	-	++	15	Y	cf naked barley ++, charred Persicaria +++, Silene + & Galeopsis +, uncharred worm eggs +, fungal sclerotia +
36	108	10	+	+	+	-	-	-	+++	15	Y	hulled barley +, charred Silene + & Persicaria +
37	30	40	+	+	+	-	-	-	++	15	Y	charred Persicaria + & charred Plantago lanceolata , uncharred worm eggs +
38	110	5	-	-	-	+	-	-	-	-	N	-
39	116	10	-	+	+	-	-	-	++	10	Y	cf. naked barley +, charred Rumex +, small grass seed +, uncharred insect remains +
40	19	5	-	-	-	+	-	-	-	-	N	-
41	121	10	-	+	-	-	-	-	+	5	N	cf. naked barley +, uncharred insect remains +, fungal sclerotia +, uncharred worm eggs +
42	123	5	-	-	-	-	-	-	-	-	N	uncharred insect remains +, fungal sclerotia +

Key: + = rare (1-5), ++ = occasional (6-15), +++ = common (16-50) and ++++ = abundant (>50), NB charcoal over 10mm is sufficient for identification and AMS dating

Table 3: Flot samples results (continued)

Sample No	Context No	Total Flot Vol (ml)	Charred Oat Grain	Charred Barley Grain	Charred Weed Seeds	Indet Charred cereal grain	Charred Hazelnut shell	Other Charred plant remains	Qty	Max size (mm)	Sufficient for AMS?	Comments
43	125	5	-	-	+	-	-	-	+	7	N	charred Persicaria +
44	127	50	-	+	+	-	-	-	+++	10	Y	charred Silene +, Galium +, worm eggs +, uncharred insect remains +, fungal sclerotia +
45	133	40	-	+	+	+	-	-	+++	25	Y	cf. naked barley +, charred Persicaria +, fungal sclerotia +, uncharred insect remains +, charred Malus/Pyrus (apple/pear) pip +
46	129	50	-	-	+	-	-	-	+++	27	Y	charred Galeopsis + & Silene +, uncharred insect remains +, fungal sclerotia +
47	135	15	-	-	-	-	+	-	++	10	Y	fungal sclerotia+, charred hazel shell +
48	136	10	-	-	-	-	-	-	++	15	Y	fungal sclerotia+, Uncharred insect remains +
49	29	50	-	-	-	-	-	-	+++	24	Y	uncharred insect remains +, worm eggs+
50	26	40	-	-	-	+	-	-	++	10	Y	fungal sclerotia++, worm eggs ++
51	27	50	-	-	+	-	-	-	++	19	Y	charred Silene + & Veronica +, uncharred insect remains +, worm egg +
52	20	700	-	+	+	-	-	-	+++	35	Y	cf. naked barley +, charred Galeopsis + & Silene +, uncharred worm egg +
53	18	100	-	++	+	-	-	-	++++	10	Y	uncharred insect remains +, charred pea/ vetch 2-4mm +, charred Chenopodium +
54	19	150	-	++	-	-	-	-	++++	15	Y	uncharred insect remains +
Key: + = rare (1-5), ++ = occasional (6-15), +++ = common (16-50) and ++++ = abundant (>50), NB charcoal over 10mm is sufficient for identification and AMS dating												

Table 3: Flot samples results (continued)

Sample No	Context No	Total Flot Vol (ml)	Charred Oat Grain	Charred Barley Grain	Charred Weed Seeds	Indet Charred cereal grain	Charred Hazelnut shell	Other Charred plant remains	Qty	Max size (mm)	Sufficient for AMS?	Comments
55	18	75	-	++	+	-	-	-	++++	10	Y	fungal sclerotia+, uncharred insect remains +, charred grass >2mm +, charred grass <2mm +, charred Polygonaceae +
56	21	10	-	-	-	-	-	-	++++	10	Y	-
57	24	100	-	-	+	-	-	-	++++	20	Y	Charred Galium +
58	25	100	-	+	+	-	-	+	++++	13	Y	Charred grass >2mm +, charred grass <2mm +, charred pea/ vetch +, charred heather stem frags +
59	38	5	-	-	-	-	-	-	+++	10	Y	fungal sclerotia +
60	39	100	-	-	+	-	-	+	++++	25	Y	round wood charcoal + charred Stellaria + & Polygonaceae +
61	147	10	-	-	-	-	-	-	+++	8	N	uncharred insect remains +
Key: + = rare (1-5), ++ = occasional (6-15), +++ = common (16-50) and ++++ = abundant (>50), NB charcoal over 10mm is sufficient for identification and AMS dating												

Table 3: Flot samples results (continued)

Sample	Material	Context	Delta-13C %	Uncalibrated	Calibrated at 1-sigma	Calibrated at 2-sigma
GU-48934	Corylus avellana charcoal	39	-26.8	3017 ± 28	1369–1361 cal BC 1296–1216 cal BC	1388–1339 cal BC 1318–1191 cal BC 1177–1164 cal BC 1144–1131 cal BC
GU-48935	Corylus avellana charcoal	57	-28	3031 ± 28	1374–1355 cal BC 1302–1229 cal BC	1396–1207 cal BC
GU-48936	Corylus avellana charcoal	33	-25.5	3051 ± 28	1385–1340 cal BC 1316–1264 cal BC	1401–1228 cal BC
GU-48937	Corylus avellana charcoal	62	-26.8	2970 ± 28	1228–1127 cal BC	1280–1108 cal BC 1100–1086 cal BC 1063–1060 cal BC
GU-48938	Corylus avellana charcoal	63	-24.6	3190 ± 28	1497–1474 cal BC 1462–1436 cal BC	1506–1415 cal BC
GU-48939	Corylus avellana nutshell	64	-26.7	5299 ± 28	4227–4202 cal BC 4168–4127 cal BC 4120–4093 cal BC 4079–4051 cal BC	4223–4045 cal BC
GU-48940	Corylus avellana charcoal	65	-29	3094 ± 28	1412–1376 cal BC 1346–1304 cal BC	1427–1283 cal BC
GU-48941	Corylus avellana charcoal	83	-26.3	2997 ± 28	1278–1195 cal BC 1141–1134 cal BC	1374–1356 cal BC 1301–1126 cal BC
GU-48942	Corylus avellana charcoal	61	-27.3	3001 ± 28	1282–1196 cal BC 1139–1135 cal BC	1376–1350 cal BC 1303–1127 cal BC
GU-48943	Corylus avellana charcoal	94	-25	3008 ± 28	1368–1363 cal BC 1291–1208 cal BC	1383–1342 cal BC 1307–1157 cal BC 1146–1128 cal BC
GU-48944	Corylus avellana charcoal	104	-26.7	3149 ± 28	1491–1484 cal BC 1452–1401 cal BC	1499–1386 cal BC 1340–1318 cal BC
GU-48945	Corylus avellana charcoal	116	-26	3119 ± 28	1431–1385 cal BC 1340–1316 cal BC	1448–1296 cal BC
GU-48946	Corylus avellana nutshell	127	-23.9	3041 ± 28	1381–1343 cal BC 1307–1259 cal BC 1244–1235 cal BC	1396–1217 cal BC
GU-48947	Corylus avellana charcoal	129	-27.9	3055 ± 28	1385–1340 cal BC 1317–1270 cal BC	1407–1257 cal BC 1251–1231 cal BC
GU-48948	Corylus avellananutshell	136	-24.4	5938 ± 28	4847–4771 cal BC	4897–4866 cal BC 4852–4727 cal BC

Table 4: Radiocarbon dates

The lithic assemblage

Torben Bjarke Ballin

Introduction

The purpose of this report is to characterize the lithic artefacts briefly, with special reference to raw-materials and typo-technological attributes. From this characterization, it is sought to date and discuss the finds. The evaluation of the lithic material is based upon a detailed catalogue (supplied as an Access database), and in the present report the artefacts are referred to by their catalogue number (CAT no.).

The Assemblage

From the excavation 20 lithic artefacts were recovered. They are listed in Table 5. In total, 95% of the assemblage is debitage, whereas 5% is tools.

	Flint	Quartz	Total
Flakes	9	8	17
Blades		2	2
Notched pieces	1		1
Total	10	10	20

Table 5: General artefact list

The definitions of the main lithic categories are as follows:

Chips: All flakes and indeterminate pieces the greatest dimension (GD) of which is ≤ 10 mm.

Flakes: All lithic artefacts with one identifiable ventral (positive or convex) surface, GD > 10 mm and L < 2W (L = length; W = width).

Indeterminate pieces: Lithic artefacts which cannot be unequivocally identified as either flakes or cores. Generally the problem of identification is due to irregular breaks, frost-shattering or fire-crazing. *Chunks* are larger indeterminate pieces, and in, for example, the case of quartz, the problem of identification usually originates from a piece flaking along natural planes of weakness rather than flaking in the usual conchoidal way.

Blades and microblades: Flakes where L ≥ 2W. In the case of blades W > 8 mm, in the case of microblades W ≤ 8 mm.

Cores: Artefacts with only dorsal (negative or concave) surfaces – if three or more flakes have been detached, the piece is a core, if fewer than three flakes have been detached, the piece is a split or flaked pebble.

Tools: Artefacts with secondary retouch (modification).

Characterization of the Assemblage

The 20 lithic artefacts from East Lodge include 19 pieces of debitage and one notched piece. Ten of the objects are in flint and ten are in quartz. The flint includes pieces in mottled grey, black, light honey brown, and brown colours, and although most of the flint is fine-grained, it also embraces cruder medium-grained material. The quartz is generally white milky quartz.

As shown in Table 6, eight flint flakes are cortical with one being tertiary (outer : inner ratio 90-10%), whereas the outer : inner ratio of the quartz flakes is opposite to that of the flint flakes, with two pieces being cortical and eight tertiary (20-80%). The cortex of all cortical flint and quartz flakes is smooth and abraded, suggesting that both raw materials were collected from pebble sources. As shown in Ballin (2019), small pebbles have more outer cortex per volume than larger pebbles, and the different outer:inner ratios of the two raw materials suggest that the flint was collected in the form of quite small pebbles, but the quartz is considerably larger pebbles or cobbles. The flint may have been collected along the shores of the North Sea a few kilometres from the site, whereas the quartz may have been collected as nodules along the River Ury a few hundred metres from the site.

Flint	Quartz	Total
1		1
7	2	9
1	8	9
9	10	19

Table 6: Reduction sequence of all unmodified flakes and blades

Although the collection is numerically small, allowing a degree of random statistical fluctuation, Table 7 does suggest that the two raw materials may have been reduced by following different operational schemas: the flint nodules may have been reduced by applying hard percussion and bipolar technique in equal measure, whereas quartz seems to have been reduced primarily by the application of hard percussion. This may also reflect the different sizes of the collected nodules, where the small flint pebbles would in most cases not have allowed the core preparation necessary to permit controlled platform reduction to take place, whereas the larger quartz nodules would. The simplicity of the two applied operational schemas is also indicated by the fact that three flint percussion flakes and one quartz percussion flake have cortical platform remnants.

No burnt pieces were recovered.

No cores were retrieved and only one tool was found. The tool is a recycled bipolar core in flint with a retouched notch in one lateral side (CAT 4; measuring 28 by 11 by 5 mm). The notch has a chord of c. 7 mm. The bipolar core is a bifacial piece with two reduction axes (two sets of opposed terminals), suggesting that it was reorientated during the reduction process.

	Flint	Quartz	Total
Hard percussion	4	4	8
Bipolar technique	4	1	5
Total	8	5	13

Table 7: Percussion techniques applied to produce the site's technologically definable unmodified flakes and blades

Summary and Discussion

The distribution of the lithic artefacts across the site (Table 8) suggests that the lithics were generally residual in relation to the site's structures and features, and thereby predating them. It is, however, uncertain whether they predate the structures and features by days, years or centuries. The presence of three hut circles or roundhouses (Downes 2012, 9), as well as sophisticated carved stone objects (Brophy and Sheridan 2012, 32; Downes 2012, 118), indicates a general date for the site in the later Neolithic or early Bronze Age periods.

Although none of the individual lithic artefacts is diagnostic, the assemblage as a whole does indicate a date. In eastern Scotland, Mesolithic (e.g. Nethermills Farm; Ballin 2017), and early Neolithic (Garthdee Road; Ballin 2014a) assemblages are generally almost (although not entirely) devoid of bipolar waste, whereas the use of anvil technique increases through the middle and late Neolithic periods (e.g. Stoneyhill Farm; Suddaby and Ballin 2010) to become dominant in the early and later Bronze Age periods (e.g. Kingfisher Industrial Estate, Aberdeen; Ballin 2008). This suggests a post-early Neolithic date for the East Lodge assemblage. It is also usually the case that flints are notably low in number on roundhouse sites, such as for example at Tornagrain near Inverness (Ballin 2018), Colinhill, South Lanarkshire (Ballin 2019), and Connagill, Sutherland (Ballin 2014b).

Ring ditch	Posthole 37	Posthole 94	Poss. kiln	Interior	Feature 44	Ring ditch	Pit 26	Pit 27	Pit 29	Total
3	1					1	1	2	1	9
		1	3	1	1	1			1	8
						1			1	2
							1			1
3	1	1	3	1	1	3	2	2	3	20

Table 8: Distribution of the lithic assemblage across the site

Discussion and Conclusions

Mesolithic deposits

As discussed above there is a Mesolithic presence at the site, probably in situ deposits although there is a possibility that the earlier material was included in the Bronze Age structures.

Structure 1

At first glance Structure 1 is a fairly typical timber post roundhouse: common throughout much of Scotland, but with a few notable aspects that tend to set it apart – the entranceway and the pit kiln area (130) near the ESE wall. The building's foundations are slightly elongated on its north/south axis, measuring c.8.5m east/west by 10.5 m north/south. This elongation is due to a slightly extended or sheltered entranceway facing SSE. The posthole spacing and arrangement in the south-eastern arc of the structure between posthole 103 and 134 remains uncertain, but feature 33, in the south-east which contained numerous large stones within its fill, follows the remaining arc of known postholes and appears to be foundational in nature. One other interpretation is that feature 33 served as a type of porch or modified entrance area, with the wall set behind it. Radiocarbon dating (see Table 4) has provided 13 middle Bronze Age dates, placing the settlement date range between 1506 -1415 cal BC (SUERC-81920) and 1280 - 1060 cal BC (SUERC-81919).

The small finds from Structure 1

Structure 1 produced the most artefacts out of all three structures, largely due to the better levels of preservation and/or minimal level of truncation/deeper stratigraphy in comparison to the other two structures.

The saddle quern and lithics

A near complete and heavily worn saddle quern was identified in the lower foundational deposits of context 33 in the eastern half of the foundation trench. The quern appears to have been deliberately placed upside down within the basal area of the stony foundations. It was discovered at the very end of last day of excavations, when one final check was made over the remaining foundation stones sitting on natural subsoils.

A possible worked quartz piece (SF 31) was found in context 135, below floor trample (context 31) in Structure 1. A lithic core SF 23 was identified in the fill of feature 33, also on the eastern half of the structure. SF 32, a flint flake, was identified in the fill (29) of pit 28 c.4 m south of Structure 1 and Structure 2 (Figure 11). On the west side of Structure 1, a partial arrowhead or projectile point made from what appears to be mudstone was recovered from the fill of posthole (95/94).

The open 'pit' kiln (130)

The pottery finds include the decorated sherds from SF 28, a complete base (SF 29), now believed to be from the same vessel from context 083 within a suspected rudimentary open or 'pit' kiln 130, where unworked clay was discovered alongside SF 29 that was still attached to a flat stone-base used to maintain its shape or provide a stable platform during the firing process. Given the obvious dangers of firing pottery next to the wall of a structure, this raises the distinct possibility that use of the kiln occurred post-abandonment. It could also be argued that 130 is not a kiln, and it simply represents an area of intense burning, not unlike an elongated hearth or fire-pit. However, the presence of a sizable lump of pure grey clay, near the vessel base SF 29 firmly attached to a flat stone slab strongly suggests otherwise.

Perforated stones SF 10, SF 20 and SF 24 and hollowed stone SF 27

Three perforated stones, SFs 10, 20 and 24 are possible loom weights. The size (c.110 by 110 mm) and weight (449 g) of SF 10 is directly comparable to a number of other prehistoric and early medieval loom weights, such as one of many recovered from Jarlshof, Shetland (Hamilton 1956, 183, National Museums Scotland ID HSA531; SCRAN online ID 000-190-004-089-C) which measures c. 134 by 114 mm by 73.5 mm thick, and is believed to have been crafted sometime between 850-1000 AD. While admittedly this is a chronological leap from the middle Bronze Age dates returned from East Lodge, the function and technology would not have changed a great deal for general use as a standard stone loom weight on an upright loom. This Jarlshof loom weight also has finely incised marks around the outside edge, which may have been used to guide the thread or keep it from

shifting too easily – these marks are perhaps similar in overall function to the partial notch found on the outside edge of SF 10. Alternatively, its possible use as a roof weight is not convincing. Its light weight and the level of craftsmanship used on this item suggest it was used for other activities. Archaeological parallels ranging from late-Iron Age figure-of-eight houses to much later Hebridean black houses indicate that simple sub-rectangular slabs of considerably larger bulk were tied around with ropes and typically employed as roof weights on thatch.

The small hollowed stone, SF 27 (Figure 20) with a simple cup-mark, was recovered from the SE interior of Structure 1. While not commonplace, these single cup-marked stones are known from a number of findspots in Northern Britain (Watson 2011, 339).

The double-sided, cup and ring-marked tablet SF 21

At East Lodge, located within the eastern interior of Structure 1 a remarkable double-sided, double-carved cup and ring-marked stone SF 21 (Figures 20-22) was found positioned largely upright within the foundation of Structure 1. The first carving which was initially visible during excavation is referred to as Side A, which comprises three concentric rings surrounding the cup without a radial channel or gutter. The outermost ring appears to be unfinished, while the lower portion of the stone contains less clearly defined rings. Once the stone was recorded and photographed, careful lifting revealed an even more intricately carved reverse Side B. This carving appears to have been more skilfully executed, with five rings surrounding a cup breached by a radial channel or gutter. Again, the outermost ring appears unfinished near the top (as photographed) while there appears to be possible wear or erosion along lower sections of the rings. In addition, the lower left side of the stone contains an elongated cup or trough which may be interpreted as a 'horn' terminal similar to those found at Achnabreck, Argyll (van Hoek 1993, 15).

Fixed 'Megalithic' cup-marked stones or rocks are a relatively common form of Neolithic or Bronze-Age prehistoric art found within an Atlantic European or Mediterranean context. They can be found in Ireland, the UK, France, the Iberian Peninsula, and as far afield as Sardinia and Switzerland. They are almost always carved on large natural rock outcrops, bedrock protrusions, boulders or orthostats, and were therefore intended to be fixed objects of some bulk and stature. A more intricate variation on the above, with a concentric ring or spiral surrounding the cup, then a gutter or channel extending outwards, are also known throughout this distribution area in smaller numbers. While there are around 2400 examples of known or suspected 'cup-marked stones or rocks' in Scotland, examples classed as 'cup and ring-marked' stones or rocks falls to around 737 (see *Scotland's Rock Art Project* 2018).

It is with portable specimens of cup and ring-marked stones that the frequency of examples greatly diminishes. Only two other examples can be considered portable within a 50 km of East Lodge. This first was found in a field in 2001 at Tullo of Benholm (Canmore ID 294026), some 3 km WSW of Gourdon, Aberdeenshire and 18 km SSW of East Lodge. The find is now in the Marischal Museum, Aberdeen University as Treasure Trove TT.44/06. The brief description of the stone is from A. Saville:

> *The small slab of granite contains four cups: one with two complete rings around it, another with a ring and seven radials leading from it, and two others with partial rings. There appears to have been another possible larger cup, as two parts of three other rings survive but the remainder has broken off. The stone is 0.40m long by 0.25m wide and 0.08m thick. The cups vary from 100mm wide to 50mm wide. It may have come from field clearance so the original location is unknown* (Saville 2006, 16).

A second portable cup and ring-marked rock was discovered outside Forfar, Angus on Baldardo Hill (Benvie 2014, 2, also discussed below in relation to a nearby cist burial). This find was accessioned into the Meffan Museums Collections F2013.21. Records suggest that the artefact is portable, yet no other information currently exists. It appears that neither stone mentioned above was found *in-situ.*

As mentioned in the specialist report (above), Tertia Barnett of *Scotland's Rock Art Project* suggests SF 21 may have come from a cist slab that was broken up.

Further research has uncovered striking parallels from nearby Upper Mains of Catterline, some 8.9 km south of the site, where at least six cist burials have been located since 1890. One cist in particular (NO88NE 11) which was excavated in the early 1920s contained a carved cup and ring-marked stone (Reid and Fraser 1924), which measured c.0.76 m by 1.03 m by 0.75 m in thickness. In addition, the upright slabs from this cist also closely match the thickness of SF 21, while the cist cover itself has a bevelled hole, almost identical in nature to the ones drilled into the perforated stones from East Lodge, particularly SF 10.

Research into the National Record of the Historic Environment of Scotland (NRHE) reveals out of 631 cist burials identified within a 100 km radius of East Lodge (HES 2019), only nine were associated with cup marked stones. This number then drops to only two that also contained cup and ring-marked stones. These are Catterline and Baldardo Hill mentioned above (NO55 SW20, Benve 2014, 2), situated some 40.5 km SW of Stonehaven and 4 km NE of Forfar, Angus respectively. Closer investigation into the Baldardo Hill site revealed there was not actually a cup and ring-marked stone associated with the burial itself, rather a cup and ring-marked rock was found some 300 m south of the cist in about 2009 and it was accessioned into the Meffan Museums Collections in 2013 (F2013.21).

The cist burial from Upper Mains of Catterline, some 8.9 km south of East Lodge, is the only recorded cist burial within 100 km of East Lodge which contains a cup and ring-marked stone, with more similarities to SF 21.

The cist slabs from Catterline, including the cup and ring-marked stone, and the carved stone tablet SF 21 from East Lodge are all produced from the same sedimentary Lower Old Red Sandstone layer formed during the Devonian Period. This sandstone forms a discreet band across the southern half of the Highland Boundary Fault, which runs in a NE direction some 250 km from Arran on the west coast across to Garron Point, which marks the northern terminus of Stonehaven Bay. Coincidentally, the fault runs almost directly below the East Lodge site some 2.5 km WSW of Garron Point (Scotland Info Guide 2019). This perhaps explains why the perforated stones from East Lodge themselves are formed from a schist found immediately to the north, rather than the softer red sandstone which was used for both the Catterline cup and ring marked-stone and the East Lodge carved stone SF 21.

The late chronology of SF 21 from a middle Bronze Age context is also notable. While a small handful of portable cup-marked stones have been occasionally recorded in middle Bronze Age domestic settings (Jones and Kirkham 2013, 651), no other recorded stones contain carvings on both sides. In addition, the stone from East Lodge appears to have had the lower-quality Side A carved later (and most likely, onsite at Structure 1) than the more carefully executed carving on the reverse Side B.

Current research indicates SF 21 is a unique, previously unknown style of portable cup and ring-marked rock art (by virtue of being a double-sided, portable tablet) that was apparently modified or quarried from a larger parent stone, and perhaps related to the cup and ring-marked stone from the cist burial at Upper Mains of Catterline, either though source material, or through its creators. The Catterline stone was apparently on display in the old Aberdeen Museum with the rest of the reconstructed cist for many years and was accessioned under Accession no: 232/2. Future research hopes to compare the two side by side.

Structure 2

Structure 2 was perhaps abandoned shortly before the construction of Structure 1, as suggested by the slightly earlier, though overlapping radiocarbon dates. Given the high level of truncation, it is difficult to reliably interpret much more detail from this structure, although the remaining arc in the eastern half indicates strong parallels with building methods used for Structure 1 (Figure 26). This of course suggests there was some degree of chronological continuity between the two structures. Structure 1 was constructed less than 0.5 m to the east as a likely replacement for Structure 2. The latter was perhaps heavily damaged by fire or high winds,

Figure 26: Structure 1 (right) and Structure 2 (left); facing north

as today 70 mph gusts are not uncommon in the area. This hypothesis would also help explain some of the truncation, and the overall paucity of stone rubble foundations in comparison to Structure 1, further suggesting a strong possibility that Structure 2 was eventually robbed out in order to build its close neighbour prior to or soon after a final abandonment phase.

Structure 3

Structure 3 was located some 12 m SW from Structure 2, and c. 7-8 m from the now-truncated SW arc of Structure 2. It forms an interesting D-shaped or perhaps oval structure with what appears to be an entrance or possibly an open SW-facing side. A possible hearth, context 146 with a filling of silt and charcoal inclusions, was situated between the terminals. Unfortunately, no charcoal suitable for radiocarbon determinations was recovered from the feature or the structure. The only artefact recovered from it was a palm-sized cobble SF 33 with peck marks and several fractures along one edge, likely formed through its use as a pounder.

In lieu of radiocarbon dates or typologically datable artefacts, it is difficult to reliably say much more regarding this structure. Given the close proximity to the two hut circles or roundhouses, the most obvious explanation, albeit still tenuous, is that it is related to Structures 1 and 2. In that regard, it may have formed a sheltered work area or out-building if contemporary with the Bronze Age remains to the north-east. Conversely, all other options remain open at present, ranging from a Neolithic to a later Iron Age structure.

The features from the East Lodge site represents two fairly typical hut circles or roundhouses that were constructed at the later end of the middle Bronze Age, with the newest 2-sigma radiocarbon determinations pushing them ostensibly into the late Bronze Age. However, the finds themselves provide a more complex narrative that may well tie the buildings to existing sites in the area. The three-pinched cordon vessel from Structure 1 stands as a somewhat unique form that may have close parallels with a similar vessel recovered from Malcolm's Mount in the late 1980s (Shepherd 1987, 23). The perforated stones, likely loom weights (both finished and unfinished), are an unusual size – arguably larger that 'typical' prehistoric looms weights, yet too small in number and size, and too well-crafted, to arguably be effective weights for thatched roofs. Most notably, the double-sided, carved cup and ring-marked stone tablet (SF 21) at this stage of research currently stands as a unique type of portable rock-art in a European context. The idea that it was quarried from a possible cist burial cover and then modified with the less well incised cup and ring carving on the reverse side by a middle Bronze Age individual wishing to emulate earlier styles, stands as the most likely explanation.

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