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The Excavation of Neolithic Pits and a Bronze Age Burial Site at Ness Gap, Fortrose

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1. ABSTRACT

An investigation by Headland Archaeology (UK) Ltd took place in early 2013 in advance of a housing development at Ness Gap, Fortrose, Highland. The excavation revealed domestic activity dating from the Neolithic to the Early Bronze Age. A cluster of Neolithic pits provided insights into the development of agriculture in the area, with evidence for cereal production and the gathering of wild resources. The use of the site changed in the Bronze Age, with the landscape utilised for funerary practices, which were represented by stone cists and cremation burials, both urned and unurned. Analysis has further informed on the burial practices of the Bronze Age and added to our understanding of a unique peninsular landscape rich in prehistoric activity.

2. INTRODUCTION

2.1 The Ness Gap project

A number of Neolithic–Chalcolithic pits, Early Bronze Age short-cists, and a Bronze Age cremation cemetery were excavated by Headland Archaeology at Ness Gap, Fortrose, Black Isle. The work was commissioned and funded by Tulloch Homes Ltd in response to a planning condition (ref: 09/00471/OUTRC) placed by Highland Council on the proposed Chanonry Park housing development. Prior to the excavation, a programme of archaeological work was carried out at the site which comprised a desk-based assessment (Haston 2006), trial trenching, and a watching brief (Marshall 2011a & b). The final excavation of an irregular 3.6-hectare plot, reduced to *c.* 2.5 hectares due to existing spoil bunds and haul roads, revealed 150 recorded cut features. The site was damaged by modern ploughing, with numerous features being severely truncated.

2.2 Geology and topography

Ness Gap is located on the eastern margins of Fortrose and covers a total area of 10.4 hectares on Chanonry Ness, a distinctive peninsula extending south-eastwards into the Moray Firth on the Black Isle (Illus 1). This site is located to the south of Ness Road (NGR: NH73290 56510), bounded by housing developments to the north and east, with Fortrose Academy to the west.

The geology of the area comprises Forres Sandstone overlain by raised marine beach deposits of post-glacial age and is characterised by gravel, sand, silt and clay, commonly charged with organic debris of plant and shells (NERC 2019). The site slopes gently from north-west (16m AOD) to south-east (8.5m AOD) towards the Moray Firth shore. The raised marine beach deposits indicate that the prehistoric sea level was higher than today.

2.3 Archaeological and historical background

The Black Isle peninsula, situated at the northern end of the Great Glen, has a small but significant archaeological record. The fertile soils and moderate climate support arable and permanent pasture with

decades of agricultural practice and afforestation impacting many sites (Woodham 1953–5: 66; Fraser 2014: 5). Nevertheless, the surviving monuments and sites highlight the importance of the Black Isle in prehistory.

One of the most significant sites on the Black Isle at Kinbeachie, to the north-west of Ness Gap, provides rare evidence of a Neolithic structure. A rectangular arrangement of post holes was interpreted as a timber building dating from the second half of the 4th millennium BC (Barclay et al 2001: 62). High concentrations of carbonised cereal grains, identified as naked barley and emmer wheat, were recovered from within the structure (Barclay et al 2001: 60, 67). The site does not exist in isolation, the distribution of Neolithic flaked stone suggests a landscape with widespread settlement and cultivation on the lower ground (Phillips et al 1999). The higher ground is dominated by two types of Chambered Cairns: Clava and Orkney-Cromarty (Henshall & Ritchie 2001). The Black Isle is the meeting place of these two regionally distinct burial monuments (Fraser 2014: 6).

The site at Ness Gap is in the town of Fortrose, which early maps refer to by the onomastic term of Chanirie or Chanonry, with its name coming from the Gaelic *A'Channanaich*, 'The Place of the Canons' or 'the Chanonry' (Fraser 1984). Gordon's maps of 1615–86 and 1636–52 depict the town with its cathedral and precinct as being larger than that of neighbouring Rosemarkie. Fortrose Cathedral, a Scheduled Ancient Monument (HES SM No. 90147), was the seat of the bishops of Ross, which was transferred from Rosemarkie in around 1235. The cathedral was an important seat of worship during the early to late medieval period and the surrounding lands were undoubtedly utilised by those in the growing town.

Little evidence exists or survives of prehistoric activity in the immediate vicinity of the site at Ness Gap. Historic Environment Scotland (HES) records a flint scatter (Canmore ID 14329) and a midden (Canmore ID 14330) found in 1923 around 800m to the west of the site. A stone cist containing a Food Vessel and a flat copper axe head was also found at the manse of Rosemarkie in 1903 (Canmore ID 14380). The most significant recent



Illus 1 Site location (OS OpenData © Crown copyright and database right 2020)

archaeological work in the area was an excavation at Fortrose and Rosemarkie Waste Water Works. Excavations there uncovered Neolithic and Bronze Age pits, a Bronze Age corn-drying kiln and a number of cremation pits, including two urned

cremations (one upright and one inverted). The evidence from Ness Gap, along with that from Fortrose and Rosemarkie Waste Water Works, reveals significant insights into prehistoric activity on Chanonry Ness.

3. ARCHAEOLOGICAL SUMMARY

The excavation at Ness Gap encompassed an area of approximately 2.5 hectares. An average of 0.60m (up to a maximum of 1.5m) of topsoil was removed, revealing a natural sub-stratum of sand with bands of gravel (Illus 2). These bands became more prevalent towards the eastern (downslope) side of the site. The geology of the site proved a challenge in that archaeological features were concealed by raised beach deposits (Whittow 1977: 226). Several features were only discovered due to the thoroughness of the archaeological team. The features found to be prehistoric included:

- a cluster of three pits within the eastern half of the excavation area containing Neolithic Carinated Bowl pottery;
- two short-cist burials to the western extent of the site, one of which included an Early Bronze Age Food Vessel;

- two pits to the south containing Beaker pottery;
- and seven centrally located pits forming a more disparate cluster of Bronze Age urned and unurned cremation burials.

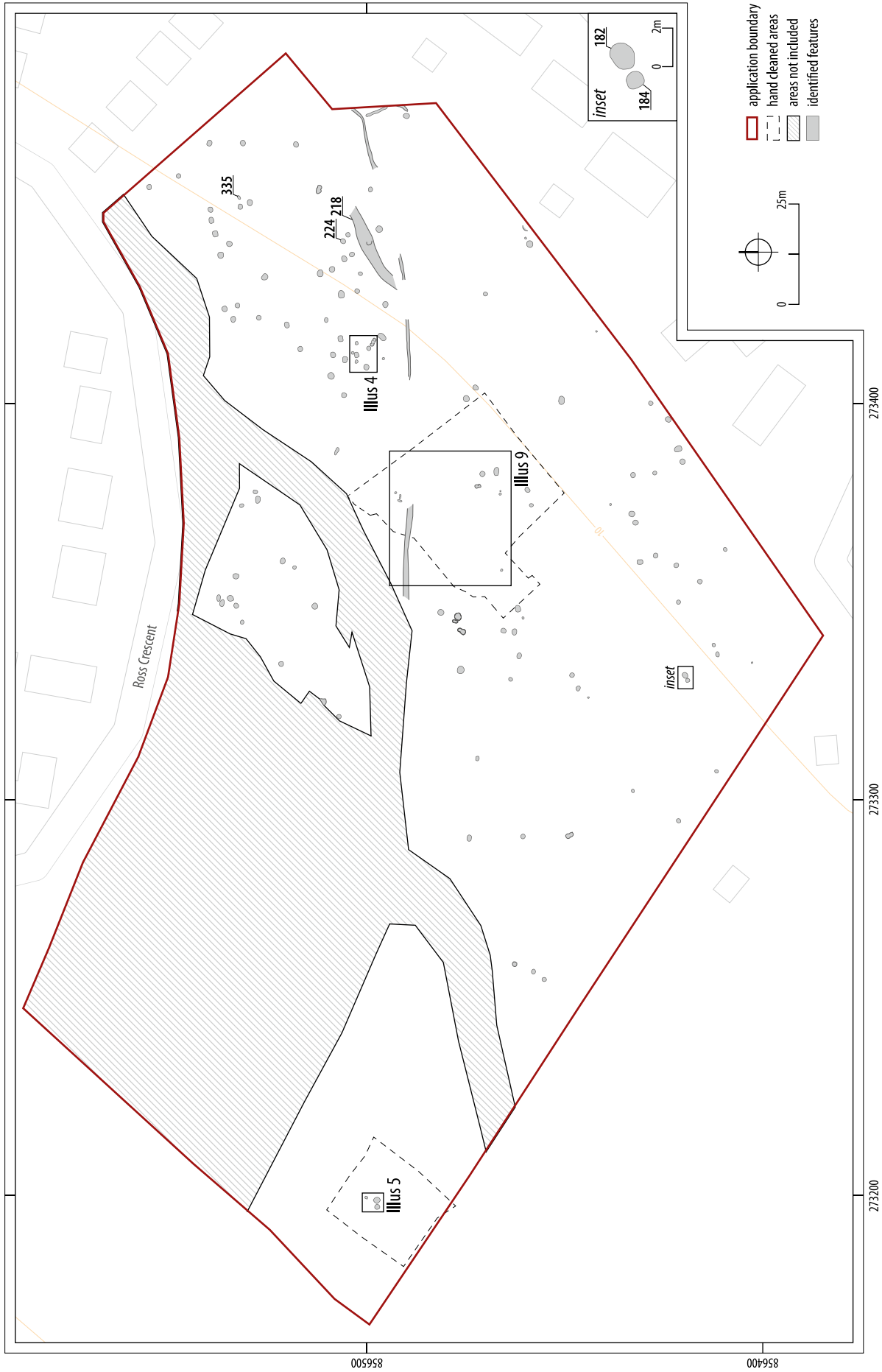
The finds were dominated by pottery, which was mostly recovered from the various pits across the site. The assemblage includes Carinated Bowl fragments, Beaker fragments, Food Vessels, Cordoned Urns, a Cinerary Urn, and an assortment of less diagnostic prehistoric material (Table 1). Burnt bone was also abundant within many of the pits relating to the cremation burials.

A small assemblage of lithics was recovered from across the site. This included limited evidence of Mesolithic activity, plus a more wide-ranging assemblage of cores and flakes (Table 2).

Evidence for the presence of metal objects (copper alloy), was found among the Bronze Age cremated



Illus 2 View of the site during removal of the topsoil (© Headland Archaeology)



Illus 3 Plan of the site showing the location of the features (OS OpenData © Crown copyright and database right 2020)

Table 1 Pottery types, date range and associated finds. (Radiocarbon dates calibrated in Oxcal v4.3.2 reported at 95.4% probability)

Feature	Context	Vessel	Type	Date	Lab Ref	Finds within/associated with vessels
Cist 030	Lower Fill 032	V1	Food Vessel	2440–2130 cal BC	SUERC-61665	
Cremation Pit 017/027	Fill 018/028	V2	Cordoned Urn	1630–1450 cal BC	SUERC-61662	Green staining on cremated human bone within urn but no surviving copper alloy
Cremation Pit 166	Fill 167	V3	Cinerary Urn	1760–1540 cal BC	SUERC-64983	
Cremation Pit 169	Fill 170	V4	Cordoned Urn	1630–1450 cal BC	SUERC-61661	Copper alloy razor and other objects
Cremation Pit 172	Fill 174	V5	Cordoned Urn	1750–1540 cal BC	SUERC-61659	Beaker sherd V9 Burnt lithics Antler fragments Copper alloy razor
Cremation Pit 172	Fill 173	V6	Cordoned Urn	1660–1500 cal BC 1690–1510 cal BC	SUERC-61660 SUERC-61671	Burnt lithics, chip, quartz pebble Antler handle? Faience bead Bone bead Copper alloy awl Cramp
Pit 182	Fill 183	V7	Beaker	2290–2050 cal BC	SUERC-64615	
Pit 182	Fill 183	V8	Beaker	2290–2050 cal BC	SUERC-64615	Lithics
Cremation Pit 172	Fill 174 of V5	V9	Beaker	c 2400–2000 BC		
Pit 325	Fill 326	V10	Carinated Bowl Pottery	c 3600–3330 BC		
Pit 327	Fill 328	V11	Carinated Bowl Pottery	3700–3500 cal BC	SUERC-64616	
Pit 329	Fill 330	V12	Carinated Bowl Pottery	c 3600–3300 BC		
Cist 417	Mid fill 420	V13	Possible Accessory Vessel	c 2126–1531 BC		

Table 2 Summary of the lithic assemblage

Feature	Context	Quartz pebble	Bipolar core	Platform core	Flake	Chip	Indeterminate	Burnt fragments	Microburin	Scraper	Edge-retouched flake	Total
	U/S				1							1
Cremation Pit 172	Fill 173							4				4
Cremation Pit 172	Fill 174 of V5							7				7
Cremation Pit 172	Fill 175 of V6	1				1		2				4
Pit 182	Fill 183		1		2	4		1				9
Pit 224	Fill 225				1							1
Pit 325	Fill 326			1		1						2
Pit 327	Fill 328				2	9			1			12
Pit 329	Fill 330					1						1
Pit 385	Fill 386										1	1
Cist 417	Fill 420						1					1
Total		1	1	1	6	16	1	14	1	1	1	43

Table 3 Radiocarbon dates from Ness Gap calibrated using OxCal v4.3.2; Bronk Ramsey (2017); r5 IntCal13 atmospheric curve (Reimer et al 2013). The reported dates are presented with the endpoints rounded outwards to five years (following Mook 1986)

**SUERC-61670 and 616699 are anomalous, contrasting with the date of the features indicated by the artefact analysis, and have not informed the interpretation of the features*

Feature	Context	Lab sample	Material	$\delta^{13}\text{C}$	Radiocarbon age BP	Calibrated age ranges (95.4%)
Pit 327	Fill 328	SUERC-64616	Nutshell: hazel, <i>Corylus avellana</i>	-25.6 ‰	4844 ± 28	3700–3530 BC
Cist 030	Fill 032	SUERC-61665	Charcoal: oak, <i>Quercus</i>	-25.5 ‰	3812 ± 34	2440–2130 BC
Pit 182	Fill 183	SUERC-64615	Charcoal: hazel, <i>Corylus avellana</i>	-24.7 ‰	3765 ± 29	2290–2050 BC
Cremation Pit 415	Fill 416	SUERC-61664	Burnt bone: human	-25.0 ‰ assumed	3405 ± 34	1870–1610 BC
Cremation Pit 166	Fill 168 of V3	SUERC-64983	Cremated bone (fibula): human	-21.8 ‰	3372 ± 35	1760–1540 BC
Cremation Pit 172	Fill 174 of V5	SUERC-61659	Burnt bone: human	-23.5 ‰	3367 ± 34	1750–1540 BC
Cremation Pit 172	Cordoned Urn V6	SUERC-61671	Interior residue	-27.5 ‰	3325 ± 34	1690–1510 BC
Cremation Pit 172	Fill 175 of V6	SUERC-61660	Burnt bone: human	-27.3 ‰	3296 ± 34	1660–1500 BC
Cremation Pit 403	Fill 404	SUERC-61663	Burnt bone: human	-29.1 ‰	3279 ± 34	1640–1450 BC
Cremation Pit 017/027	Fill 029 of V2	SUERC-61662	Burnt bone: human	-23.2 ‰	3262 ± 34	1630–1450 BC
Cremation Pit 169	Fill 171 of V4	SUERC-61661	Burnt bone: human	-22.3 ‰	3261 ± 34	1630–1450 BC
Pit 182	Fill 188*	SUERC-61670	Nutshell: <i>Corylus avellana</i>	-26.3 ‰	4824 ± 34	3700–3520 BC
Pit 327	Fill 328*	SUERC-61669	Nutshell: <i>Corylus avellana</i>	-23.2 ‰	3819 ± 34	2460–2140 BC

remains. Copper alloy staining was identified on the cremated bones, suggesting the presence of small metal objects which had been through the cremation process but not survived over the long term. Several small fragments were recovered which appear to have passed through the funeral pyre. These have been identified as the remains of a possible awl and fragments of putative razors.

Two beads were also found during the excavations. One segmented faience bead (in two conjoining fragments) was found inside one of the Cordoned

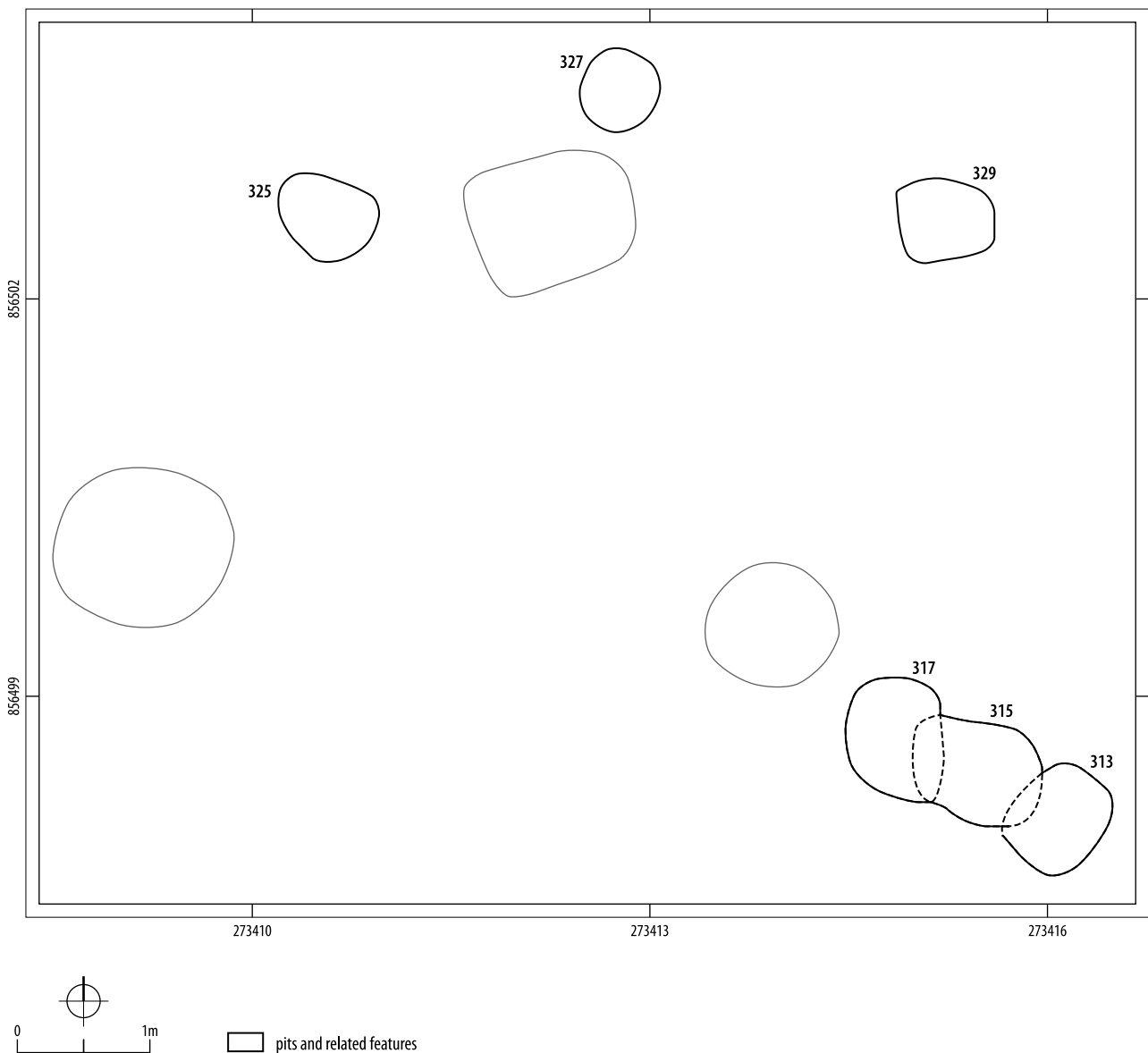
Urns. A fusiform bone bead was found in the fill of the pit and probably originated from the same vessel, as the contents were disturbed post-depositionally by animal burrowing.

A programme of radiocarbon dating was carried out on samples taken from a variety of contexts. A total of 14 samples were submitted to the Scottish Universities Environmental Research Centre (SUERC) AMS Facility, East Kilbride. The samples provided 11 radiocarbon dates spanning the Neolithic, Chalcolithic and Bronze Age (Table 3).

4. THE NEOLITHIC PIT CLUSTER

A small cluster of three pits (325, 327 and 329) was discovered some 50m north-east of the main cluster of cremations (Illus 3). These were located amongst a concentration of probable modern pits but were distinct in both form and content (Illus 4). All three were sub-circular and measured 0.6–0.8m in diameter and 0.2–0.3m deep. The pits represent the remains of nearby early to middle Neolithic domestic activity containing: pottery, flint debitage, charcoal and charred hazelnut shells. The charcoal was dominated by oak (*Quercus* sp.) but also contained fragments of hazel (*Corylus avellana*) and heather

(*Calluna vulgaris*) charcoal. Nine sherds of early to middle Neolithic Carinated Bowl were found in the pits, representing three vessels (V10, V11 and V12). The body sherds, most likely from the lower portion of the vessels, have an average thickness of c 10–12mm with smoothed exterior surfaces. The fabric, which is tempered with large angular quartz inclusions, is specific to the Neolithic pottery found on site. The largest sherd was recovered from Pit 325 and comes from near the bottom of a hemispherical base. There is a layer of residue on the interior surface indicating that it had been used with foodstuffs, potentially as cookware. None of the other sherds showed evidence of residues. A sherd from Pit



Illus 4 Plan of Pits 325, 327 and 329 (© Headland Archaeology)

329 has grain impressions on the exterior surface, providing further evidence for domestic activity. Pit 327 was radiocarbon dated to 3700–3530 cal BC (95.4% probability; SUERC-64616) from a hazelnut shell recovered from the fill.

The abrasion on all three vessels suggests they had moved around or been open to the elements, before slumping or being placed in the pits. The

material within the pits potentially accumulated over some time before being deposited. Pits 325 and 329 each contained a single fill, indicating that the deposition of the material occurred as one phase of activity. The high quantities of flint debitage within the fills, principally from Pit 329, may also imply that flint knapping was taking place nearby.

5. CHALCOLITHIC–EARLY BRONZE AGE ACTIVITY

5.1 Short-cist burials

Prior to excavation, trial trenching exposed an intact stone-built short-cist (C030) at the far western corner of the site (Marshall 2011b: 7, illus 3 and illus 5). Radiocarbon dating of charcoal retrieved from within the cist produced a date of 2440–2130 cal BC (95.4% probability; SUERC-61665). Traces of human bone were found, through palaeoenvironmental assessment, but it could not be determined whether they represent the remains of an inhumation or cremation, either of which would be consistent with the Early Bronze Age date. At this stage, the contents of the cist were fully excavated but the structure left intact. The investigation of this cist continued during the excavation with the recording and removal of the lining stones (Context 033) (Illus 5A, 5B). This revealed a cut (C030) which was somewhat irregular in plan and measured 1.1 × 1.0m and 0.45m deep. The lining was found to rest directly against the cut, packed in places with redeposited natural sand and stones (C032).

The cist contained a complete small tripartite Food Vessel (V1) in the ‘Yorkshire’ style. The vessel stands at 130mm tall with a rim diameter of 135–145mm, a base diameter of 70mm, and a maximum diameter of 150–160mm (Illus 6). The vessel is sub-circular in plan and irregular in both manufacture and decoration. It has an internal bevel and two cavettos (a concave moulding with a regular curved profile), upon which is a twisted cord-impressed herringbone motif. The lower body is also decorated with twisted cord that has been looped upon itself and pushed into the surface. The impressions to the exterior rim bevel are not continuous; there is a c 10mm gap between the start and finish points. The spacing between and the length of the impressions is irregular. The exterior has also been wet smoothed or slipped to hide the very large (2–10mm) frequent rock inclusions which are visible on the interior. The angular, speckled black and white, inclusions constitute around 30% of the matrix and are well sorted throughout the fabric. The black organic residue is located on the rim bevel and part of the interior, suggesting the vessel contained food or had been used in cooking.

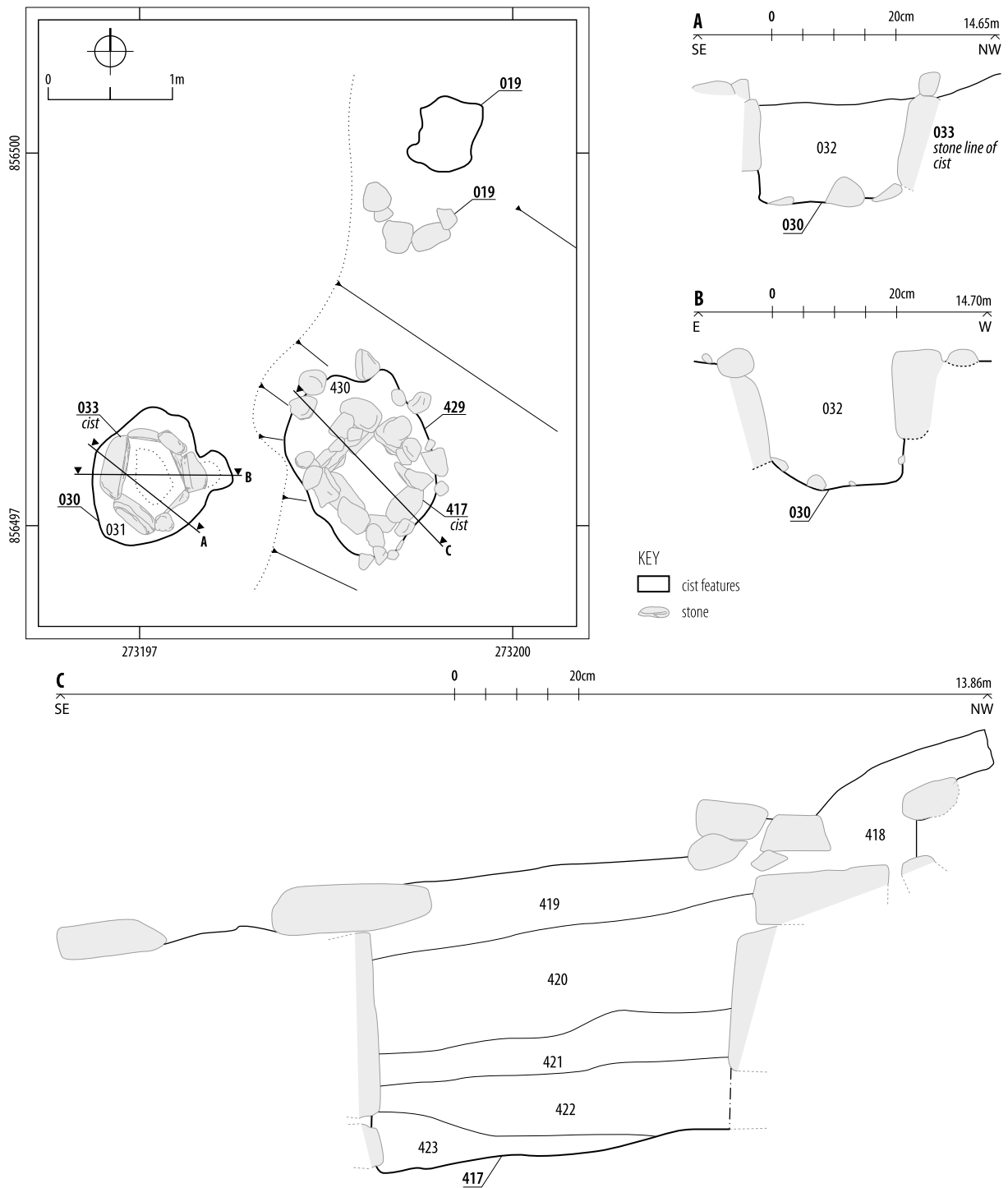
Sooting to parts of the exterior and spalled areas on the lower body could have occurred during firing or through use for cooking.

During hand-cleaning around Cist 030, a second short-cist (Cist 417) was revealed cut into the slope immediately to the east of the first. The cist was slightly larger, with the sub-oval cut (C429) measuring 1.6 × 1.35m and 0.4–0.8m deep. It was lined with water-worn stones of up to 0.4m in diameter. These were supported with smaller packing stones and sand (C430), resulting in an internal space that measured 0.5 × 0.4m (Illus 5C). The cist had no surviving capstone and was filled with several layers of redeposited natural material (C419–423) containing pottery and small fragments of non-identifiable burnt bone. The upper two deposits (C419–420) and the deposit overlying the packing material outside the main lining (C418), contained fragments of glass and hammerscale, suggesting the cist had been disturbed in more recent history. Eight sherds and 19 fragments of pottery, in very fragmented and poor condition, were recovered from within the modern disturbance. A single diagnostic rim sherd, intricately decorated using fine twisted cord, could be part of the remains of a small Food Vessel or a cup (often termed accessory vessel). The sherds have no original surfaces, are grey in tone and are slightly vesicular, which may suggest they have been burnt (see Barclay 2002).

A possible partial stone-lined pit, Pit 019, was uncovered during trial trenching a short distance to the north-east of the cists (Illus 5). The fill contained fragments of charcoal and non-identifiable burnt bone and was thought to be the remains of another cist. This feature was not convincingly rediscovered during the excavation, the stony natural deposits limiting the identification of shallow features, making it impossible to research further the reality of the potential cist.

5.2 Chalcolithic–Early Bronze Age pits

Two medium-sized Pits 182 and 184 were recorded near the southern edge of the site (Illus 3). Pit 182, which measures 1.3 × 1.2m and 0.25m deep, contained an assemblage of Beaker pottery and lithics. A radiocarbon date of 2290–2050 cal BC (95.4% probability; SUERC 64615), obtained from charcoal collected within the fill, corresponds well



Illus 5 Plan of Cist Burials 033 and 429. A-B: Section through Cist Burial 033. C: Section through Cist Burial 429 (© Headland Archaeology)

with the assemblage. Pit 182 contained abundant hazel charcoal together with a small amount of pomaceous fruitwood (*Pomoideae* sp.), alder (*Alnus glutinosa*) and oak.

The pottery recovered from Pit 182 includes two Beaker vessels that can be termed ‘domestic’ (V7 and V8). Beaker V7 was retrieved from soil sample processing and comprises three small body sherds and eight fragments. The sherds are 9mm thick with a sandy fabric tempered with fine, well-sorted quartz and mica. The largest sherd has six horizontal lines of twisted cord decoration. The three sherds

of Beaker V8 are larger and comprise a conjoining base, wall and neck sherd. The neck form is closed with three cavettos, presumably leading to a bulbous belly, finishing at the small flat base. Decoration occurs on the lower body in the form of five comb-impressed horizontal lines bordered top and bottom with short comb-impressed diagonals (Illus 7). The comb would have had closely positioned rectangular-sectioned teeth. The fabric of this vessel is unlike the other fabrics in the assemblage. The sandy fabric includes fine, well-sorted quartz and mica with some large, very rare, black and white



Illus 6 Food Vessel V1 from Cist 030 (© Headland Archaeology)

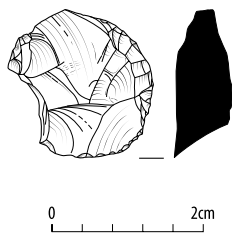


Illus 7 Base and body sherd of Beaker V8 (© Headland Archaeology)

speckled, angular rock (possibly granite) inclusions. The interior of the base and lower wall sherd is coated in a thick black organic residue indicating the presence of foodstuffs.

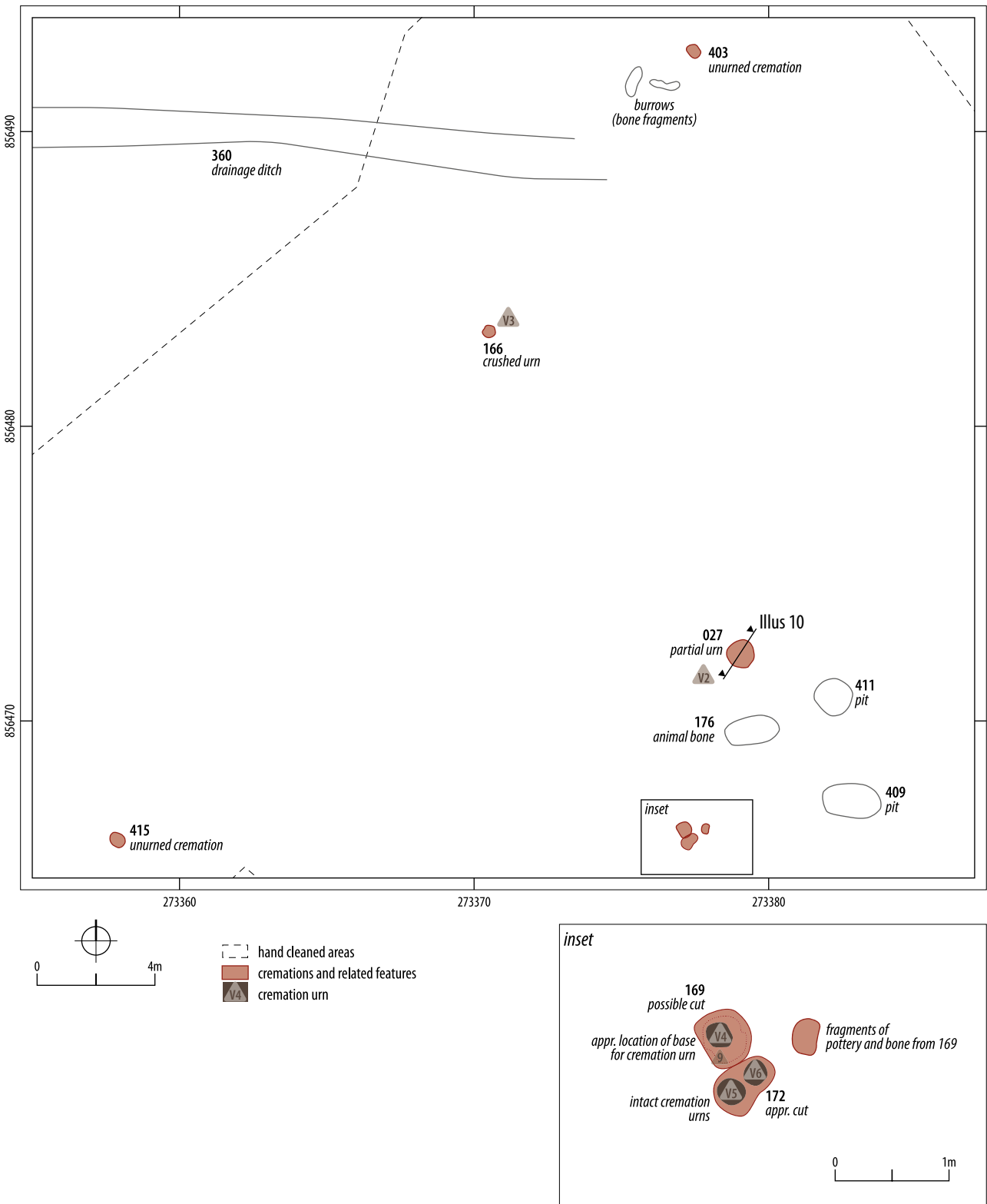
The lithic assemblage from Pit 182 included flint chips, which may indicate it was open at the time of knapping or located near a knapping event. The lithic pieces present in this pit included a bipolar

core and a thumbnail scraper on a bipolar core or flake (Illus 8). These two pieces could have been made any time between the Mesolithic and Early Bronze Age. However, this small sub-circular type of scraper is more common in the latter part of this range, between the Late Neolithic and Early Bronze Age, which corresponds well with the radiocarbon date obtained from the pit.



Illus 8 Detail of thumbnail scraper from Pit 182 (© Headland Archaeology)

6. MIDDLE BRONZE AGE CREMATION BURIALS



Illus 9 Plan of cremation burials (© Headland Archaeology)

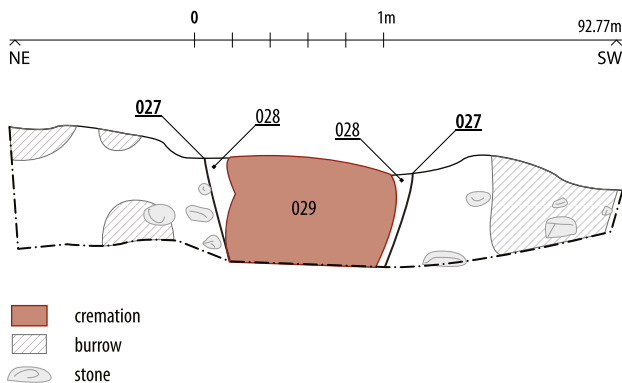
Table 4 Summary of contexts containing burnt bone

Feature	Context	Associated vessel	Weight	Description
Cremation Pit 017	Fill 018	V2	16g	Context (018) denotes cremated bone which had spilled out of V2 through disturbance
Cremation Pit 017	Fill 029 of V2	V2	c 414g	Combined, C018 and C029 equalled c 430g of cremated bone from V2 Three fragments of the orbit from the frontal bone were identified as being probably male
Pit 019	Fill 020	–	< 3g	
Cremation Pit 027	Fill 028	–	< 3g	
Cist 030	Fill 031	–	< 3g	Fill of Cist 030
Cist 030	Fill 032	V1	< 3g	Inner fill of Cist 030
Pit 110	Fill 111	–	< 3g	
Cremation Pit 166	Fill 168 of V3	V3	274g	Contained large fragments of cremated bone of a probable adult
Cremation Pit 169	Fill 171 of V4	V4	471g	Contained large fragments of cremated bone. An additional 28g of cremated bone was identified in the surrounding fill through bioturbation
Cremation Pit 172	Fill 173	V5	8g	Burnt bone and charcoal flecks. Fill surrounding Vessels 5 and 6. Probably derived from V6
Cremation Pit 172	Fill 174 of V5	V5	1,140g	Burnt bone and charcoal; antler present
Cremation Pit 172	Fill 175 of V6	V6	678g	Burnt bone and charcoal; antler present as well as unspecified faunal bone
Pit 224	Fill 225	–	< 3g	
Pit 325	Fill 326	V10	< 3g	Also contained one sherd of Neolithic pottery
Pit 327	Fill 328	V11	< 3g	Also contained a lithic and charred nut shells
Pit 329	Fill 330	–	< 3g	
Cremation Pit 403	Fill 404	–	171g	Abundant burnt bone fill
Cremation Pit 403	Fill 408	–	–	Fill of animal burrow with fragments of burnt bone from Pit 403 from bioturbation. Same as Fill 404
Cremation Pit 415	Fill 416	–	231g	
Cist 417	Fill 418	–	< 3g	Deposit located around the periphery of Cist 417. Same as Fill 419 but deposited outside cist by bioturbation
Cist 417	Fill 419	–	< 3g	Upper fill within Cist 417. Same as Fill 418
Cist 417	Fill 421	–	< 3g	Sandy backfill of Cist 417; below C420 and above C422

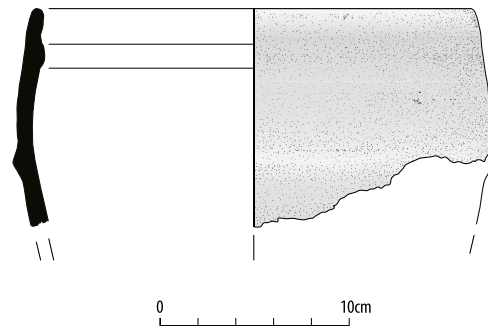
In total five urned cremation burials were discovered at Ness Gap, clustered in the central part of the site (Illus 9). Three of these were upright urns whilst two were inverted. Of the upright urns, two were recovered from a single pit, Pit 172, and were fully intact. The third, from Pit 169, was severely truncated and in a poor condition. The two inverted urns, both of which have also been damaged by truncation, were recovered from Pits 027 and 166. Four of the urns were Cordoned Urns with the fifth being a Cinerary Urn. These all contained variable amounts of burnt human bone (Table 4). The only taxon present in the deposits was oak. The pits and their associated vessels are described individually below.

6.1 Pit 027, Vessel V2

During trenching, a patch containing small sherds of pottery and fragments of burnt bone was discovered on a downhill slope. Upon further investigation, it was discovered to be a cremation urn burial (V2) that had been truncated through ploughing, leaving around a third of its upper portion. An indistinct cut (C027) for the cremation urn was visible as a slight difference in the colour of the sand surrounding the cremation urn edges (Illus 10). Despite the truncation, the cremation urn V2 appeared to be in its original location and had clearly been inverted. The vessel has an interior and exterior cordon positioned 35mm and 95mm from the rim, respectively (Illus 11). The cordons were pinched, with both being rounded and fairly even in height and width (the exterior is around 4mm



Illus 10 Section through Cremation Pit 027 (© Headland Archaeology)



Illus 11 Detail of Cordoned Urn V2 from Pit 027 (© Headland Archaeology)

in thickness and the interior varies between 2mm and 4mm). The rim is rounded and similar to most of the other urns in the assemblage. However, the upper 20mm of the vessel is thicker, giving the effect of a subtly bulging band.

The cremated bone within urn V2 was radiocarbon dated to 1630–1450 cal BC (95.4% probability; SUERC-61662) and was identified as an adult male aged approximately 25–35 years old. No other finds were associated with V2. However, the cremated bone showed copper alloy staining, which suggests objects of this material must have accompanied the deceased into the pyre.

6.2 Pit 166, Vessel V3

A further inverted urned cremation, V3, was excavated 14m NNW uphill of Pit 027 in a small hollow. It was contained within Pit 166, which measured 0.7 × 0.6m and 0.05m deep and had suffered greater plough damage than V2. Around a fifth of the vessel remained in a roughly circular but disturbed position. The urn is unique in the assemblage due to its internal rim bevel, which is very irregular in thickness; at some points it could be termed expanded on the exterior. The wall thickness of the vessel is very thin (5mm in certain areas) despite the rim being up to 15mm thick. Unfortunately, the overall form cannot be confidently judged. There was at least one cordon which was U-sectioned and has either been pinched then folded downwards or applied. There are smoothing marks above the cordon and a fold below, between its join to the body.

The amount of cremated bone in the vessel was the smallest of the urned cremations; this is not surprising, due to its heavy truncation. The bone was radiocarbon dated to 1760–1540 cal BC (95.4% probability; SUERC-64983) and was found to be from an adult, but provided no further osteological information.

6.3 Pit 169, Vessel V4

Pit 169 containing V4 was located immediately to the north of Pit 172 (Illus 9). Only the truncated remains of the base of the pit survive as a shallow hollow measuring 0.6 × 0.5m and 0.05m deep. Urn V4 was the worst preserved, as not only had it been ploughed, it also had extensive root disturbance, causing the sherds to crumble and spall when lifted. The vessel was deposited in the ground upright but what remained had crushed down on itself. Reconstruction was not possible due to its friable condition, but the base sherds indicate a diameter of *c* 110mm. One of the retrieved sherds displays a shallow cordon, although its positioning on the



Illus 12 Fragments of the putative razor from V4 (photo by Alison Sheridan, National Museums Scotland)

vessel could not be identified. A further small cluster of pottery fragments and burnt bone was found in a very shallow natural depression 0.75m to the east. These have been interpreted as having been dragged from Pit 169 by ploughing.

Fragments probably representing three objects, including a possible razor, were recovered from V4. The first artefact is represented by a set of three flat and very thin (0.6–0.8mm) non-joining fragments, which are greenish-brown with a yellowish patch on one side. The overall shape of the fragments suggests they form a tanged object that was broader at its distal end than at the tang. The most likely interpretation is that the fragments are the remains of a very thin, diminutive razor, with a narrow rivet hole for attachment to a handle (Illus 12). A further three fragments are minimally thicker (0.65–1.2mm) and include a piece of deliberately bent copper alloy sheet. The copper alloy sheet is 8mm wide and was bent to leave a gap of 4.25mm between the two ‘arms’. The object has been interpreted as a handle for a thin organic object. The remaining two objects may have formed part of the same artefact, with the larger piece measuring 12.5 × 7.6 × 1.2mm. A kink was identified but, in this case, it appears to be a product of distortion due to burning, not a deliberate feature. The flaky and blistered appearance of most of the fragments suggests that the metal had been through the funeral pyre (Illus 13). Due to the condition of the fragments, no plausible identification of the object can be suggested but it seems unlikely they represent a metal cover for the putative razor.

The cremated bone within V4 dated to 1630–1450 cal BC (95.4% probability; SUERC-61661) and was an adult female. No further osteological information was gained from analysis of these remains.

6.4 Pit 172, Vessels V5 and V6

The most impressive of the urned cremations are vessels V5 and V6, both complete on recovery, which had been buried in a single pit, Pit 172. This pit was not visible on the surface as it was cut into a band of very clean sand and backfilled with the same material (Illus 9). It was only discovered when an area around vessel V4 was being cleaned back and the rim of one of the vessels was revealed. A slight change in compactness upon excavation revealed



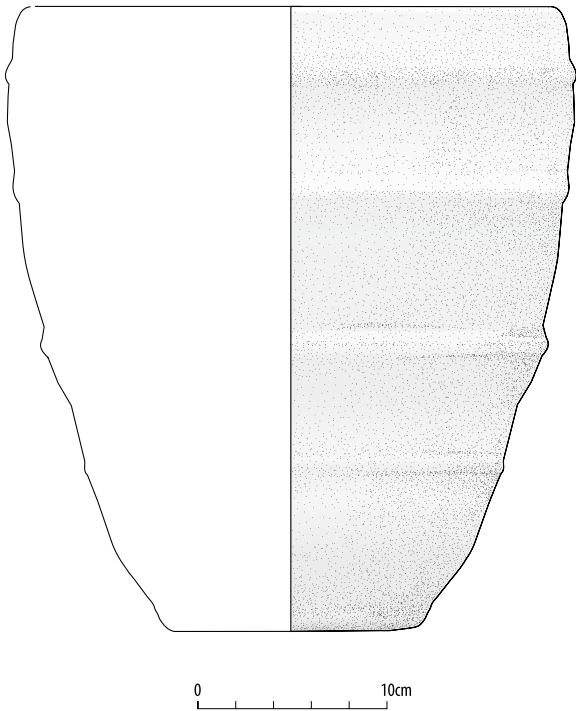
Illus 13 Copper alloy finds from V4 (photo by Alison Sheridan, National Museums Scotland)

the cut to be very tight to the vessels, measuring approximately 0.54×0.29 m and 0.35m deep. The two urns were buried in an upright position at a substantially greater depth than the other vessels and hence survived the plough. The two vessels were gently touching within the pit, indicating they may have been interred at the same time.

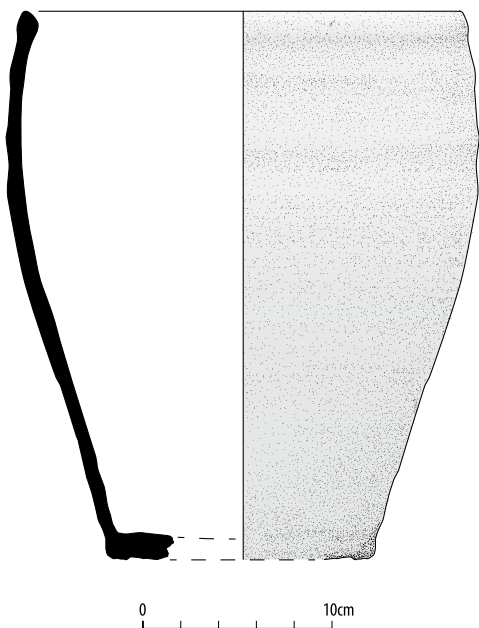
The two urns (and most of the pit) were extracted in one block and excavated under laboratory conditions. Upon excavation, the smaller of the two urns (V6) was discovered to be broken at its base, where it is likely an animal had burrowed into its side. Due to this, a bead and some burnt bone discovered within the pit fill have been attributed to this vessel. Urn V5 (Illus 14) is the larger of the two and has a simple profile which slightly barrels inwards at the rounded rim. This vessel

has four shallow applied cordons spaced at uneven intervals along the vessel. The vessel is very similar to the Cordoned Urn found at the nearby site of Stoneyfield, Inverness (Simpson 1996: 75, illus 18). Urn V6 is also barrel-shaped, with a base around half the size of the rim diameter and walls which kick out at the bottom before curving upwards. The vessel has two very shallow and uneven pinched cordons located 25mm and 95mm from the rounded rim (Illus 15).

The cremated bone in urn V6 dated to 1660–1500 cal BC (95.4% probability; SUERC-61660) and was identified as an adult, most probably female. The bone within urn V5 was radiocarbon dated to 1750–1540 cal BC (95.4% probability; SUERC-61659) and was that of a female of approximately 35–39 years of age. Cremation is much more destructive of the articular



Illus 14 Cremation urn V5 (© Headland Archaeology)



Illus 15 Cremation urn V6 (© Headland Archaeology)

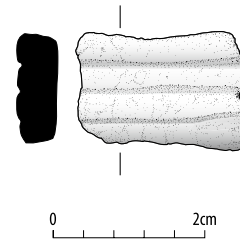
ends of bones than of the shafts of long bones or the skull (McKinley 2000: 405; Harvig 2015: 52). As such, few instances of degenerative changes to joint surfaces were recorded in the cremated bone

assemblage. However, fragments of the bodies of two thoracic vertebrae (from the upper part of the thoracic spine) from urn V5 showed some lipping, a not unusual sign of ageing. The head of the right radius from the same skeleton displayed evidence of osteochondritis dissecans which can be caused by a single trauma (Rogers & Waldron 1995: 28) or micro-trauma from repetitive action (Aufderheide & Rodriguez-Martin 1998: 81). There was also evidence to suggest the female had lost a tooth at least a year before death; whether this was due to caries or gum disease was impossible to determine.

In these two cremations, bones from the tips of the fingers were recovered that were fully calcined (white). It has been suggested that fully cremated extremities imply the body lying flat in the pyre with arms crossed on top of the body (Squires 2015: 161). The remains in the vessels had been particularly carefully gathered. In both cases, some small bones from the extremities of the fingers and toes were identified. These included the sesamoid bone, a bone less than 7mm in size, from urn V5. Many bone fragments had a maximum dimension of around 90mm, indicating that the cremated remains had probably been allowed to cool before

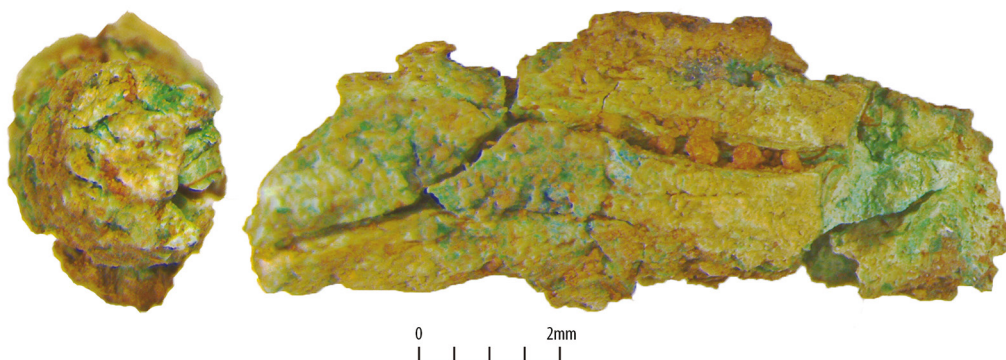
gathering. The minimal disturbance of the material took place between gathering and final interment in the urns as excavated (Harvig 2015). Fragments of all sizes, and from all areas of the skeleton, were recovered from each level of the vessels. This suggests that the remains were not placed in the urns from the pyre in a systematic (for example, head to feet) way. Both the individuals had been accompanied on the pyre by objects of antler. In urn V6, antler was recovered from all levels of the pot, with pieces from the top and bottom of the vessel fitting together. The material was fully calcined throughout and had stains of molten copper alloy. The beam of a red deer antler recovered from this vessel showed evidence of a hand-polished and shaped end with a hollow core indicative of a tool handle with a diameter of 23mm. In addition, the vessel contained a calcined fragment from the proximal articulation of a large mammal (probably cattle or deer). As this is not a particularly meat-rich part of the carcass, it may represent a fragment of another tool-handle or may have been attached to a hide.

An abraded sherd of a ‘fineware’ Beaker, measuring 22.5 × 15.5mm with three horizontal lines of decoration, was discovered within urn V5 (Illus 16). The very regular shape and abraded edges could imply it was a small token worn through handling. Alternatively, its regularity may be because it was broken along coil joins. The sherd passed through the pyre, yet it is impossible to discern if it was added deliberately. The accidental inclusion of something lying on the ground may be just as likely if the cremated remains were scooped up in their entirety, with everything indiscriminately collected.



Illus 16 Beaker sherd from V5 (© Headland Archaeology)

Several fragments of metalwork were also recovered from within the vessels. A fragment (plus crumbs) of a round-sectioned rod, presumed to be of copper alloy rather than of copper, measuring 11 × 3.9mm was found among the material from V6 within the pit (Illus 17). In colour, the fragment is a variegated light and dark green and brown with a matt texture. The fragment is heavily corroded and crazed with very little, if any, of the original surface surviving. The corrosion process has involved springing along the deep cracks, which makes the rod’s diameter slightly greater than it would have been. The rod is also very slightly warped; this could be due to the effects of burning during the cremation process. The rod has been interpreted as an awl, rather than a pin shaft, for two reasons. Firstly, a possible fragmentary antler handle was recovered within the calcined remains in V6. This could potentially be interpreted as a handle for an awl. Early Bronze Age awls with organic handles are known from other sites across Britain (e.g. of wood, in a barrow in Wiltshire excavated by Hoare: Annable & Simpson 1964, no. 420). Secondly,

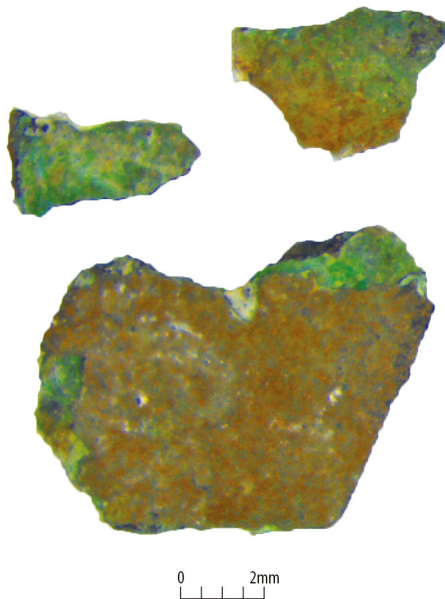


Illus 17 Fragment of a round-sectioned rod from V6 (photo by Alison Sheridan, National Museums Scotland)

metal pins are far rarer than awls in Early Bronze Age Cinerary Urn contexts (Woodward & Hunter 2015).

A fragmentary object, possibly a razor, was also recovered from the fill of urn V5. This comprised three principal fragments (which do not conjoin), together with numerous crumbs of a very thin object (Illus 18). The largest fragment measures 8.9 × 7.5mm and is just 0.8mm thick, with part of an original edge surviving on one side. The surface is matt and variegated green and brown in colour. The largest fragment may come from the broad part of a tang for a razor as the metal seems to be too thin for the object to have been a knife. The fragmentary and poor condition of the object is consistent with its having passed through the funerary pyre.

Along with the metalwork, two beads were associated with cremation urn V6. The faience bead from within the vessel is comprised of a complete segmented bead of six segments, broken into two fragments (Illus 19). The bead is broken along the intersegment hollow, where the wall is thinnest, and probably broke in antiquity within the urn. The overall length of the bead is 20.3mm, with a diameter of 4.1–4.5mm, and a hole diameter of 1.6–1.9mm. The bead is cylindrical with flattish-topped segments, ranging in width between 3.1mm



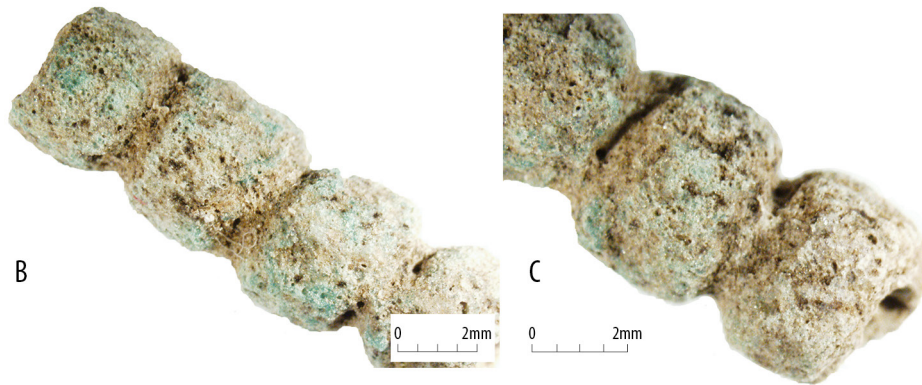
Illus 18 Copper alloy razor from V5 (photo by Alison Sheridan, National Museums Scotland)

and 3.9mm, defined by incised grooves of irregular depth. The ends are perpendicular to the long axis of the bead. The longitudinal hole is circular and centrally-located, and there are clear internal corrugations formed as a result of the faience paste having been wrapped around a stalk of straw during the manufacturing process, prior to firing. The bead is matt and most of its original (and probably thin) blue glaze is no longer present. Thus, the dominant colour is that of its weathered core, a brownish-buff, with occasional blackish-red speckles (which are probably of cuprite, produced by the heating of the copper-based glaze colourant in the reducing atmosphere of the funerary pyre). However, over one part of its circumference, extending part-way into the body of the bead, there is a strip of weathered pale blue glaze. The surface is slightly rough and pitted with numerous tiny vesicles formed by the escape of gas during the bead's firing. The quartz grains have fused sufficiently so that only a few incompletely fused grains are visible. Two small spall scars on two of the segments relate to ancient damage, quite possibly due to heating in the funeral pyre. There are no obvious signs of thread-wear or bead-on-bead wear.

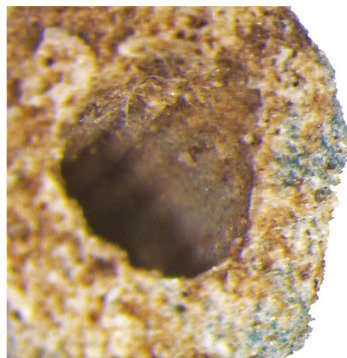
A calcined fusiform bone bead of a compact texture and off-white colour was recovered from within the pit fill (C173) associated with V6 (Illus 20). The bead was likely dislodged from the fill of V6 as a result of the animal-burrowing which broke the base of the vessel. The bead measures 11.1mm in length with a diameter of 7.7–7.8mm. In cross-section, the bead appears as a minimally flattened circle within the body, tapering at the ends. The longitudinal perforation is wide, slightly tapered and centrally positioned with a smooth interior. The diameter of the hole is 3.2mm at one end and *c* 4.3mm at the other, with the wider end displaying a sharper perforation edge. The narrow end of the perforation has been choked, around 2mm down the hole, by a blackish-brown material that is suspected to be manganese precipitated from the groundwater post-depositionally. There is also a small patch of similar-looking material adhering to the exterior surface. The bead is matt, with a small patch of low sheen on the surface which could have resulted from the initial storage of the bead in a plastic bag (which is known to create post-excavation polish). It is unclear if the bead was originally polished, losing



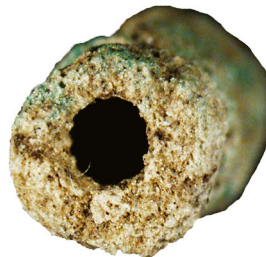
A 0 0.5mm



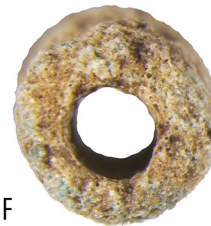
B 0 2mm C 0 2mm



D 0 1mm



E



F

0 2mm

(Above) Illus 19 Faience bead recovered from V6. A: Overall view with the conjoining fragments placed together. B: Details of the four-segment fragment showing the scoring to create the segments and variation in the surface colour. C: The vesicles from gas escaping during the bead's manufacture. D: Corrugation marks along the hole left by the piece of straw around which the faience paste had been wrapped. E: The broken end of the bead. F: The original end of the bead (photo by Alison Sheridan, National Museums Scotland)

(Right) Illus 20 A calcined fusiform bone bead from V6, Pit 172. Images display the overall form, material within the perforation, and shaper perforation edge (photo by Alison Sheridan, National Museums Scotland)



0 2mm

the sheen during the cremation process. There are a couple of hairline cracks extending from the 'sharp' end and almost imperceptible nicking of each end of the hole where the bead ends would have been closest. These may have been caused by thread wear, with the slope of the bead ends being a feature of the original design, as opposed to grinding wear.

6.5 Unurned cremations

Two shallow cuts (C403 and C415) were recorded in the vicinity of the urned cremations, which

contained burnt human bone and small quantities of charcoal. The pits were severely truncated, with Pit 403 further disturbed by burrowing. Cremated bone from within Pit 403 was radiocarbon dated to 1640–1450 cal BC (95.4% probability; SUERC-61663) and identified as an adult but provided no further osteological information. The cremated bone from Pit 415 was dated to 1870–1610 cal BC (95.4% probability; SUERC-61664) and was a probable female adult. In both cases, similarly to the urned cremations, bones from all parts of the skeleton had been gathered for interment.

7. OTHER FEATURES

Pits 224 and 385, both in the eastern part of the site, contained lithics with Pit 224 also containing fragments of iron and glass. The lithics were in such small quantities they could easily be residual or intrusive. The pits could not be related to other features by location or form and, due to the lack of other dating material, remain undated. A broad, shallow linear ditch (C218) was also encountered in the eastern part of the site, containing a large number of marine shells. However, no dating evidence was retrieved from this feature.

Of the remaining 128 features, nearly all could be categorised as post-medieval pits. These were typically sub-circular, 1.0–1.5m in diameter and 0.1–0.4m in depth. They were filled with brown-grey sandy silt, and in some cases packed full of medium-sized stones. In total 26 of these pits contained post-medieval glass and china, with a handful also containing fragments of animal bone identified as cattle, pony and mouse. In conversation with members of the local agricultural community, it was suggested the pits may have been potato clamps (clamps are used for the temporary storage of crops).

8. DISCUSSION

The fieldwork at Ness Gap was carried out over three years and provided an opportunity for the study of the distinctive peninsula of Chanonry Ness and its surrounding landscape. The excavations at Ness Gap provide important insights into prehistoric life on the Black Isle, revealing a shift in the use of the site from domestic to funerary. The Neolithic pits indicate early domestic activity similar in nature to that found elsewhere on the Black Isle. Funerary practices at the site begin in the Early Bronze Age and develop through several centuries of prehistory. The differing practices reveal cultural attitudes, adaptations and the power of memory.

8.1 The first activity at Ness Gap

A Mesolithic presence at Ness Gap is hinted at from the limited lithic assemblage, which includes a single Mesolithic microburin from within the fill of Pit 327. Ephemeral evidence of Mesolithic activity was also found at the nearby site at Fortrose and Rosemarkie Waste Water Works. A Mesolithic flint blade fragment was recovered in addition to a basal layer of a reused pit, producing a radiocarbon date of 7034–6700 cal BC (Fraser 2014: 59; Saville 2014: 39). Significant Mesolithic activity has recently been identified at Tarradale, Muir of Ord, which includes several shell middens on raised beaches (Grant 2018). The excavation of one midden revealed evidence for possible ephemeral structures with two antler T-axes, a biserial barbed antler point, and a red deer antler handle also being recovered (Grant 2018). The identification of Mesolithic activity at Ness Gap fits with the expected distribution of activity around the coastline of the Black Isle.

Three pits (325, 327 and 329), located in the north-east quadrant of the site, represent the earliest features at Ness Gap. The three pits, all of which contain sherds of Carinated Bowl, fit well into the growing corpus of research into prehistoric pits. Pits are a common feature of Neolithic sites in Britain identified at sites in Scotland including Grandtully, Perthshire (Simpson & Cole 1990); Deer's Den (Alexander 2000), Forest Road, Kintore (Cook & Dunbar 2008); Knocknagael Farm, Inverness (Kilpatrick 2016); Granton Road, Forres (Cook 2016); Meadowend Farm, Clackmannanshire (Jones

et al 2018) and Milltimber and Wester Hatton, Aberdeenshire (Dingwall et al 2019). Those at Ness Gap display similar traits, containing a single fill with charcoal, pottery, lithics and charred plant remains (Cook & Dunbar 2008; Smyth 2012; Thomas 2012). The purpose of these pits is poorly understood, although several recent studies have tried to make some sense of these features (Anderson-Whymark & Thomas 2012; Carver 2012; Noble et al 2016). Pits have been interpreted as ritual deposits, with evidence for the material having been selected and arranged within (Thomas 1999; Pollard 2001; Pannett 2012). Alternatively, they are often understood as the remains of domestic activity (Field et al 1964; McInnes 1971; Thomas 2012). The practice of digging pits and depositing material appears to be associated with the lifecycle of the community (Noble et al 2016: 194). The lack of Neolithic settlement evidence makes pits an important resource in understanding developing subsistence practices.

The pits at Ness Gap contain sherds of Carinated Bowls which appeared in Scotland during the first half of the 4th millennium BC (Sheridan 2003; Sheridan 2007: 9). Carinated Bowls are found across the north-east of Scotland, and further afield, with their presence on the Black Isle arguably indicating its participation in the successful development and expansion of farming (Sheridan 2014a: 32; Ray & Thomas 2018; Brace et al 2019). The abrasion on all three sherds suggests they had moved around or been open to the elements at some point, possibly in midden material, before slumping or being placed in the pits. The pottery is most likely the remains of domestic refuse with evidence for its use to contain foodstuffs as cookware. The charred plant remains, which include hulled barley and hazelnut grains, are also consistent with domestic refuse. The pits from Fortrose and Rosemarkie Waste Water Works also contained carbonised cereal grains and hazelnut shell (Ramsay 2014: 62). The results from both sites indicate that during the Neolithic on the Black Isle, as across much of mainland Scotland, subsistence was based on both agriculture and the gathering of wild resources (Bishop et al 2009).

8.2 The Early Bronze Age

In the Chalcolithic to Early Bronze Age, the land at Ness Gap was used for both domestic and funerary purposes. A medium-sized pit, Pit 182, which was radiocarbon dated to 2290–2050 cal BC (95.4% probability; SUERC 64615) contained an assemblage of domestic Beaker pottery. Domestic Beakers are not as well understood as their funerary counterparts, as when they are discovered they are commonly found in pits with few associated features (Allen & Maltby 2012; Sheridan 2012). A large assemblage of domestic Beaker at Culduthel Mains Farm is probably the best recently identified and analysed assemblage of domestic Beaker in Scotland (Hatherley & Murray forthcoming). In total 24 beakers, most of which were thin-walled and fine, were identified and comparable to those retrieved from Ness Gap (Sheridan forthcoming). Beaker is well represented locally, with a complete example from a cist at Blackstand, Rosemarkie (Stevenson 1948–9) and sherds from around 19 vessels at Fortrose and Rosemarkie Waste Water Works (Sheridan 2014a). At Ness Gap, the function of the Beaker pits was unclear, with their positioning in a landscape seemingly dominated by funerary activity poorly understood.

The earliest funerary features on the site consist of a group of three short-cist burials. The complete tripartite Food Vessel (V1), placed inverted in Cist 030, was similar to a tripartite Food Vessel discovered in the early 20th century in the neighbouring village of Rosemarkie (Walker 1903–4: 26). This example was decorated in a similar herringbone pattern but with whipped rather than twisted cord. Scottish Food Vessel dating would suggest a typological date for the vessel from Ness Gap of 2200–1520 cal BC (Sheridan 2004: 249). However, the radiocarbon date from oak charcoal in the cist is unexpectedly early (2440–2130 cal BC; 95.4% probability; SUERC-61665). The early date may be due to old wood effect, as the sample measured may derive from the heartwood, or the dating of residual material. The dating of Food Vessels is not conclusive, nor is our understanding of their relationship to other Bronze Age ceramics (Sheridan 2007). As such, the date from Ness Gap still makes an important contribution to the dating of Scottish Food Vessels and dated Bronze Age burials.

The lack of human remains within the cists limits any assessment of the placement of the vessel within the cist. There is some evidence to suggest that upright Food Vessels placed next to the head were 'possibly meant to hold food or drink to accompany the deceased' (Arablaolaza 2013: 11). While the vessel contained within Cist 030 was used for cooking or containing foodstuffs, it was inverted within the grave. The lack of human remains with the cist is not unusual, with a range of taphonomic processes accounting for their loss. There were traces of burnt bone in both cists at Ness Gap. However, there was not enough to conclude the presence or absence at one time of human remains buried within them. The contamination of Cist 417, evidenced by fragments of glass and hammerscale in the upper deposits, indicates a disturbance which could account for the loss of the remains. Empty cists have been found throughout Scotland, including at Dalmore, Alness, Ross-shire (Jolly & Aitken 1879). A metaphysical interpretation of empty cists has also been proposed, with empty funerary contexts functioning as cenotaphs (Allen 1981; Downes 2006; O'Donnell 2016). The empty cist may represent people whose remains could not be recovered, such as the 'boat-shaped' cists found at St Kilda for those lost at sea (Arablaolaza 2014: 16).

The condition of the sherds of pottery contained within Cist 417 is suggestive of being burnt, which may associate them with a funeral pyre prior to deposition within the cist. At Sannox Quarry, Isle of Arran, the cracks and poor condition of base sherds were explained by excessive heat, potentially from proximity to the funeral pyre (Arablaolaza 2014: 12). This is not the only example where funeral pyres have been related to pottery. It has been theorised that small accessory vessels were made for the funeral and fired on the pyre, accounting for their variety and, at times, hastily made appearance (Gibson 2003: 284). Whether or not the cists were intended for, or indeed used as a burial place for an individual, it is certain that they contain evidence of funerary rituals of the period.

The small amount of both domestic and funerary activity taking place during the Chalcolithic to Early Bronze Age does not paint a large enough picture to understand the potential overlap in Food Vessel and Beaker use, and it is unclear whether activities relating to each type represent concurrent or

consecutive activity. The location of Ness Gap on the shoreline of the Moray Firth may have gained greater significance from the Early Bronze Age onwards. During the Early Bronze Age, the Migdale-Marnoch period of bronze working in north-east Scotland flourished. From the Moray Firth along the Great Glen to Ireland was a major transport route and it is theorised that copper was transported from Ireland to the bronze workers of the north-east of Scotland (Curtis & Wilkin 2012: 240). During this period graves overlooking passes were monumentalised to be visible to people travelling along shores and crossing firths (Curtis & Wilkin 2012: 247). While there is no evidence for monuments over the graves at Ness Gap, the positioning of the graves may have echoed the importance of such locations along major routeways.

8.3 A 'special place' in the Middle Bronze Age and beyond

In the Middle Bronze Age domestic activity on the site ceases, with the land becoming part of a wider funerary landscape. Seven cremation burials, both urned and unurned, were discovered at Ness Gap, which contained diagnostic human remains accompanied by high-status objects. The palaeoenvironmental analysis suggests that oak, principally from the trunk and major branches, was preferentially selected for the pyre in Bronze Age cremations at Ness Gap. The use of oak may have been preferred as it burns at a high temperature. The dominance of a single taxon in prehistoric cremation assemblages has been observed at various sites including: Radley Barrow Hills (Thompson 1999) and Rollright Stones (Straker 1988) in Oxfordshire, and Templenoe in County Tipperary (O'Donnell 2011).

The funerary complex at Ness Gap does not exist in isolation, with four cremations, two urned and two unurned, discovered 600m to the north-west at Fortrose and Rosemarkie Waste Water Works (Fraser 2014: 65). The presence of funerary activity at both sites may even indicate that the landscape was considered a 'special place', perhaps due to its location on the distinctive Chanonry Ness. No evidence was retrieved during excavation to suggest the use of visible markers over the burials to indicate their location in the wider landscape. However, there

may have been some indicator as to their location. This is inferred by the proximity of V4 to V5 and V6, as the differences in pit shape and depth do not suggest they were deposited at the same time. The close proximity of features seems deliberate and would have been difficult to achieve without prior knowledge of the location of V5 and V6. The use of markers is presumed at the larger-scale cremation cemetery site at Skilmafilly, Aberdeenshire where 41 pits were recorded to have little evidence for re-cutting or disturbance (Johnson & Cameron 2012).

8.3.1 The urns and the deposition of burial goods

The cremations at Ness Gap were contained within Cordoned Urns, which are not as numerous across the Moray Firth region as further south in Aberdeenshire and the Lothians (Waddell 1995: 120). Cordoned Urns can date between 1880 and 1500 BC (Sheridan 2003: 207; 2007: 169) and their use in the cremation burials at Ness Gap helps define this burial practice. The combined radiocarbon dates retrieved from the Ness Gap pottery fall between 1755 cal BC and 1450 cal BC. The Cordoned Urns discovered at the nearby cemetery at the Waste Water Works produced a date range of 1870–1620 cal BC (Fraser 2014: 34). The potential of earlier activity at Fortrose and Rosemarkie Waste Water Works may indicate that the use of this cemetery began before that at Ness Gap, although both could have been in use at the same time. The range of dates, spanning the use of the Cordoned Urns across Scotland, and the variation between vessels at Ness Gap, demonstrate the complexity of the tradition echoed elsewhere (Waddell 1995).

The presence of metal items in five of the cremations at Ness Gap suggests that the occupants of these graves had been afforded a high status in society. The association with Cordoned Urns (in the case of vessels V2, V4, V5 and V6), and the presence of probable razors in urns V4 and V5 accords with a pattern noted for Cordoned Urns, both in Scotland and in Ireland (Kavanagh 1991; Waddell 1995). The dates obtained for urns V4 and V5 is in line with the currency of Early Bronze Age razors. In Scotland, for example, there have been recent finds of razors associated with Cordoned Urns at Hill of Tuack, Aberdeenshire (Sheridan et al 2016), Broich Road,

Crieff, Perth and Kinross (Sheridan 2014c) and Kilmagadwood, Perth and Kinross (Sheridan et al 2018); the first two are associated with radiocarbon dates comparable with those for urns V4 and V5 (see Brindley 2007: 371–2 for dates for Irish razors).

The deposition of specific types of metal objects in male and female graves is well established in the Bronze Age. Razors are almost invariably with males (Kavanagh 1991; Waddell 1995; Jockenhövel 1980: 30), making the apparent association with females at Ness Gap intriguing. The remains from both V4 and V5 were identified as *probably* female, introducing the possibility that they are in fact male. Yet the putative razor from V4 has been interpreted as potentially being for female use as it is smaller and thinner than ordinary Early Bronze Age razors. The small and thin razor found in an Early Bronze Age grave at the Mound of the Hostages, Tara, County Meath has been interpreted in this manner (Sheridan et al 2013). As for the putative handle-mount found in V4, this is unparalleled among British Bronze Age razors, and so its identification as such needs to be regarded as tentative.

In V6 the remains of a probable adult female were deposited with an awl, a bone bead and a faience bead. Early Bronze Age awls and beads are predominantly associated with female graves (Thomas & Ellwood 2005). A nearby contemporary parallel for the presence of both beads and an awl can be cited from the Fortrose and Rosemarkie Waste Water Works cemetery. There, a bipartite urn was found to contain the remains of a probable female, along with an awl and fired clay beads, all of which had passed through the pyre (Sheridan 2014b). The calcined condition of the bone bead at Ness Gap indicates that it also passed through the pyre.

The faience bead does not show the extreme signs of heat alteration occasionally seen in burnt faience beads, for example in a segmented bead from Stoneyburn, South Lanarkshire, whose hole had become fused shut (Sheridan 1995). Nevertheless, the variable condition of the faience beads found across the Moray Firth at 102 Findhorn (Sheridan & McDonald 2001: illus. 8.24), together with experimental work by the author, makes it clear that some faience beads can pass through a pyre without incurring serious heat-damage. The loss of most of the glaze from the Ness Gap bead, the presence of probable cuprite specks, and the ancient loss of

two small spalls from the larger fragment, all point towards some degree of heat damage consistent with the faience bead having been worn during the cremation. It seems likely that both beads found associated with urn V6 had originally formed part of a single piece of jewellery such as a necklace that may well have been worn by the deceased.

Cordoned Urns are the commonest urn to be associated with faience beads in northern Britain (Sheridan & Shortland 2004). The radiocarbon dates associated with the Ness Gap beads fit well within the overall date range of faience beads in Britain and Ireland (Sheridan & Shortland 2004: illus. 21.1). The faience bead joins the regional Moray Firth cluster of such beads, the best known of which are the 22 segmented, two star-shaped and one quoit-shaped bead that made up the 102 Findhorn Necklace (Shepherd & Shepherd 2001). Other members of this cluster comprise a handful of segmented beads, also from Findhorn, found by local resident Michael Sharpe. In addition, a dozen segmented beads and four star-shaped beads were found on Culbin Sands, just across the bay from Findhorn (Shepherd & Shepherd 2001). As at Ness Gap, the 102 Findhorn Necklace had been associated with the remains of a woman along with a neonate or third-trimester foetus (Shepherd & Shepherd 2001: 106). Indeed, wherever the sex of the deceased associated with faience beads has been reliably determined, it has consistently been female (including in cases where more than one individual's remains are present), with the notable exception of a male youth at Tara in Ireland (Sheridan et al 2013).

There are stylistic differences and similarities between the beads from 102 Findhorn and Ness Gap. As at Ness Gap, several of the Findhorn segmented beads have traces of the internal corrugation caused by wrapping the paste around a straw (Sheridan et al 2013: Illus 10). The segments on the beads from 102 Findhorn were created by jabbing a sharp tool at several points around each bead (Sheridan & McDonald 2001: 116), whereas the segments on the Ness Gap bead were created by scoring around the bead. The analysis of the 102 Findhorn beads revealed that they had almost certainly been manufactured locally, with seaweed ash being the probable fluxing agent (Sheridan & McDonald 2001: 119; Sheridan et al 2004). While the Ness Gap bead has not yet been analysed, it is at least likely that it too was

made locally. The difference in the technique of forming the segments, a feature also noted on the other Moray Firth segmented beads, confirms the impression that these were made in small numbers, probably by metalworkers (who would have had access to the copper/copper-based glaze colourant and who knew how to heat materials to a high temperature). The distinctive concentration of finds from around the Moray Firth, particularly Culbin Sands, has led to the suggestion that the area was key to long-distance sea trade (Bradley et al 2016: 25).

The bone fusiform bead finds a parallel in a bead found with cremated remains of four individuals (two adults including one male,

one adolescent and an infant) in a Collared Urn at Eweford West, East Lothian (Lelong & MacGregor 2008: 109). Closer to Ness Gap, the Early Bronze Age cemetery at the Fortrose and Rosemarkie Waste Water Works site has produced two fusiform fired clay beads plus an oblate bead of the same material. The proximity between the two sites, the similarities in cremation deposits, and the suite of radiocarbon dates make it likely that the cemeteries may have been linked and broadly contemporary. The sites may form part of the 'tight little knot of Cordoned Urns from the Laigh of Moray' described by Shepherd and Shepherd (2001: 110).

9. CONCLUSIONS

The excavations at Ness Gap provide significant insights into prehistoric activity on the Black Isle. The evidence from the group of Neolithic pits can be added to that from other sites to provide increasing insights into the development of subsistence practices in the Neolithic. Together with the evidence from Fortrose and Rosemarkie Waste Water Works, the sites inform the ever-expanding understanding of Bronze Age burial practices in Scotland. There is a shift in burial practices witnessed at Ness Gap from short-cist

inhumation in the Early Bronze Age to cremations in the Middle Bronze Age. The artefacts deposited within the cremations include high-status metal objects and the remains of personal adornments. The beads indicate both participation in wider networks across the Moray Firth and possible local production techniques. The metalwork from the site is significant, with the association of putative razors with potentially female graves warranting further investigation. Finally, the location of the site, in a unique peninsular landscape, may have contributed to it becoming a 'special place' in the Bronze Age, used to bury and remember the dead.

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11. REFERENCES

- Alexander, D 2000 'Excavation of Neolithic pits, later prehistoric structures and a Roman temporary camp along the line of the A96 Kintore and Blackburn Bypass, Aberdeenshire', *Proc Soc Antiq Scot* 130: 11–75.
- Allen, D 1981 'The excavation of a Beaker burial monument at Ravenstone, Buckinghamshire in 1978', *Archaeological Journal* 138: 72–117. <https://doi.org/10.1080/00665983.1981.11078662>
- Allen, M J & Maltby, M 2012 'Beaker land-use, animals and economy – a chronological changing point?', in Allen, M J, Gardiner, J & Sheridan, A (eds) *Is There a British Chalcolithic? People, Place and Polity in the later Third Millennium*, 281–97. Oxford: Oxbow Books.
- Annable, F K & Simpson, D D A 1964 *Guide Catalogue of the Neolithic and Bronze Age Collections in Devizes Museum*. Devizes: Wiltshire Archaeological and Natural History Society.
- Anderson-Whymark, H & Thomas, J (eds) 2012 *Regional Perspectives on Neolithic Pit Deposition: Beyond the Mundane*. Oxford: Oxbow Books. <https://doi.org/10.2307/j.ctvh1dkr0>
- Arablaolaza, I 2013 'ARO5: Spinning the yarn: a cist at Keas Cottage, Spinningdale', *Archaeology Reports Online* 5. <http://www.archaeologyreportsonline.com/reports/2013/ARO5.html>. Accessed 13 February 2019.
- Arablaolaza, I 2014 'ARO10: The cliff hanging cists; Sannox Quarry, Isle of Arran', *Archaeology Reports Online* 10. <http://www.archaeologyreportsonline.com/reports/2014/ARO10.html>. Accessed 13 February 2019.
- Aufderheide, A C & Rodriguez-Martin, C 1998 *The Cambridge Encyclopedia of Human Palaeopathology*. Cambridge: Cambridge University Press.
- Barclay, A 2002 'Ceramic Lives', in Woodward, A & Hill, J D (eds) *Prehistoric Britain: The Ceramic Basis*, 85–95. Prehistoric Ceramics Research Group: Occasional Publication No. 3. Oxford: Oxbow Books. <https://doi.org/10.2307/j.ctvh1dw69.12>
- Barclay, G, Carter, S, Dalland, M, Hastie, M, Holden, T, MacSween, A & Wickham-Jones, C 2001 'A possible Neolithic settlement at Kinbeachie, Black Isle, Highland', *Proc Soc Antiq Scot* 131: 57–85.
- Bishop, R, Church, M J, Rowley-Conwy, P A 2009 'Cereals, fruits and nuts in the Scottish Neolithic', *Proc Soc Antiq Scot* 139: 47–103.
- Brace, S, Diekmann, Y, Booth, T J, van Dorp, L, Faltyskova, Z, Rohland, N, Mallick, S, Olalde, I, Ferry, M, Michael, M, Oppenheimer, J, Broomandkhoshbacht, N, Stewardson, K, Martiniano, R, Walsh, S, Kayser, M, Charlton, S, Hellenthal, G, Armit, I, Schulting, R, Craig, O E, Sheridan, A, Parker Pearson, M, Stringer, C, Reich, D, Thomas, M G & Barnes, I 2019 'Ancient genomes indicate population replacement in Early Neolithic Britain', *Nature Ecology & Evolution* 3: 765–71.
- Bradley, R, Rogers, A, Sturt, F, Watson, A, Coles, D, Gardiner, J & Scott, R 2016 'Maritime Havens in Earlier Prehistoric Britain', *Proceedings of the Prehistoric Society*: 1–35. <https://doi.org/10.1017/ppr.2015.22>
- Brindley, A L 2007 *The Dating of Food Vessels and Urns in Ireland*. Galway: Department of Archaeology, National University of Galway.
- Bronk Ramsey, C 2017 'Methods for summarizing radiocarbon datasets', *Radiocarbon* 59: 1809–33.
- Carver, G 2012 'Pits and Place-making: Neolithic Habitation and Deposition Practices in East Yorkshire c. 4000–2500 BC', *Proceedings of the Prehistoric Society* 78: 111–34. <https://doi.org/10.1017/S0079497X00027134>
- Cook, M 2016 'Prehistoric Settlement Patterns in the North-East of Scotland; Excavations at Grantown Road, Forres 2002–2013', *Scottish Archaeological Internet Reports*, 61. <https://doi.org/10.9750/issn.1473-3803.2016.61>
- Cook, M & Dunbar, L 2008 *Rituals, Roundhouses and Romans: Excavations at Kintore, Aberdeenshire, 2000–2006*. Edinburgh: Scottish Trust for Archaeological Research.
- Curtis, N & Wilkin, N 2012 'The Regionality of Beakers and Bodies in the Chalcolithic of North-East Scotland', in Allen, M J, Gardiner, J & Sheridan, A (eds) *Is There a British Chalcolithic?*, 237–56.
- Dingwall, K, Ginnever, M, Tipping, R, van Wessel, J & Wilson, D 2019 *The land was forever: 15,000 years in North-East Scotland: Excavations on the Aberdeen Western Peripheral Route/Balmedie–Tipperty*. Oxford: Oxbow Books.

- Downes, J 2006 'Cremation Rites and Technology in Bronze Age Orkney', unpublished PhD thesis, University of Sheffield.
- Field, N H, Matthews, C L & Smith, I F 1964 'New Neolithic sites in Dorset and Bedfordshire, with a Note on the Distribution of Neolithic Storage-Pits in Britain', *Proceedings of the Prehistoric Society* 30: 352–80. <https://doi.org/10.1017/S0079497X00015164>
- Fraser, I 1984 'Place names of Ross and Cromarty', in Omand, D (ed.) *The Ross and Cromarty Book*, 219–29. Golspie: The Northern Times Ltd.
- Fraser, L 2014 *Fortrose and Rosemarkie Waste Water Works, Rosemarkie Road, Rosemarkie. Archaeological Excavation: Final report*. Ross and Cromarty Archaeological Services, 2014–34/FRW12. Unpublished archive report by ROCAS in Highland Council HER.
- Grant, E 2018 *Muir of Ord's Earliest Settlers*. <http://www.tarradaletroughstime.co.uk>. Accessed 3 March 2019.
- Gibson, A (ed.) 2003 *Prehistoric Pottery: People, Pattern and Purpose*. Oxford: BAR International Series 1156.
- Hatherley, C & Murray, R forthcoming *Culduthel: An Iron Age Craft Centre*, Edinburgh: Society of Antiquaries of Scotland.
- Harvig, L 2015 'Past Cremation Practices from a Bioarchaeological Perspective', in Thompson, T (ed.) *The Archaeology of Cremation. Burned Human Remains in Funerary Studies*, 43–62. Oxford: Oxbow Books. <https://doi.org/10.2307/j.ctvh1drrsq.8>
- Haston, S J 2006 'An Archaeological Desk-based Assessment of Land at Ness Gap, Fortrose, Highland', unpublished client report, Headland Archaeology.
- Henshall, A S & Ritchie, J N G 2001 *The Chambered Cairns of the Central Highlands*. Edinburgh: Edinburgh University Press.
- Jockenhövel, A 1980 *Die Rasiermesser in Westeuropa (Westdeutschland, Niederlande, Belgien, Luxemburg, Frankreich, Großbritannien und Irland)*, *Prähistorische Bronzefunde VIII*, 3. Munich: C H Beck.
- Johnson, M & Cameron, K 2012 'An Early Bronze Age unenclosed cremation cemetery and Mesolithic pit at Skilmafilly, near Maud, Aberdeenshire', *Scottish Archaeological Internet Reports* 53. <https://doi.org/10.9750/issn.1773-3808.2012.53>
- Jolly, W & Aitken, T 1879 'Notice of the Excavation and Contents of Ancient Graves at Dalmore, Alness, Ross-shire. With Notes on the Crania', *Proc Soc Antiq Scot* 13: 252–64.
- Jones, E, Sheridan, J A & Franklin, J 2018 'Neolithic and Bronze Age occupation at Meadowend Farm, Clackmannanshire: Pots, Pits and Roundhouses', *Scottish Archaeological Internet Reports* 77. <https://doi.org/10.9750/issn.2056-7421.2018.77>
- Kavanagh, R 1991 'A reconsideration of razors in the Irish Earlier Bronze Age', *Journal of the Royal Society of Antiquaries of Ireland* 121: 77–104.
- Kilpatrick, M C 2016 'Relieving Floods, Revealing History: Early Prehistoric Activity at Knocknagael Farm, Inverness', *Scottish Archaeological Internet Reports* 64. <https://doi.org/10.9750/issn.2056-7421.2016.64>
- Lelong, O & MacGregor, G 2008 *The Lands of Ancient Lothian: Interpreting the Archaeology of the A1*. Edinburgh: Society of Antiquaries of Scotland.
- Marshall, N 2011a 'Ness Gap, Fortrose – Archaeological Evaluation and Watching Brief (Phase 1a & 1b)', unpublished client report, Headland Archaeology.
- Marshall, N 2011b 'Ness Gap, Fortrose – Results of an Archaeological Evaluation (Areas B–G)', unpublished client report, Headland Archaeology.
- McInnes, I J 1971 'Settlement in later Neolithic Britain', in Simpson, D D A (ed.) *Economy and Settlement in Neolithic and Early Bronze Age Britain and Europe*, 113–30. Leicester: Leicester University Press.
- McKinley, J 2000 'The Analysis of Cremated Bone', in Cox, M & Mays, S (eds) *Human Osteology in Archaeology and Forensic Science*, 403–21. Cambridge: Cambridge University Press.
- Mook, W G, 1986 'Business Meeting: Recommendations/Resolutions Adopted by the Twelfth International Radiocarbon Conference', *Radiocarbon* 28, 2A: 799 <https://doi.org/10.1017/S0033822200008043>
- NERC (Natural Environment Research Council) 2019 *British Geological Survey*. <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>. Accessed 13 February 2019.

- Noble, G, Christie, C & Philip, E 2016 'Life is the Pits! Ritual, Refuse and Mesolithic–Neolithic Settlement Traditions in North-east Scotland', in Brophy, K, MacGregor, G & Ralston, I (eds) *The Neolithic of Mainland Scotland*, 171–99. Edinburgh: Edinburgh University Press. <https://doi.org/10.3366/edinburgh/9780748685721.003.0009>
- O'Donnell, L 2011 'People and woodlands: an investigation of charcoal as indicators of cultural selection and local environment in Bronze Age Ireland', 5th International Meeting of Charcoal Analysis, Valencia 5–9/9/11. Saguntum Extra-11: 97–8. <https://ojs.uv.es/index.php/saguntumextra/article/download/1599/973>. Accessed 7 March 2019.
- O'Donnell, L 2016 'The power of the pyre – a holistic study of cremation focusing on charcoal remains', *Journal of Archaeological Science* 65: 161–71. <https://doi.org/10.1016/j.jas.2015.11.009>
- Pannett, A 2012 'Pits, pots and plant remains: trends in Neolithic deposition in Carmarthenshire, South Wales', in Anderson-Whymark, H & Thomas, J (eds) *Regional Perspectives on Neolithic Pit Deposition*, 126–43.
- Pollard, J 2001 'The aesthetics of depositional practice', *World Archaeology* 33: 315–33. <https://doi.org/10.1080/00438240120079316>
- Phillips, T, Jack, A & Seright, S 1999 'The Black Isle Fieldwalking Project', unpublished report, University of Reading.
- Ramsay, S 2014 'Botanical Remains', in Fraser, L (ed.) *Fortrose and Rosemarkie Waste Water Works*, 44–52.
- Ray, K & Thomas, J 2018 *Neolithic Britain*. Oxford: Oxford University Press.
- Reimer, P J, Bard, E, Bayliss, A, Beck, J W, Blackwell, P G, Ramsey, C B, Buck, C E, Cheng, H, Edwards, R L, Friedrich, M & Grootes, P M 2013 'IntCal13 and Marine13 radiocarbon age calibration curves 0–50,000 years cal BP', *Radiocarbon* 55: 1869–87.
- Rogers, J & Waldron, A H 1995 *A Field Guide to Joint Disease in Archaeology*. Chichester: Wiley.
- Saville, A 2014 'Lithics', in Fraser, L (ed.) *Fortrose and Rosemarkie Waste Water Works*, 39.
- Shepherd, A G & Shepherd, A N 2001 'A Cordoned Urn burial with faience from 102 Findhorn, Moray', *Proc Soc Antiq Scot* 131: 101–28.
- Sheridan, J A 1995 'The faience beads', in Banks, I 'The excavation of three cairns at Stoneyburn Farm, Crawford, Lanarkshire, 1991', *Proc Soc Antiq Scot* 125: 321–4.
- Sheridan, J A 2003 'New Dates for Scottish Bronze Age Cinerary Urns: Results from the National Museums of Scotland Dating Cremated Bones Project', in Gibson, A *Prehistoric Pottery: People, Pattern and Purpose*, 201–26. Oxford: BAR International Series 1156.
- Sheridan, J A 2004 'Scottish Food Vessel Chronology Revisited', in Sheridan, A & Gibson, A (eds) *Sickles and Circles: Britain and Ireland at the Time of Stonehenge*, 243–69. Gloucestershire: Tempus.
- Sheridan, J A 2007 'Dating the Scottish Bronze Age: There is clearly much that the material can still tell us', in Burgess, C, Topping, P & Lynch, F (eds) *Beyond Stonehenge: Essays on the Bronze Age in Honour of Colin Burgess*, 162–85. Oxford: Oxbow Books.
- Sheridan, J A 2012 'A Rumsfeld Reality Check: what we know, what we don't know and what we don't know we don't know about the Chalcolithic in Britain and Ireland', in Allen, M J, Gardiner, J & Sheridan, A (eds) *Is There a British Chalcolithic?*, 281–97. Oxford: Oxbow/Prehistoric Society (Prehistoric Society Research Paper 4).
- Sheridan, J A 2014a 'The prehistoric ceramic material', in Fraser, L (ed.) *Fortrose and Rosemarkie Waste Water Works*, 18–34.
- Sheridan, J A 2014b 'Artefacts associated with bipartite urn Pot 41 from Pit F10', in Fraser, L (ed.) *Fortrose and Rosemarkie Waste Water Works*, 34–9.
- Sheridan, J A 2014c 'Copper alloy razors from Pits 043, 003 and 031, Broich Road, Crieff', unpublished report for CFA Archaeology Ltd.
- Sheridan J A forthcoming 'Pottery report: Culduthel Farm, Phases 7 and 8' in Hatherley, C & Murray, R *Culduthel: An Iron Age Craft Centre*, Edinburgh: Society of Antiquaries of Scotland.
- Sheridan, J A & McDonald, A 2001 'Faience', in Shepherd, A G & Shepherd, A N 2001 'A Cordoned Urn burial with faience from 102 Findhorn, Moray': 110–19.
- Sheridan, J A & Shortland, A 2004 "...beads which have given rise to so much dogmatism, controversy and rash speculation": faience in Early Bronze Age Britain and Ireland', in

- Shepherd, I A G & Barclay, G J (eds), *Scotland in Ancient Europe. The Neolithic and Early Bronze Age of Scotland in their European Context*, 263–79. Edinburgh: Society of Antiquaries of Scotland.
- Sheridan, J A, Eremin, K & Shortland, A 2004 ‘Understanding Bronze Age Faience in Britain and Ireland’, *MRS Proceedings* 852: OO7.2. <https://doi.org/10.1557/PROC-852-OO7.2>
- Sheridan, J A, Jay, M, Montgomery, J, Pellegrini, M & Cahill, J 2013 ‘“Tara Boy”: local hero or international man of mystery?’, in O’Sullivan, M, Scarre, C & Doyle, M (eds) *Tara – From the Past to the Future*, 165–90. Dublin: Wordwell.
- Sheridan, J A, Cowie, T, Troalen, L, Walton Rogers, P, Bradley, R & Stewart, R 2016 ‘The excavated artefacts’, in Bradley, R & Nimura, C (eds) *The Use and Reuse of Stone Circles: Fieldwork at Five Scottish Monuments and its Implications*, 74–93. Oxford: Oxbow Books.
- Sheridan, J A, Hall, D, Romera, A, Welch, N & O’Grady, O 2018 ‘Kilmagadwood Early Bronze Age cemetery: excavation and initial post-excavation research’, *Tayside & Fife Archaeological Journal*, 24: 1–20.
- Simpson, D D A 1996 ‘Excavation of a kerbed funerary monument at Stoneyfield, Raigmore Inverness, Highland, 1972–3’, *Proc Soc Antiq Scot* 26: 53–86.
- Simpson, D D A & Cole, J M 1990 ‘Excavations at Grantully, Perthshire’, *Proc Soc Antiq Scot* 120: 33–44.
- Smyth, J 2012 ‘Breaking ground: an overview of pits and pit-digging in Neolithic Ireland’, in Anderson-Whymark, A & Thomas, J (eds) *Regional Perspectives on Neolithic Pit Deposition*, 13–29.
- Squires, K E 2015 ‘The Integration of Microscopic Techniques in Cremation Studies’, in Thompson, T (ed.) *The Archaeology of Cremation. Burned Human Remains in Funerary Studies*, 151–72. Oxford: Oxbow Books. <https://doi.org/10.2307/j.ctvh1drsq.12>
- Stevenson, R B K 1948–9 ‘A Beaker Burial in the Black Isle’, *Proc Soc Antiq Scot* 83: 235–6.
- Straker, V 1988 ‘The charcoal’, in Lambrick, G (ed.) *The Rollright Stones: Megaliths, monuments and settlements in the prehistoric landscape*, 102–3. London: English Heritage Archaeological Report 6.
- Thomas, J 1999 *Understanding the Neolithic*. London: Routledge.
- Thomas, J 2012 ‘Introduction: beyond the mundane?’, in Anderson-Whymark, H & Thomas, J (eds) *Regional Perspectives on Neolithic Pit Deposition*, 1–12.
- Thomas, N & Ellwood, E C 2005 ‘Early Bronze Age copper alloy awls from Sites I and II, with metal analysis and classification’, in Thomas, N (ed.) *Snail Down, Wiltshire, The Bronze Age Barrow Cemetery and Related Earthworks, in the parishes of Collingbourne Ducis and Collingbourne Kingston. Excavations 1953, 1955 and 1957*, 219–22. Devizes: Wiltshire Archaeological and Natural History Society 3.
- Thompson, G B 1999 ‘The analysis of wood charcoals from selected funerary contexts’, in Barclay, A & Halpin, C (eds) *Excavations at Barrow Hills, Radley, Oxfordshire, Vol 1: The Neolithic and Bronze Age monument complex (Thames Valley Landscapes)*, 247–53. Oxford: Oxford University Press.
- Waddell, J 1995 ‘The Cordoned Urn tradition’, in Kinnes, I & Varndell, G (eds) *Unbaked Urns of Rudely Shape, Essays on British and Irish Pottery*, 133–22. Oxford: Oxford University Press.
- Walker, J T 1903–4 ‘Donations to the Museum and library’, *Proc Soc Antiq Scot* 38: 469–70.
- Whittow, J B 1977 *Geology and Scenery in Scotland*. London: Penguin.
- Woodham, A 1953–5 ‘A Survey of Prehistoric Monuments in the Black Isle’, *Proc Soc Antiq Scot*, 88: 65–93. https://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-352-1/dissemination/pdf/vol_088/88_065_093.pdf. Accessed 16 October 2019.
- Woodward, A & Hunter, J 2015 *Ritual in Early Bronze Age Grave Goods*. Oxford: Oxbow Books.