

ARO44: Exceptional pots: the early Neolithic of Hillhouse Farm, Kilmarnock, East Ayrshire

By Kenny Green, Diane Alldritt, Torben Ballin and Alison Sheridan

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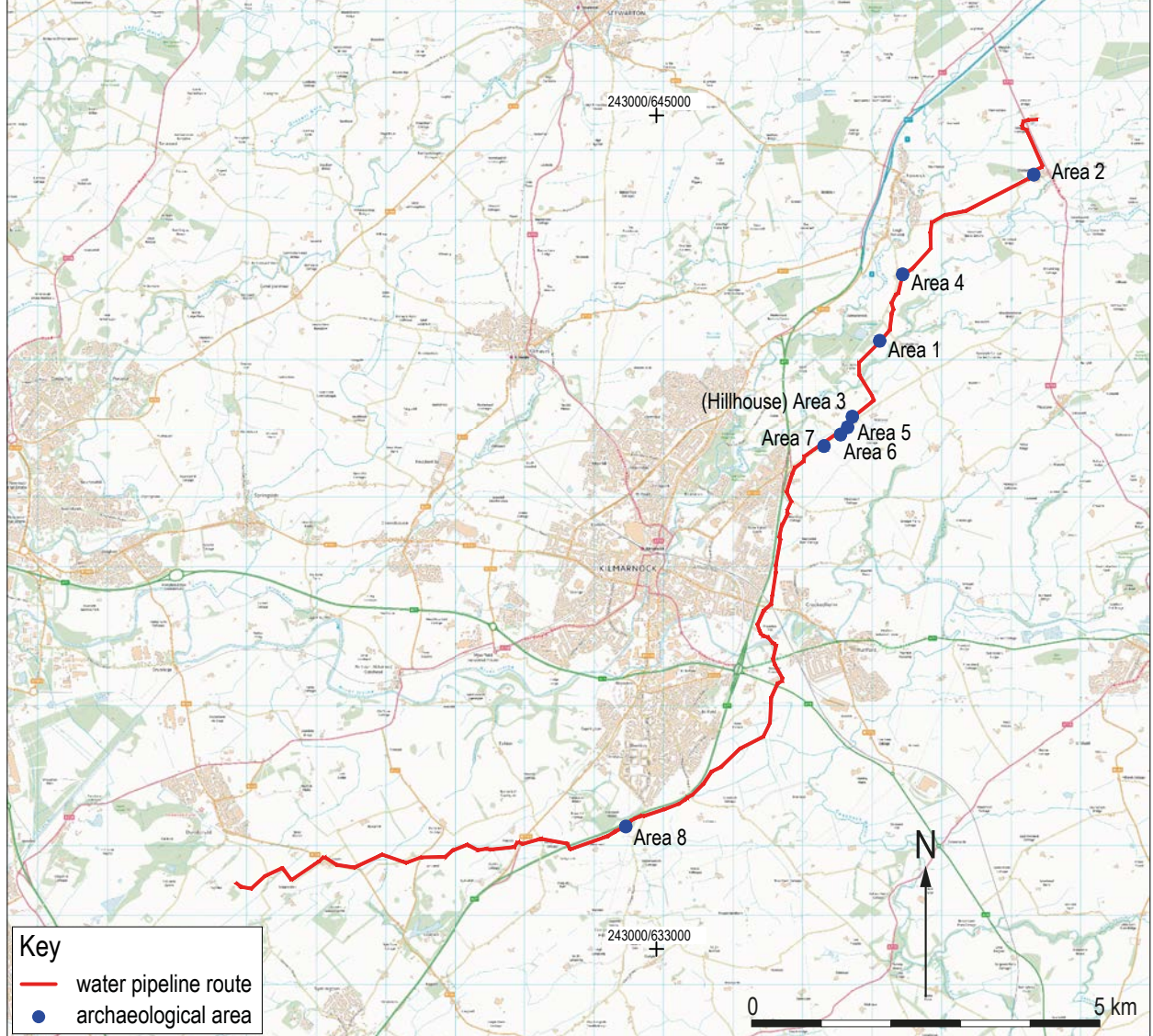
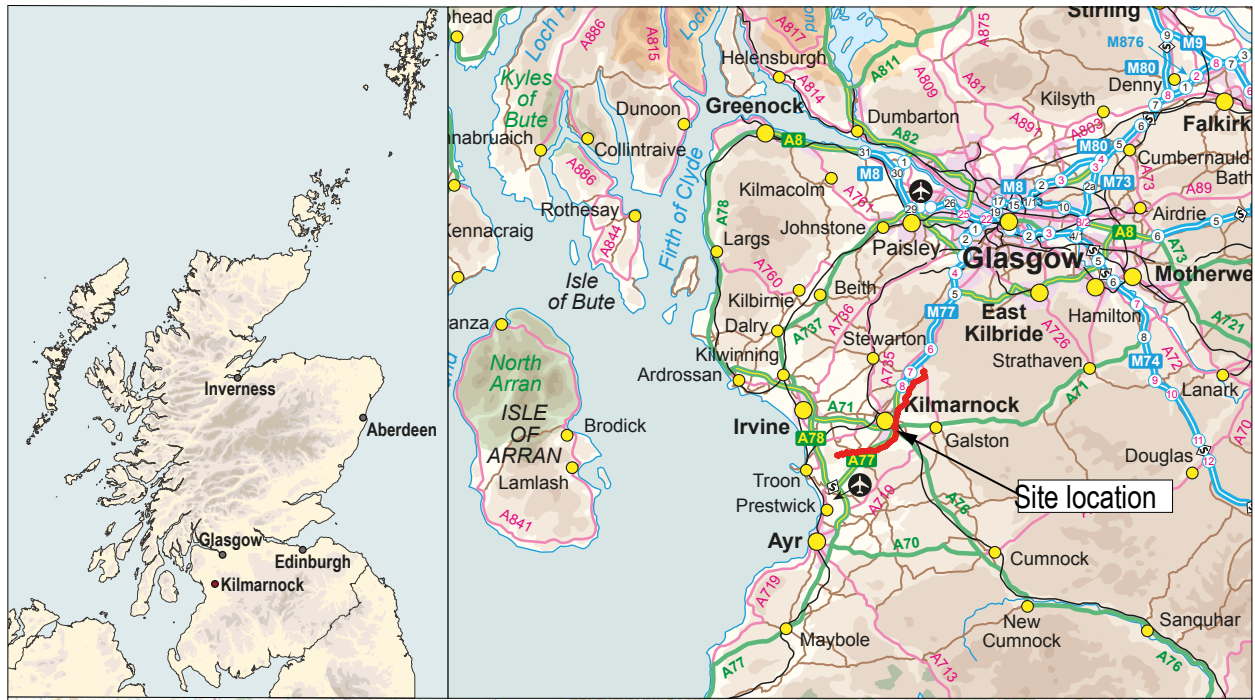
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Figure 1: Site location.

Introduction

Between 26 April and 14 August 2017 an archaeological watching brief was undertaken by GUARD Archaeology Ltd following the Highlees water pipeline route on behalf of Scottish Water. The pipeline started north-east of Kilmarnock at the Water Treatment Works at Amlaird, extended south and west passing Kilmarnock to the south-east, to terminate at the Highlees Water Treatment Works near Dundonald. During the watching brief, eight sites of potential archaeological interest were identified and subsequently investigated with archaeological features ranging in date from the early Neolithic to the post-medieval period/modern times.

The largest of these sites, Area 3, at Hillhouse Farm, consisted of a number of groups of pits and postholes, some of which are dated to the 37th to 34th centuries BC. A few small fragments of burnt flint were recovered from some of the features along with 218 fragments of early Neolithic pottery representing between 19 and 23 pots. Many of the features also contained quantities of charcoal, particularly from oak and hazel with some fragments of alder, and numerous fragments of hazel nutshell. The evidence represents some of the materials used in construction of the building as well as fuel and wild resources available to its inhabitants.

Site location, geology and archaeological background

The investigated area followed a proposed new water pipeline route, approximately 22 km in length, extending from the Water Treatment Works at Amlaird, near Fenwick, south-west to the Water Treatment Works at Highlees, Dundonald (NGR: NS 4838 4445 to NS 3691 3342). In some places the route followed the A77 road, and terminated at Craigroyston, to the south-west of Kilmarnock (Figure 1).

A map regression exercise of the area along the pipeline route indicated that most of the land within the proposed development area has historically been used for agricultural purposes from at least the mid-eighteenth century onwards, with little other development taking

place. The route generally crossed agricultural fields, at varying elevations of between 40 m and 100 m OD. Eight areas of archaeological interest were uncovered and investigated during the project.

The superficial or subsoil deposits across the archaeological areas consist of glacial till, but beneath Area 3 the till is damictonic - poorly sorted clays, sands and gravels with boulders (British Geological Survey 2020, online viewer). The bedrock geology across most of the archaeological sensitive areas along the pipeline route consists of an Upper Limestone Formation, other sedimentary rocks, but Scottish Middle Coal Measures were noted at the southern end of the pipe route at Area 8.

Only one cultural heritage site was previously known within the 40 m working corridor of the Highlees water pipeline. This is the find spot of a polished stone axe head at Craufurdland Castle, approximately a kilometre north-east of Area 3 with its possible early Neolithic structure, and indicating further Neolithic activity in the area.

The results of the investigation

Area 3, Hillhouse Farm

Located adjacent to Hillhouse Farm, in an area of rich agricultural land, close to the Craufurdland Water and just off Grassyards Road, north-east of Kilmarnock and south of Craufurdland Castle, Area 3 revealed the largest concentration of archaeological remains found on the Highlees pipeline route. An area measuring 40 m by 30 m was machine stripped and cleaned to reveal several groups of features (Figure 2). The archaeological remains were located on a raised area which overlooked a possible palaeo-channel to the south. The general locale had been heavily truncated over a long period of time by agricultural activity, as well by the ground works for the pipeline.

At the north end of stripped area were four equally spaced, large sub-circular-shaped postholes 320, 348, 351 and 358 aligned E/W (Plate 1 and Figure 2). The postholes were straight walled with slightly rounded, wide bases. They ranged from 0.63 m to 1.04 m in diameter and between c. 0.5

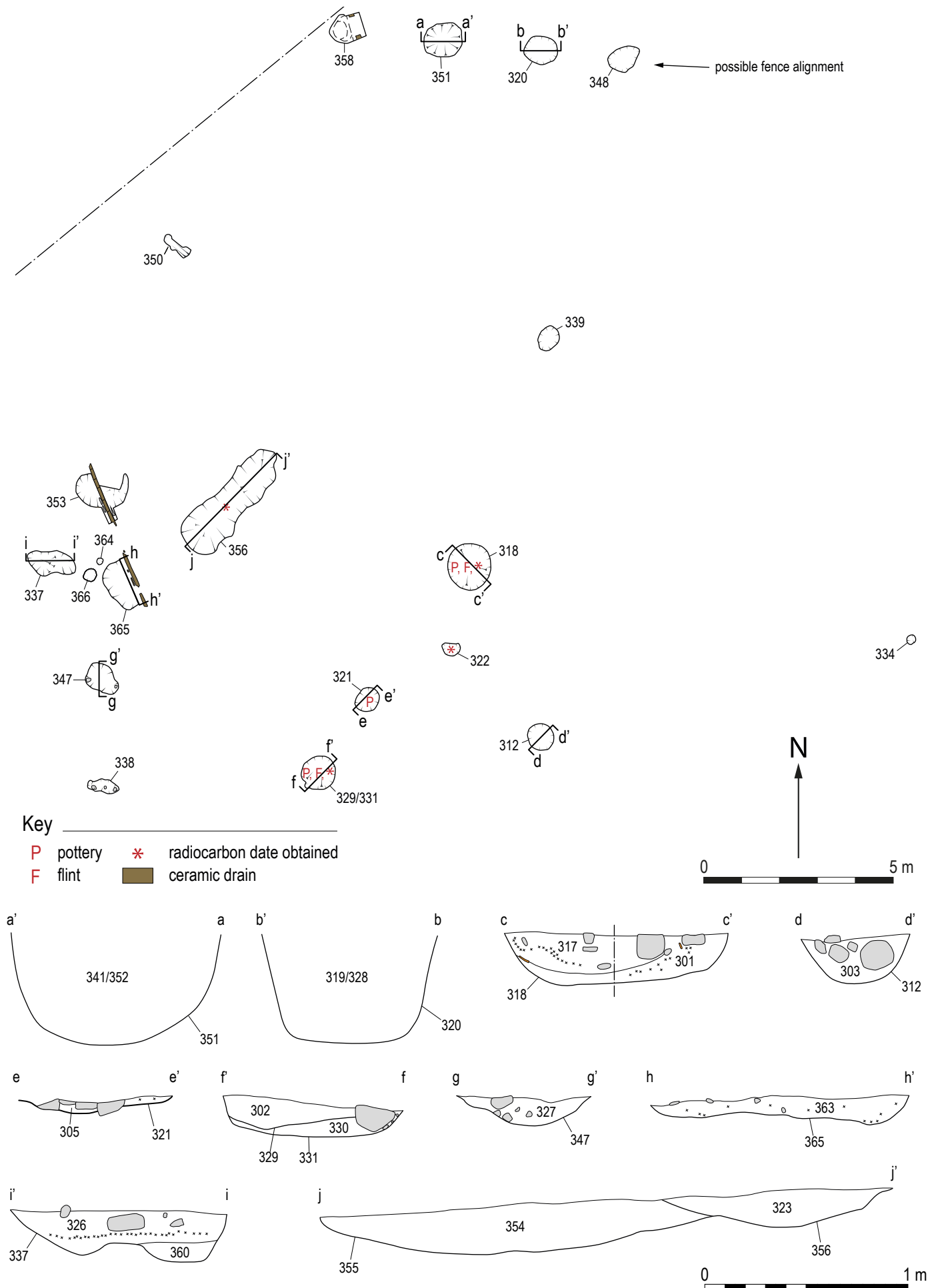


Figure 2: Area 3 Site plan and sections.

m to 0.58 m in depth. It is possible that additional postholes of the alignment lay outside of the area of investigation. The most westerly posthole 358 was truncated by a ceramic field drain.

In general, the postholes had cobbles in their lower fill, which were probably the remains of packing material around the original posts, with a surrounding matrix and upper fill of sandy silt. Only a small quantity of carbonised material was recovered from the postholes fills. The most easterly of them 348 contained some fragments of unidentified burnt wood, while the neighbouring posthole 320 contained fragments of burnt oak. None of them contained any cultural material.

A cluster of five pits were located at the western side of the excavated area along with a further four possible pits associated with them. The features (350, 353, 365, 347 and 338) ranged in diameter from c. 0.7 m to 0.95 m although two (353 and 365) had been severely truncated by a ceramic field drain. Their depths were between 0.14 m and 0.32 m. None of these features contained any material culture although traces of carbonised oak and alder wood were recovered along with carbonised hazel nutshells.

To the immediate west of posthole 365, was a small group of three other features (337, 364 and 366). Two were very small and shallow, with diameters of only 0.2 m and 0.4 m. The more northerly example contained fragments of hazel nutshell and the westerly had unidentified

charcoal. It is possible that these features related to posthole 365, which also contained a quantity of hazel nutshell. Pit 337 was larger, measuring c. 1.2 m by 0.63 m but was shallow at only 0.26 m in depth. Fragments of hazel charcoal were recovered from its fill along with some hazel nutshell fragments.

Approximately 2 metres east of the western features was a sub-rectangular pit 356, measuring 1 m by 0.6 m with a depth of c. 0.4 m. It was filled by brownish orange silt 323 and contained some oak charcoal, along with burnt hazel nutshells. No finds were recovered from it.

In the eastern part of the excavated area was a group, possibly linear, of sub-circular postholes (339, 318, 322, 321 with 329/331), but only their bases survived. The most northerly, 339 measured 0.7 m by 0.54 m by 0.2 m, and contained a large quantity of burnt hazel nutshells. Pit/posthole 318 (Plate 2) had straight walls and a flat base with a diameter of approximately 1.1 m and a depth of 0.27 m. Its lower orange coloured fill (317) suggested that it may have been a fire pit as it contained a substantial quantity of pottery, oak and hazel charcoal and carbonised hazel nutshells. Its upper silty fill contained a large quantity of sherds of pottery (SF 301, 305, 328, 329 and 339) (see Early Neolithic Pottery, below), most of which are early Neolithic carinated vessels, one flint flake in Yorkshire flint (CAT 11), hazel and oak charcoal and carbonised hazel nutshells. There were few lithic finds from the



Plate 1: View of linear arrangement of post holes taken from the south.

site in general, and CAT 11 is likely to be a piece of Yorkshire flint. The pottery recovered from both fills of this pit represents the majority of the identified Carinated Bowls identified from the site.

Several of this eastern group of postholes contained fragments of early Neolithic pottery along with large quantities of wood charcoal and hazel nutshells. The remains of a much smaller posthole 322 was found to the south that contained hazel and alder charcoal with some burnt hazel nutshell fragments, but no pottery or flint. Posthole 321 was c. 0.7 m in diameter but only 0.07 m in depth, and its fill 305 contained alder charcoal and hazel nutshells along with sherds of two vessels (SF 335 and 347). At the southern end of the eastern group of features, posthole 329/331 was sub-circular and measured between 0.8 m and 0.9 m in diameter but was only 0.18 m deep. Its fill 330 contained oak charcoal, carbonised hazel nutshells, a flint chip (CAT 12), and sherds of identifiable and abraded pottery (SF 343, and find 029 recovered from retents). This posthole was later recut (329) and

its fill 302 contained oak and hazel charcoal along with hazel nutshells and fragments of four vessels (SF 302, 303, 336, 337, 338 and 342) (see Early Neolithic Pottery, below).

East of the eastern group of features was a posthole 312 measuring 0.65 m in diameter with a depth of around 0.24 m. Its fill (303) of clayey silt including gravel and several large cobbles, also contained small amounts of hazel and alder charcoal, as well as a single sherd of early Neolithic pottery (SF 304). A small, shallow posthole (334) was located in the east corner of the site measured c. 0.24 m by 0.18 m and was filled with clay, silt and stones (315). It contained a small deposit of oak charcoal, possibly the remains of in-situ burning of a post.

Areas 1 and 2

Area 1 was located at Waterslap, near Fenwick, and Area 2 was identified north of Laigh Arness Farm near to West View, both north-east of Kilmarnock. Area 1 consisted of three large archaeological deposits ranging in length from 1.2 m to 1.8 m, in width from 0.55 m to 1.3 m, and in depth from



Plate 2: Pit 318 during excavation showing pottery sherds in situ.

0.05 m to 0.08 m. Environmental samples were examined and the deposits were determined to be of post-medieval date, containing only clinker but otherwise were sterile. Area 2 consisted of a hollow which, when excavated was found to contain a small quantity of charcoal and a sherd of medieval or post-medieval green glazed pot (SF 201). In addition, several large, dark coloured deposits were investigated but they were post-medieval in date and suggested that ground clearance for agriculture had occurred in the area.

Areas 4, 5 and 6

Area 4 was located at Waterslap, south of Fenwick Village. A large deposit of burnt material was identified, and after excavation was determined to be a post-medieval dump of waste material, probably used as ground levelling. Area 5 was north of Wardlaw Road on Grassyards Road just north-east of Kilmarnock where no features were identified. Area 6 was also located on Grassyards Road, where a number of deposits of varying sizes were identified as organic, natural deposits consisting of peat or waterlogged clay.

Area 7

Area 7 was located just north-east of Kilmarnock on Grassyards Road, just to the south-west of Wardlaw Road. There were three deposits in Area 7, built up from layers of what appeared to be industrial material. The primary deposit (701) 1.8 m by 1.3 m and 0.08 m thick comprised reddish-brown silty-clay and gravel. Some of this material had become mixed with overlying deposits suggesting the area had been disturbed by agricultural activities. One of these (706) was at the eastern tip of the main deposit and consisted of brown/orange clayey-silt with gravel. The other (707) was located in the central eastern

part of the primary deposit and was mixed with the overburden (709).

Deposit 702 was located 0.8 m west of deposit 701 and appeared to be a small pocket of modern debris. Another deposit (703 lower and 708 upper) was located 0.3 m east of the primary deposit. The lower part was similar to the other deposits and the upper deposit of dark silty-clay and gravel was truncated by a field drain.

Modern overburden 709 covered much of the extent of Area 7. It was 0.25 m thick and consisted of silty-clay, with gravel, flecks of brick or ceramic drainage tiles as well as pieces of coal and other waste material. It had been ploughed and was mixed to some degree with all the other deposits found in the area. A number of environmental samples were analysed from these deposits but all were found to be sterile.

Area 8

Area 8 was located just south of Kilmarnock near the Kilmarnock Bypass and to the western side of Craigie Road. A sub-circular deposit of three layers of burnt material 801, was the only archaeological feature found there. The basal deposit 803 measured 1.15 m by 1.1 m by 0.06 m and consisted of red/grey clay with gravel. The middle layer 802 was a deposit of black silty-sand and gravel and of similar extent and thickness. The upper deposit 801 was less extensive and consisted of reddish-orange silty-sand with gravel.

During the initial stripping phase of the deposits in Area 8 a small flue was originally identified as protruding from them as if the area included a small kiln. When the area was re-stripped, a flue could not be found. The analyses of three environmental samples were found to be sterile.

Specialists reports

Carbonised plant macrofossils and charcoal

By Diane Alldritt

Introduction and methodology

Fifty nine environmental samples taken during archaeological excavation work along the proposed route of the Highlees water pipeline to the SW of Kilmarnock were examined for carbonised plant macrofossils and charcoal. Material sorted from forty three of the sample retents was also analysed for identifiable remains.

The bulk environmental samples were processed by GUARD Archaeology Ltd using a Siraf style water flotation system (French 1971). The samples varied from 1 to 24 litres in volume. The flots were dried before examination under a low power binocular microscope typically at x10 magnification. All identified plant remains including charcoal were removed and bagged separately by type.

Wood charcoal was examined using a high powered Vickers M10 metallurgical microscope at magnifications up to x200. The reference photographs of Schweingruber (1990) were consulted for charcoal identification. Plant nomenclature utilised in the text follows Stace (1997) for all vascular plants apart from cereals, which follow Zohary and Hopf (2000).

Results

The environmental samples produced wide variations in quantities and types of carbonised remains recovered dependent upon the area excavated with the most abundant site being Area 3 producing from 5ml up to 75ml of charcoal fragments and hazel nutshell per sample, whilst <2.5ml of crushed charred detritus was generally all that was found from Areas 2, 4, 7 and 8. Modern remains were quite scarce and consisted of <2.5ml of roots and occasional finds of earthworm egg capsules suggesting a small degree of bioturbation was possible through some of the deposits. Clinker and coal were more frequently encountered and reflected post-medieval industrial activity and disturbance in Areas 2, 4, 7 and 8.

Results are discussed below, with detailed results in Table 1 in the site archive.

Discussion

East of Craufurdland Castle and Waterside Areas 1 and 2

Three samples (101, 102 and 103) were examined from this area with all proving sterile of carbonised remains. Deposits (101) and (102) both contained clinker probably from post-medieval activity.

Area 1 at Waterside produced varied results with four of the five samples taken from here producing only trace crushed charred detritus or being completely sterile whilst in contrast sample 5 from quad 4 of burnt deposit (201) produced a substantial concentration of charcoal fragments. Quad 4 (201) contained mainly *Betula* (birch) charcoal in fragment sizes 10 mm to 40 mm, together with a collection of carbonised weed seeds indicative of waste or rough ground, suggesting this deposit may be fuel waste, but with the presence of numerous burnt weeds is more likely to reflect clearance of scrub for agricultural land. No cereal grain or other remains were recovered from this deposit to suggest it originated from domestic activity. Deposit (201) quad 2 contained a few crushed fragments of charcoal which were too small to identify, but probably part of the same burnt waste deposit as quad 4.

Shallow depression/feature 1 (202) was sterile and probably a natural feature, perhaps a plough scrape or stone hole. Quad 3 (202) was also sterile as was deposit (207) with all producing geological material in the flots suggesting these are natural.

Three samples examined from Area 2 were all sterile producing a mixture of geological material and clinker. Quad 2 from deposit (209) contained a small concentration of clinker suggesting this is probably from recent/post-medieval activity, whilst quads 3 and 4 from (209) were both sterile, suggesting this deposit is probably a mixture of natural and remnants from later activity.

Area 3, Hillhouse Farm

Area 3 represented the largest area of archaeological features investigated and also produced the most significant results from the environmental samples. Thirty three samples were analysed and produced a number of

concentrated deposits of hazel nutshell and charcoal of probable early Neolithic date.

Large deposits of well-preserved *Corylus avellana* (hazel) nutshell were recorded from pits (318/301) and (317/318, 321/305, 329/302 and 304), with slightly less hazel nutshell present in pits (312/303, 331/330, 337/326, 337/326, 338/307, 353/324 and 365/363). These deposits indicated a significant level of food gathering and processing activity was taking place here, with the burnt waste reflecting the processing of substantial quantities of hazel nuts for direct consumption as food or in preparation for storage for later use. The nutshells were found as a mixture of half shell fragments 10 mm to 15 mm in size as well as numerous smaller crushed fragments <5 mm to 5mm.

Possible pit fills (323, 340 and 362) contained a few trace fragments of nutshell and probably were also areas of hazel processing. Whereas pit (343/342) and pit fills (354) and (501) were largely sterile containing only coal and geological material, and were possibly modern or natural features. Pit (359/357) was sterile and probably an animal burrow or root damage as was pit (351/341).

The pit fills also contained charcoal with consistently the same types of fuel being used for drying and roasting the hazel nutshells. Typically oak and hazel were found in combination with both being recorded in pits (312/303, 318/301 and 317), and in (329/302). A very large concentration of oak was present in sample 28 taken from fire pit (318/301), with lesser quantities of oak recorded in pits (320/319), (331/330) and (338/307). Interestingly a couple of the pits produced *Alnus* (alder) charcoal sometimes with hazel also present, and these could represent a different phase of activity at the site with no oak present in these deposits. A large deposit of alder was found in pit (321/305) in fragment sizes 10 mm to 30 mm, lesser amounts in shallow pit (347/327) although all in good condition, whilst 10 mm to 25 mm sized fragments of alder and hazel were found together in pit fill (304). Any of the hazel and alder from the various pits would be suitable for radiocarbon dating.

Possible posthole (334/315) contained a small deposit of oak charcoal perhaps remains of a post burnt in situ although the material was

highly crushed and may have been intrusive from nearby burning. Possible postholes (348/313, 350/344 and 366/325) produced a few iron panned fragments of indeterminate charcoal that had probably washed into the fills. Furrow (349) was sterile and probably a natural feature. Posthole fill (346) was also sterile.

Areas 4, 7 and 8

Area 4 produced a large deposit of blackened material truncated by modern field drains. Six samples were examined from area 4 from deposits (401, 402, 404, 405 and 406). Deposit (406) was the only context to produce charcoal, in this case a single fragment of *Betula* (birch) in good condition, in amongst many 10 mm coal fragments and geological material. Deposit (401) produced a small deposit of crushed clinker fragments, whilst the remaining deposits (402, 404 and 405) proved sterile. Given the mixture of clinker, coal and scarce charcoal along with geological remains, this is probably a dump of post-medieval waste or material being used for levelling.

Seven samples were examined from Area 7 with all contexts (701, 702, 703, 705, 706, 707 and 708), coming from industrial overburden and proving sterile of carbonised remains. There was no significant archaeological activity in this area and the remains are probably post-medieval or natural.

Three samples were analysed from Area 8 with (801, 802 and 803) all sterile and probably originating from natural deposits.

Conclusion

The environmental samples produced the most significant archaeological results from Area 3 Hillhouse Farm with the finding of large volumes of hazel nutshell fragments and charcoal probably relating to early Neolithic activity in the area. Waterside Area 1 produced one substantial deposit of birch charcoal from (201) quad 4 possibly reflecting medieval or post-medieval field clearances for agriculture whilst the remaining deposits from this area were largely devoid of material. Areas 2, 4, 7 and 8 appeared to be heavily truncated and influenced by more recent post-medieval/modern industrial activity with the samples from Areas 2 and 4 containing much clinker and coal and those from 7 and 8 mostly found to be sterile.

Radiocarbon dating material has been obtained from a number of features in Area 3, with pits (318/301), and (317), (321/305), fill (304), (329/302) and (331/330) producing the best preserved hazel nutshell. The birch from Waterside 1 would also be suitable for dating but may not be particularly ancient.

Radiocarbon dates

Six radiocarbon dates were returned from the samples (Table 1), the majority being from Area 3 and activities associated with the postholes on the east side of the excavated area. Two of these (sample 20 and 29) contained early Neolithic Carinated Bowls (see Early Neolithic pottery, below) and returned date ranges of c. 3642 to 3380 cal BC (SUERC-93082 and SUERC-93087), spanning the middle to end of the early Neolithic and into the middle Neolithic period. The early part of the date ranges clearly corresponds with the use of the pits for the deposition of the pottery. A narrower date range from a pit lying between the previous two (sample 23), and not associated with pottery, produced a distinct early Neolithic date of 3655-3524 cal BC (SUERC-93083), possibly implying that the two pits with pottery were disturbed or reused at a slightly later period. An elongated pit, again not associated with any cultural artefacts, and located between the east and west pit groups produced a very late Mesolithic date of 4341-4233 cal BC, from sample 42. There was not sufficient carbon from the pits in the north of Area 3 for sampling, and these remain undated.

The dates from Area 2 (sample 16) and Area 4 (sample 5) are post-medieval to modern in their date range (see Table 1).

Sample Nr	Lab Code	$\delta^{13}\text{C}$	Context	Radiocarbon Age BP	Dates at 2 sigma
5	SUERC-93080 (GU54636)	-26.6 ‰	Betula charcoal from 406	149 ± 31	1667–1910 cal AD
16	SUERC-93081 (GU54637)	-25.1 ‰	Betula charcoal from 202	148 ± 31	1667–1910 cal AD
20	SUERC-93082 (GU54638)	-25.9 ‰	Corylus avellana nutshell from 301	4741 ± 31	3636–3501 cal BC 3430–3380 cal BC
23	SUERC-93083 (GU54639)	-24.5 ‰	Corylus avellana nutshell from 304	4815 ± 31	3655–3624 cal BC 3601–3524 cal BC
29	SUERC-93087 (GU54640)	-25.1 ‰	Corylus avellana nutshell from 330	4774 ± 31	3642–3517 cal BC 3396–3385 cal BC
42	SUERC-93088 (GU54641)	-24.5 ‰	Corylus avellana nutshell from 323	5415 ± 31	4341–3423 cal BC

Table 1: Radiocarbon dates.

Lithic assemblage

By Torben Bjarke Ballin

The assemblage - general overview

From the excavations at Highlees, 17 lithic artefacts were recovered (Tables 2 and 3). Apart from one fire-flint and one piece of slag, all pieces are debitage.

	Flint	Chert	Indet. lithic	Quartz	Shale?	Total
Chips	5	2		3		10
Flakes	1				1	2
Indeterminate pieces	3					3
Fire-flints	1					1
Slag			1			1
TOTAL	10	2	1	3	1	17

Table 2: General artefact list by raw materials.

	Area 2	Area 3	Area 4	Area 6	Area ?	Total
Chips	4	6				10
Flakes		1		1		2
Indeterminate pieces	2		1			3
Fire-flints					1	1
Slag			1			1
TOTAL	6	7	2	1	1	17

Table 3: General artefact list by area.

The definitions of the main lithic categories are as follows:

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

Flakes: All lithic artefacts with one identifiable ventral (positive or convex) surface, GD > 10mm 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 $L \geq 2W$. In the case of blades $W > 8$ mm, in the case of microblades $W \leq 8$ 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).

Characterisation and conclusion

This assemblage includes 17 pieces, 15 of which are debitage. In addition, one fire-flint and one piece of slag were recovered. Ten pieces are of flint, two are chert, three are quartz, one is of an indeterminate type of lithic material and one piece may be of shale (from Area 6). Flint, chert, quartz and shale are all available in the local area, either from beach walls, river gravels or inland outcrops (Cameron and Stephenson 1985; Smith 1880). Flake CAT 11 from Area 3 may be of Yorkshire flint (Ballin 2011). Eight pieces are burnt, six of which (chips and minuscule

indeterminate pieces) were recovered from Area 2, whereas one burnt indeterminate piece and the slag (CAT 4) were retrieved from Area 4. The small burnt pieces from Area 2 all appear to be from the same object.

The debitage comprise 10 minuscule chips, two flakes, and three indeterminate pieces. CAT 1 is a shaped core-like fire-flint (Ballin 2005) with crush-marks along several edges (41 by 32 by 25 mm). The cortex is soft-ish, suggesting importation from areas with chalk such as the shingle beaches of south-east Britain. It may be based on ballast flint suggesting a late date. CAT 4 is an indeterminate piece (greatest dimension 20 mm) based on an unknown form of lithic material, and it is so vitrified that one surface appears entirely glassy. It also has slaggy structures like tiny holes from air-bubbles.

Six pieces were recovered from Area 2 (burnt chips and indeterminate pieces of flint), seven from Area 3 (six chips and one flake of flint, chert and quartz), two from Area 4 (one burnt indeterminate piece of flint and one piece of slag), one from Area 6 (one flake of shale?), and one is a stray topsoil find (fire-flint CAT 1).

The burnt pieces from Area 2 are all from a possible fire-pit (C201). Those from Area 3 were recovered from a number of different pits and postholes and may be knapping debris which entered the features with the back-fill. One of the pieces from Area 4 is from topsoil and the other is unstratified. The shale(?) flake from Area 6 is also from topsoil. And the fire-flint is from topsoil but it is uncertain which area it came from.

The finds are generally undiagnostic, but as the fire-flint (unstratified) may be based on ballast flint, this piece may date to the post-medieval

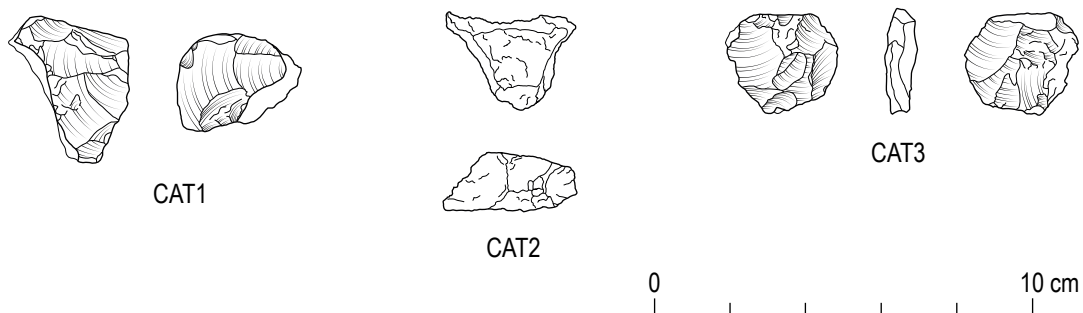


Figure 3: Lithics.

period. The heavily vitrified piece of slag (Area 4) was probably created in connection with the burning of chalk or limestone for lime, which was then spread across the field. Yorkshire flint (Area 3) is generally associated with the middle and late Neolithic periods and shale (Area 6) was used from the middle/late Neolithic periods onwards.

The early Neolithic pottery

By Alison Sheridan

The assemblage of early Neolithic pottery comprises 218 sherds and around 90 fragments (i.e. pieces smaller than 10 mm in length or width), weighing around 1.64 kg. Parts of at least 19 pots and possibly as many as 23 are present. The assemblage was inspected both macroscopically and using a binocular microscope at a magnification of x20, and numerous conjoining pieces were refitted. The work was undertaken in accordance with the revised guidelines of the Prehistoric Ceramics Research Group (1997) and the Chartered Institute for Archaeologist's *Standards and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials* (2020). A summary description of each pot is presented in Appendix 1, and a more detailed catalogue exists in archive form.

The pottery all comes from the south-eastern part of Area 3 Hillhouse Farm, and predominantly from posthole 318 (whose fills are contexts 301 and 317; there were also seven unstratified sherds from this feature). In this posthole was found 80% of the assemblage by weight (1311 g) and c. 65% by sherd total (141); parts of 12 out of the 19 definitely-identified pots (namely Pots 1-2, 4-7, 10-12, 14, 15 and 19) are represented, along with a few unattributable sherds and fragments. The next abundant feature was posthole 329/331 (its fills are 302 and 330): here, nearly 10% of the assemblage by weight (159.3 g) and c. 22% by sherd number (48) was found, with the sherds belonging to Pots 3, 5, 8 and 16 (plus some unattributed sherds and fragments; and see below regarding the 'Pot 5' sherd).

As for the remainder of the assemblage, posthole 321/305 contained c. 4% of the assemblage by weight and c. 10% by the number of sherds (21, plus 18 fragments), with sherds from Pots 9 and

17 present, while posthole 312/303 produced just 1% of the assemblage by weight (1 sherd, from Pot 13). The other pottery was from unstratified contexts, including one sherd (Pot 18) that was found among material that had been dragged by the bulldozer (context 306). No pottery was found in any other part of the timber structure; one find from posthole 358, which had initially been collected as a possible sherd, was found to be a natural sandstone pebble. The only possible example of where a pot's sherds had ended up in different contexts concerns Pot 5, where one rim sherd was found in the fill of posthole 329/331 (context 302) while the other sherds from this pot were found in posthole 318, around 7 m to the north-east. However, one cannot rule out the possibility that that rim sherd comes from a different pot (i.e. a notional 'Pot 20') that happens to resemble Pot 5 closely.

While in most cases (13 pots – Pots 2, 4, 6 and 10-19), just 5% or less of each pot is present, with Pot 7 the figure is around 75%, and with Pot 3 it is c 30%; there were sufficient conjoining sherds in both cases to refit large parts of these pots (Plate 3). Moreover, many of the sherds from Pots 7 and 3 are relatively large, with the largest in Pot 7 (and in the whole assemblage) measuring 101 x 88.2 mm. The size of the Pot 7 sherds, and the fact that so much of that pot is present, suggest that it had probably broken not far from where the sherds ended up. In general, the sherds in the assemblage showed little sign of having lain around for long before being incorporated into the posthole fills: fracture surface abrasion was not marked, except in the case of the few sherds that have been scorched or burnt (from Pots 8, 12, 15 and 17-19), and where belly sherds have abraded exterior surfaces, this is likely to relate to their use, as noted below.

All the pots are round-based, and while their size, shape and fineness vary, overall the assemblage is characterised by sinuous-profiled and gently-carinated vessels, with a predominance of thin-walled pots whose maximum wall thickness below the rim does not exceed 10 mm (15 of the 19 identified pots fall within this category). Indeed, in the case of Pot 1, parts are as thin as 3.7 mm. The thickest-walled vessels are Pots 7 and 14, with maximum wall thicknesses of 14 mm and 13.8 mm respectively. In size, the estimated rim diameters range from 170 mm (Pot



Plate 3: Pots 7 (left) and 3 (right) after refitting of the conjoining sherds. See Figures 6: 1) and 5: 1) for graphic reconstructions of their overall shape; the upper part of Pot 7 is tilting slightly downwards. Photos: Alison Sheridan.

7) to c. 320 mm (Pot 2), and where the depth of the pot can be estimated, this ranges from 119 mm (Pot 4) to c 148 mm (Pot 2). Rims are almost all everted, rounded and rolled over to form an external beading, of varying prominence. Their shape can vary over the circumference of a pot, as seen for example in Pot 7 where its exterior is variably rounded or flattened.

There are at least two examples (namely Pots 1 and 2, Figure 4) of large, open, shallow-bellied, gently-carinated bowls with long splaying necks and simple rounded or rolled-over everted rims. The very thin-walled Pot 1, with an estimated rim diameter of c. 300 mm and estimated depth of 124 mm, is particularly finely made, with sparse inclusions, a polished and burnished exterior and a polished interior, and decorative ‘fingertip’ fluting on the interior of the rim and neck over part of its circumference (Figure 4: 1). It would have required considerable skill to create such a large, fine and thin-walled vessel. Pot 2 appears to be even larger, with an estimated rim diameter of c. 320 mm and estimated depth of c. 148 mm (Figure 4: 2); also thin-walled, it is less fine in both fabric and finish than Pot 1.

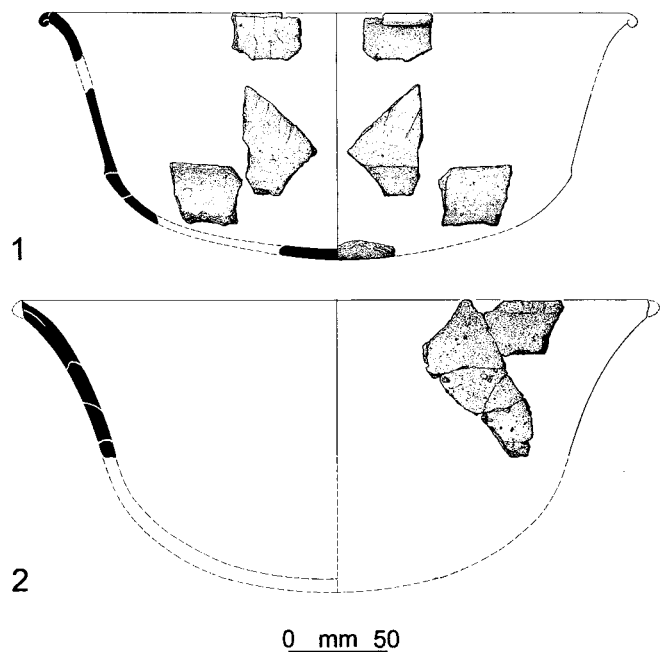


Figure 4: 1) Pot 1, 2) Pot 2. Drawings by Marion O’Neil.

The other definitely carinated vessels are Pots 3 (Figure 5: 1), 4 (Figure 5: 2) and 6 (Figure 5: 3), although several other pots in the assemblage, lacking sherds from the relevant part of the body, are also likely to have been carinated (namely Pots 5 - Figure 5: 4, 10, 11 and 17). Of the definite examples, Pot 3 is the smallest, with an estimated rim diameter of 180 mm and estimated depth of 135 mm. It has an everted, rolled-over rim, a long, straight, upright neck, a gentle carination and a fairly shallow belly (Figure 5: 1). The slightly larger Pot 4 (Figure 5: 2) also has a long, straight, upright neck, gentle carination and shallow belly; its rim is slightly peaked on the exterior and the estimated rim diameter is c. 200 mm. Too little of Pot 6 survives to assess its overall shape, although its neck is straight, the carination gentle and the belly shallow.

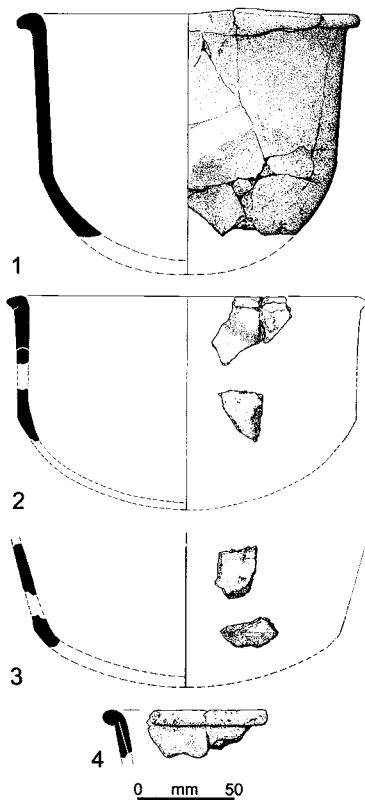


Figure 5: 1) Pot 3, 2) Pot 4, 3) Pot 6, 4) Pot 5. Drawings by Marion O'Neil.

The S-profiled vessels range in shape from the deep-bellied, slightly globular form of pot 7 (Figure 6.1; estimated rim diameter c. 180 mm) to the shallower-bellied Pots 8 and 9 (Figures 6: 2) and 5: 3); estimated rim diameters c. 180 mm).

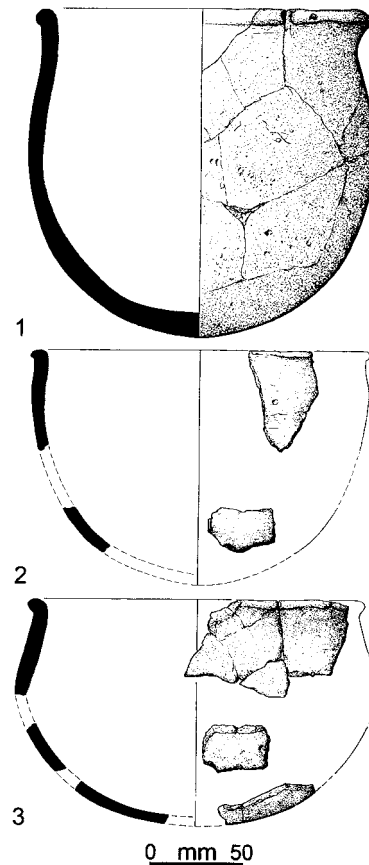


Figure 6: 1) Pot 7, 2) Pot 8, 3) Pot 9. Drawings by Marion O'Neil.

Regarding surface finish, all the pots had had their surfaces smoothed, with several appearing to have been wet-smoothed, producing a slip-like appearance (e.g. on Pot 5). The use of tools is clear on Pot 7, where horizontal and diagonal smoothing marks can be seen on the interior surface; here, plant matter and perhaps a pebble had been rubbed across the surface (Plate 4: 1). Pot 1 stands out in the quality of its finish, as described above; where the surface has been burnished, over part of the neck, narrow horizontal hollows have been left by the tool that had been used, probably a pebble or a narrow bone spatula (Plate 4: 2). As for the sinuous 'fingertip' fluting seen over part of the interior of the neck of that pot, the hollows are narrow, suggesting either the use of a small finger or of a narrow pebble (Plate 4: 3). Other evidence relating to the manufacture of the pots comes from the various breaks that have occurred along coil or strap joint planes; most of these are horizontal and of upright or inverted U-shape,

but there are also diagonal examples where the ends of a strap had been joined, and in one case a sherd has split along a long joint plane. In Pots 1 and 3, fracture surfaces show how the rim had been applied to the top of the neck. The peaked beading on the rim of Pot 4 had probably been shaped using a spatulate tool.

As regards fabric, with the exception of Pot 1 which will be described below, the whole assemblage shares in common the presence

of sand along with other, slightly larger (gravel-sized) round and sub-angular clasts of a variety of rock types, including siltstone, mudstone and fine sandstone. This sand and gravel may have been present naturally in the clay, or else was added to the clay as a filler to prevent the pots from cracking during firing. The amount of sand and the frequency of the slightly larger clasts varies: in 14 of the pots, the density of such inclusions is 5% or less, whereas in Pot 7 it is 10-15%; in Pot 3, 10%, and in Pot 15, 7% (with the densities being

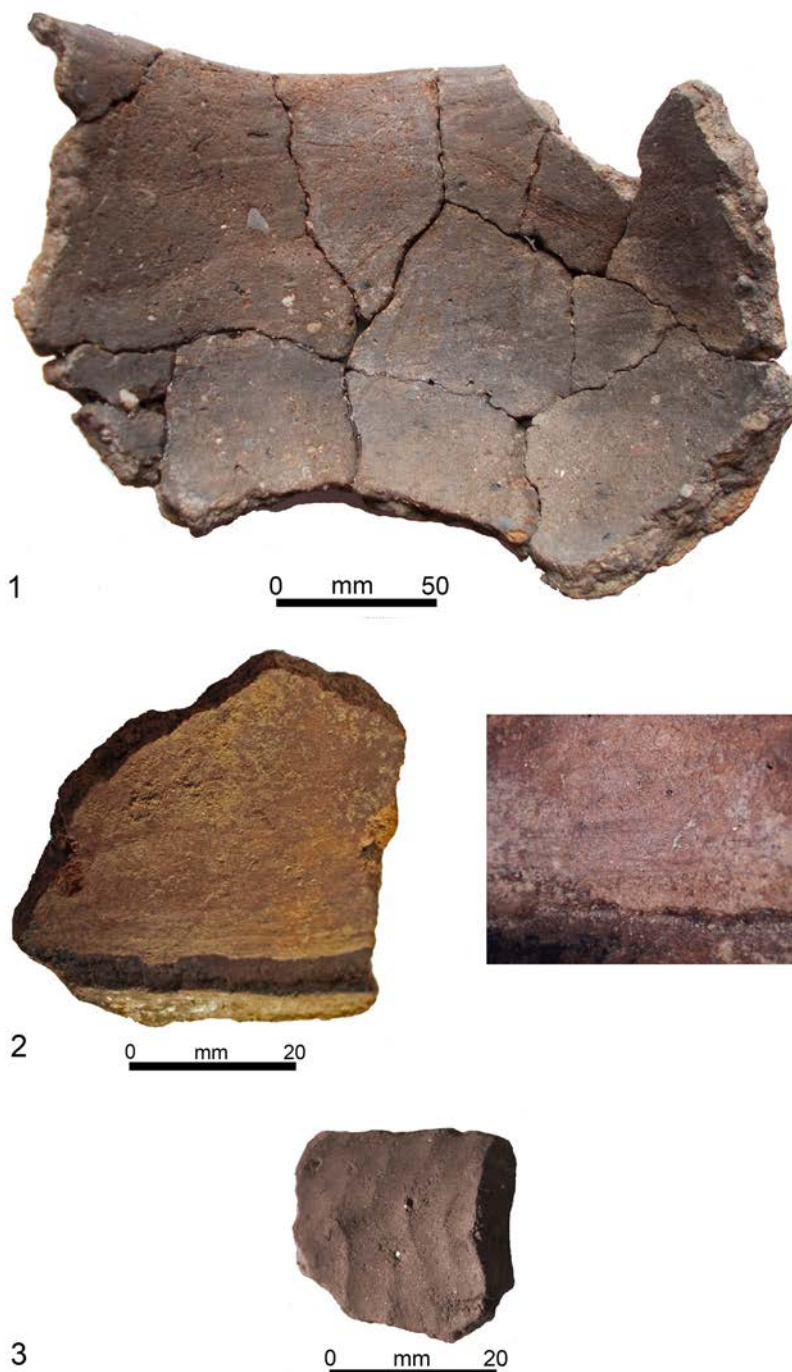


Plate 4: The interior of Pot 7, showing horizontal and diagonal smoothing and wipe marks. 2: Neck sherd from Pot 1 showing horizontal burnishing facets, most clearly seen just above the carination; right, detail of this area. 3: rippled fingertip fluting on the interior of the neck of Pot 1, immediately below the rim. Photos: Alison Sheridan.

estimated using charts published by Matthew et al. 1991). Mica is consistently present in the form of tiny, glittery platelets (as well as in the form of black biotite clasts). In Pot 1, however, much larger platelets of golden mica are present, along with small angular fragments of deliberately added, crushed white stone, probably feldspar, containing sparse black mineral inclusions; the sherds at the bottom of the belly also contain some sand. Overall, the density of inclusions in this pot is 3%. The consistency of the inclusion types in all the other pots suggests that the pots were made using the same raw materials, and it seems likely that the sand and gravel was available locally. As for the provenance of the crushed stone and large mica platelets seen in Pot 1, a local source is possible since granodiorite, microgranite and similar rocks containing the relevant minerals outcrop in the Kilmarnock area (MacPherson et al. 2001). The sand in the Pot 1 lower belly sherds looks the same as the sand in the other pots.

There are various signs that the pots had been used. Pots 1, 3, 7, 9 and 13 have abraded exterior surfaces on their lower belly sherds and this could have been caused by repeated nestling of the pots on rough surfaces (e.g. within a hearth). The use of some of the pots for cooking is suggested by the presence of patches of a thin, black organic residue on the exterior surface of Pots 1 (Plate 5), 3, 4, 9 and possibly also 8, and on the interior of Pots 4 and 14 (with a narrow band also being visible on the interior of part of the neck of Pot 1). While not all black residue results from cooking – some can result from the evaporation, or spilling, of a pot’s former liquid contents – nevertheless the locational patterning of the residue on these pots suggests that it had derived from their use for cooking, even in the case of the very fine Pot 1 (whose lower belly sherds’ exterior is a slightly lighter colour than elsewhere on the pot, perhaps as a result of heating the pot). Pot 7, despite the absence of visible organic residue, is also likely to have been used for cooking as its lower belly is markedly lighter in colour than the rest of the exterior, suggesting that it had been scorched post-firing, presumably by being placed in hot embers. Likewise, the relatively thick-walled Pot 13, represented by a lower belly sherd, has a scorched exterior, suggesting its use for cooking. The other scorched sherds and the burnt sherds mentioned above could have become burnt by

lying in a hearth after the pots had broken. The size and shape range of the pots in general is consistent with their use in preparing and serving foodstuffs; none would have been large enough to be used as a storage pot, except for small quantities of material.



Plate 5: Detail showing the thin black organic encrustation on the exterior of the upper belly, immediately below the carination, on Pot 1. Photo: Alison Sheridan.

There is evidence, from Pot 7, for the curation of a pot: just below the rim, a hole had been drilled from both sides so that a crack could be repaired by running a thong through holes on either side (Plate 6). The fact that the hole had been drilled from both sides could, however, also mean that the sherd in question had become detached from, and then was reattached to, the rest of the pot during its use-life. As noted by Anna Brindley in her study of pot perforations (2019), bi-directional drilling can be hard to achieve with narrow-mouthed pots such as Pot 7, unless the sherd is detached.

Discussion

Every aspect of this assemblage – the vessel forms and sizes, the presence of some very thin-walled vessels as well as thicker-walled examples, the nature of the surface finish and the general relative sparseness of lithic inclusions – is consistent with the earliest, ‘traditional’ phase of the Carinated Bowl ceramic tradition, dating to the early Neolithic (Sheridan 2007; 2016), and a date around the 39th/38th century BC is likely. As explained elsewhere (Sheridan 2007; 2016), this tradition can be regarded as one of a series of regional variants of Chasséo-Michelsberg pottery that developed in northern France and Belgium towards the end of the fifth millennium. It was introduced to eastern Britain by immigrant farming groups from the Nord-

Pas de Calais region of northern France, first appearing around the 41st century BC in the Thames Estuary, and during the 39th century in Scotland (though probably coming direct from the Continent, rather than spreading up from south-east England, *contra* Whittle *et al.* 2011, 835-43 and fig. 14.177). Its use spread westwards rapidly across lowland Scotland from the east coast from around the 39th century BC.

Parallels for aspects of the Hillhouse assemblage can be cited from far and wide in lowland Scotland. For example, the thin-walled, open shallow bowl form seen in Pots 1 and 2 can be paralleled at the large ‘hall’ at Crathes Warren Field, and at the smaller house at Garthdee Road, both Aberdeenshire (Sheridan 2009a, figs 37.11, 38.13 and 39.16-17; 2014, illus. 24.1,3 and 4; table 12, pots 1-4). Some of these *comparanda* have decorative fluting, like that seen in Pot 1 (albeit on the exterior surface). Closer to Hillhouse, excavation of the ‘hall’ at Lockerbie Academy, Dumfries and Galloway, also produced several similarly-shaped vessels (Sheridan 2011, illus. 9.1-9.5); closer still, the assemblage from the settlement at Maybole, South Ayrshire included three vessels of this type (Sheridan 2009b, illus. 8.1-3; illus. 9, 14). Even the choice of filler for Pot 1 can be paralleled among traditional Carinated Bowl assemblages, with a combination of a white-and-black stone and mica platelets being found in the assemblages from Crathes, Garthdee Road and Maybole, among others. Likewise, sand and gravel has been found in Carinated Bowl assemblages elsewhere in this part of Scotland

(e.g. Laigh Newton, East Ayrshire: Ballin Smith 2011). It may be that a particular ‘recipe’ was being followed.

Thanks to developer-funded excavations over the last 20 years, there have been a number of finds of Carinated Bowl pottery in the western Scottish lowlands south and west of the Clyde, and these have filled an important gap in the distribution map for this pottery tradition in Scotland (Figure 6 and cf. Sheridan 2007, fig. 1). Both ‘traditional’ and ‘modified’ variants of Carinated Bowl pottery are represented, the former constituting the earliest, and most widespread variant of this tradition as initially introduced into Scotland, and the latter constituting a slight shift away from this earliest ‘canon’ e.g. with some heavier rims; gentle carinations being replaced by sharp shoulders; and with lugs occasionally being used. Moreover, the quality of potting is somewhat inferior in several cases.

Whittle *et al.*’s Bayesian modelling of radiocarbon dates for traditional Carinated Bowl pottery in Scotland (2011, 825 and fig. 14.159) concluded that it appeared around 3825–3740 cal BC (95% probability), and that is broadly consistent with the dates from Lockerbie Academy (Kirby 2011) and from William Grant & Sons Distillers’ warehouse 37 site, Grangeston, South Ayrshire, whose initial phase of Neolithic activity has been dated as early as c. 3950–3700 cal BC (Sheridan 2009c and MacGregor, pers. comm.). That it continued in use after the ‘style drift’ into ‘modified Carinated Bowl pottery’ had occurred



Plate 6: Front (left) and back (right) views of rim from Pot 7 showing the repair perforation that has been drilled from both sides. Note also that the outside of the rim in this part of the pot is flatter than elsewhere, as shown in Plate 3 and Figure 6: 1). Photos: Alison Sheridan.

is clear from the dates from Maybole, South Ayrshire, which calibrate to 3780-3650 cal BC (Becket and MacGregor 2009, 118), similar to the dates for modified Carinated Bowl pottery obtained from several sites in the region. While it is not always easy to determine whether a Carinated Bowl assemblage is of 'traditional' or 'modified' type, the former is represented in the region as follows: in South Ayrshire, at Maybole (Sheridan 2009b), Grangeston (Sheridan 2009c) and Ayr Academy (vessel 19: Ballin Smith 2019a); in North Ayrshire, at Station Brae, Dreghorn (Addyman 2004; assemblage inspected by current author); in East Ayrshire, at Hillhouse (this publication), at The Leven at Loudoun Hill Quarry and at Laigh Newton (Atkinson et al. 2000; Ballin Smith in Toolis 2011); in South Lanarkshire, west of the Clyde: Larkhall Academy (Dutton and Atkinson 2006). Assemblages of modified Carinated Bowl pottery are known from South Ayrshire at Grangeston (Sheridan 2009c); from North Ayrshire at Dreghorn (Addyman

2004); and from South Lanarkshire, west of the Clyde, at Newton Farm, Cambuslang (MacSween 2009), Snabe Quarry, Drumclog (Ballin Smith 2015a) and Colinhill, Strathaven (vessel 1: Ballin Smith 2019b). Most of these assemblages are associated with radiocarbon dates in the 38th and 37th centuries BC. Other Carinated Bowl pottery, which could be of either variant, has been found at Ladywell near Girvan (Ballin Smith 2015b) and at Monkton (vessel 14: Ballin Smith 2015c), both South Ayrshire. The Monkton vessel is associated with a date of 3637–3510 cal BC (SUERC-44640, 4750±21 BP: *ibid.*, 17). Early Neolithic pottery is also reported to have been found near Girvan, during work relating to the Girvan Reinforcement Gas Pipeline (Becket and Innes 2007), but requires inspection to check the identification.

The Hillhouse assemblage is therefore an important addition to the small but growing *corpus* of early Neolithic, traditional Carinated Bowl pottery in the region.



Figure 7: Map showing distribution of finds of Early Neolithic Carinated Bowl pottery in Scotland; the numbered entries relate to finds from lowland western Scotland to the south and west of the Clyde since 2007 (when the map was first published: Sheridan 2007, fig. 1), or which were omitted from that map. Dots indicate finds of traditional Carinated Bowl pottery; stars, of modified Carinated Bowl pottery; X: traditional or modified Carinated Bowl pottery. Key: 1. Newton Farm, Cambuslang; 2. Larkhall Academy; 3. Colinhill Road, Strathaven; 4. Snabe Quarry, Drumclog; 5. The Leven, Loudoun Hill Quarry; 6. Laigh Newton; 7. Hillhouse; 8. Station Road, Dreghorn; 9. Monkton; 10. Ayr Academy; 12. Grangeston (William Grant and Sons distillery, Warehouse 37); 13. Ladywell. Note: other recent finds, from elsewhere in Scotland, have not been added. Map by Alison Sheridan.

General discussion

The archaeological evidence indicates there were three separate groups of features present in Area 3, Hillhouse Farm that were severely truncated by ploughing and by the construction processes for the Highlees pipeline. During the first examination of all the evidence, it was advocated that the pits and postholes formed a roughly rectangular outline. The large postholes in the north possibly formed a wall, with other pits and postholes suggesting the alignments of the east and west walls of a building. The southern end was unclear but the location of four pits suggested a possible rounded gable. The identification of early Neolithic pottery from pits in the south-east part of the site directed thoughts to propose the remains of an early Neolithic timber hall. This, however, was based on no additional stratigraphic alignments of nearby postholes or cultural evidence, such as the occurrence of pitchstone.

Re-examination of the site plan with the evidence of the post-excavation analyses and radiocarbon dates led to the interpretation of the pits and postholes in a different way. The archaeological features and the presence of pottery sherds pointed to activity taking place in the early Neolithic period on the eastern side of the excavated area, with a separate group of features to the west, with possibly residual Mesolithic material, and, with an undated alignment of postholes in the north being the most recent features. The evidence suggests that this is a more realistic interpretation of the features and material cultural remains that were present.

The groups of pits and postholes

The four large postholes at the north end of the excavated area were the most substantial features on the site. Each was found to contain large quantities of cobbles used for packing around a substantial post, but only a few fragments of burnt oak were identified from them. Unlike many of the other postholes in the rest of the excavated area they contained no traces of hazel nutshells or evidence of material culture. It is considered that these may represent a later fence or boundary alignment.

The two groups of pits in the south of Hillhouse Farm were located adjacent to a palaeo-channel,

which could have provided an available water source in prehistory, a resource that has attracted camps or short visits to the area.

The western features are represented by central group of four larger pits (353, 337, 365 and 347) and two postholes (364 and 366) with an outlier to the north (350), two further postholes to the west (345 and 359), a shallow one to the south (338), and a large elongated feature to the east (356). Evidence of oak and alder charcoal was recovered from those features to the south and west along with some fragments of carbonised hazel nutshell. A small quantity of burnt hazel nutshells and wood charcoal were located in the northern features of this group, with the two small postholes 364 and 366 in the centre of it, containing only traces of wood charcoal and hazel nutshells. Additional burnt hazel nutshell fragments and oak wood were found in the elongated pit 356 indicating that all the evidence of activity in this area was dominated by the processing and roasting of hazel nutshells and the use of firewood. Charcoal from the elongated pit returned a late Mesolithic date, the only radiocarbon date from this group. Whether the rest of the pits are roughly of the same period is open to speculation. Groups of late Mesolithic pits interpreted as fire-pits and postholes (often from wind screens) are a result of repeated autumn visits to places such as Site 7, West Challoch, Dunragit in Dumfriesshire (Baillie 2021), where a temporary camp was set up.

The eastern group of features was slightly better preserved than the west and comprised five features with an additional one to the north. The latter, 339, contained a large quantity of hazel nutshells. The largest pit (318) of this group was relatively shallow and again contained burnt hazel nutshells along with oak and hazel charcoal. Fragments from three separate pots, all dating to the early Neolithic were recovered from its lower fill. Its upper fill also contained oak and hazel charcoal and some burnt hazel nutshells, and a large quantity of early Neolithic pottery sherds from at least nine other vessels, and one small flake of flint.

The southernmost pit of this group 329/331, also contained sherds of pottery from at least four different vessels as well as oak charcoal, burnt hazel nutshells and a small chip of flint. There

were clear links between pottery sherds between this and pit 318 to the north. Between these two was a smaller pit 321, which contained a large quantity of hazel nutshells as well as fragments from two more early Neolithic vessels. The period of use for these pits spans a period between 3655 and 3380 cal BC (see Radiocarbon dates).

Several groups of early Neolithic pits with pottery have been excavated recently at Carnoustie, Angus (see Ballin Smith et al forthcoming), which seem to be external activities linked to the timber halls found on the site. Although preservation of organic material there was generally poor, the indications were that food was prepared in the fire-pits in these areas, with other activities also taking place. However, no formalised structures were recorded around the pits at this site, indicating their uses were temporary and not permanent. The radiocarbon dates from Carnoustie suggest activity from c. 3643 to 3366 cal BC to possibly as late as 3118 cal BC. The pits at Hillhouse Farm indicate a short period of use but perhaps they represent more than one visit to the site.

The pottery

All the pottery recovered from the eastern group of postholes has been dated to the early Neolithic period and represents an exceptional assemblage of vessels. The pots had been used for the preparation and consumption of foodstuffs, as abrasion marks, carbonised food residues and scorch marks indicate.

Certain pots seem to have been deposited into individual features, except Vessel 5, as a sherd from it was identified in pit 318 and another similar sherd was recovered from pit 331. The size of the sherds, along with the quantity of each vessel recovered, might suggest that they were whole or damaged when deposited into the postholes. The deliberate placement of pottery in pits and postholes concurs with evidence from other sites with early Neolithic pottery such as Monkton (Rennie 2015, and Ballin Smith 2015c) and Colinhill (Spence 2019, and Ballin Smith 2019b). In the case of Hillhouse Farm it is unlikely that the quantity of pottery found was accidentally incorporated into the backfill material of pits and postholes as can happen through disturbance. It would seem that the pottery was deposited purposefully in the pits in Area 3, either whole or

as selected sherds from particular vessels, prior to the features being filled in as an 'end of use' ritual.

The date range of the pottery of between 3655 to 3501 to 3380 cal BC (see Radiocarbon dates above) is similar to the date range produced at Monkton of 3637-3510 cal BC (Rennie 2015 and Ballin Smith 2015). The date of 3798-3637 cal BC for a pit which contained some of the sherds of an early Neolithic Carinated Bowl at Colinhill (Spence 2019, and Ballin Smith 2019), are a little earlier, but highlight the use and disposal of this pottery in the early Neolithic.

Conclusions

From the archaeological work along the pipeline route only Area 3 Hillhouse Farm produced clear evidence of prehistoric occupation, although of a temporary nature. What is remarkable about this site is the survival of pits and postholes in spite of much disturbance and truncation and the preservation of what can only be described as an important assemblage of early Neolithic pottery.

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Appendix 1: Summary catalogue

Note: ERD – estimated rim diameter; ECD – estimated carination diameter; E – exterior; C – core; I – interior. Wall thickness measurements exclude those across the rim. Fabric categories: 1: sand with occasional gravel-sized clasts of a variety of rock types, at density of 5% or less; 2: same, over 5%; 3: very sparse sand, plus crushed white stone with black biotite inclusions and large mica platelets.

Pot 1 (context 301: SF 305, part of 339 plus part of sieve finds <020> and <028>; context 317: SF 309, 311–13, 317, 322 and 341): 46 sherds, including five pairs of conjoining sherds, from large, fine, very thin-walled open bowl with everted, rolled-over beaded rim, long splaying straight neck, gentle carination and shallow belly. 15-20% of the pot present; overall weight 168 g. ERD 300 mm; ECD 233 mm; estimated height 124 mm; wall thickness range 3.7-6.6 mm. Surfaces carefully smoothed and polished to a low sheen; part of neck burnished to a high sheen. Rippled ‘fingertip’ fluting over part of the interior of the neck. Fabric: 3. Patches of thin black organic residue on E on belly, immediately below carination, and immediately below rim at one point; also band of black residue on I at bottom of neck, on one sherd. Figures 3.1, Plate 4.2 and 4.3.

Pot 2 (context 301: part of SF 305; unstratified, from 318: SF 328, 329; unstratified: 333, 334): nine sherds, of which six conjoin, from large, fairly fine, thin-walled open bowl with everted and probably rounded, rolled-over, beaded rim, splaying slightly

concave neck and probably gentle carination and shallow belly. <5% of the pot present; overall weight 44.7 g. ERD c. 320 mm; ECD 218 mm; estimated height 148 mm; wall thickness range 6.0-6.9 mm. Surfaces had been wet-smoothed but the E is roughened through abrasion. Fabric: 1. Figure 3.2.

Pot 3 (context 302, SF 302, 303, 336, 338): 30 sherds (many of which conjoin), two fragments and a detached lithic inclusion from a medium-sized, fairly fine carinated bowl of ‘neutral’ profile, with an everted, rolled-over beaded rim, a long straight upright neck, gentle carination and shallow belly. Around 30% of the pot present; overall weight 159.3 g. ERD 180 mm; ECD 154 mm; estimated height 135 mm; wall thickness range 6.8-10.2. E and I wet-smoothed; E polished to a low sheen. Fabric: 2. Figure 4.1.

Pot 4 (context 301: part of SF 339; context 317: SF 315): three sherds (of which two conjoin) from a medium-sized carinated bowl of neutral profile, with an upright, rolled over, beaded rim, the uneven beading having been worked into a peaked shape. The neck is long, straight and vertical; the carination very gentle; and the belly fairly shallow. Around 5% of the pot present; overall weight 34.4 g. ERD c. 200 mm; ECD c. 190; estimated height c. 119 mm; wall thickness range 5.6-7.4 g. E and I wet-smoothed; there are hints of horizontal smoothing marks on the interior of the rim. Fabric: 1. Small patches of thin black organic residue on E of rim and I of carination sherd. Figure 4.2.

Pot 5 (context 301: SF 301, part of 305, part of 339, part of sieve find <028>; context 317: SF 340; unstratified, from 318: SF 326, 327, 331, 332; context 302: SF 342). Fourteen sherds (including one pair of conjoining sherds) from a fairly large, thin-walled bowl, possibly a carinated bowl (although no carination sherds present), with an everted, rounded, rolled-over beaded rim and a straight neck. <10% of the pot present; overall weight 69.3 g. ERD 240; wall thickness range 6.1-8.8 mm. E and I wet-smoothed, although subsequently

- roughened through abrasion. Fabric: 1. It is not certain that SF 305 belongs to this pot but there is no other candidate vessel. Note also that rim sherd SF 342, from context 302, is not guaranteed to belong to this pot; it might have come from a different, but very similar-looking pot – a notional ‘Pot 20’. Figure 4.4.
- Pot 6** (context 301: part of SF 339, part of sieve find <020>; unstratified, from 318: SF 330: Seven sherds and five fragments (plus crumbs) from a small, thin-walled, fine carinated bowl with a straight, probably slightly splaying neck, a gentle carination and probably a shallow belly. 5% or less of the pot present; overall weight 19.1 g. ECD c. 160 mm; wall thickness range 5.5–8.3 mm. E and I wet-smoothed. Fabric: 1. Figure 4.3.
- Pot 7** (context 301: SF 305, 339, part of sieve find <028>; context 317: SF 306, 308, 310, 312, 314, 316, 318–21, 324–6; unstratified: part of SF 347) Fifty-four sherds (of which many conjoin), 10 fragments and several crumbs from a deep-bellied, sinuous-profiled pot with an everted, rounded rim, varying in shape around the pot: one rim sherd has a flattish exterior. The belly is globular. Around 75% of the pot present; overall weight 902.9 g. ERD c. 180 mm; estimated height c. 179 mm; wall thickness range 6.5–14 mm. Upper part of E looks to be wet-smoothed; lower down, E slightly rougher, partly due to use-abrasion. Smoothing and wiping marks on I, including marks possibly left by grasses or similar plant matter. Fabric: 2. One rim sherd has a repair hole just below the rim, drilled from both sides. Figure 5.1, Plate 3.1, Plate 4.1, Plate 6.
- Pot 8** (context 302: part of SF 336, 337; context 330: SF 343, sieve find <029>) Thirteen sherds (of which several conjoin) and three fragments from a medium-sized, thin-walled, fine hemispherical bowl with a gently everted, rolled over beaded rim. <10% of the pot present; overall weight 43.1 g. ERD c. 180 mm; estimated height c. 127 mm; wall thickness range 5.7–7.9 mm. E and I probably wet-smoothed; horizontal smoothing marks on E, possibly made by wiping with grass or other plant matter; the E surface is slightly undulating from the smoothing process. Fabric: 1. Rim sherd SF 337 is burnt and rim sherd 336 looks to be scorched on E and I. Figure 5.2.
- Pot 9** (context 305: SF 335; unstratified: part of SF 347) Sixteen sherds, including several conjoining sherds, from a medium-sized, thin-walled, fine bowl with a sinuous profile and an everted, rounded, rolled-over, unevenly beaded rim. Around 15% of the pot present; overall weight 70.4 g. ERD 180 mm; estimated height 120 mm; wall thickness range 5.2–8.1 mm. E and I wet-smoothed, with horizontal wipe marks on I; rim-and-neck sherd SF 347 has a slightly corrugated I from the smoothing process. Fabric: 1. Patch of thin black organic residue on E. Figure 5.3.
- Pot 10** (context 301, part of sieve find <020>) Single sherd, possibly from the upper belly just below the carination of a thin-walled, fine, carinated bowl. <5% of the vessel present; weight 4 g. Too small to estimate pot diameter; wall thickness 5.5–7.2 mm. E and I wet-smoothed and buffed to a low sheen. Small patch of blackish-brown deposit on E but this does not look to be organic residue; could be extraneous material. Not illustrated.
- Pot 11** (context 301, part of sieve find <028>) Six sherds (including two conjoining sherds) and one fragment from a thin-walled, fine bowl, that may – depending on the orientation of the largest sherd – have had a long, slightly concave, probably splaying neck. If this is the case, the vessel could possibly have been an open, shallow-bellied carinated bowl like Pots 1 and 2. One sherd may be a simple rounded, slightly everted rim sherd but the ‘rim’ may be the result of edge-abrasion during wet-sieving. <5% of the pot present; overall weight 12.5 g. Sherds too small for estimating pot diameter; wall thickness range 6.4–7 mm. E and I wet-smoothed and there is a hint of some possible fingertip fluting on the E or I of the largest sherd. Fabric 1. Not illustrated.

Pot 12 (context 301, part of SF 305) One small sherd from a thin-walled pot; sherd too small to indicate size and shape of vessel. <5% of the pot present; weight 1 g. Wall thickness 7 mm. Surfaces smoothed but abraded. Fabric: 1. Sherd is burnt. Not illustrated.

Pot 13 (context 303, SF 304) One sherd from the bottom of the belly of a fairly large, relatively thick-walled but not very thick pot. <5% of the pot present; weight 19.2 g. Wall thickness 8.6-10.4 mm. Surfaces had been smoothed but E is slightly pitted, scratched and abraded. Fabric: 1. Not illustrated.

Pot 14 (context 301, part of SF 339) Three conjoining sherds from the lower belly of a large, thick-walled cooking pot. <5% of the pot present; weight 50 g. Wall thickness 12.8-13.8 mm. E and I smoothed but E pitted with a few sockets for dissolved-out lithic inclusions. Fabric: 1. Thin black organic residue on I. Not illustrated.

Pot 15 (context 301, part of SF 339) Burnt and heavily abraded sherd, possibly from the rim area, from a thin-walled pot; if it is a rim sherd, the rim is slightly everted and gently pointed. <5% of the pot present; weight 4 g. Wall thickness range 5-6.8 mm. 2. Had been carefully smoothed but surface abrasion has revealed the sand and gravel inclusions and roughened the surfaces. Fabric: 1. Thoroughly burnt. Not illustrated.

Pot 16 (context 302, sieve find <027>) Two conjoining belly sherds and one fragment from a thin-walled, fairly fine pot. <5% of the pot present; weight 3 g. Wall thickness range 4.8-6.4 mm. E and I probably wet-smoothed, although inclusions protrude. Fabric: 1. Not illustrated.

Pot 17 (context 305, part of sieve find <022>) Six sherds and 18 fragments from a fairly thin-walled, fairly fine pot. <5% of the pot present; overall weight c 14 g. Wall thickness: 7.5 mm on largest sherd; thickest in set 11.3 mm, but it is not certain whether all the sherds and fragments belong to the same pot. Heavy abrasion, both in antiquity and from the

wet-sieving process, makes it difficult to assess the original surface finish, but careful smoothing is assumed. Fabric: 1. Thoroughly burnt. Not illustrated.

Pot 18 (context 306, SF 344) Small, burnt, featureless spall. <5% of the pot present; weight 0.9 g. Wall thickness 5.8 mm, but will have been greater originally. Heavy surface abrasion makes it hard to assess original surface finish. Fabric: 1. Thoroughly burnt. Not illustrated.

Pot 19 (context 301, part of SF 339) Lower belly sherd from a fairly thin-walled pot. <5% of the pot present; weight 11 g. Wall thickness 6.9-7.6 mm. Heavy surface abrasion makes it hard to assess original surface finish, but it is assumed that the surfaces had been carefully smoothed. Fabric: 1. Thoroughly burnt. Not illustrated.

Unattributable plus possible Pot 21 (context 301, part of sieve find <028>) Three sherds and c. 25 fragments from an indeterminate number of pots; overall weight 5 g. Most are so heavily abraded from the wet-sieving process that it is impossible to tell whether they belong to any of the already-identified pots, although there may be one hitherto unaccounted-for pot present: Pot 21 comprises one sherd and two fragments of a very thin-walled, fine pot (3.7 mm) that is not Pot 2. Just a tiny percentage (c. 1%) of the pot is present. The surfaces have been carefully smoothed and it belongs to Fabric group 1. Not illustrated.

Unattributable plus possible Pots 22 and 23 (context 330, part of sieve find <029>) Two sherds and c. 25 fragments from an indeterminate number of pots; overall weight 2.2 g. Most are so heavily abraded from the wet-sieving process that it is impossible to tell whether they belong to any of the already-identified pots, although there may be two hitherto unaccounted-for pots present, each represented by a single, small sherd, with carefully-smoothed surfaces and belonging to Fabric Group 1: Pot 22 is 7.2 mm thick; Pot 23 is 3.8-4.1 mm thick. Not illustrated.

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