7. FINDS

7.1 Pottery

Melanie Johnson

An assemblage (230 sherds, 1,875g) of handmade prehistoric pottery was recovered consisting of a minimum of 45 vessels. The quantification of the pottery is shown in Table 4. The average sherd weight was 8g, indicating the assemblage was fragmented and consisted of generally small sherds and, overall, the assemblage was abraded to very abraded. A full catalogue is included in the site archive.

Small fragments of fired clay or possible daub were recovered from Pit 038 and Post Hole 776, in a fine orange fabric, but this is such a small assemblage it is not possible to comment upon this further.

7.1.1 Fabric

The fabrics were generally coarse, with most being hard-fired, though a number were crumbly. Colours were generally grey, greyish-brown and brown to orange with generally unoxidised darker cores. Wall thickness ranged from 5mm to 17mm, and inclusions were generally small and comprising 1–3%, with some examples of larger chunks of rock. Surfaces were generally reasonably well finished, being smoothed, with occasional finger-marking or wiping marks visible. There was very little sooting or charred residue visible.

7.1.2 Typology

Ten of the vessels included rim sherds, seven included bases, and a further possible curved shoulder sherd (P14 from Pit 226) was also recorded. The rest of the assemblage was plain body sherds.

The rims included two tiny sherds which comprised only the rounded rim tip (P2 from Pit 038; P30 from Pit 920), four everted rims (P27 from Pit 905, P34 from Pit 639, P38 from Post Hole 657, P41 from Post Hole 677), an incurving rim (P21 from Pit 587), and rims from open-mouthed vessels (P15 from Pit 230, P17 from Pit 271, P19 from Pit 380).

The bases were mostly plain, flat bases (P16 from Pit 230, P18 from Pit 338, P20 from Post Hole 522, P22 from Post Hole 729, P39 from Post Hole 673, P43 from Post Hole 681), with one example of a footed base (P12 from Pit 170).

One base (P18) had a diameter of 16cm and one rim (P41) had a diameter of 25cm, otherwise diameters were not measurable, due to the small size of the sherds.

Only one vessel had any indication of decoration or embellishment. This was a rim sherd (P15) from Pit 230, which had been perforated below the rim.

Six radiocarbon dated features which also contained pottery were all dated to the Late Bronze Age (148, 160, 271, 380, 657 and 776).

7.1.3 Distribution

The vast majority of features contained only a few sherds from one vessel, and the isolated pits and six-post structures contained more of the diagnostic pottery than the roundhouses. Pits 039, 170, 226, 230, 271, 338, 380, 589, 640, 905 and 920 contained rims and bases, while Four-post Structure 3 contained a single base sherd (P20), Six-post Structure 1 contained an everted rim (P38), and Six-post Structure 2 contained two base sherds (P39, P43) and an everted rim (P41). Roundhouses 3, 4, 5 and 6 contained pottery, but apart from one base sherd from Roundhouse 5 (P22 from 729), these were all plain body sherds.

7.1.4 Discussion

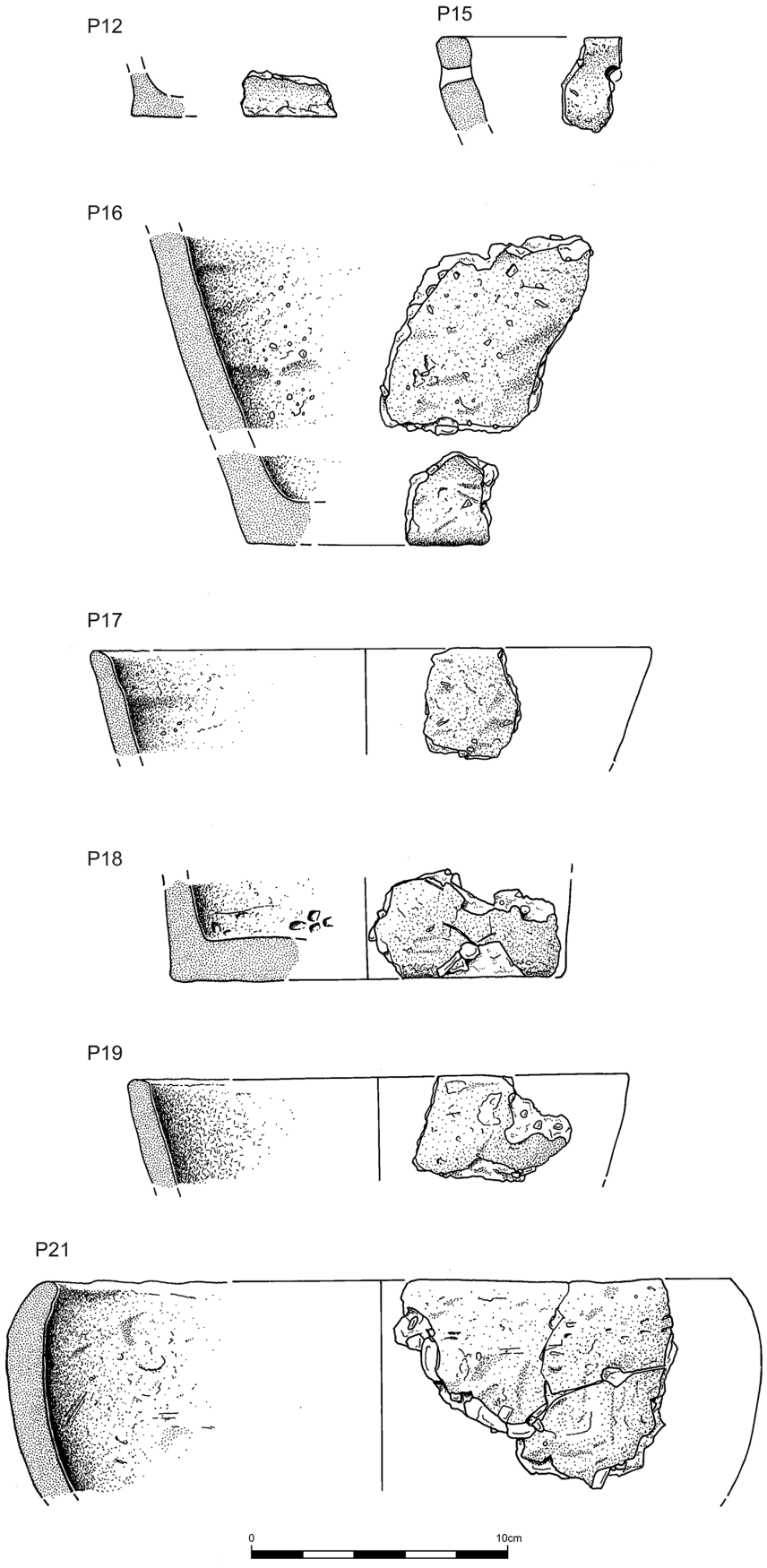
The assemblage is typical of later prehistoric assemblages from mainland Scotland, which consist of coarse, plain vessels with upright, incurving, everted or bevelled rims. Refining dating of pottery from this period is problematic, due to poorly understood typologies, extended periods of use for the so-called 'flat-rimmed ware', and the small size of excavated assemblages. For example, the Early Iron Age palisaded enclosure at Blackford, Perth and Kinross, returned just two body sherds (Johnson 2021) while the Middle Iron Age souterrain and post-built roundhouse at Drumyocher (Johnson 2017) had no finds, and the Early Iron Age settlement at Ironshill, Angus (Pollock 1997), which included four- and six-post structures, also had no pottery. Middle and later Bronze Age sites appear to have larger pottery assemblages than Iron Age sites, which is reflected in the evidence at this site, but even still the typologies are poorly defined, and dating is reliant upon the ability to

Table 4 Distribution of prehistoric pottery

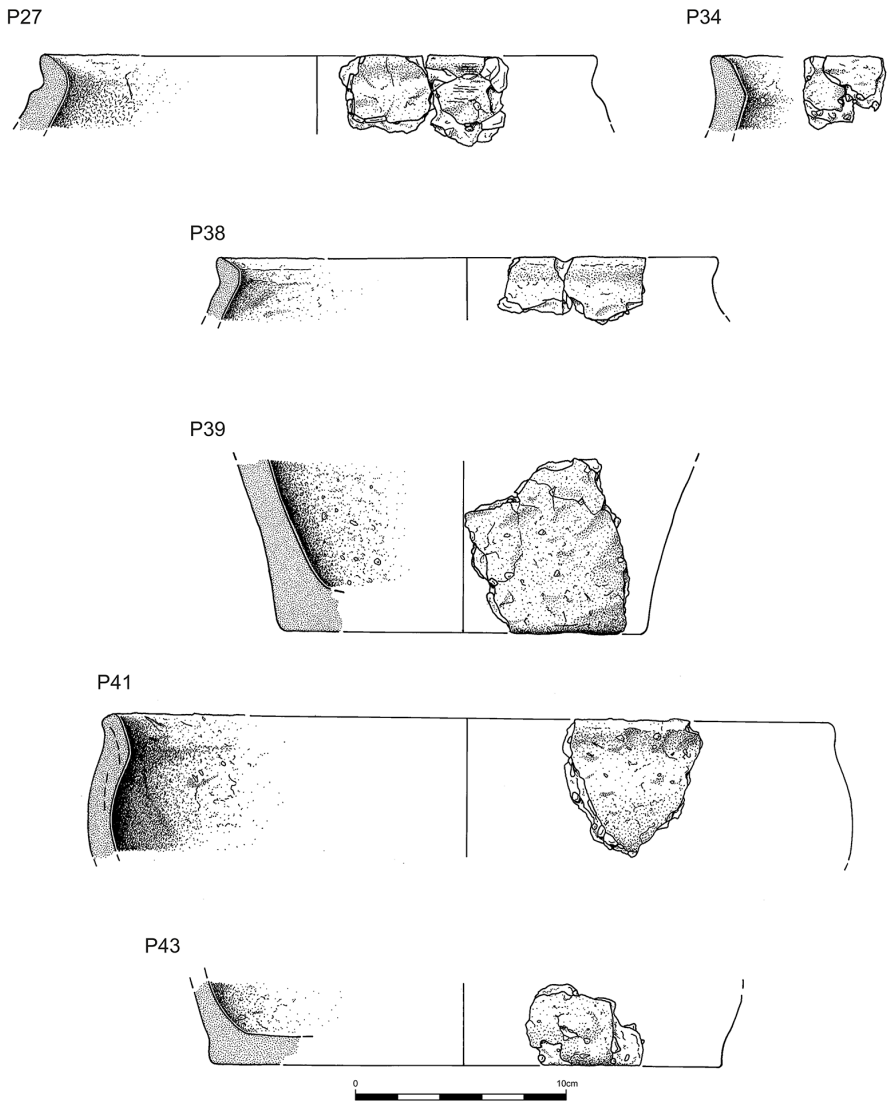
Context	Fill of	Area	Feature	No. sherds	Weight (g)
133	132	1	RH1	2	3
101	100	1	RH3	1	3
105	104	1	RH3	3	3
149	148	1	RH3	13	123
051	050	1	RH4	5	7
161	160	1	RH4	7	32
171	170	1	RH4	2	12
223	222	1	RH4	3	13
227	226	1	RH4	1	4
697	696	1	RH5	1	2
730	729	1	RH5	1	13
777	776	1	RH6	1	1
784	783	1	RH6	1	2
658	657	1	6P1	4	42
674	673	1	6P2	23	285
678	677	1	6P2	3	75
680	679	1	6P2	7	42
682	681	1	6P2	7	89
029	028	1	Pit	3	14
039	038	1	Pit	1	4
231	230	1	Pit	3	204
272	271	1	Pit	7	36
337	338	1	Pit	17	231
381	380	1	Pit	1	32
627	626	1	Pit	1	9
637	636	1	Pit	3	29
640	639	1	Pit	5	35
644	643	1	Pit	9	28
523	522	2	4P3	3	39
589	587	2	Pit	3	152
906	905	2	Pit	53	213
921	920	2	Pit	36	98

procure secure radiocarbon dates. However, some general comments on dating can be made and there may be some emerging trends within the pottery assemblages of this period.

There are no internally bevelled rims and a greater number of everted rims at Loak Farm, suggesting a date beyond the Middle Bronze Age, which ties in well with the radiocarbon dates. For example, the assemblage from the Middle Bronze Age roundhouses at Drumyocher, Aberdeenshire (Johnson 2017) consisted of bucket- and barrel-shaped vessels with internally bevelled rims being



Illus 28 Late Bronze Age–Early Iron Age Pottery



Illus 29 Late Bronze Age–Early Iron Age Pottery

dominant, and contained few everted rims, in contrast to Loak Farm. The Loak Farm assemblage also does not contain any of the ridged vessels more common in the Middle Bronze Age (such as those seen at Linshie Gutter, Lanarkshire (Terry 1995)), which also indicates a later date. McGill (2003) suggested that internally bevelled rim forms could broadly be seen as diagnostic of the later Bronze Age.

Everted rims have been found associated with a souterrain and ring ditch roundhouse at Thainstone, Aberdeenshire (in this case, decorated) (McGalliard & Wilson 2021), at Birnie, Moray (MacSween in prep), at Redcastle souterrain (McGill 2005) and at Dunnicaer promontory fort (Cruickshanks 2020). In each of these instances, their context of recovery suggests they date to the early centuries AD. Everted and flat rims have also been found associated with Late Bronze Age and Iron Age unenclosed settlement at Seafield West, Inverness (Johnson 2011) and with Middle/Late Bronze Age ring ditch roundhouses at Oldmeldrum (Johnson 2010). This indicates that everted rims begin to appear in the later Bronze Age and continue in use through the Iron Age. Therefore, much of the typological dating of later prehistoric sites relies on proportions of pottery types, rather than absolute presence or absence, in lieu of more detailed synthesis of assemblages with secure radiocarbon dates.

No pottery was recovered from the features dating to the early medieval period.

7.2 Worked stone

Ann Clarke

A small assemblage of eight objects of worked stone was recovered, comprising a variety of artefact types including two flat perforated cobbles (400.1 and 825.1); two cobble tools (217.1 and 217.2); a hollowed stone (001.1); two anvils or rests (881.1 and 265.1); and a trough quern (473.1) (Table 5).

Two flat subcircular cobbles (400.1 and 825.1) have a perforation made in the centre of their faces (Illus 30). The largest, 400.1, is made from a flat waterworn cobble of quartzitic schist which has subsequently broken across one end. The perforation is biconical in cross-section and made by grinding from both faces to create a circular hole of 30mm in diameter on the surface narrowing to just 9mm at the hole. The perforation in the centre of 825.1 was made in a similar fashion and is the same shape and size; this a flat cobble of pelitic schist which is damaged around the whole circumference, obscuring the original outline.

The function of these perforated cobbles is not known at present, but they are likely to be components of a larger piece of equipment. They are too large to be spindle whorls (even broken the stones are heavy, weighing 1,100g (400.1) and 498g (825.1)). If they were designed to be suspended, then the central placement of the hole suggests they were to lie flat against something to weigh it down or keep it flat rather than swinging free. The twine used for suspension would have had to be thin, given the 9mm hole diameter. It is more probable that they were designed to be used as a weight or flywheel for a rotational piece of equipment such as a drill (Ilan 2016). The larger perforated cobble (400.1) came from Pit 399, which cut Pit 384: perhaps large Pit 384 was constructed to contain a working station for a contraption such as a drill. The second perforated cobble (825.1) was from Ring Ditch 824.

An alternative interpretation for the perforation is to enable lifting the stone disc from a container. A narrow twine would thread through the small hole and be tied to a toggle below, allowing the disc to be raised or lowered into a container such as a pot without touching the lid.

Stone discs with central perforations, but of differing dimensions, are found sporadically on later prehistoric sites in the wider region. If they are indeed parts of a drill, they would, given their different sizes, have been used for working a variety of materials. They appear to be associated with activity dating to the Middle Bronze Age and later. A weight of similar dimensions to 400.1 came from Structure 1 at a Middle Bronze Age roundhouse at Drumyocher, Aberdeenshire (Johnson 2017) and two centrally perforated cobbles were recovered from over Structure 3C, another Middle Bronze Age roundhouse, at Blackford, Perthshire (O'Connell & Anderson 2021). At Aldclune, Perthshire, the centrally perforated stones were from the earlier roundhouse dating from around 200 BC (Hingley et al 1997) while two centrally perforated cobbles came from Green Castle, Portnockie dating to the Iron Age or perhaps Late Bronze Age (Clarke 2019). More locally, a group of similar roughly perforated subcircular stones was recovered from Oakbank crannog, Loch Tay (Dixon 1984: 233–4, Fig. 34), interpreted as net or thatch weights, a

Table 5 Distribution of stone artefacts

Cat no.	Context	Fill of	Area	Feature	Worked Stone
001.1	001	-	1	Unstratified at RH4	Hollowed stone
217.1	217	216	1	RH3	Pounder/grinder
217.2	217	216	1	RH3	Plain hammerstone
265.1	265	264	1	Pit	Anvil/rest
400.1	400	399	1	Pit	Perforated cobble
473.1	473	471	2	4P3	Trough quern
825.1	825	824	1	RD 824	Perforated cobble
881.1	881	880	1	Pit	Anvil/rest

Illus 30 Two flat perforated cobbles (400.1 and 825.1) and cobble tool (217.1)

numberof perforated stone weights were recovered from Black Spout, Pitlochry (Strachan 2013: 40–2), and a stone weight was recovered from the Middle Bronze Age roundhouse settlement at Drumyocher, Aberdeenshire (Johnson 2017).

The pounder/grinder (217.1) is a fine cobble tool dating to the Bronze Age or Iron Age (Illus 30). It is a rounded quartzite cobble with three broad rounded facets pecked and ground on one end. It was found together with a plain hammerstone (217.2) made

from a schist pebble with light hammering marks over parts of the surface, in Pit 216 associated with Roundhouse 3.

The hollowed stone (001.1) is a large sub-rectangular block of sedimentary rock with a flat base (Illus 31). The fine, oval, round-based basin has been ground into the upper face and it has a smooth interior with visible striations running around the inside of the basin, suggesting a circular motion of shaping or wear. A rough channel (50mm–30mm wide) has been pecked across the flat side rim of the slab at one end, presumably to drain or collect liquid associated with the basin (Illus 31). The rounded basin itself is reminiscent of a Neolithic quern or even a polissoir, but the channel worked on the flat edge has some similarities with hollowed stones found at Late Bronze Age/Early Iron Age Finstown, Orkney, which were thought to be somehow associated with metalworking (Clarke 2020). This large, hollowed stone was found during initial topsoil stripping over the area of Roundhouse 4 and slight, fresh machine damage on its upper face indicates it was sitting upright on the sandy soil below. This suggests the stone was originally left in situ in Roundhouse 4 and may offer a clue as to what the structure was used for. In this respect the remains of iron slag in one of the post holes of Roundhouse 4 may be linked with the use of the hollowed stone in some form of metalworking.

Hollowed stones do not occur as standardised forms; they can be difficult to identify, compare and discuss since they occur in a wide variety of finishes, dimensions and basin or cup shapes (Clarke 2006). They are found across Scotland especially during the Iron Age but none, with the exception of the Finstown stones, have a worked channel on the surface.

Potential evidence for other craft activity comes from two large stone blocks found in pits to the east of the main post hole structures. Neither block appears to have been deliberately shaped. The larger boulder (881.1, from Pit 881) with dimensions of 560mm by 350mm by 180mm has a rounded base and slightly concave upper face formed by cleavage along a quartzitic layer. There is no evidence for grinding. A slightly smaller block of schist (265.1, from Pit 265) with dimensions of 435mm by 360mm by 190mm is also unworked. These may be structural stones or more likely anvils/working rests for craft activities. They were both found in larger pits beyond the structures and could have been used for activities that needed to be located outside the main occupation area.

Illus 31 Hollowed stone (001.1), with close-up of rough channel

A trough quern (473.1) was the only stone artefact from Area 2 (Illus 32). It is made from a coarse-grained metamorphic rock with large grains of quartz and mica. The stone is now very friable and the original edges are destroyed. The worn upper face survives best because it has been compressed and flattened through use, and this has prevented weathering taking hold. It may have been broken in half before burial. The base is slightly rounded and the worked upper face is concave along the length and asymmetrically concave across the width, with heavier smoothing wear on the slightly steeper side. The basin is 25mm deep and worn smooth through use as a grinder. Though the original edge is damaged, the worn face may have extended out to the edge.

The quern dates to the Bronze Age and was reused as post hole filling or as a post pad, in Four-post Structure 3 (Post Hole 471). Close links between agriculture and structures are observed during the Bronze Age of the Northern Isles, where stone agricultural tools such as mattocks and ard points were frequently redeposited in structures, sometimes, as in the case of Ness of Gruting, Shetland, together with caches of grain (Clarke 2006). Unfortunately, no caches of grain were discovered within the four-post or six-post structures following environmental sampling to suggest that they were granaries, but that does not eliminate these structures from consideration as agricultural buildings of another function.

7.3 Slag

Rod Mackenzie

The assemblage of potential metalworking residues largely consists of pieces of slag-like residues as well

Illus 32 Trough quern (473.1)

as magnetic geological material. For the purposes of this report, the general terms macro-residues and micro-residues relate to fragments of material with a volume greater or less than approximately 3mm^3 respectively. Any micro-residues relating to metal production have been quantified separately to the natural geological material in the samples. No instrumental analysis has been performed on any of the metal production residues in the assemblage.

7.3.1 Overview of the assemblage

The assemblage comprised 43 pieces of metal production residues, weighing approximately 2,600g in total.

A description of the macro-residues and an overview of the micro-residues are given below. A catalogue of the micro-residues in the assemblage, listing quantities by context, is provided in the archive.

The only diagnostic macro-residues were two pieces of slag recovered from the fill of Pits 234 and 260, which were close to each other to the north of Roundhouse 1, where radiocarbon dating indicates they were 8th- to 10th-century AD in date. The single fragment of slag from Pit 234 weighs approximately 320g and 85mm in diameter and is plano-convex in shape. The fracture surface of the slag is graphite-grey in colour, and it has a variable density, with a low to moderate abundance of vesicles. The original outer surface of the slag has the possible imprint of a piece of decomposed charcoal. A small fragment of possible corroded iron weighing approximately 1g was also found in the micro-residues from Pit 234. The fragment of slag from Pit 260 is also plano-convex in shape, but at 2,360g and around 180mm diameter, it is considerably larger than the piece from Pit 234. The surface of the slag suggests that it has a similar variable density and abundance of vesicles as the piece from Pit 234, and it also has some traces of decomposed charcoal. Both of the above pieces are characteristic slag by-products of ironsmithing known as 'smithing hearth bottoms'. These are the solidified remains of slag that originally formed and accumulated in the base of blacksmiths' hearths during use. Smithing hearth bottoms are a relatively common find at sites dating from the Late Iron Age to the medieval period where ironsmithing had taken place.

Fragments of slag were also recovered from the fill of Pit 050 (Roundhouse 4) and these range in volume from sub-3mm^3 to around 100mm^3. There are 72 pieces of macro-residue weighing 422g in total, and approximately 550–600 pieces of micro-residues that weigh 462g in total. The slag is pale buff to grey in colour, has a relatively high abundance of vesicles and is of low density. The slag has the characteristic morphology of fuel-ash-derived material. Amongst the fuel-ash slag, there were four pieces of micro-residue that are indicative of ironsmithing. The pieces are small spheres (sub-2mm diameter) of graphite-grey slag.

There are very low trace amounts of ironsmithing evidence in some of the samples, but these tend to consist of only one or two sub-1mm diameter pieces of spheroidal hammerslag or flakes of hammerscale. The only exception is Pit 464 (Four-post Structure 3), which contained seven spheres of hammerslag ranging in size from sub-1mm to approximately 4mm diameter.

The micro-residues from Post Hole 160 (Roundhouse 4) and Ditch 722 (Roundhouse 5) contained fragments of fuel-ash slag. Around 50 small fragments of fuel-ash slag totalling 8g were present in Post Hole 160, whereas Ditch 722 contained 14 small fragments weighing less than 1g.

7.3.2 Interpretation of the assemblage

The evidence for metal production all appears to relate to the forging of ferrous metal. The most notable pieces in the assemblage are the two lumps of smithing hearth-bottom slag recovered from Pits 234 and 260. Both of these features have been radiocarbon dated to the early medieval period (Pit 260: 774–992 cal AD, 95% probability, 1140±24 BP SUERC-99180, 1111±22 BP SUERC-99181; Pit 234: 771–991 cal AD, 95% probability, 1121±26 BP SUERC-100342, 1189±26 BP SUERC-100343). Apart from one small fragment of corroded iron, no other residues relating to metal production were found in Pits 234 and 260.

The type of fuel-ash slag recovered from Pit 050 (Roundhouse 4) is a type typically produced by a reaction between alkali wood ash and the siliceous lining of the surface that the fire and ash is in contact with, and it can potentially originate from a range of activities, such as food or pottery production,

funeral pyres or the burning-down of wattle and daub buildings (Keys 2012: 2; Salter 2005: 1–2). Only four pieces of micro-residues relating to ironsmithing were found in Pit 050, which is not enough to confidently link the fuel-ash slag in the context with metal production, and the slag could be the by-product of an unrelated pyrotechnic event.

Trace amounts of micro-residues relating to ironsmithing were present in the bulk samples recovered from the site. The individual pieces of micro-residue are almost entirely at the smaller end of the spectrum (<1mm in diameter) and were well distributed across the site, with no significant concentrations to pinpoint where smithing activities may have been carried out. It is worth bearing in mind that very small pieces of smithing micro-residues can easily be redistributed, either by being swept up or blown around, or carried on the soles of footwear or buckets, baskets and so on.

From the types and amount of residues present in the assemblage, the overall impression is that ironsmithing was an activity that had taken place during the later phases of occupation, although it was possibly only done on an occasional basis, perhaps by an itinerant smith. The smithing hearth bottom from Pit 260 suggests that ironsmithing was being carried out at, or close to, the site during the early medieval period.