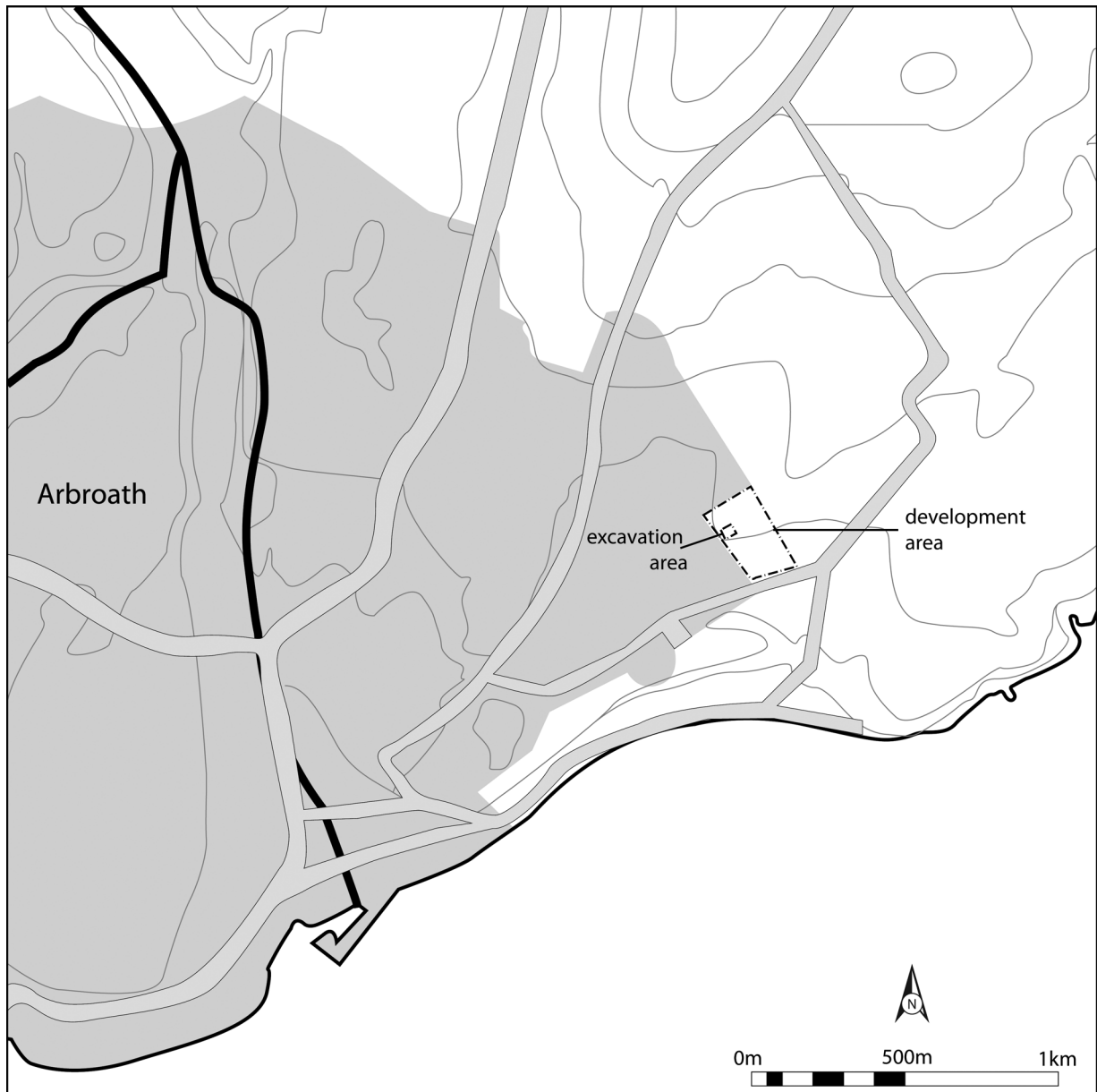




Illus 1 Location of the development area on Cliffburn Road, Arbroath. (Drawn by Stefan Sagrott)

Unenclosed Middle Bronze Age settlement and Early Historic pits at Cliffburn Road, Arbroath, Angus

Lindsay Dunbar

with contributions by R P Engl, A MacSween and J Robertson

Cliffburn Road is located on the NE fringes of the former fishing town of Arbroath, Angus ((NGR NO 6559 4178; Illus 1). The site lies on a raised beach set back a little way from the coast with clear views out over the North Sea. The cliffs, to which Cliffburn Road owes its name, which are less than 300m from the site, are approximately 20m high at this point; immediately to the north they are higher and steeper and often form an impassable boundary to the seashore, while a few hundred metres further south they slope away to sea level.

In 2010 AOC Archaeology undertook the evaluation of a greenfield site, 4.94ha in area, on Cliffburn Road in advance of a housing development. All that was found during the evaluation was the remains of a ring-ditch roundhouse (ST1) and therefore excavation focused on an area 45m by 45m centred on the roundhouse. Within this area another structure, a post-ring roundhouse (ST2), was subsequently uncovered as well as a scatter of pits and post-holes (Illus 2).

Excavated features

After the removal of the overburden the exposed surface was hand-cleaned to identify features. The excavation of all features associated with the two structures comprised the removal of 100% of archaeological sediment by hand, while the excavation of the isolated features comprised the removal of 50% of archaeological sediment by hand unless finds or other anthropic inclusions dictated otherwise. Standard palaeoenvironmental samples (30 litres) were recovered from every significant soil context, where volume of fill allowed.

Structure 1 (Illus 3)

ST1 consisted of a large crescentic ring-ditch around the eastern side of the structure, with a cluster of postholes within the interior. The projected external diameter of the ring-ditch would have been 14m, and thus the minimum diameter for ST1. The ring-ditch was up to 9.5m long and 2m wide when first uncovered, and was up to 0.31m deep with gently sloping sides and a flat base. It had a single relatively homogeneous fill with extensive signs of bioturbation in the form of root activity and animal burrows, particularly at its northern end. Pottery sherds, V2 (Illus 4), and quartz lithics, FN14,

were recovered from the ring-ditch, and although it was recovered from the overlying ploughsoil, it is probable that the saddle quern, FN08 (Illus 5) was also from this feature.

Along the inner edge of the ring-ditch are six postholes (Postholes 1–6), all c. 0.35m in diameter and spaced between c. 1.15m and 1.8m apart (centre to centre). Posthole 7 might be a replacement or support post. Together these postholes would have formed the eastern side of a post-ring with a diameter of c. 9.5m which would have enclosed all the features found to the west of the ring-ditch (Illus 3).

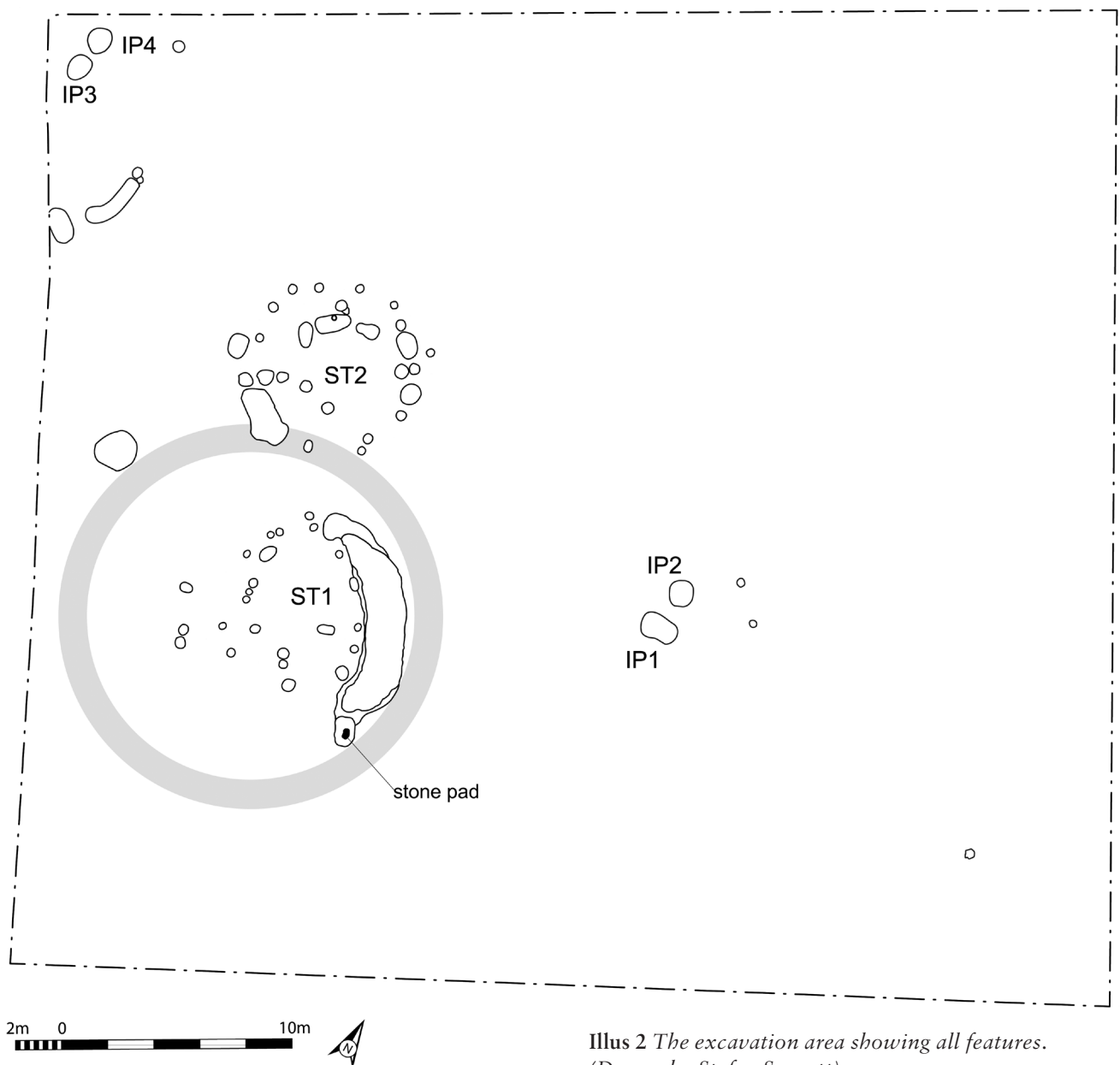
A further 17 variously sized postholes and pit features lie within the footprint of ST1. These postholes are quite deep, with an average depth of more than 0.20m, well defined and may represent the remains of internal partitions within ST1.

Samples of hazel charcoal from the ring-ditch and from Postholes 8 and 9 were submitted for radiocarbon-dating (Illus 6) and produced dates in the mid-2nd millennium cal BC (Table 1). Three of the dates, one from the ring ditch (SUERC-33021) and the dates from the postholes (SUERC-33022 and SUERC-33023) are statistically indistinguishable from each other, suggesting activity sometime in the 16th–14th centuries cal BC, while the fourth date, from the ring-ditch (SUERC-33020), suggests slightly earlier activity.

Structure 2 (Illus 7)

ST2 lay immediately to the north of ST1 (Illus 2) and consisted of a well-defined post-ring roundhouse with internal pits and postholes. There were at least nine post-holes forming a post-ring with an overall diameter of c.7.5m. The postholes were all of a similar diameter and depth, 0.40m in diameter and mostly over 0.23m deep. The postholes were spaced at intervals of between 1.5m and 2.5m (with an average of 1.95m). A further three postholes (Postholes 10–12) which are of very similar dimensions and lie very close to the line of the post-ring may represent replacement or supporting posts.

Pit 1, a large but shallow pit no more than 0.20m deep, lay along the circuit of the post-ring. It had been heavily damaged by rabbit burrows and it is possible that additional postholes belonging to the post-ring had been removed by the rabbit activity. However, it is also



Illus 2 *The excavation area showing all features.
(Drawn by Stefan Sagrott)*

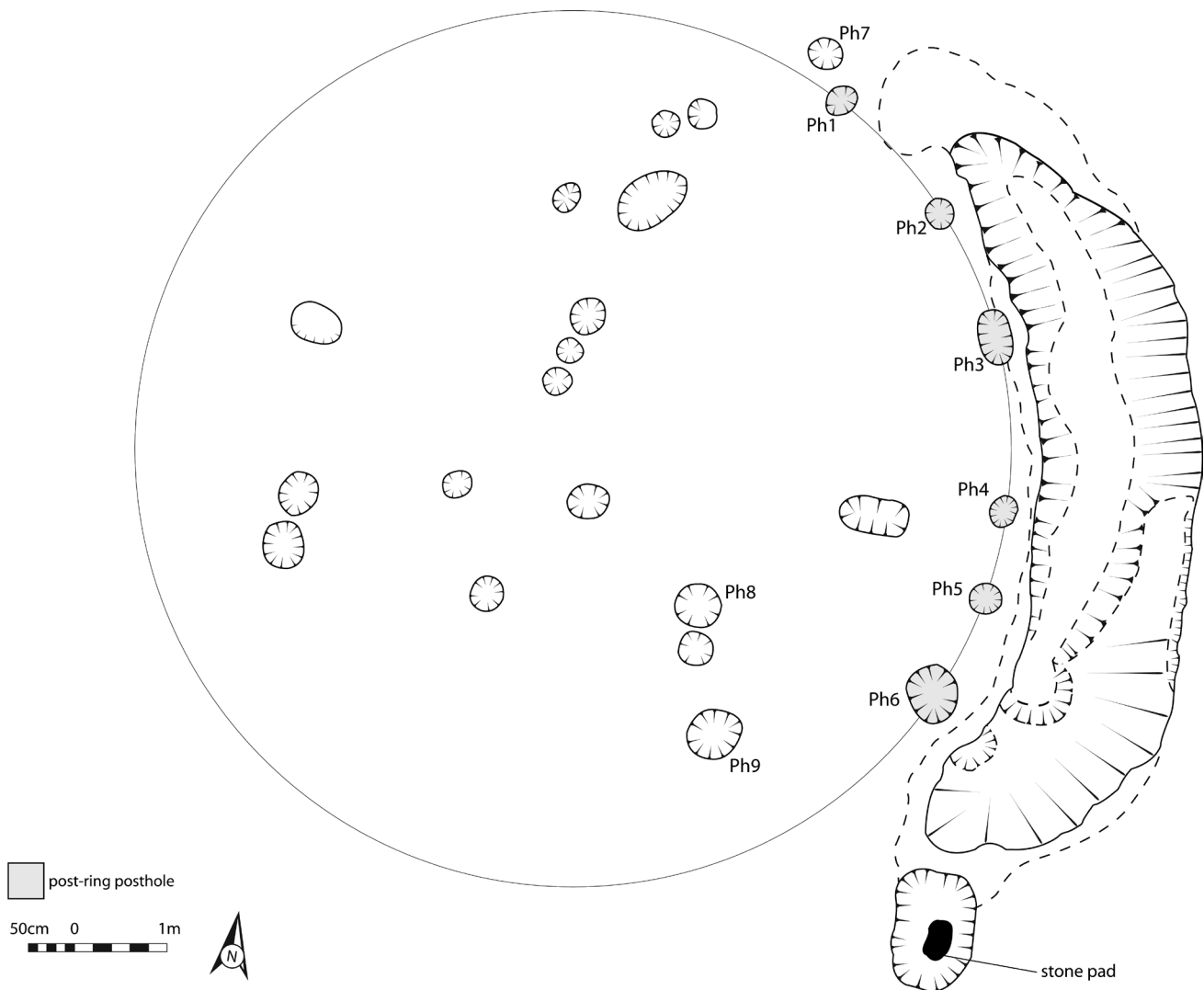
possible that Pit 1 lay in the area behind the entrance into the structure, and was an erosional feature which subsequently developed as a result of traffic in this area. There are a cluster of postholes in this area which may reflect some interior structure around the entrance. Posthole 14 contained a large flat stone postpad.

There were a number of other large pits along the line of the post-ring, Pits 2 and 3 lying between the structural posts, while Pit 4 lay just outside the circuit. These were amongst the deepest features excavated on the site, with depths of up 0.50 m.

Within the post-ring there is a group of three pits, Pits 5–7, all over 1.0m long and 0.22m deep, which form a rough arc in the northern half of the structure. Pit 6 contained the incomplete remains of a bucket-shaped vessel, V1, and some quartz debitage, FN12. The vessel had been inverted and fragments of unidentifiable burnt bone and birch and hazel charcoal were recovered from the interior of the vessel (see Robertson below).

The base of the vessel had probably been removed by ploughing but it is clear that the vessel had been deposited in a damaged and incomplete state because there were sherds missing from the neck and rim (Illus 4). Thus, while the inverted nature of the vessel and the presence of burnt bone is suggestive of a cremation the use of a damaged vessel militates against this interpretation.

Six features in ST2 were radiocarbon-dated, all yielding dates in the latter half of the mid-2nd millennium cal BC (Illus 6; Table 1). All but one of the dates are statistically indistinguishable from each other, suggesting activity sometime in the 14th–12th centuries cal BC. The date from Posthole 1 is slightly earlier. This could indicate earlier occupation of ST2 but there are other possible explanations which should be considered. This date is statistically indistinguishable from three of the dates from ST1 so it could be residual charcoal from the earlier structure. The other possible



Illus 3 Plan of Structure 1. (Drawn by Stefan Sagrott)

explanation is that as oak charcoal was used for this date the apparently older date arises from the 'old oak effect'.

Isolated features (Illus 2)

Some 10m to the east of ST1 lay a cluster of two postholes and two pits. IP1 was 1.1m in diameter and 0.13m deep with straight sides and flat base. It contained a single fill from which a single rim sherd from an undecorated prehistoric pot, V3 (Illus 4) was retrieved. IP2 was a shallow oval feature, 1.65m long and between 0.7m and 0.8m wide, and no more than 0.11m deep. No finds were recovered from this pit.

Early Historic features (Illus 2)

In the far NW corner of the excavation area approximately 8m from the post-ring of ST2 lay a cluster of seven features. This included a shallow curvilinear

ditch, two intercutting postholes and a solitary posthole, and three large pits. As a group these seven features do not form any kind of coherent structure even allowing for loss of features through truncation. Although well defined some of the features were as little as 0.04m in depth, whilst others were as much as 0.48m deep. None of the evaluation trenches opened up beyond the N edge of the excavation area contained any features which could add to the interpretation of this cluster of pits and postholes.

Although no artefacts were recovered from any of these features, IP3 and IP4 produced noteworthy macroplant assemblages containing charred wheat and barley/rye grains, hazelnut shell and fruit seeds. Charcoal from IP4 produced a radiocarbon date which calibrates at 2-sigma to AD 680–880 (SUERC-33032), while a barley grain from IP3 produced a radiocarbon date which calibrates at 2-sigma to AD 780–980 (SUERC-33030) (Table 1).

Table 1 Radiocarbon dates from Clifffburn Road.

ST number / Context	species	SUERC number	radiocarbon date (age BP)	2 sigma calibrated ranges (cal BC)
Middle Bronze Age				
ST1/ring-ditch fill	<i>Corylus avellana</i> (hazel)	33020	3290 ± 30	1640–1490 cal BC
ST1/Ph9	<i>Corylus avellana</i> (hazel)	33023	3180 ± 30	1510–1400 cal BC
ST1/ring-ditch fill	<i>Corylus avellana</i> (hazel)	33021	3165 ± 30	1500–1390 cal BC
ST1/Ph8	<i>Corylus avellana</i> (hazel)	33022	3160 ± 30	1500–1380 cal BC
ST2/Ph1	<i>Quercus</i> sp (oak)	33031	3195 ± 30	1520–1410 cal BC
ST2/Ph13	<i>Corylus avellana</i> (hazel)	33024	3115 ± 30	1450–1300 cal BC
ST2/Pit 6	<i>Betula</i> sp (birch)	33034	3085 ± 30	1430–1290 cal BC (93.7%) 1280–1260 cal BC (1.7%)
ST2/Pit 2	<i>Corylus avellana</i> (hazel)	33028	3040 ± 30	1410–1210 cal BC
ST2/Pit 4	<i>Betula</i> sp (birch)	33033	3010 ± 30	1390–1120 cal BC
ST2/Ph6	<i>Corylus avellana</i> (hazel)	33029	2995 ± 30	1380–1340 cal BC (5.5%) 1320–1120 cal BC (89.9%)
Early Historic				
IP3	<i>Hordeum</i> sp (barley)	33030	1145 ± 30	AD 780–980
IP4	Pomoideae	33032	1235 ± 30	AD 680–880

Specialist reports

The ceramic assemblage

A MacSween

Four vessels are represented in the assemblage from Clifffburn Road (Illus 4). The sherds from V1, from Pit 6 in ST2, are from a bucket-shaped vessel with an interior bevelled rim and two fingertip grooves running around the exterior below the lip. V2, from the fill of the ring-ditch in ST1, is represented by a couple of sherds from the basal angle of a pot with a flat base. V3, from the fill of IP1, is a flat rim. The final vessel, V4, is represented by one unstratified body sherd, broken in two.

All the vessels have a high percentage of rock temper and have been slipped on the exterior. They are well fired and the sooting on some sherds indicates their use as cooking vessels.

The pottery is what would be commonly termed a later prehistoric, flat-rimmed, domestic assemblage. Comparable assemblages include West Acres, Newton Mearns (MacSween 2005) and Lintshie Gutter, Lanarkshire (Smith 1995). These assemblages are characterised by bucket or barrel-shaped vessels; plain, flat or slightly splayed rims; a high proportion of rock temper and a lack of decoration. The available dating evidence indicates that this type of pottery was in use in Scotland from the first half of the second millennium to 800BC (Sheridan 2003, 208). At West Acres, some of the pottery was recovered from the fill of the curvilinear trench which comprised the ring-groove roundhouse. This was interpreted as representing the smashing of vessels into the curvilinear trenches once the house had been abandoned and the fences removed (MacSween 2005, 482).

The chipped stone assemblage

R P Engl

Some 21 pieces of chipped stone were recovered during the works at Clifffburn Road. This included material derived from both stratified and unstratified deposits. Ten of the artefacts were retrieved from the hand-sorting of the sediment samples.

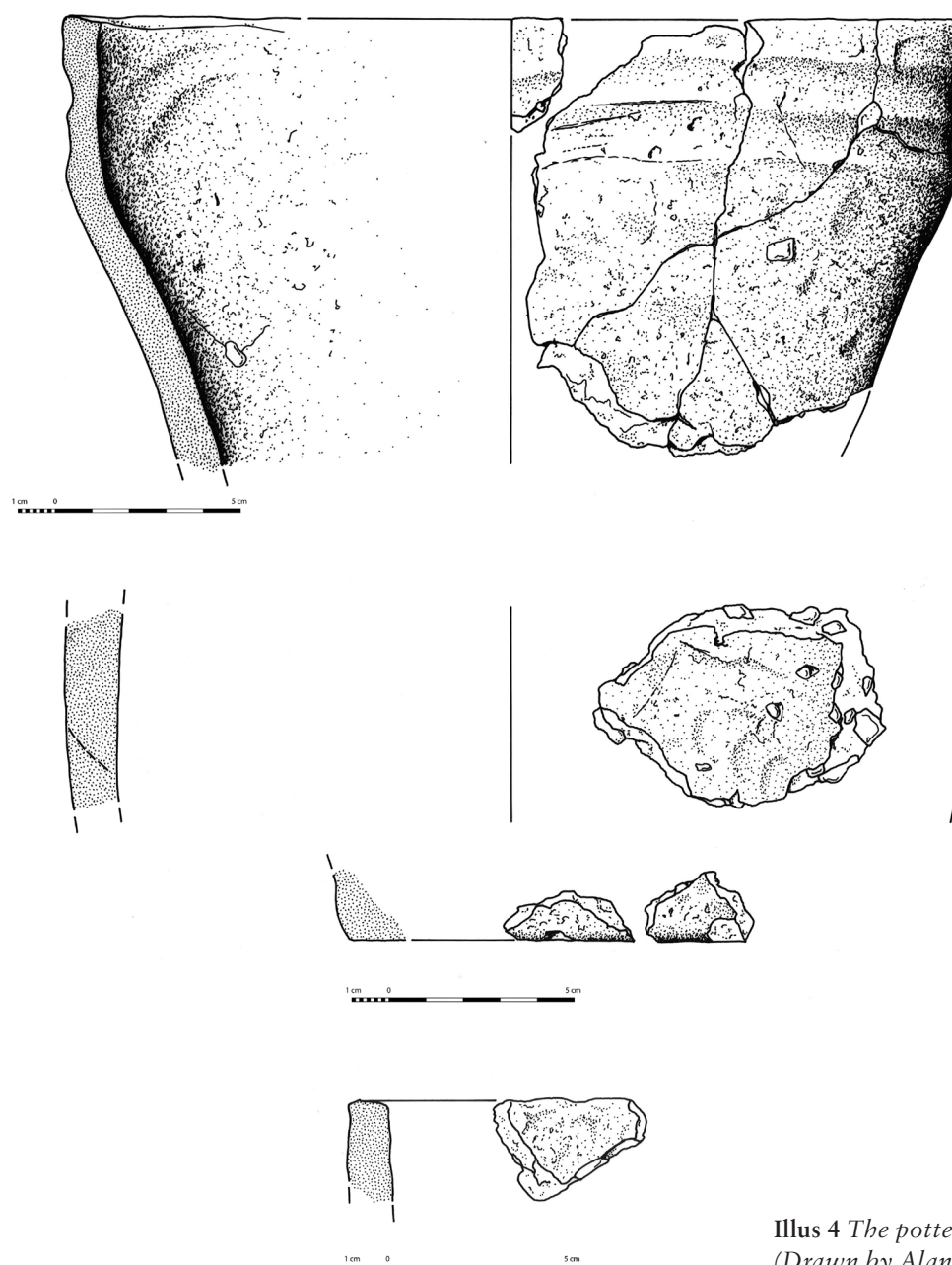
The assemblage was comprised solely of debitage, with no secondarily worked artefacts. The natural sub-soil of the site contained pockets of sand and gravels and it is likely that the majority of the artefacts are directly derived from this. A notable exception is an unstratified chalk flint nodule (FN02). It is probable that this originated in offshore North Sea chalk deposits and was then re-deposited within the glacial till.

Quartz and quartzites dominate, accounting for 75% of the assemblage with flint and agate appearing as supplementary materials. The quartz is of the type termed 'greasy' (Saville and Ballin 2000) and is a translucent grey in colour with fine flaking properties. The quartzite is also fairly workable being composed of small close-knit, grains of crystal. The material is reddish brown in colour.

Two other unstratified pieces of flint occur within the assemblage. The broken blade FN09 is grey in colour and contains small blooms of cream patination. This grey coloured flint is found throughout Angus and the wider eastern coast of Scotland. A chunk FN03.1 is also grey in colour and appears heat affected with numerous potlid fractures and signs of crazing.

Two pieces of banded agate are present, a regular flake FN01 and a split nodule FN15.

With the exception of the broken flint blade and the agate flake, quartz and quartzite flakes form the main component of the assemblage. In the absence



Illus 4 *The pottery, V1, V2 and V3.
(Drawn by Alan Braby)*

of secondarily worked material or debitage classes such as cores, these form the only major technological element. For intractable materials such as these, the bipolar technique is often employed in order to obtain serviceable flakes. The two split nodules would appear to show that this was used in the initial opening of nodules on site. However, other technological elements typical of this reduction method, such as the presence of core remnants, opposed crushed platforms or flake scars do not appear. It would therefore seem likely that the flakes within the assemblage probably represent a rather expedient and ad-hoc reduction strategy centred on direct hard hammer detachment of flakes from simple platforms as required.

Discussion

The small and relatively undiagnostic nature of the assemblage makes technological and chronological inferences difficult. However, limited information regarding such factors can still be gleaned from the material.

Quartz is a dominant component of many prehistoric lithic assemblages throughout Scotland from the Mesolithic to the Middle Bronze Age. Quartz also has an extremely wide distribution and is present to varying degrees on almost all sites throughout the Islands and the mainland (Finlayson 1998, 137).

The bi-polar technique utilising hard-hammer and anvil has long been assumed to be the most common method of working quartz. However, at Clifftown

Road the use of this technique appears limited to the initial opening of suitable nodules. These were then worked through the direct application of hard hammer technique to produce a flake assemblage. Though neither of these working techniques appear chronologically sensitive (Finlayson 1998, 138) a later prehistoric date would not be out of place.

The lack of recognisable core types within the Cliffturn Road assemblage would seem to illustrate that the lithic material was not curated but produced as required. The production of sharp quartz flakes would be more than adequate for a range of simple domestic tasks.

No substantial quartz assemblages are known from the various sedimentary regions of Scotland (Ballin 2008, 61) of which Angus is a part. Where this material is present it appears restricted to small, supplementary sub-assemblages such as at Fordhouse Barrow (Ballin forthcoming) or small expedient examples such as Cliffturn Road. In earlier prehistoric sites this most probably reflects the predominance of flint and chert as raw materials in this area and the lack of substantial quartz deposits within Old Red Sandstone geological deposits. At the Cliffturn Road site the assemblage illustrates the expedient use of lithic material where the procurement of more easily workable material such as flint would not be important.

Numerous other recently excavated unenclosed settlement sites associated with later prehistoric activity have produced similar small, relatively undiagnostic, expedient lithic assemblages. These include Hatton Farm, Angus (Clarke 2010, 21) and West Acres, Newton Mearns (Engl 2005). During an evaluation conducted

less than 1km from the site on Montrose Road, Arbroath (Dunbar 2011) a similar mixed assemblage comprising eight flint pieces, six quartz pieces and three agate pieces was recovered. This assemblage included two scrapers and one used flake along with fragments of three cores and suggested an Early Bronze Age date.

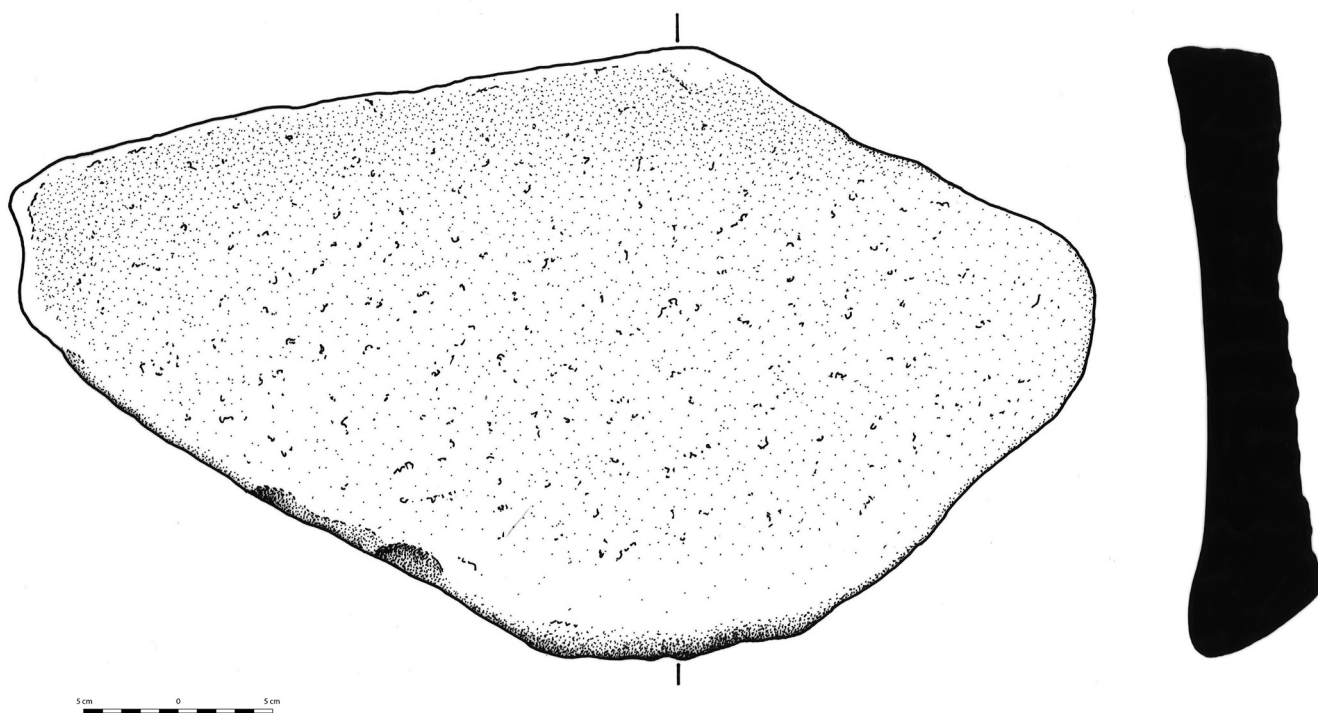
The bulk of the assemblage was retrieved from the excavated features; only five artefacts were retrieved from the top-soil. It is possible that the assemblage may represent 'background noise' of wider prehistoric activity within the locale but the apparent lack of struck flakes within the surrounding top-soil would suggest that the artefacts recovered from the site are indicative of related use.

The saddle quern

R P Engl

As described above, the quern was recovered from the ploughsoil immediately over the ring-ditch of ST1 and probably came from that feature. This has direct parallels at Kintore, Aberdeenshire, where numerous saddle querns were recovered from the ring-ditches of roundhouses of Middle Bronze Age date (Engl 2008).

The quern is 0.56m in length and 0.33m in width (Illus 5). It is 80mm in height at the raised end and 60mm at the lower end. The quern is made on roughly fashioned sub-rectangular block of grey sandstone with a flattened base to aid stability during use. The artefact has a single raised end and a shallow pitted working face 15 mm in depth. The face shows evidence of a smoothed rim, visible in patches around the sides and lower end.



Illus 5 *The saddle quern, FN08.* (Drawn by Alan Braby)

Although a well-defined saddle-quern typology does not yet exist in Scotland (Close-Brooks 1983) the form of the Cliffturn Road quern is in keeping with numerous examples found within late Neolithic and Bronze Age contexts throughout Scotland.

The ecofact assemblage

J Robertson

Introduction

The charred macroplant assemblage is small and is dominated by indeterminate cereal caryopses. Few charred wild/weed taxa were recovered. The charcoal assemblage was small and fragments 4mm and larger were found in only 57% of the processed samples. Modern contamination consisting of roots, plant material, insect and snail shells were present in most samples. Given the small size and poor condition of the charred macroplant assemblage it is not possible to address archaeobotanical questions such as diet, status and farming techniques practised on this site.

Burnt bone was also recovered during the sample processing. Mainly of small indeterminate fragments, but those from Pit 6 in ST2 were relatively large fragments, although still only a few millimetres in size.

The Middle Bronze Age features

Trace amounts of charred macroplant remains and charcoal were found throughout the Middle Bronze Age structures without any concentrations worthy of note. Barley (*Hordeum* sp) and oat (*Avena* sp) as well as indeterminate cereal grains were present. The only other identifiable charred plant remains were pale persicaria (*Persicaria lapathifolium* L), and hazel nutshell (*Corylus avellana* L). Oak (*Quercus* sp), hazel (*Corylus avellana*) and birch (*Betula* sp) charcoal was present in some of the features.

Most of the carbonised plant remains and charcoal probably represents domestic debris which became accidentally incorporated in postholes and pits. There are two possible exceptions. Pit 4 in ST2 contained a relatively large number of birch roundwood fragments together with a few fragments of hazel, which might represent the burning of a discrete object such as withy mat or basket, rather than the slow, random accumulation of domestic debris. Pit 6 in ST2 also contains indeterminate cereal remains, hazel and birch charcoal and fragments of burnt bone, all of which could be interpreted as domestic debris. However, it also contained large fragments of a ceramic vessel, V1 which appears to have been inserted upside down suggesting that the contents of the pit had been more deliberately deposited. Analysis of bulk samples taken from above, below and from inside the vessel found that the charred plant remains were present in all the sediments but the burnt bone was only found in the sediment inside the vessel.

The Early Historic features

IP3 contained the largest concentration of charred macroplant remains found on at Cliffturn Rd. These included wheat/rye (*Triticum/Secale* spp), barley and oats and hazelnut shells. IP4 was less rich, with only a small amount of indeterminate cereal remains and some hazel and Pomoideae (this family includes apple, pear, hawthorn and quince) charcoal. Rush (*Juncus* sp) capsules were found in two of the postholes which form a cluster around the dated Early Historic pits.

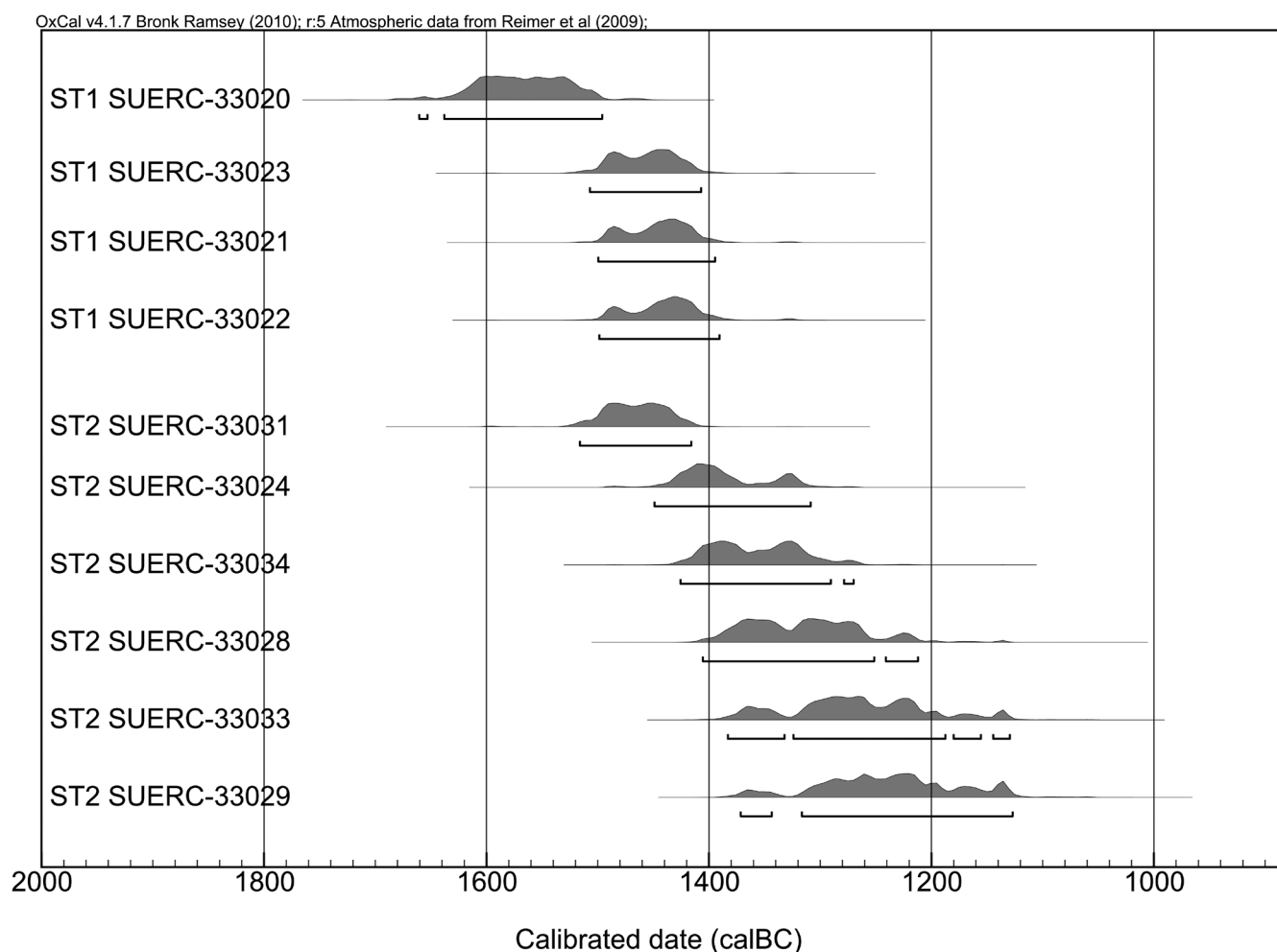
Discussion

The excavations at Cliffturn Road have uncovered two periods of activity; unenclosed Middle Bronze Age settlement and Early Historic features believed to be associated with a nearby settlement.

The Middle Bronze Age settlement

Illus 6 shows the spread of the ten radiocarbon dates from the roundhouses, ST1 and ST2. They indicate activity on the site from at least the 16th century cal BC to the 12th century cal BC and suggest that the roundhouses were in use consecutively rather than contemporaneously, with ST1 predating ST2. SUERC-33031, one of the dates from ST2, appears to be identical to three of the dates from ST1 but, as argued above, this may be because the oak charcoal was residual or because it was 'old oak', rather than indicating contemporary occupation of both structures. Although there is no surviving stratigraphic relationship between the two structures the structural reconstruction presented below suggests that their footprints would have overlapped, reinforcing the argument against contemporaneity. It is possible that the very survival of these roundhouses has been due to the dispersed material from the bank providing a degree of protection.

Both structures are severely truncated (see below) but represent the residual remains of a building design which first appears in the Bronze Age and becomes ubiquitous in the Iron Age – the post-built roundhouse with an encircling bank which would have borne the weight of the roof rafters. These survive in upland areas, in Angus as elsewhere, as more complete hut circles with bank intact. None of the examples in Angus has been excavated (Dunwell and Ralston, 2008, 51) but there are numerous excavated examples in the Highlands (ie Barber 1997; McCullagh and Tipping 1998; Dunbar 2008) which can provide us with comparanda for the structural elements which are missing at Cliffturn Road. These suggest that we should allow for a bank between 1.5m to 2.5m in width behind the ring-ditch. As Illus 2 shows, with a 2.5m-wide bank encircling it, the footprint of ST1 would have lain over that of ST2 and thus they cannot be contemporary.

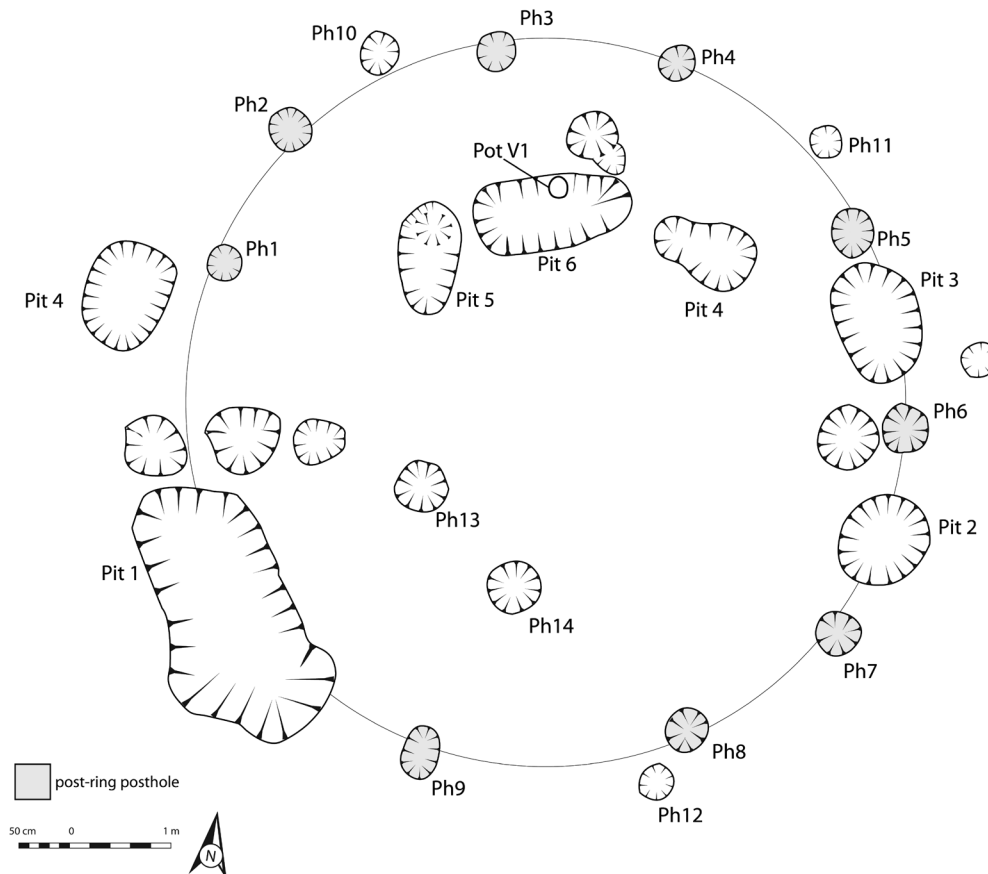


Illus 6 *The radiocarbon dates from Structures 1 and 2. (Prepared by Stefan Sagrott)*

Roundhouse settlement is visible as cropmarks on the agricultural lowlands throughout Angus but it has generally been assumed to be 1st millennium BC in date because until recently the only excavated examples, at Douglasmuir (Kendrick 1995) and Ironshill (Pollock 1997), have returned dates of this age (Cameron et al 2007, 52). However, two settlements of Middle Bronze Age date have been uncovered during a recent road improvement scheme in Angus. Two roundhouses have been found at Auchrennie, Muirdrum, (Cameron et al 2007, 48–57), and at Hatton Farm, Elliot (Gray and Suddaby 2010), both less than 7 miles down the coast from Clifffburn Road. Like ST2, Structure A (AM STA), the better preserved of the two roundhouses at Auchrennie, has a post-ring (diameter c8.2m) and discontinuous ring-ditch, but also has evidence for repair and renovation in the form of replacement postholes, evidence that may have been lost to plough damage at Clifffburn Road. Structure A also contained a large sub-rectangular pit in which prehistoric pottery was found, similar to Pit 6 in ST2. Phosphate tests, undertaken to determine whether the pit had been a burial, proved negative (Cameron et al 2007, 51–2). At Hatton Farm a post-ring roundhouse (diameter

c 8.0m) was superseded by a ring-ditch roundhouse which was built across the eastern half of the original footprint. A saddle quern and domestic pottery sherds were recovered from the ring-ditch. It is interesting that at all three excavated Middle Bronze Age settlements, the later structure has been built overlapping the footprint of the earlier, suggesting longevity of settlement on the same stance.

Unenclosed Middle Bronze Age settlement has also been uncovered at Kintore, Aberdeenshire (Alexander 2000; Cook and Dunbar 2008; Dunbar et al forthcoming). In all, seven ring-ditch roundhouses with Middle Bronze Age dates have been excavated, three of them forming a tight cluster at Forest Road (Cook and Dunbar 2008, 88–95), while the others are widely scattered across an area approximately 700m square (Alexander 2000; Dunbar et al forthcoming). The exact chronological relationships between these roundhouses cannot be determined but it is clear that, in the cluster of three houses at Forest Road, at least one was later because it blocked the entrance to another in the group (Cook and Dunbar 2008, 91). The Middle Bronze Age unenclosed settlement pattern at Kintore has been characterised as one of a small, settled community



Illus 7 Plan of Structure 2. (Drawn by Stefan Sagrott)

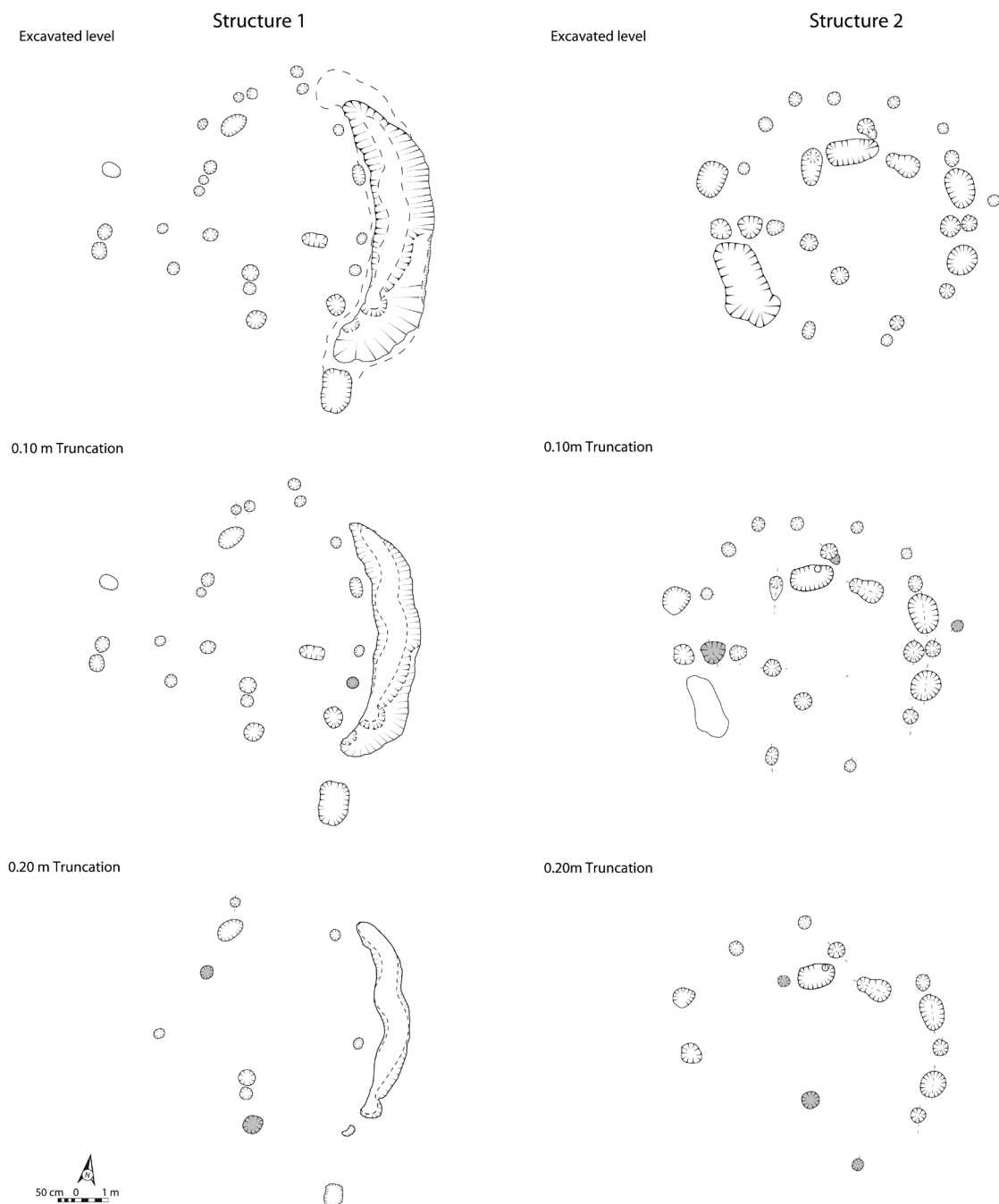
maintaining one or two ring-ditch roundhouses at any one time, which over time moves across the landscape, abandoning an old stance and erecting new roundhouses, often only a few hundred metres away (ibid 347–9). If this model is applied to Cliffturn Road then ST1 and ST2 can be seen as one such settlement stance in a moving settlement pattern and would explain the absence of other contemporary features elsewhere in the development area. The southwest-facing slopes to the W of the development area would have offered an ideal landscape for further settlement but unfortunately most of the area is now modern residential housing (Illus 1).

Possible Pictish activity?

The small cluster of features in the NW corner of the excavated area has produced radiocarbon dates indicating activity some time in the 8th to 10th centuries AD. The domestic refuse in the pits indicates that these features formed part of a settlement.

The evidence for Pictish settlement in Angus is elusive, despite the wealth of symbol stones which attest to their presence in the area. St Vigeans, with its rich collection

of carved stones lies just over a mile along the coast from Cliffturn Road, while only a few hundred metres towards the coast at Victoria Park, the recovery of human remains suggests the location of an Early Christian graveyard possibly associated with St Ninian (Atkinson 1988; Becket 2009), so we should anticipate contemporary settlement in the vicinity. Dunwell and Ralston (2008, 138) have argued that the invisibility of Pictish settlement may be because the building methods employed, sleeper beams in shallow trenches, postpads and crucks, would leave little imprint in a ploughed landscape. A contemporary structure has been found at Newbarns, some five miles up the coast from Cliffturn Road (McGill 2004). Here a long, sub-rectangular structure with what have been interpreted as cruck slots in the walls, has produced dates spanning the 8th to 11th centuries AD. Not far away was a group of pits of identical date, which contained crop-processing waste. The pits at Cliffturn Road may be seen in the same light, as outliers of a settlement, the nucleus of which either lies some distance away from the site and therefore unrevealed, or has been destroyed by millennia of agricultural activity.



Illus 8 Structures 1 and 2; what would survive after continued truncation (projected in 100mm spits). Shaded features are less than 30mm deep. (Drawn by Stefan Sagrott)

Truncation

All the archaeological features have been severely truncated by ploughing; when first uncovered the ring-ditch of ST1 was 9.5m long and 2m wide but after initial surface cleaning to define the feature, which might have removed 50mm of soil at most, it was reduced in size to 8m by 1.7m (Illus 3), illustrating the shallow nature of the features and their fragility. The saddle quern was found partially dragged from the ring-ditch, and most of the pottery sherds were recovered from the surface cleaning of the ringditch meaning they were lying within the active zone of plough damage. As noted by Barclay et al (2001), prehistoric pottery is only likely to survive for a year or two within an active ploughsoil. Illus 8 illustrates the hypothetical effects of increasing levels of plough truncation of ST1 and ST2. This demonstrates how the apparent coherence of these structures can be quickly confused and lost even when the structures are predominantly post-built with deeply set earthfast timbers. The effects on Early Historic buildings with shallow beam slots would be even more dramatic and deleterious.

Acknowledgements

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Abstract

The excavation of a greenfield development on the coast immediately northeast of Arbroath has revealed the remains of a plough damaged Middle Bronze Age unenclosed settlement, only the second example of this type of site to be excavated in lowland Angus. The remains consisted of two roundhouses which had been occupied consecutively, the earlier in the 16th–14th centuries BC and the later in the 14th–12th centuries BC. A small assemblage of pottery, lithics and a saddle quern were associated with these structures. Two pits in the corner of the excavation produced dates in the 8th–10th centuries AD suggesting the presence of a Pictish settlement somewhere in the vicinity of the site.

Keywords

lithics
Middle Bronze Age
Pictish
pits
postholes
pottery
quartz
ring-ditch
roundhouses
saddle quern
truncation
unenclosed settlement

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