5 CASTLESTEADS RING-GROOVES SITE, *by A Rees*

5.1 Introduction

This site was located on the edge of an alluvial river terrace 150m south of Castlesteads House and 200m north of the confluence of the South and North Esk rivers (illus 2.1). It was located within a field bounded on three sides by woodland at 34m above OD (NGR: NT 3397 6936). The site lies within the system of pitted boundaries considered in Section 4 (illus 4.1), although it is not visible on the aerial photographs which reveal the pitted boundary cropmark complex.

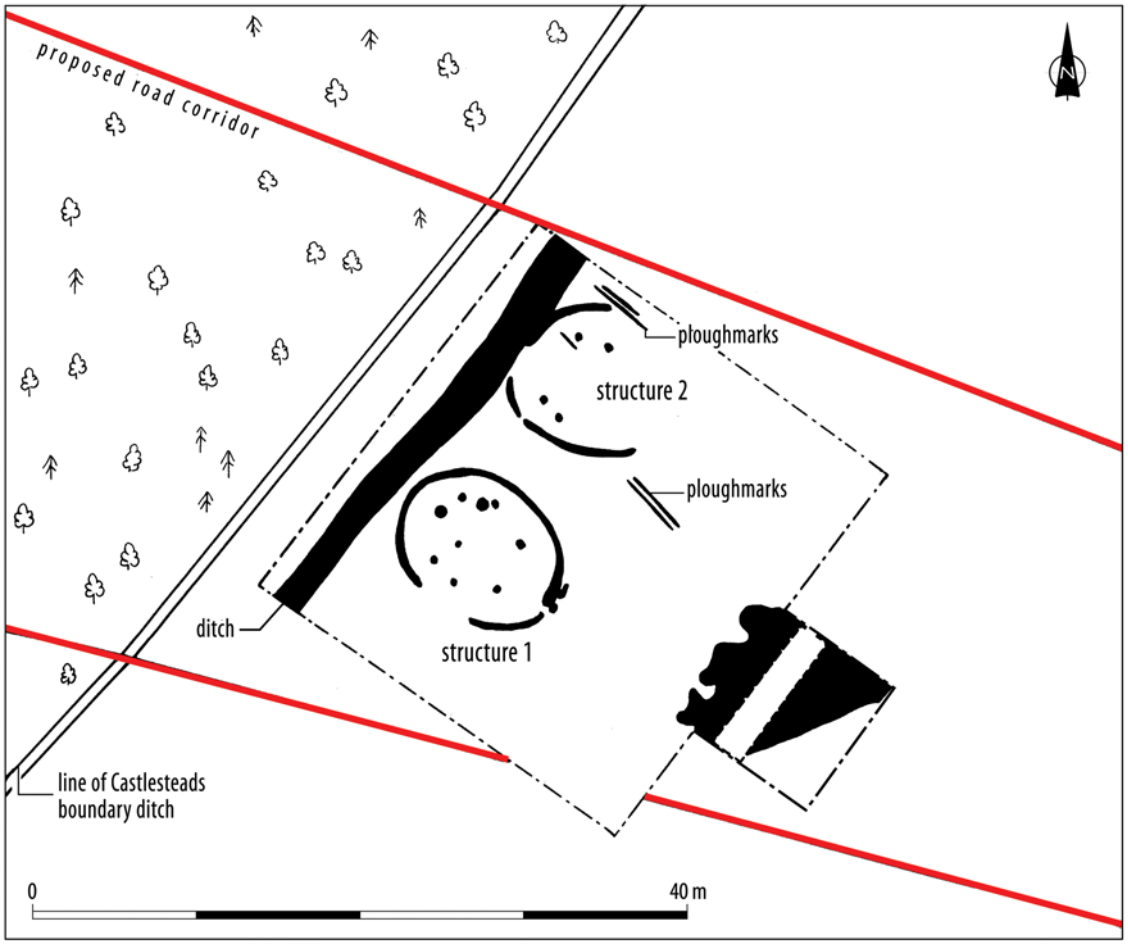
5.2 Methods

The site was identified during the route evaluation in 1994, when fieldwalking located a small number of flint and chert artefacts. The excavation of a series of trial trenches and test pits was then undertaken at this location, and one of these (Trench A) uncovered a small section of ring-groove slot. Small scale trenching then revealed a further section of the ring-groove (Trench B). Following recommendations made to Historic Scotland, a larger trench 30m × 30m was opened to investigate this discovery (illus 5.1). This trench revealed two ring-groove structures and a group of intercutting pits to be present within the proposed road corridor. The trench was subsequently extended further, adding a small section to investigate the large pit group further.

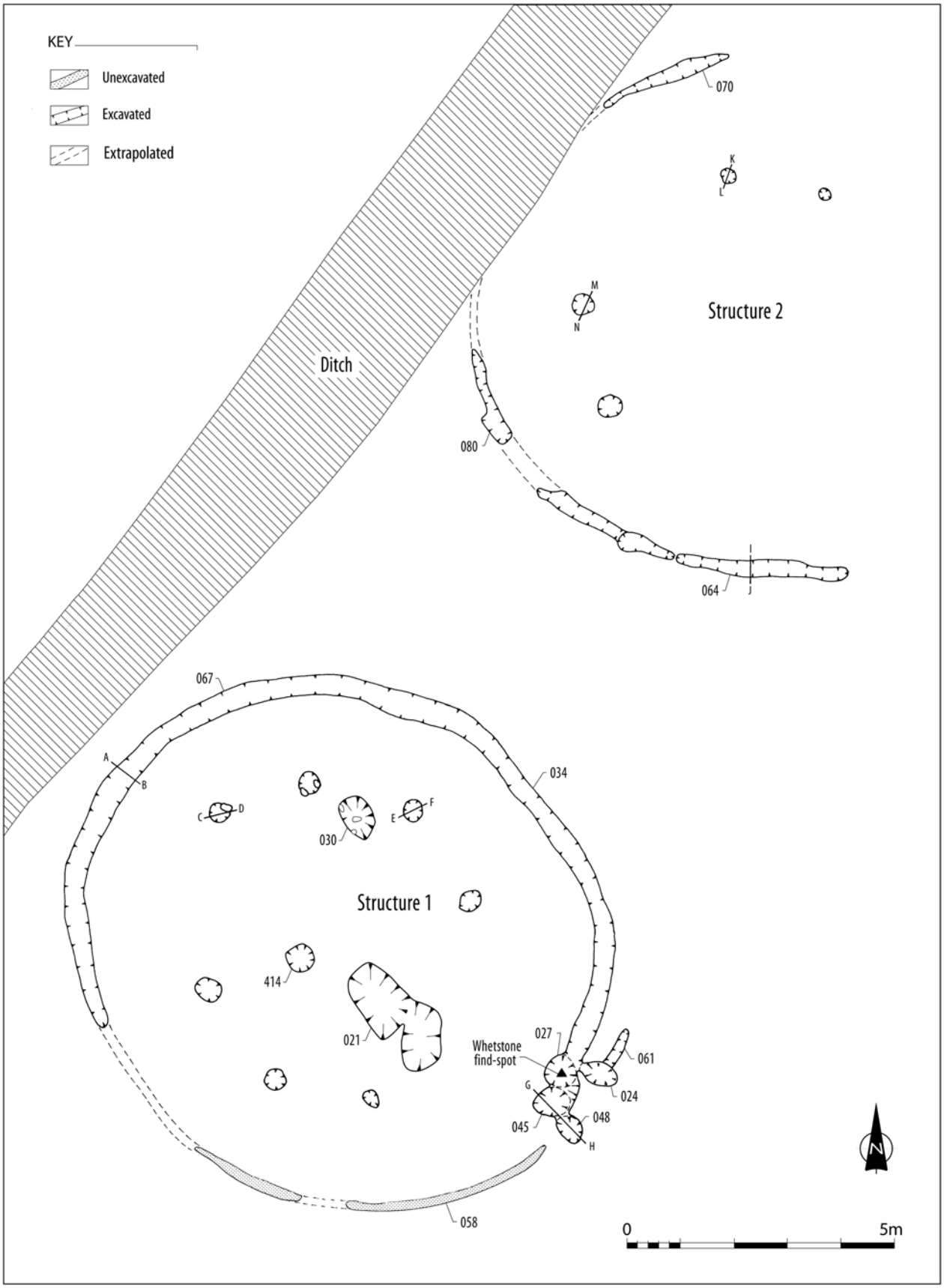
5.3 Archaeological results

5.3.1 Structure 1

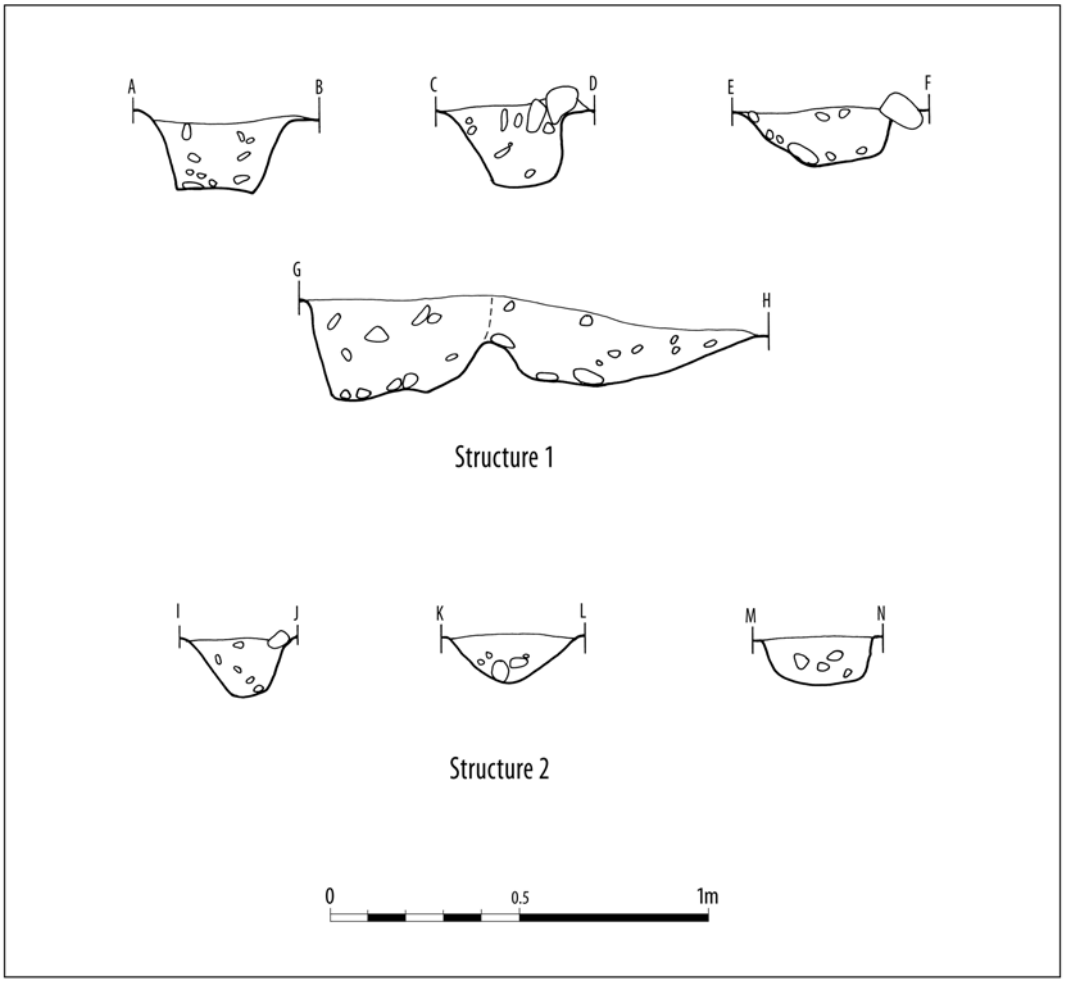
This sub-oval structure was defined by a ring-groove slot, measuring 10.4m across its north-west to south-east axis and 9.4m wide on the north-east to south-west axis (illus 5.2). The slot was typically



Illus 5.1 Overall site plan



Illus 5.2 Plan of the ring-groove structures



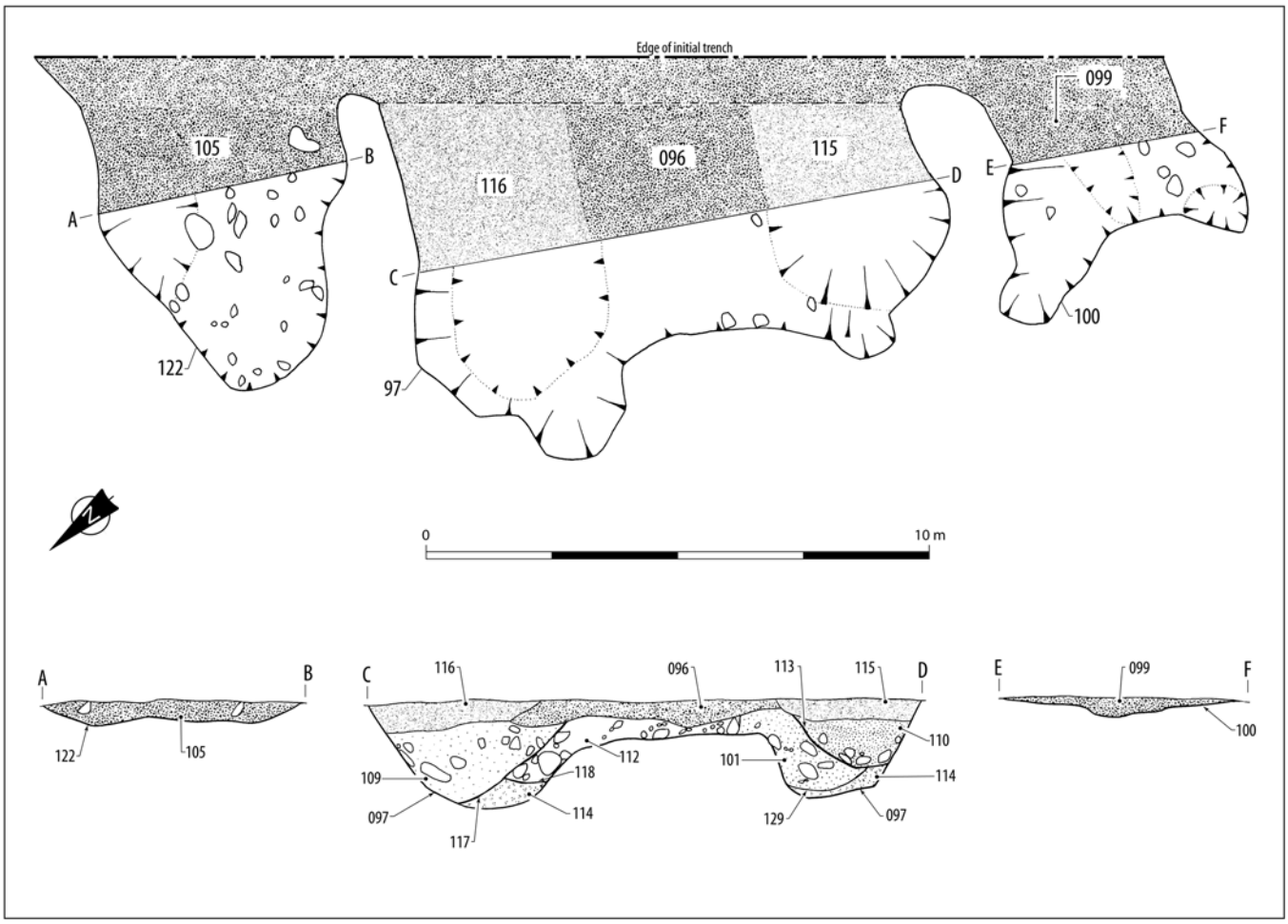
Illus 5.3 Sections

from 0.4m to 0.5m wide and 0.25m to 0.35m deep with steep sides and a level base (illus 5.3, A–B). In the south-western sector of the ring-groove the slot (058) decreased in size, measuring as little as 0.25m in width by 0.1m deep, and was absent in places due to differential plough truncation. No post-holes, post-pipes, stone packing, or impressions of posts were located in the ring-groove slot, either within the fill or as impressions in its base. One quartz and three chert flakes were recovered from the ring-groove fills, along with four pieces of charcoal.

At the south-east section of the slot, a series of four pits/post-holes (024, 027, 045 and 048; illus 5.2) was located, probably indicating the position of the entrance to the structure and representing the foundations of a doorway. All four pits appeared to intercut one another, although this was due mainly to the difficulty in ascribing different contexts to uniform fills. The pits measured from 0.3m to 0.45m in diameter and from 0.3m to 0.4m in depth with generally sloping sides and flattish bases (illus 5.3, G–H). There were no packing stones within the features. The four pits may represent two constructional phases of the entrance or two adjacent sets of entrance posts, the uniformity of the fills suggesting the latter is more likely. A whetstone was recovered from the most northerly post-hole (027).

In addition to the four pits, a small slot (061), measuring 0.7m in length and 0.15m deep, ran parallel to the ring-groove for a distance of 0.7m. When the curve of this section of slot was extrapolated, it appeared to continue the line of the southern section of slot (058), forming a continuous arc cut by the entrance pits. It is unclear what the function of this ring-groove extension was.

Within the area circumscribed by the ring-groove slot was a concentric ring of seven post-holes, measuring from 0.3m to 0.5m in diameter and 0.15m to 0.4m in depth (illus 5.2; illus 5.3, C–D and E–F). All were filled with a uniform, gravelly sand/silt with occasional packing stones. The post ring measured 5m across and the posts were spaced at fairly regular intervals approximately 2m apart. The spacing suggests that one post was missing to the west. Three other features were identified within the ring-groove, a sub-oval feature (021) approximately 2m long and 1m wide, which contained a relatively clean sand fill, in which was found a chert flake, and two shallow pits (030 and 414).



Illus 5.4 Re-cut features plan and sections

5.3.2 Structure 2

Almost 50% of a second ring-groove structure was identified *c* 4m to the north of Structure 1 (illus 5.2). The ring-groove slot comprised three separate heavily plough-truncated sections (064, 070 and 080). The largest (064) measured 6m in length by 0.3m in width by 0.15m in depth (illus 5.3, I–J). To the north-west of this, the next section (080) measured 3m long by 0.2–0.4m wide by 0.1m in depth. The northerly end of this section of ring-groove had probably been cut by a later ditch (illus 5.2). Beyond this to the north-west, a further section (070) measured 2.75m long by 0.05–0.2m wide by 0.1m deep. This section had probably also been cut by the ditch on its western side and truncated by deep ploughing on the eastern side. When extrapolated, the diameter of Structure 2 would have been similar to Structure 1, at approximately 10m. No post-holes, stone packing, or re-cuts were identified within the ring-groove slot.

Within the area bounded by the fragmented ring-groove, four post-holes of a concentric inner ring survived. These had been heavily truncated by deep ploughing and measured from 0.27m to 0.4m in diameter by 0.1m to 0.15m in depth (illus 5.3, K–L and M–N). The eastern side of Structure 2 had been removed by ploughing. Evidence of the ploughing could be seen in plough scores cut into the surface of the subsoil. No other features were located and no artefacts were retrieved within the general area of Structure 2.

5.3.3 Ditch

Parallel to the current field boundary ditch and truncating Structure 2 was what appeared to be the traces of an earlier version of the boundary ditch, 1.5–2.5m wide and 0.3m in depth. The fill comprised a dark, gravelly soil. No artefacts were recovered from the excavated sections. The ditch cut Structure 2 and ran parallel to the current boundary ditch, so in the absence of any dating evidence it has been assumed that it represents a recent precursor to the modern ditch.

5.3.4 Re-cut features

To the east of Structures 1 and 2, a group of three adjoining pits was noted when topsoil stripping was

Table 5.1 Flint from ring-grooves site excavated contexts

Stone	Object	Type	Re-cut Pits No.	Ring-grooves No.
Flint	Flakes	Inner Regular	44	
		Inner Irregular	33	
		Secondary Regular	7	
		Secondary Irregular	10	
		Primary	1	
	Chunks	Inner	4	
		Secondary	1	
Chert	Flakes	Inner Regular	4	1
		Inner Irregular	11	2
		Secondary Regular	1	
		Secondary Irregular	2	
		Primary	1	
	Blades		1	
	Chunks	Inner	2	1
	Cores		1	
Quartz	Flakes			1
Chalcedony	Pebbles		3	1
Total			126	6

taking place (illus 5.1 and 5.4). The central feature (097) of the three measured 4m across by 3m in exposed length by 0.85m in depth, and appeared at first to be the terminus of a ditch, as the features extended beyond the limits of the trench. The feature appeared to have been re-cut, probably on at least two occasions. To either side of this central feature were two shallow, smaller features. The feature on the northern side (122) measured 2.25m across by 2m in exposed length by 0.25m in depth; one small abraded sherd of prehistoric pottery and several chipped stone artefacts were recovered from the upper levels of its fill (105). Upon full excavation, numerous flint and chert flakes were recovered from the fills of these features, in particular 097 produced a large number of flint blades, scrapers and debitage from the fills 109, 112 and 114.

The trench was extended to the south-east (illus 5.1) in the hope of ascertaining the extent of these features, but this proved not to be possible owing to time restrictions and the lack of any traceable edge to the features on the surface. The plan marks the excavated extent of the features but, with the agreement of Historic Scotland, the area to the east was not fully examined to work out the sequence.

5.4. The finds

5.4.1 Lithics, by B Finlayson

An assemblage of chert and flint with a small quantity of quartz and chalcedony was recovered by a variety of techniques. It comprised an excavated sample of 132 pieces (the majority from the re-cut features), a test-pitting sample of 57 pieces, a gridded fieldwalking collection of 40 pieces, and a collection of 110 pieces from the surface. With the exception of the excavated material the samples were all dominated by chert, but this included a significant proportion of unworked pebbles and angular blocks. What remained of these samples after discounting the unworked material was a low-density, undiagnostic distribution of artefacts which cannot be directly linked to the excavated features and will not be discussed further. Differences between the excavated sample in proportions of raw materials and types of chert indicate that the material recovered from the excavation was probably not from a recycled flint scatter incorporated into the features, but did relate specifically to the activity around the features.

The sample from the excavated contexts was small (Table 5.1), but a number of points can be made. The raw material was imported. This is obvious for the flint material, being a non-local stone type, although insufficient cortex was present to state reliably whether the bulk of the material came from a secondary (perhaps beach pebble) source, or whether it was from a primary chalk context. It would not be so clear that the chert was imported if it were not for the comparative material supplied by the other collections. These included numerous angular blocks and rounded pebbles, suggesting two natural mechanisms for the chert's transportation to the site, but both pebbles and blocks were mostly of a grey chert, full of fissures and flaws and generally coarse in texture. The excavated, worked

chert included a higher proportion of red and purple cherts of generally finer texture. The limited analysis of chert sources so far undertaken does indicate that there may be some variation in colour and texture at individual source spots, but the selection process evident in the assemblage suggests that this material was specifically selected, and not from the material locally available.

Only one core was present amongst the excavated sample, and only two primary flakes; indeed, inner flakes massively dominated the flint part of the assemblage. There were also very few chunks compared with most complete chert assemblages. These aspects suggest that little knapping was undertaken in the area of the excavation, and that the lithic material did not enter these contexts as part of a generalised waste disposal. The material may therefore indicate that specific tasks were undertaken here, or that waste disposal from a limited number of tasks was made here.

Technologically the material was all from a hard-hammer flake-based industry, with only one blade present. There was some invasive shallow retouch present, and there was one well-made scraper. These factors all suggest that the material fits into the broad late Neolithic/Bronze Age flint-working tradition. With such a small sample it is impossible to provide any more close chronological estimate.

5.4.2 Prehistoric pottery, by M Johnson

A single sherd of undecorated prehistoric pottery was recovered from context 105 (SF 12) in re-cut feature 122, weighing 11g and measuring 8–9mm thick. It was very abraded, with rounded edges and most of its surfaces were missing. It had a dark grey core and interior and a light brown exterior. There were fine cracks all over its surfaces, possibly indicating that it had been burnt. The fabric was coarse, slightly corky with a hackly fracture, and contained about 2% small quartz inclusions. The sherd perhaps was a flat-topped rim but the abrasion was so severe that this identification was uncertain. There was some iron pan adhering to the inner surface. The sherd cannot be dated.

5.4.3 Coarse stone

A fine-grained sandstone whetstone was recovered from one of the entrance post-holes to Structure 1. This object is currently missing.

5.5 Discussion

5.5.1 The re-cut features

The three adjoining pits to the east of the site produced a relatively large assemblage of worked flint and chert, as well as one sherd of prehistoric pottery. The lithics are dated to the Late Neolithic/Bronze Age, indicating that the features most likely pre-date the ring-groove structures. Scattered, isolated pits of this date are not uncommon on sands and gravels. They may simply be rubbish pits related to settlement activity, the structures of which have been lost or were located beyond the limits of the excavated area.

5.5.2 The ring-groove structures

Due to the high density of aerial photographic and cropmark sites in the vicinity of Castlesteads, there has been intensive map-based study of the prehistoric landscape. Halliday (1982), and more recently Brown (2002, 8) have pieced together the aerial photographic evidence and reconstructed the concealed relict landscape of pitted boundaries, ring-ditch houses, a palisaded homestead, enclosures and enclosed homesteads around Castlesteads. Excavations 1km to the south-east of Castlesteads at Thornybank (Rees 2002) have revealed a ring-groove structure of similar size and type to the Castlesteads examples, found in close association with a pit alignment, traces of an associated bank and a parallel palisade. The Lamb's Nursery and Melville Nursery sites in Dalkeith (Cook 2000; Raisen & Rees 1995) also produced structures of this type. Further afield, many examples of ring-groove house type have been excavated in the Lothian plain area, such as those at Broxmouth (Hill 1982), Dryburn Bridge (Dunwell 2007) and St Germains (Alexander & Watkins 1998).

The Castlesteads structures were heavily truncated, making reconstruction of their superstructure and interpretation of their function even more difficult than usual. Nor could it be established stratigraphically whether or not the two buildings on this site were contemporary. It may be that each individual structure would have fulfilled separate functions and concerns, such as settlement and/or stockholding, although this is very difficult to confirm. No artefactual or environmental evidence was available, nor any material suitable for radiocarbon dating, so the structures could not be dated. Comparisons with other sites may provide more clues.

The Castlesteads structures were presumably of ring-beam construction, with the main weight of the roof being taken on the inner post-rings. The outer wall would not have been load-bearing and could therefore have been relatively slight. The doorway to Structure 1 was perhaps up to 0.5m in width and was flanked by offset timbers forming a shallow porch. No evidence of a hearth was found in either structure, but such features could have been lost through plough truncation.

Ring-groove roundhouse construction is evidenced in the Lothians in the first millennium BC at sites such as Melville Nurseries (Raisen & Rees 1995, 770–400 cal BC; GU-2888) and Dryburn Bridge (House 9; Dunwell 2007, 770–410 cal BC, AA-53704).

However, the Lamb's Nursery structure was dated approximately 750 years earlier than that at Melville Nurseries (Cook 2000, 103), suggesting this architectural type was already in use rather earlier in the Bronze Age, and Ashmore (2001) argues for the appearance of this structural type in the first quarter of the second millennium BC. Presumably the Castlesteads structures belong somewhere in this very broad date range.

Perhaps of significance in the choice of location of these types of settlement is the subsoil type. The easily worked sand and sandy gravels found at Castlesteads and Thornybank could have been chosen for settlement due to the physical ease with which structures could be built, together with a need to locate these sites on ground free from drainage and flooding problems.

Recently excavated examples of these structures at Castlesteads, Thornybank, Lamb's Nursery, and a partially excavated example at Inveresk (Neighbour 2007) have often been recognised as very vestigial features sited on sandy subsoils. Of these, one was revealed during trenching evaluations (Castlesteads) while the other two were identified during the excavation of unconnected separate sets of features, specifically a long cist cemetery at Thornybank and Roman features at Inveresk. These chance discoveries suggest that there are likely to be many more of these structures lying undiscovered along the Esk Valley.

5.6 Conclusion

The Castlesteads ring-groove structures add two further examples to the growing corpus of knowledge concerning this building type. Unfortunately, evidence for their date and use was not forthcoming, but limited interpretation of their above-ground appearance is possible from their plan and by using evidence from nearby sites.

The slight physical remains of these structures means that many of these sites are not detected by non-invasive archaeological techniques such as aerial photographic survey, in comparison with ring-ditch houses, which are more readily identifiable in this type of survey due to the much broader surrounding ditch. This point is borne out if the aerial photographs of the Castlesteads site are studied with hindsight – the ring-groove structures and the pit complex are not visible even though their locations are clear. This is in sharp contrast to the obvious presence of two nearby examples of probable ring-ditch houses. Although occasionally visible on aerial photographs, ring-groove structures tend not to be as easy to identify as ring-ditch types. This demonstrates the incomplete nature of the information which can be gleaned from even the best aerial photographs.