II

An Unenclosed Bronze Age House Site at Lookout Plantation, Northumberland

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THE site was found in September 1980 during the construction of the Simprim to Corbridge section of the Frigg IV gas pipeline, and was investigated by archaeologists attached to the project. It was previously noted by Tim Gates, then Field Officer for Northumberland with the North East of England Archaeological Unit, as a ring ditch on a 1:10 000 aerial photographic survey of the pipeline route commissioned by British Gas (Storey & Partners 1979).

The site is located in the Till Valley 5·50 kilometres south-east of its confluence with the River Tweed and one kilometre west of Etal and the River Till. The lower course of the valley is flanked by the Cheviot *massif*, and two kilometres east of the site by the escarpment of the Fell Sandstone series. It is situated at 61 metres OD on the eastern slope of the Cornhill Kettle moraine, approximately 50 metres from its junction with the underlying boulder clay. The morainic sands and gravels support a fairly intensive arable regime, whereas the more intractable boulder clay derived soils, south and east of the site, are given over increasingly to pasture towards the River Till (fig. 1).

A site plan was recovered following the removal of topsoil and four main elements were identified. These included

- an apparently heptagonal slot or outer ring; with
- a south west facing entrance and complementary timber porch structure, which enclosed
- an inner ring of seven post holes.

Within this internal ring were a number of "pit like" features and stakehole alignments (fig. 2).

A search of the surrounding pipeline easement revealed no other archaeological features connected with the site. Thus it was assumed that the site formed the earth-cut remnants of a single, unenclosed roundhouse.

SITE DESCRIPTION

External Slot (figs 2 and 3)

The external slot was not quite circular but appeared to be roughly heptagonal with five visible sections of between 4·80 and 5·60 metres in length. They enclosed an area of about 95 square metres with an internal diameter of 10·3 m (north–south) and 10·2 m (east–west).

The depth of each section of the slot varied considerably over the site. In the south eastern sector (fig. 3) it was 0·47 m deep, on the western side of the entrance it was 0·54 m in depth, and to the east of the entrance 0·50 m. On the eastern side the depth of the slot averaged 0·26 m, whilst it was no more than 0·05–0·08 m deep at any point along the northern circumference of the site. The depth of the slot appears to have been determined by the relative level at which the morainic gravels underlay the site, and defined the bottom of the slot wherever encountered.

The width of the slot also varied, apparently from section to section. In the south-western quadrant it was between 0·68 and 0·75 m wide, whereas on the north-western and eastern sides it was quite narrow, 0·28–0·35 m wide. Elsewhere it varied between 0·45 m and 0·55 m in width.

The fill of the slot consisted of a light brown sandy silt loam, which also included some

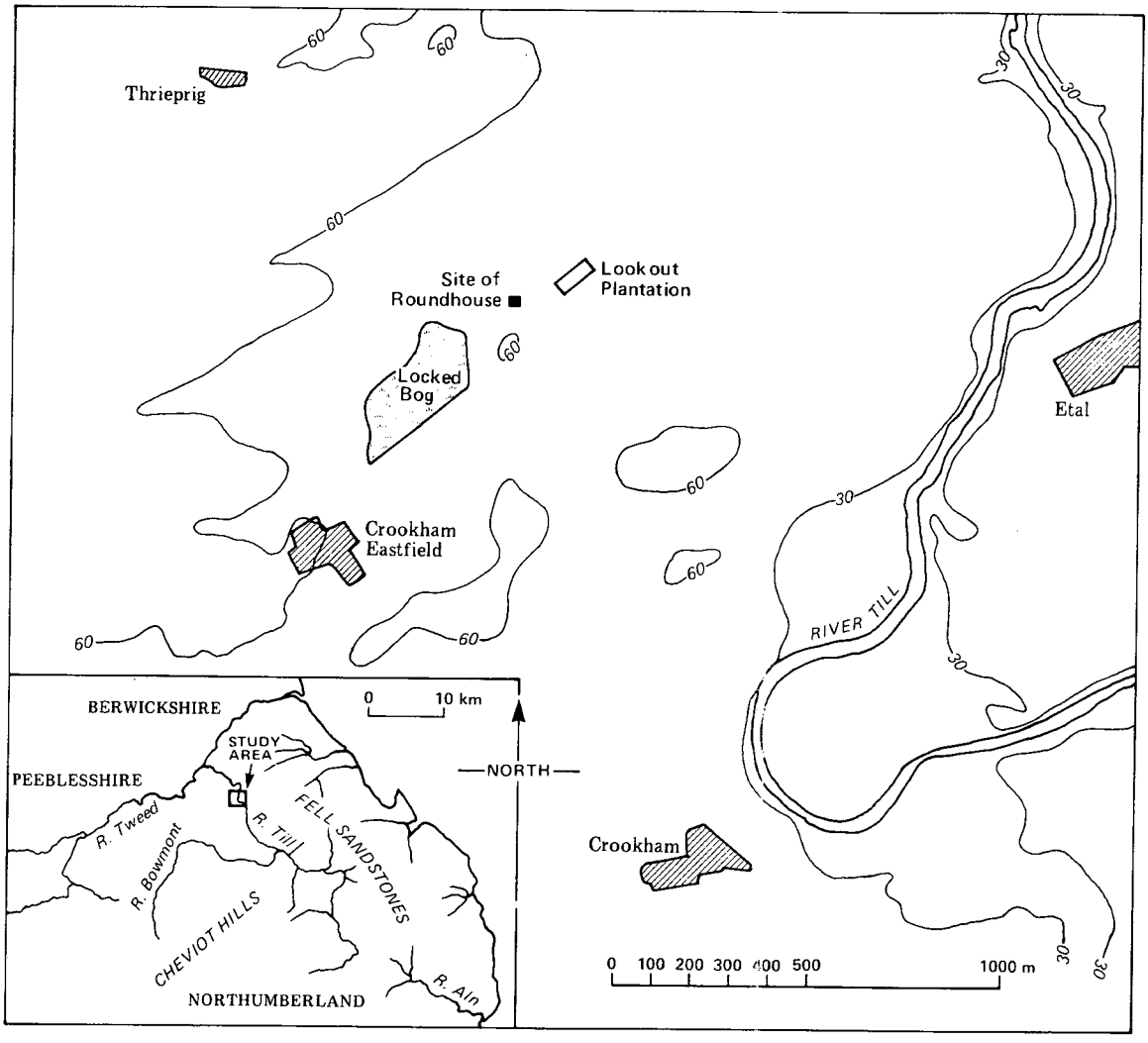

Fig. 1 Lookout Plantation, Northumberland: location plan.

compactly laid water-worn pebbles in the south-western sector and around the entrance, where the underlying gravels were deeper. It was lighter and sandier on the outside edge and in places towards the bottom of the profile, it was quite difficult to distinguish from the undisturbed subsoil.

The apparent angular arrangement of the slot and its square-cut profile suggested at first that it may have acted as a foundation for a sill beam. A 7·0 m section of the south-eastern quadrant was examined in order to see if there was any evidence for a structural arrangement in the fill of the ditch that would complement the internal circle of posts.

Four putative post pipes were recorded between 1·80 m and 2·0 m apart, extending eastwards from the entrance over a 6 m length of the slot (fig. 2). F55 was located precisely at the junction of the porch foundation and the slot, and was 0·10 m in diameter. F56 which was only recorded in plan, lay 1·85 m away and was

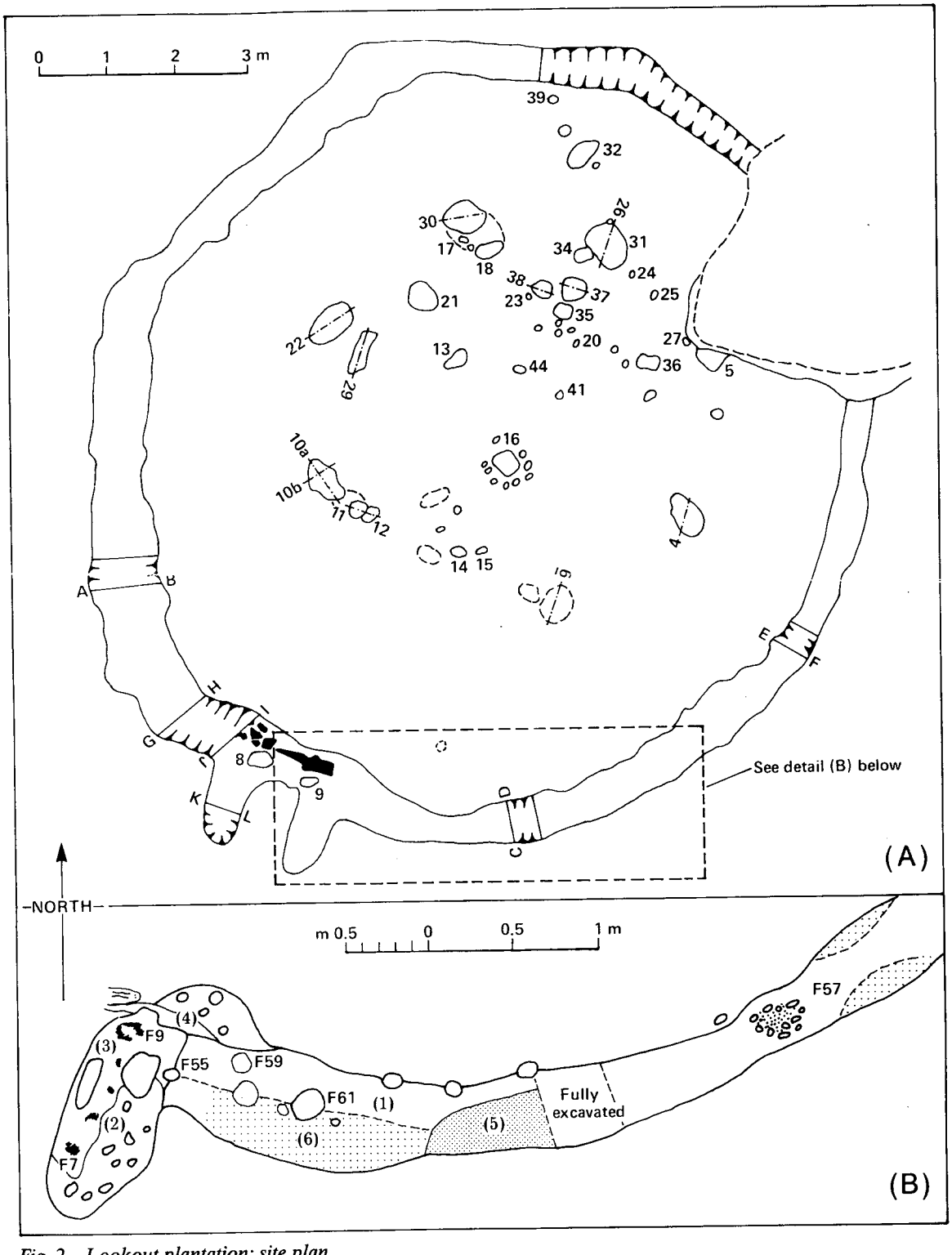

Fig. 2 Lookout plantation: site plan.

0·12 m in diameter. F57 was 1·80 m beyond F56 and contained a fill of coarse gravel. Two metres beyond that, F58 was 0·10 m in diameter. Three other post pipes were recorded immediately to the east of the entrance, F59 and F60 which were 0·40 m east of F55 were both 0·14 m in diameter and F61 was 0·17 m in diameter.

Other than F57 they were all distinguished by a fill of cohesive dark brown silt that contained a very slight amount of charcoal, and were barely discernible as features. No evidence of a sill beam foundation was found either in plan or section. However the impression that the slot may have been dug in separate sections was borne out by the discovery of a block of subsoil protruding into the ditch at a point where it narrowed to 0·31 m in width, and where it also corresponded with a presumed junction between two external slot sections (fig. 3).

An inner ring of stakeholes was found on the internal edge of the slot, which was slightly battered and much more roughly hewn than the vertically cut outer edge. The main fill had been replaced along this edge by a friable brown silt containing fewer stones and considerably more charcoal, and a number of stakeholes were set vertically and in some cases obliquely through this matrix against the inner edge of the slot. These varied between 0·10 and 0·12 m in diameter and 0·12 to 0·25 m in depth (figs 2 and 3).

In the north-eastern quadrant, a section of the slot, 3·50 m in length, had been removed by the excavation of a large sand-filled pit. Part of it was removed to a depth of 1·60 m without reaching the bottom of the feature. Although the farm manager had no knowledge of it, the rectangular shape and even profile of the pit suggested that it was a modern, machine-cut feature. Safety concerns and the possibility that it may have been a burial pit for diseased livestock precluded any further investigation.

Entrance (figs 2 and 3)

At the south-western end of the site the outer ring appeared to curve outwards into two slightly splayed foundation trenches or 'horns' to form an entrance 0·70 m wide at the threshold, and 0·85 m wide at the open southern end. The western side of the entrance was 0·60 m wide and 1·33 m long and both sides presented a straight internal edge.

A 'threshold stone' was found placed on edge across the entrance along the line of the external slot. It was set to a depth of 0·68 m within a narrow trench, 1·88 m long and up to 0·21 m wide cut outside the edge of the external slot. The upper, exposed part of the stone was friable and fragmented at the edges and appeared to have been truncated by plough or machine action, as well as by natural exfoliation.

In contrast to the rest of the site there was considerable evidence of burning around the entrance area and timber features which were evident along the inner edge of each side of the entrance appeared to be the remnants of a burnt superstructure, possibly a porch.

A spread of charcoal on the eastern side of the entrance resolved itself into five post pipes between 0·08 m and 0·12 m in diameter (figs 2 and 3) aligned perpendicularly to F9 at the threshold. A complementary arrangement of post pipes on the other side of the entrance was similarly aligned to F8.

Both F8 and F9 were situated in front of the threshold and appeared to be portal-like features. They contained a fill of charcoal and minute quantities of burnt bone and calcareous material in a dark brown silt matrix, which in the case of F8 extended to a depth of 0·41 m.

The area within the porch consisted of a compacted pebble surface covered by numerous flecks of charcoal which were either a product of the destruction of the porch or are the only remnants of an occupation surface left on the site. The condition of the ground surface was indicative of the greater trampling and wear that one would expect to find in an entrance area.

Internal Post Setting (figs 2 and 3)

The internal ring of seven post holes (F4, F5, F6, F10, F22, F30 and F31) enclosed an area approximately six metres in diameter which enclosed all of the archaeological features

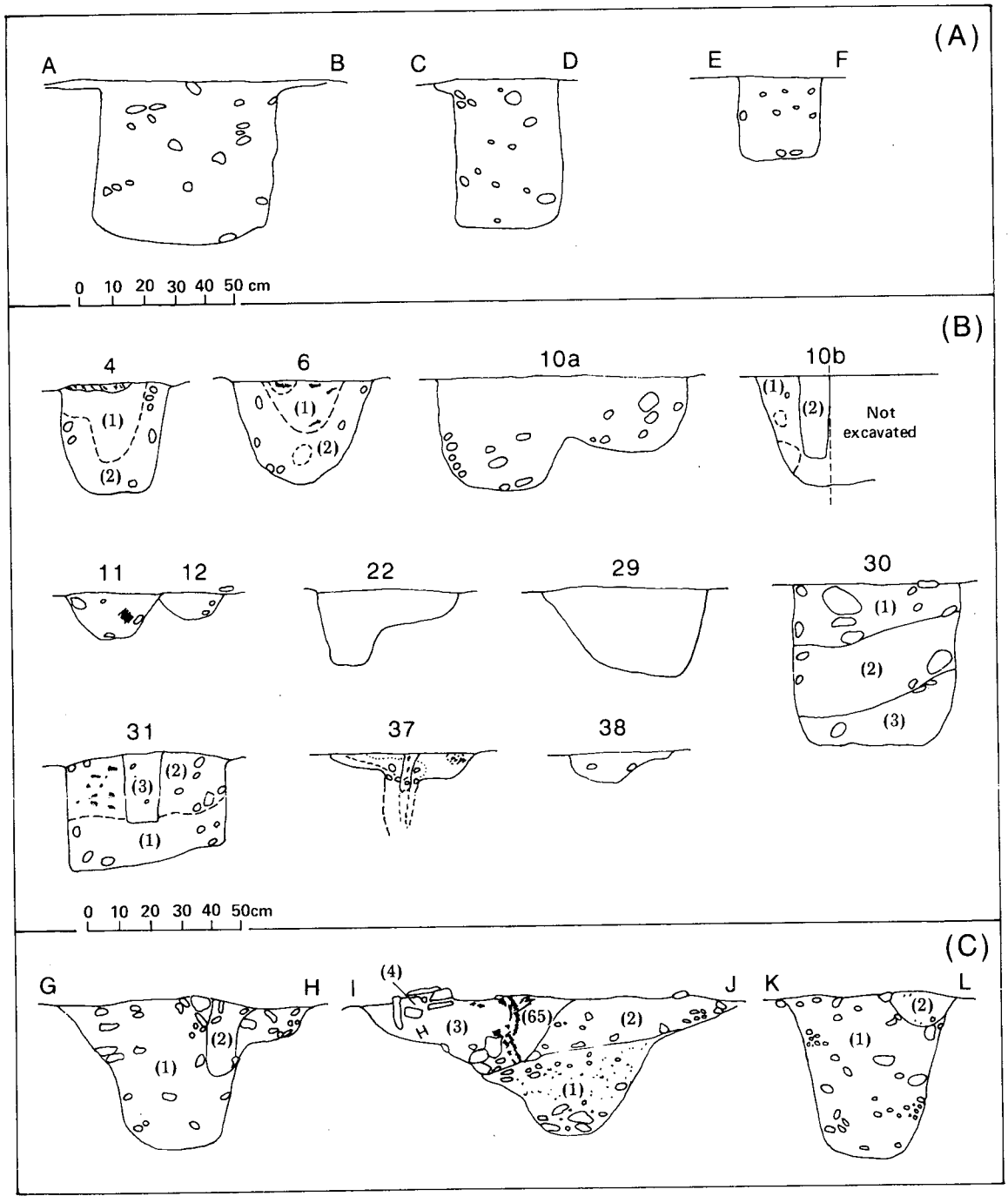

Fig. 3 Lookout plantation: sections.

within the site but for three stake-holes and a small gravel-filled pit (F32) at the northern end of the site.

The post-setting was positioned a little eccentrically up slope towards the north-eastern quadrant of the enclosure. Four of its component features, F4, F5, F10 and F31 had recognisable post pipes. Their depths were 0·22 m, 0·23 m, 0·25 m and 0·26 m respectively and their diameters were 0·22 m tapering to 0·13 m, that in F5 was not recorded, and features 10 and 31 were 0·12 m and 0·13 m in diameter respectively.

Feature 6 contained a "v"-shaped pocket of dark brown silt interspersed with flecks of charcoal; it was 0·17 m deep and 0·23 m wide with a pad of charcoal at the surface 0·09 m in diameter and 0·06 m thick. It had a similar fill to that in post pipe F4.

After the excavation of F31 a depression, 0·12 m in diameter and 0·04 m deep was recorded at the bottom of the feature. As the post-pipe recorded in profile did not extend as far as the bottom of the feature and was not aligned with the above depression, it is probable that an earlier post had been removed and subsequently replaced.

There was no indication of a post-pipe in F30. Two features F17 and F18, were located in a shallow declivity to the side of F30 and were only revealed after the removal of the first few centimetres of the upper fill of that feature. F17 was 0·12 m in diameter and 0·15 m deep and F18 was 0·10 m in depth. Both contained a fill of dark brown silty loam. This suggested that F30, like F31, may have been re-used, possibly by the replacement of a post within the same hole.

The profiles of F22 and F10 also suggested that these features may have undergone some modification during or after their construction. The southern side of F22 appeared to have been recut to a depth of 0·09 m in the form of a hole 0·16 m in diameter that contained sterile brown silt. However this may relate more to a modification of other features within the post setting.

The modifications, if any, to F10 seemed to relate to a group of small truncated features (F11, F12, F14 and F15) and a number of shallow, fairly continuous smears between post holes F6 and F10, which gave the impression of some kind of screen arrangement across the front of the post ring. Feature 11 which is 0·28 m in diameter and 0·19 m deep, contained a dark brown silt fill and cut F12 which contained a black silty loam fill.

Internal Features (fig. 2)

Other than F16 and the small post holes which surrounded it all of the remaining features within the inner post setting lay to the north of a line between F22 and F4. F16 which lay precisely at the centre of the area enclosed by the external slot was no more than 0·19 m in depth and contained a uniform fill of sterile brown silt. The postholes surrounding it which formed an irregular ring *c.* 1·50 m in diameter were between 0·10 m and 0·12 m in diameter, and made up almost entirely of charcoal.

A line of stake holes between F31 and F5 included F24, F25 and F27, all of which were 0·08 m in diameter. Another stakehole, F26, lay on the northern edge of, and was cut by, F31. F34, F35 and F36 were three similar rectangular square-cut features which appeared to form one "unit" in the north-eastern corner of the post ring. F37 and F38 were both shallow features with a sandy fill. F37 contained a small upright, 0·03 m in diameter set in a hole 0·07 m in diameter which had been excavated to a depth of 0·17 m. F23, a feature adjacent to F38, was 0·18 m in diameter and 0·15 m in depth and contained a fill of dark brown silt. With the exception of F20 the remainder of the stake-holes and features 40–44 were not excavated. F20 was an oval feature 0·11 m and 0·13 m in diameter and 0·10 m deep with a dark brown silt loam fill. F29 was 0·83 m in length and 0·45 m wide and was between 0·36 m and 0·27 m deep. It contained a fill of brown silt with a few disparate flecks of charcoal. F13 was 0·37 m in diameter and 0·09 m deep. F21 was 0·50 m in diameter and 0·25 m deep. Both features contained a uniform brown silt fill.

FINDS

Pottery (fig. 4)
Five fragments of pottery representing two different wares were found on the site. One was recovered from the fill of the external slot, and the remaining four, all of the same type, came from component features of the inner post ring, the presumed occupation area.

1 Rim sherd (fig. 4.1)

The sherd has a dark grey core with numerous small limestone inclusions. The body of the sherd is 9 mm thick and has a flat rim, 15 mm wide. A magenta red slip with quartzite inclusions covers the sherd other than along a slight lip, 1–2 mm wide, on the outside of the rim. It is abraded and may have been introduced into the site from another context during the construction of the slot.

Parallels for this rim form can be found in some later Neolithic ware from Scotland where it is usually found on "bowl" shaped vessels. The shape of the rim is similar to examples found on the Class I wares (nos 46–9) from Luce Sands, Wigtownshire (McInnes 1963: 52–3). The most striking characteristic of this particular sherd is its smooth red slip. Some Class III wares at Luce Sands are also red in colour and frequently have polished appearance. McInnes suggests that this red slip may reflect an attempt to copy Beaker characteristics.

2 Body sherd (fig. 4.2)

Two other similar sherds which were found in F6 and F10 are not illustrated. The sherd is 10 mm thick and has a black core containing organic temper and a filler of grit and limestone inclusions, some of which erupt on both surfaces. The external sandy fabric is light brown and has an uneven finger-impressed surface. There are a number of faint striations which appear to be grass marks.

They comprise fragments of "flat rimmed ware" and are usually associated with plain, bucket-shaped vessels found on ritual and settlement sites throughout Northern Britain, with a particular incidence in central and eastern Scotland and Northumberland. It is an undistinguished type of pottery found in contexts "as diverse as the third and first millennium B.C." (Coles and Taylor 1970: 97–8). Examples have been recovered from second and first millennium bc, radiocarbon dated contexts from settlement sites in Scotland (Hedges 1975: 69, Jobey 1980, Barber 1982: 359).

3 Rim sherd (fig. 4.3)

The sherd is *c.* 7 mm thick and has a sandy brown external fabric which contains a number of minute quartzite grains. It has a black core containing an organic temper and some small grit inclusions. The rim, which is pitted and abraded, is inverted into the vessel from a point 10 mm below the lip of the rim.

The fabric of this sherd is similar to that above (2) but has a finer grain and is much better fired. The profile of the rim is suggestive of the bipartite urn tradition of later second millennium bc funerary ware. A parallel for the slight bipartite form of this particular sherd can be found in four inverted rim sherds found on the "secondary floor" of the stone circle at Loanhead of Deviot, Aberdeenshire (Kilbride–Jones 1935: 198, 212).

Pottery recovered from platform-based house sites at Mam Tor, Derbyshire included shouldered and bipartite forms, and had associated radiocarbon dates of 1130 ± 115 bc and 1120 ± 132 bc (Barnes 1982: 174). The sherd from Lookout Plantation came from the fill surrounding a post-pipe which gave a radiocarbon date of 1280 ± 110 bc (HAR 4386).

Polished Stone Axe (fig. 4)
A polished stone axe was recovered from the upper fill of the external slot, 0·55 m east of the entrance.

The tool is 78 mm long and is brown in colour. It is 51 mm wide and 27 mm thick at the

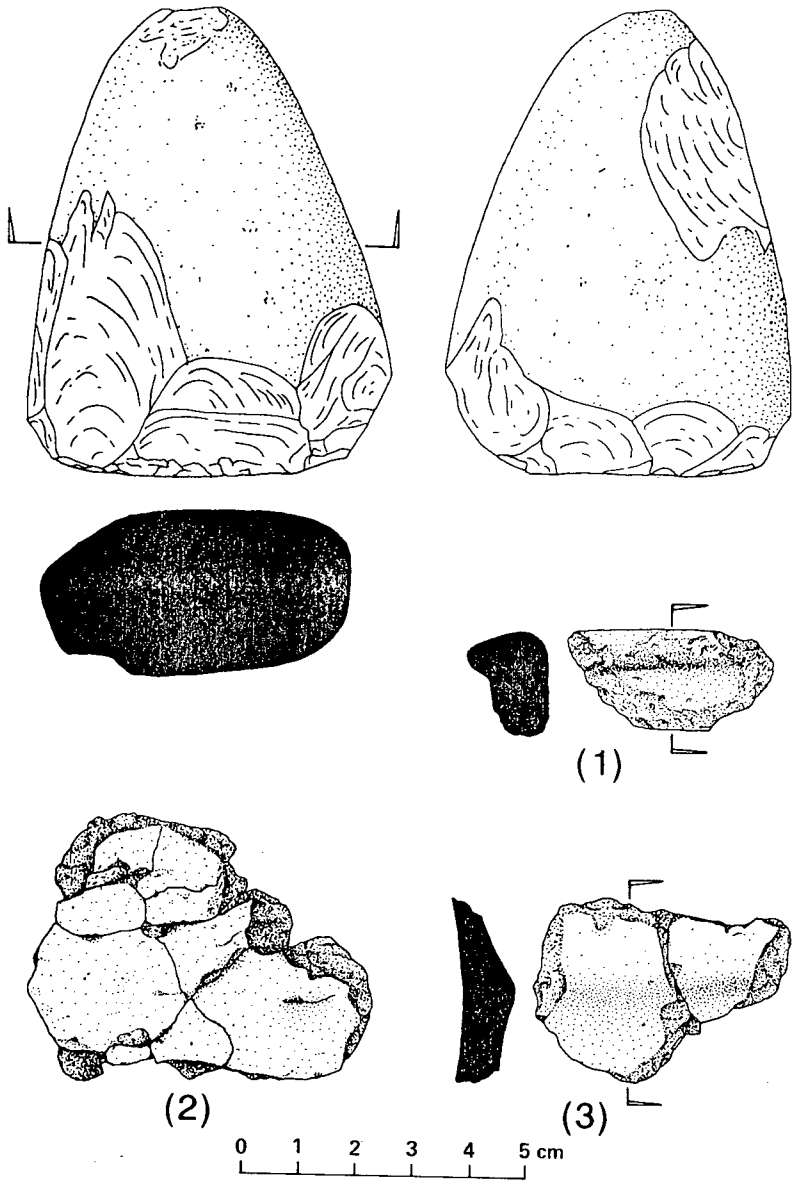

Fig. 4 Lookout plantation: pottery (3/4).

cutting edge, narrowing to 10 mm wide and 11 mm thick at the hafting end where it has a rounded profile with a thin incision in the stone which extends 18 mm down either edge of the tool. It is fairly flat along each edge and rounded over both faces of the tool, the difference in profile being marked by a seam along the lateral edges which becomes more accentuated towards the hafting end. The cutting edge is heavily damaged and flakes of stone have been removed from either face in a way that suggests that the damage was a product of percussion or repeated hammer-like blows. The face of the cutting edge is serrated as a

result of an abrasive or rubbing action, presumably against a tractable material such as wood, as the interstices in the stone, which run longitudinally along the damaged edge, have not been smoothed by the action.

Radiocarbon Dating

Four wood charcoal samples were submitted to the Carbon 14/ Tritium low level measurements laboratory at AERE, Harwell.

Feature No.	Laboratory No.	Date
F8	HAR-4385	3370 ± 80 bp (1420 BC)
F31	HAR-4386	3230 ± 110 bp (1280 BC)
F30	HAR-4387	3090 ± 130 bp (1140 BC)
F7	HAR-4388	3410 ± 80 bp (1460 BC)

Relatively small samples were taken from F30 and F31 in the inner post ring, thus their error estimates are higher than those taken from F7 and F8 in the entrance area. The sample in F31 was taken directly from a postpipe, as was that in F8, one of the portal posts in front of the stone threshold. The samples removed from F7 came from the posthole alignment along the eastern side of the entrance.

DISCUSSION

The constraints imposed by working within a pipeline construction programme prevented a complete investigation of the site. However enough information was recovered to effect a basic reconstruction of the building that formerly stood there.

An external ring of posts between 0·10 m and 0·20 m in diameter and *c.* 1·80 to 2·0 m apart were found within the excavated area of the external slot. They acted as roof supports and were bedded on the gravel that underlay the site. The slot had been excavated to a greater depth at the southern end of the site and some stone appears to have been introduced into the bottom to compensate as extra bedding material. The size of the slot in this area and the presence of additional roof support posts (F8–F9, F59–F61) in, and on either side of the narrow entrance, suggests that the apex of the roof may have been centred over the inner ring of roof supports. Their eccentric disposition towards the northern end of the house and the open space left between posts F6 and F10 may have led to a pitch in the roof and a corresponding downthrust over the southern end of the house around the entrance.

If the roof had been centred over the outer ring of supports, then there would have presumably have been an equal load distribution over the whole circumference. However this would have rendered the additional roof supports and deeper foundation on either side of the entrance superfluous, unless this part of the outer ring possibly in the absence of a ring-beam section, was left structurally weaker in order to accommodate the entrance and the porch. It would seem most likely that the roof was centred over the inner ring and was pitched down over a reinforced entrance area.

The only evidence to support a roof concentric with the outer ring is F16 a feature which lies virtually at the geometric centre of the site. However this feature has probably been truncated too greatly by plough action to provide any direct evidence to support such a hypothesis.

The wall was made up of a ring of stakes lying *c.* 0·15 m within the outer ring of roof supports. Their oblique and vertical setting against the internal edge of the slot suggests that they may have supported a wattle frame, perhaps with daub facing.

On either side of the entrance where the use of prefabricated or wattle frames would have been impractical, the stakes appear to have been placed closer together to form very short lengths of continuous wall, possibly in an attempt to bond a separate porch structure into the main wall-frame. The chopped and ragged internal edges of the slot suggested periodic replacement of, or repair to, the wall.

Complementary evidence of renewal was found in the inner ring of roof supports which showed evidence of post replacement, particularly in the profiles of F30 and F31. Radiocarbon dates from these two features were 1140 ± 130 bc and 1280 ± 110 bc respectively.

Evidence of modification was also found in those features at the open southern end of the internal ring of roof supports. These appeared to form a "screen" between the entrance and the occupation area.

Despite evidence for various structural alterations, particularly to the roof supports, there was hardly any horizontal displacement in the ground plan. The inner and outer ring of roof supports were evenly disposed either side of an axis extending through F31 and midway through the entrance portals (F8 and F9). The porch area however does not conform to this display of "post axial symmetry" (Guilbert 1982). Its incongruity to the rest of the plan further supports the stratigraphic evidence that it was a later addition to the building. Probably the last phase in its construction.

A lack of symmetry was also apparent between the outer slot and the roof supports which it contained. A degree of angularity is not an uncommon feature in prehistoric roundhouse plans, particularly of sill-beam or stone-founded construction, and where it occurs the shape of the wall need not necessarily be affected. Circularity is invariably achieved by the posts within the outer ring, as at this site where there is an apparent regular spacing of roof supports over differing lengths of foundation slot.

Though the shape of the external slot clearly had no influence on the form of the building at Lookout Plantation, excavation confirmed that there was some deliberation in the construction of the slot in a separate straight sections.

Very little occupation material was found in the house. Small fragments of burnt bone and charcoal were found in the entrance area and on the inner edge of the slot where they had possibly been introduced in periodic repairs to the wall. Charcoal and fragments of pottery were also found in those features at the front of the inner ring of roof supports, in postholes F6 and F10 and the intervening features, F11–F15 inclusive.

This distribution suggested that the actual occupation or living area was at the front of the house, and the rear of the building, where most of the features within the inner post ring are concentrated, was a sleeping or storage area. These features may reflect some form of internal partition but the elucidation of individual structures was not possible as those features recorded on plan appear to relate to an extended period of occupation. At least one stakehole (F27) in an alignment (F24–F27 incl.) was cut by post F31, and two other features F17 and F18 were removed in a re-excavation of post F30.

SIGNIFICANCE

Chronological Context

A range of fully developed building techniques, typical of first and second millennium bc timber roundhouses, which included a double ring of roof supports and a porch of sill-beam construction, were used in the design and construction of the house. Characteristics reminiscent of second millennium bc ringwork construction on funerary sites were also evident on the outer slot and in the stone-set threshold arrangement at the entrance.

The latter feature appears to be a product of the "continuous kerb revetment" tradition which is found on mid-second millennium bc ringworks, particularly enclosed cremation cemeteries, throughout northern England and Scotland. Many of these sites also display the double ring ground plan characteristic of domestic roundhouses (Varley 1938; Bu'lock 1961; Radley 1966; Jobey 1968; Ritchie and McLaren 1972).

A stylisation in house construction techniques based on familiar architectural style current on both funerary and settlement sites in the area at the time is reflected in a similar hybridisation between domestic and funerary elements, whether coincidental or conscious, in later Bronze Age pottery styles (Jobey 1980: 86–7, Burgess 1980: 96–7). This apparent similarity between funerary and domestic architectural styles may account for the apparent bias towards funerary sites and the relative paucity of settlement evidence in the second and earlier first millennium bc in Northern Britain.

Geographical Context

The house site at Lookout Plantation appears to be unenclosed as there is no apparent complementary archaeological evidence for attendant enclosure or agricultural activity. The lowland location of the site has meant that only the earth-cut remnants of the house have survived, and any stone-built structures that may have existed in the area in the form of clearance cairns or field walls have been removed.

Relatively few second millennium bc unenclosed settlement sites are recorded in Northern Northumberland and the border area. The only other archaeologically attested lowland unenclosed house sites in the "Tyne–Forth" province as a whole have been found incidentally in the excavation of a Romano-British site at Hartburn, Northumberland (Jobey 1973); on the East Lothian lowland at Dryburn Bridge (Pollock and Triscott 1979) and at Broxmouth Hill (Hill 1982) in the excavation of mid-first millennium bc settlement sites—a palisaded enclosure and hill fort respectively. Radiocarbon dated unenclosed timber-built roundhouses of the mid-second millennium bc have come to light in excavation in the border area at Green Knowe, Peebleshire (Jobey 1980).

There is little extant evidence of settlement in the Till Valley area other than those later first millennium bc Iron Age enclosure sites located along the cragline overlooking the valley (Jobey 1968) and a small number of unenclosed settlements on the eastern tailslopes (Gates 1983: 105). There is considerable evidence of earlier second millennium bc ritual and funerary activity in the Milfield henge complex of the lower course of the valley (Harding 1981; Miket 1981).

Jobey has counselled a reconsideration of the unenclosed hut circle as a possible form of settlement that would complement the extensive burial evidence for the period in these areas (1978), and remove the impression that much of Northern Northumberland was little more than an "elephant's graveyard" at this time. Single unenclosed house sites occur as stone founded huts or subdued ringworks in the upland, in Northumberland and the borders, and are occasionally found with surrounding evidence of field clearance or where they can be defined, cultivation plots and field systems (Jobey 1982, 23). In a survey of unenclosed settlement in Northern Northumberland over 50% of the sites at an elevation of between 120 m and 430 m OD comprised only one house (Gates 1983, 110).

There can be difficulties in identifying such roundhouses which may be freestanding and have no complementary evidence of field clearance or enclosure; and confusion is possible with other upland features such as ring cairns or sheep stells (Jobey 1964, 56; Gates 1983, 107). These problems in detection are paralleled in the lowland where the only manifestation of sites such as at Lookout Plantation, where formation is favourable, is in the form of cropmark ring ditches of relatively small dimension, no more than 10–15 m in diameter. Such features can also lend themselves to a variety of interpretations other than that of a roundhouse. This ambiguity may have led to an imbalance in the distribution of unenclosed settlement sites in that only seven of the 97 known unenclosed house sites, other than Lookout Plantation, are on ground lower than 120 m ASL (Gates 1983). Gates has suggested that a proportion of the seventy or so ring ditches which he has recorded with diameters not exceeding 20 m may represent unenclosed houses (1983, 106) and thus may extend their geographical range into the plough zone.

In upland areas where land partition and agricultural features still survive, the apparently dispersed and open nature of this form of settlement has been commented upon. As in Perthshire where the distribution of groups of hut circles accompanied by clearance cairns was seen to show "a much wider and far more diffuse distribution than eighteenth century A.D. townships" (Fairhurst 1969: 140). A clearer picture of early second millennium bc unenclosed settlement in relation to landscape development is apparent in a survey of Bronze Age settlement in the Plym Valley, Devon (Smith 1982). Of 357 house sites recorded in the survey area 36% were unenclosed and where possible the author was able to demonstrate that at least one third of those remaining

had also been formerly freestanding and were incorporated at a later date into larger aggregate systems of boundaries, fields and interconnected settlement. It was suggested that some of these houses were originally freestanding in the 15th–16th centuries bc and absorbed later in the 11th–12th centuries bc.

A similar relationship between earlier second and later late second/first millennia bc settlement has been implied at Akeld, Northumberland where an apparent chronological gradation in land use from clearance cairnfield to cultivation terraces to rectangular field plots was discerned within part of an extensive Bronze Age landscape spreading over a large area of the Cheviots (Burgess 1981). A series of three, superimposed roundhouses related to the later field system development were late second/early first millennium bc in date.

The lack of evidence at Lookout Plantation for ancillary structures to the house may be because of the manner in which such monuments were originally constructed. Field or paddock walls if made up of linear banks of cleared stone are unlikely to survive a single ploughing and would leave no trace of their former position in the form of crop or soil marks. However the current picture of second millennium bc landscape development in upland Northumberland shows that settlement was probably accompanied by extensive clearance rather than pronounced land partition at this time. The, albeit fragmentary, evidence at Lookout Plantation suggests a similar pattern of landscape development on the lowland; and a reconsideration of cropmark ring ditches as possible unenclosed settlement sites.

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REFERENCES

BARBER, J. (1982). "Arran", *Current Archaeology*, 83, 358–63.

BARNES, B. (1982). "Man and the Changing Landscape", Liverpool.

BU'LOCK, J. D. (1961). "The Bronze Age in the North West", *Transactions of the Lancashire and Cheshire Archaeological Society*, 71, 1–42.

BURGESS, C. B. (1981). "Excavations at Houseledge, Akeld, Northumberland", *Newcastle and Durham University Archaeological Reports for 1980*, 7–10.

COLES, J. M. and TAYLOR, J. J. (1970). "The Excavation of a Midden in the Culbin Sands, Morayshire", *Proceedings of the Society of Antiquaries of Scotland*, 102, 86–100.

FAIRHURST, H. (1969). "The Deserted Settlement at Lix, West Perthshire", *Proceedings of the Society of Antiquaries of Scotland*, 101, 160–99.

GATES, T. (1983). "Unenclosed Settlements in Northumberland", in Chapman, J. C. and Mytum, H. C. (eds), "Settlement in North Britain 1000 B.C.–A.D. 1000", *British Archaeological Reports*, 118, 103–48, Oxford.

GUILBERT, G. (1982). "Post Ring symmetry in Roundhouses at Moel Y Gaer and Some Other Sites in Prehistoric Britain" in Drury, P. J. (ed.), "Structural Reconstructions", *British Archaeological Reports*, 110, 67–86.

HARDING, A. F. (1981). "Excavations in the prehistoric ritual complex near Milfield, Northumberland". Proceedings of the Prehistoric Society, 47, 87–135.

HEDGES, J. (1975). "Excavation of Two Orcadian Burnt Mounds at Liddle and Beaquay", *Proceedings of the Society of Antiquaries of Scotland*, 106, 39–98.

HILL, P. (1982). "Broxmouth Hill-fort excavations 1977–78: An Interim Report", in Harding, D. W., (ed.), *Later Prehistoric Settlement in South East Scotland*, 141–88.

JOBEY, G. (1964). "Enclosed Stone Built Settlements in North Northumberland", *Archaeologia Aeliana*, 4, 42, 41–64.

JOBEY, G. (1973). "A Native Settlement at Hartburn and the Devils Causeway, Northumberland (1971)", *Archaeologia Aeliana*, 5, 1, 11–53.

JOBEY, G. (1978). "Unenclosed Platforms and Settlements of the Later Second Millennium BC in

Northern Britain", *Scottish Archaeological Forum*, 10, 12–26.

JOBEY, G. (1981). "Green Knowe Unenclosed Platform Settlement and Harehope Cairn, Peeblesshire". *Proceedings of the Society of Antiquaries of Scotland*, 110, 72–113.

KILBRIDE-JONES, H. E. (1935). "An Account of the Excavation of the Stone Circle at Loanhead of Daviot, and of the Standing Stones of Cullerlie, Echt, both in Aberdeenshire, on behalf of HM Office of Works". *Proceedings of the Society of Antiquaries of Scotland*, 70, 278–310.

MCINNES, I. J. (1963). "The Neolithic and Early Bronze Age pottery from Luce Sands, Wigtownshire". *Proceedings of the Society of Antiquaries of Scotland*, 97, 40–81.

MIKET, R. (1981). "Pit Alignments in the Milfield Basin, and the Excavation of Ewart I", *Proceedings of the Prehistoric Society*, 47, 1981, 137–46.

POLLOCK, D. C. and TRISCOTT, J. (1980). "Summary Excavation Reports: Dryburn Bridge". *Proceedings of the Prehistoric Society*, 45, 1980, 369.

RADLEY, J. (1966). "A Bronze Age Ringwork on Totley Moor and other Bronze Age Ringworks in the Pennines", *Archaeologia Journal*, 126, 1–26.

RITCHIE, J. N. G. and MCLAREN, A. (1972). "Ring Cairns and Related Monuments in Scotland", *Scottish Archaeological Forum*, 4, 1–17.

SMITH, K. (1982). "The Plym Valley Survey", in Balaam, N. D., Smith, K. and Wainwright, G. J. (1982). "The Shaugh Moor Project: Fourth Report—Environment, Context and Conclusion", *Proceedings of the Prehistoric Society*, 48, 203–278.

VARLEY, W. J. (1938). "The Bleasdale Circle", *Antiquaries Journal*, 18, 154–68.