Proc Soc Antiq Scot, 118 (1988), 111–129

Pit alignment and earthworks between Marygoldhill Plantation and Drakemire, Berwickshire

Peter Strong*

SUMMARY

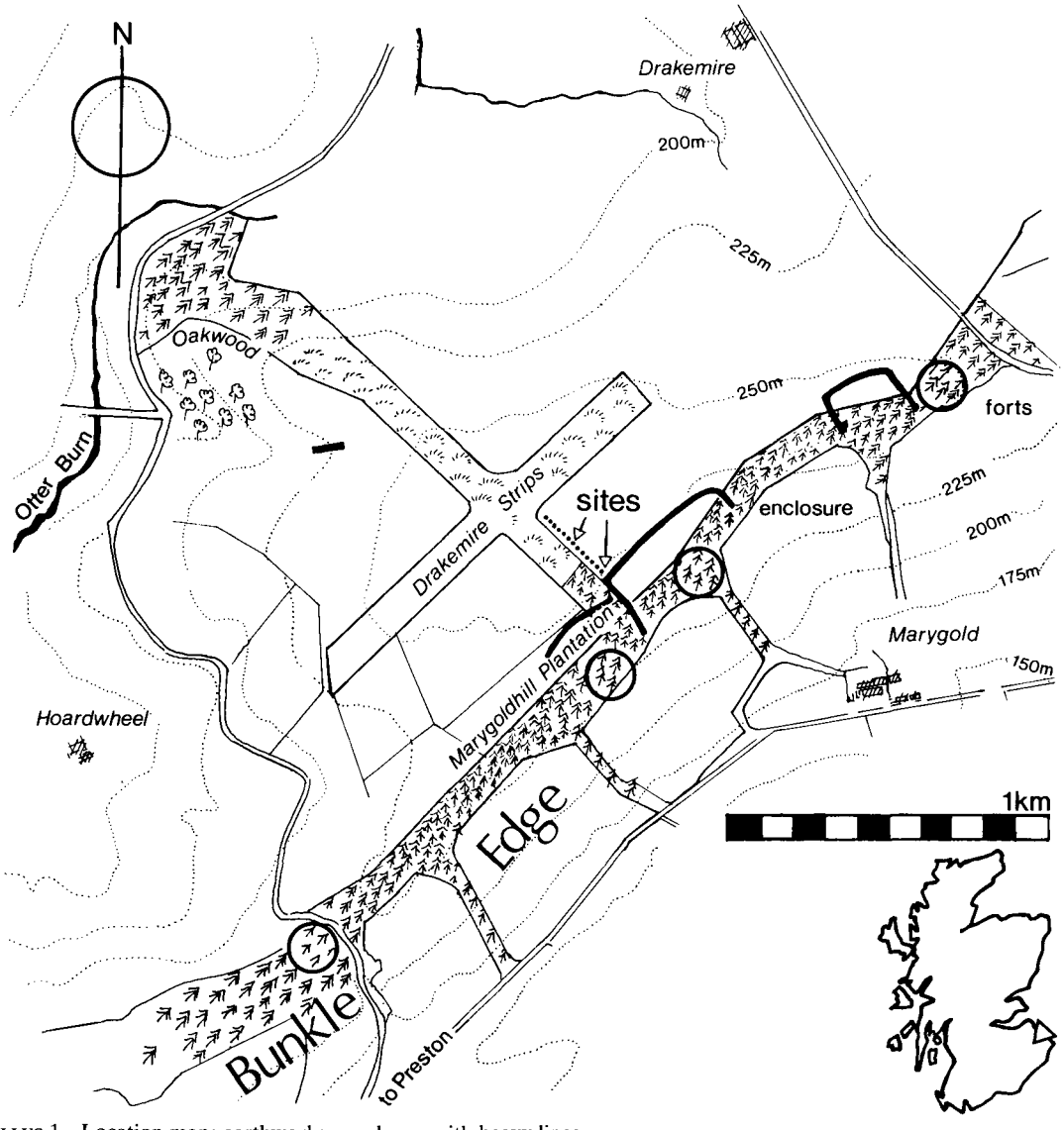
A co-linear alignment of pits and ditch segments accompanied by a bank are cut by the ramparts of an enclosure annexed to one of the Bunkle Edge Iron-Age forts. Excavation of three consecutive pits of the alignment showed that they may have held posts, in contrast to the irregularities of the other pits which had been used for quarrying. The suggestion is made that they may be the relics of two non-contemporary pre Iron-Age earthworks and parts of a larger system of land divisions embracing the high ground of the area. The site was levelled by ploughing immediately before investigation.

INTRODUCTION

The site area lies at the south-western edge of a large field just to the north of Bunkle Edge, Berwickshire (illus 1). The earthworks included a sub-rectangular enclosure of about two hectares which partially surrounded the Marygoldhill east fort, and a linear feature composed of a line of pits and a flanking bank running north-westwards from the enclosure (NGR NT 8044 6049 to 8024 6070). This incorporated a putative gateway (NT 8036 6057) with a staggered entrance (Site 2) (illus 2). The enclosure was defined by a continuous double bank and medial ditch which converged with the linear earthwork at the west corner (NT 8044 6049) (Site 1) (illus 3, 4).

Francis Lynn (1894) in his examination of the Bunkle Edge forts mentions a 'trench' which was clearly visible on the ground although not noted on the ordnance map of the time. Craw (1928) refers to the linear earthwork as the 'Drakemyre Black Dyke' and it is marked on his plan as running north-westwards from the north corner of the Marygoldhill Plantation. Craw agrees with Lynn that the enclosure was later than the Black Dyke as the excavated earth from the rampart ditch had been thrown into its trench. He observed that the Black Dyke ran 150 yd (140·2 m) north from the enclosure where he found a gateway 24 ft (7·32 m) wide through it, the ends of the banks on either side being out of alignment. He also states that the dyke was lost at a distance of some 300 yd (283 m) from the enclosure and that he was unable to trace it further. Lynn, 48 years earlier, had been able to follow it running out across the moor, presumably before the Drakemire strips were laid out. He traced it over the ridge and down through the natural cover known as Oakwood (otherwise Aikieside Wood). All that is visible of this sector today is a short stretch of a possible ditch at the head of the gully south-east of the wood. Lynn asserted that from there it crossed the valley and rose to the higher ground on Blackerstone farm further north (NT 77 61). He considered that both Drakemyre Black

*Central Excavation Unit, 9 Melville Street, Edinburgh



ILLUS 1 Location map; earthworks are shown with heavy lines

Dyke and the bank running in a south-westerly direction from the enclosure were 'of the same class as the Catrail and very ancient'.

The 25″ OS map for 1906 shows an 'ancient trackway' on the line of the earthwork (illus 5). It appears to continue down over Bunkle Edge to the south-east past the forts. In 1908 Royal Commission investigators reported than an 'ancient track' ran from the north-west corner of the enclosure (RCAMS 1915); this they described as an irregular mound about 14ft (4·27 m) across, with a trench in places 3ft (0·914 m) below its crest, running an irregular course across the moor. A similar, less noticeable, 'track' crossed the plantation immediately to the south-west and ran through the heather in a south-westerly direction for a distance of about 300 yd (283 m) (illus 1).

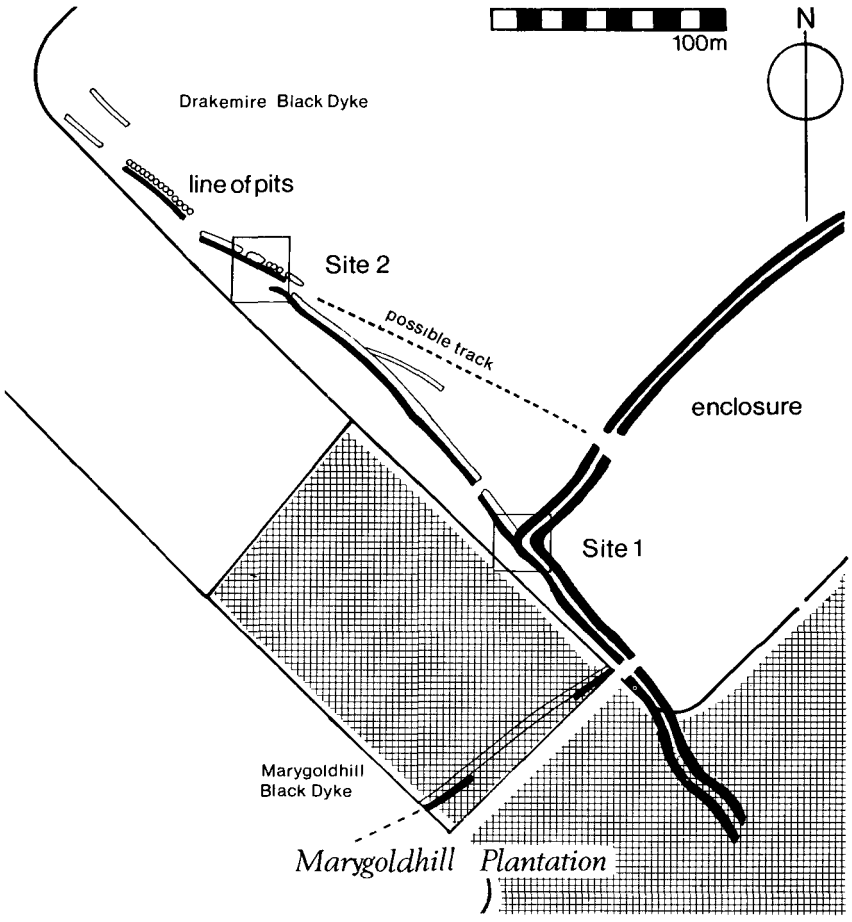
ILLUS 2 Vicinity of Site 2 in 1982, prior to levelling. Inset; photograph taken in 1983

There is nothing now to be seen on the ground of this so called 'Marygoldhill Black Dyke' except for a low mound in the plantation, but a faint cropmark sometimes shows from the air. Examination of aerial photographs suggests that it curves to the south back into the wood. Craw noted that both these earthworks were of the 'pitted trench type'. The Royal Commission investigator also observed that the latter one had 'numerous traverses' crossing the trench.

The aerial photograph (RCAMS BW 3879) (illus 6) shows an additional unitary feature which may well be a track running east-south-east from the gateway at Site 2 (illus 3). It incorporates a short length of ditch, which is visible on the ground, and continues as a shallow dip through the clump of trees. The line passes through a gap in the enclosure ramparts, and heads down into the wood at the existing gate and present-day track.

The Royal Commission carried out a plane-table survey of the monument in 1982 and the upstanding earthworks were clearly delineated. At the north-western end of the site area a line of pits was recorded c 1 m diameter at 1 m intervals along the north-eastern side of and adjacent to the low bank north of the 'gateway'. When the Central Excavation Unit carried out a survey of linear monuments in 1983 (Barber forthcoming) these were classified as part of a pit alignment stated to be later than the enclosure.

In the summer of 1983 the field was levelled in preparation for cultivation and the upstanding archaeological features were destroyed. All that remained of what had been until recently a substantially upstanding monument was by late September 1983 reduced to a few slight depressions in the ground accompanied by patches of rubble and exposed subsoil. Areas of exposed old ground surface which had been buried under the banks of the south-eastern part of the site area showed amongst the fresh plough furrows. At the north-west, the truncated remains of the bank near the 'gateway' still



ILLUS 3 Plan of the earthworks in the vicinity of the sites; banks upstanding prior to levelling are marked with heavy lines

existed to a maximum height of 50 cm above the old ground surface although the ditch and the pits were difficult to locate as they had been almost completely filled by the levelling operation (illus 2, 4).

LOCATION

The 8 km-long ridge of which Bunkle Edge is the south-western extension lies west-south-west/east-north-east between the Eye Water and the Whiteadder. The south face of the high ground rises steeply from the Tweed valley lowlands and the once impassable Billiemire and levels out as a plateau at 230 m OD rising to 260 m before sloping away more gently northwards into the valleys of the Otter Burn and the Eye Water. Four well-known Iron-Age forts are spaced along the brow of the escarpment from Preston Cleugh to Dogbush, overlooking the Merse of Berwickshire and the distant rounded mass of the Cheviot. To the north, on the plateau, the field is sheltered from the west round to the south-east by extensive plantations of conifers and beech trees. The forts are likewise hidden by mature belts of trees. Erstwhile shelter belts to the north, the Drakemire Strips, have been cleared of

ILLUS 4 Vicinity of Site 1 in 1982, prior to levelling

trees and now consist of thick heather and scrub. Northwards again beyond them towards Drakemire Farm the rough moorland is systematically being reclaimed for cultivation.

In the late 19th century the Homes of the Hirsel, who owned the land, laid out across the top of the moor a large system of shelter-belt plantations bounded on either side by sunken walls to keep out cattle. In 1945–6 the area was ploughed (see aerial photograph 106G Scot/UK no 5289. April 1946) for the only time in recent history but the earthworks do not seem to have been much affected. Until 1982 the ground had either been waste or rough grazing of poor quality. The natural rock is in many places very near to the surface and the soil cover is everywhere thin and poor. The land drains well although the archaeological features are often indicated by waterlogged patches near to the trees where seasonal deposits of leaves accumulate.

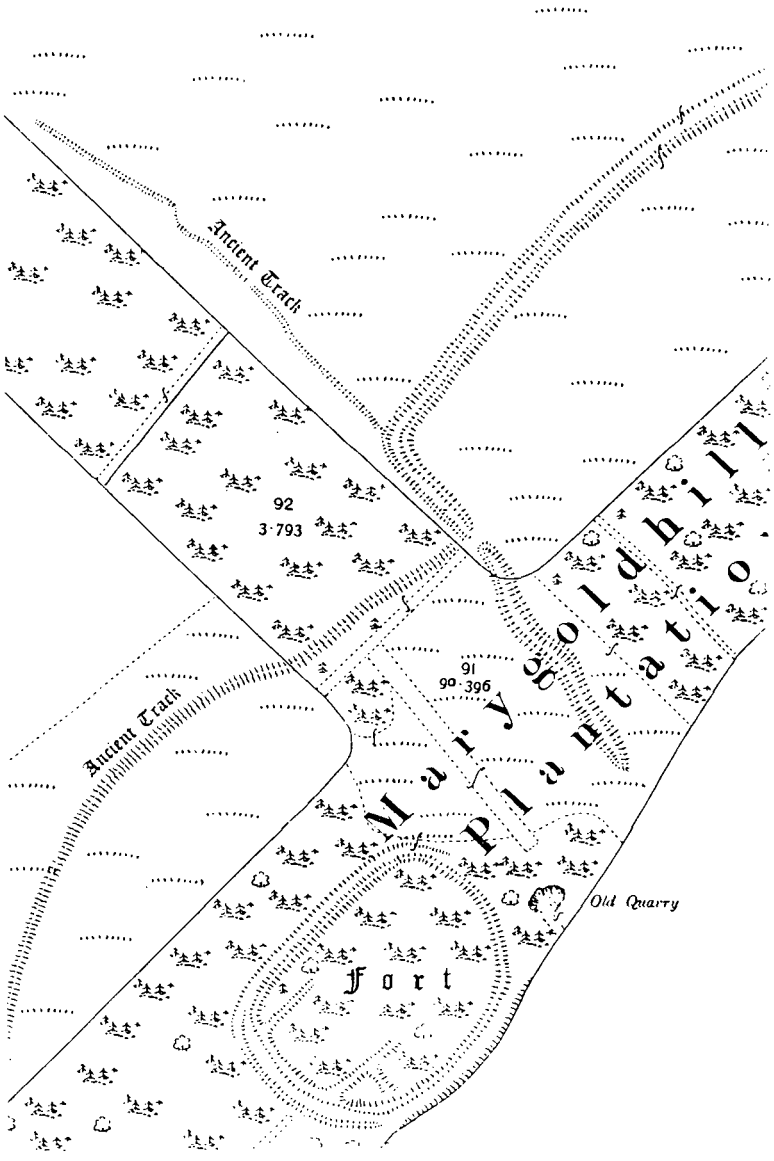
SOILS

The northern part of the site lies on iron podzols of the Minchmoor Series of the Ettrick Association. To the south there is a change along the line of the north-western rampart of the enclosure to brown forest soils of the Linhope Series of the Ettrick Association. The parent material of the Ettrick soils is derived from Lower Palaeozoic greywackes and shales whose steeply tilted bedding planes could be seen close to the surface in the cuttings. In this area the soils generally have an H-horizon of dry fibrous raw humus overlying a grey sandy-loam aerobic E-horizon. The B-horizon includes a dark reddish-brown layer enriched with humus and iron, which can sometimes develop an incipient iron pan, and an underlying yellow-brown or strong brown layer rich in sesquioxidic weathering products which may give rise to induration and concretion.

EXCAVATION

SITE 1

A trench was laid across the approximate position of the junction of the linear earthwork ('the Black Dyke') and the north-west rampart of the enclosure ('the enclosure ditch') (illus 7). Large flakes of rock were uncovered during de-turfing. After cleaning these were found to be the top of fill blocking a ditch visible as an irregular linear depression running off to the north-west (the Black Dyke). At the east edge of the site the blocking ended where a 5 m-wide ditch (the enclosure ditch) cut across the first at right angles.



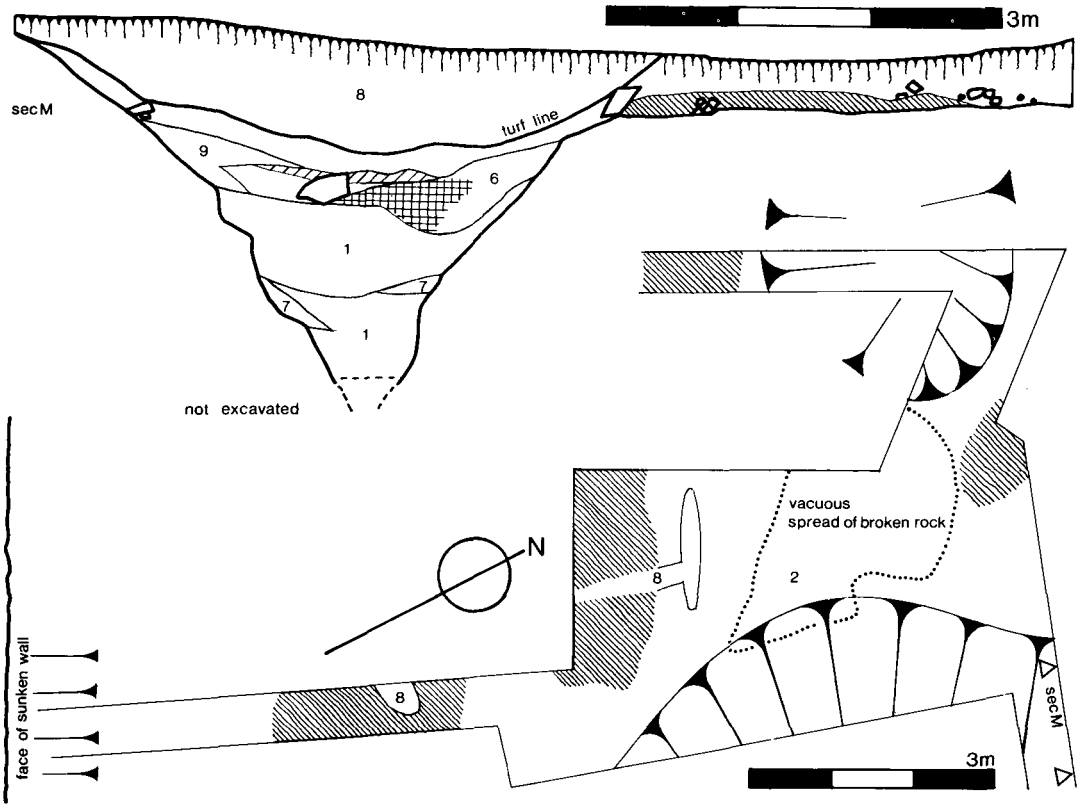
ILLUS 5 Excerpt from 25″ OS map 1906

ILLUS 6 Aerial view of Drakemire Black Dyke from north-east: enclosure rampart is at the left

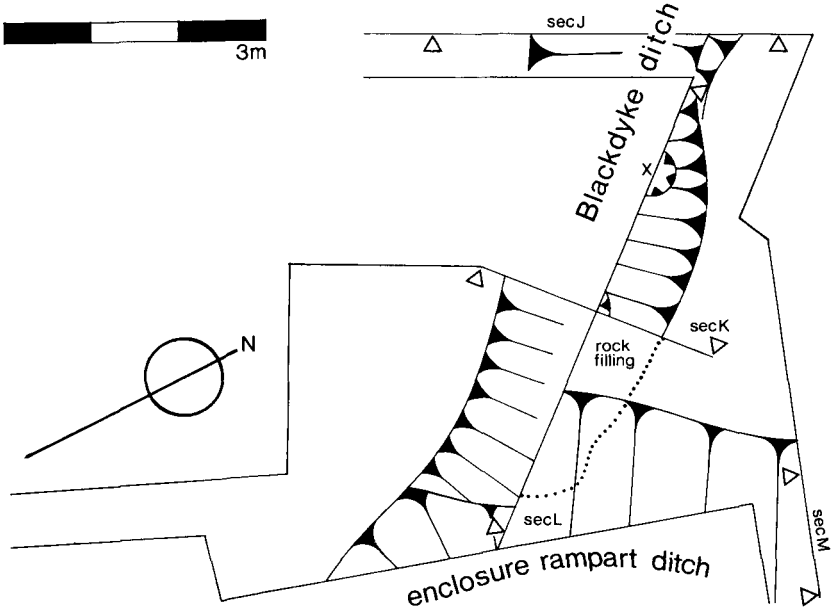
Within the 2 m-wide V-cut of the Black Dyke ditch the stone fill extended back 6 m north-westwards from the edge of the larger ditch to the terminal of the depression which contained black humic soil derived from rotted beech leaves. Beneath it a hard grey even-textured leached horizon covered a stony layer which was heavily concreted with a black iron-like substance. The primary fill of the depression was gravel and this continued under the stone fill blocking the ditch. Section J (illus 8) shows layers of stony material sloping down from the south-west rim over the primary fill.

Under the topsoil at the south-west side of this ditch, a deposit of fine pinkish-orange sandy clay had been truncated at the east by the enclosure ditch (plan, illus 7). The soil layer continued north-westwards parallel to the Black Dyke ditch out of the excavated area. On the north-east side patches of similar material which had been partly removed by recent disturbance did not extend to the edge of the enclosure ditch. The stone blocking of the ditch contained voids and was free-draining almost to the very bottom of the feature. A thin primary deposit of yellow pea-grit and gritty sand, which also partly covered the sides under it, filled the lower interstices of the stones.

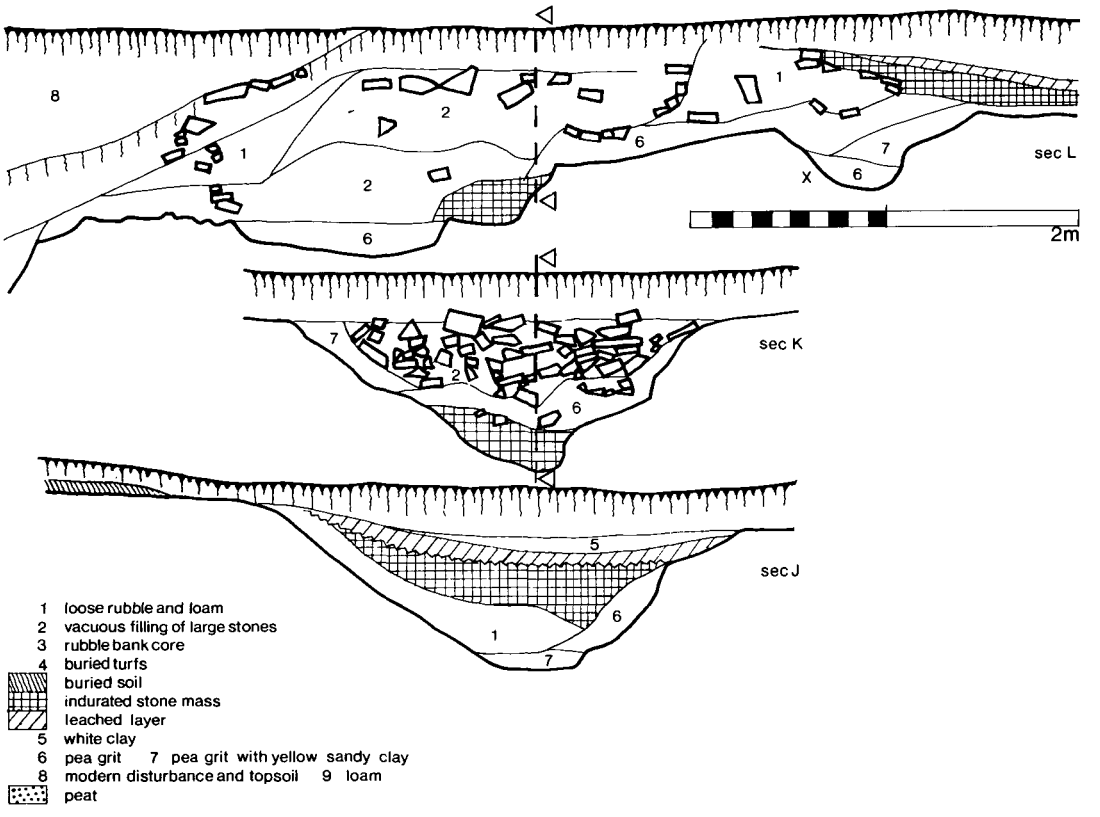
At the north end of the longitudinal section through the blocking (sec L; illus 8, 9), the black loamy fill between the stones, probably due to penetration by water and roots from the open depression, obscured the profile. At X (plan, illus 8) a circular pit 50 cm diameter, cutting into the bedrock below the blocking in the ditch, was filled with dark brown pea-grit over a lower fill of yellow pea-grit. At the south-east of the section a hollow was similarly filled.



ILLUS 7 Plan of Site 1 before excavation and after removal of topsoil; section through enclosure ditch (key illus 9)



ILLUS 8 Plan of Site 1 after sectioning the Black Dyke ditch



ILLUS 9 Site 1 sections and key to layer descriptions

A deposit of white clay over a gritty leached sand horizon and an iron pan covered both the side slopes and the bottom of the depression as well as the lower remnant of a bank on its south-west side (recently truncated) with its buried soil. Under this, induration had occurred to an extreme extent presenting a solid, concreted, layer of small red-stained stones in a black matrix which extended in places to the bottom of the underlying ditch.

Discontinuous layers of pea-grit lined the bottom and the sides of the original V-shaped cut although this was generally thicker and higher on the south-west side (sections K and J; illus 9). Outcropping rock, weather-shattered and solid, caused the sides to be uneven. At the south-east end of the south-west side the granulated weathered head of the bedrock allowed a straighter profile.

SECTION M

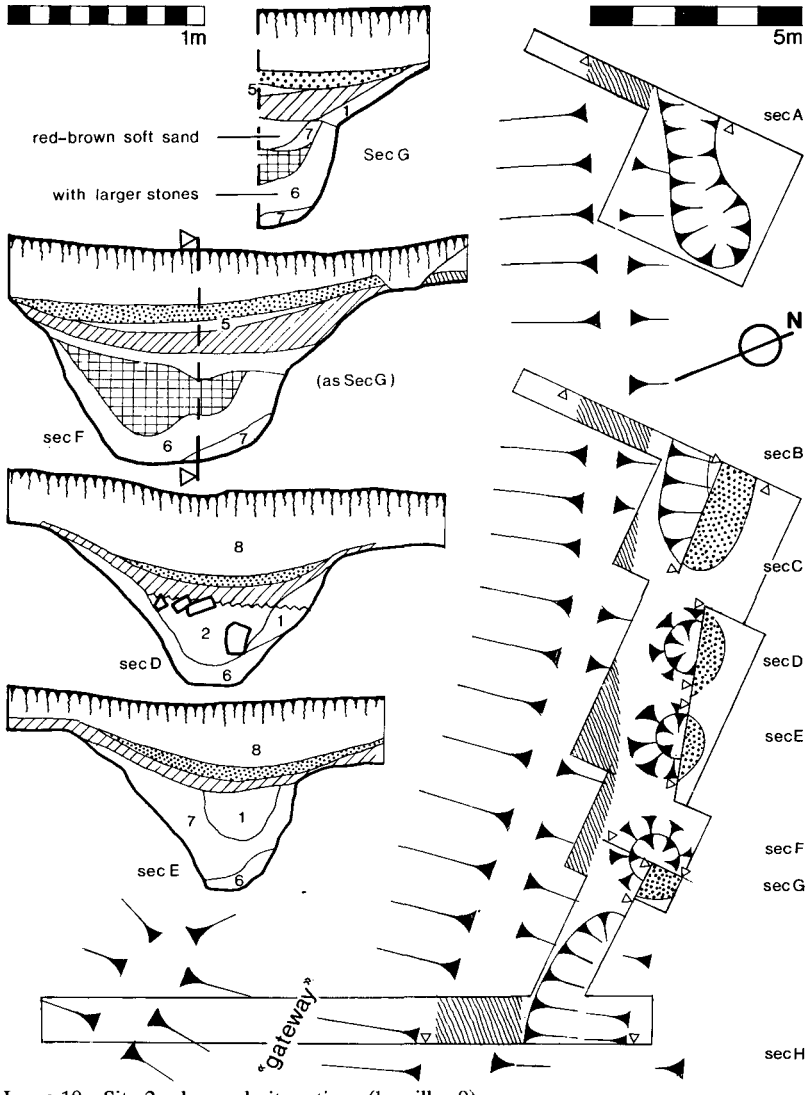
The enclosure ditch was sectioned down to 3 m at which depth it was deemed inadvisable to continue due to the instability of the fill (illus 7). The top part, over the recently buried grass and turf horizon, was mixed earth, turf and stone. The layer under the buried turf-line contained a large boulder and some rounded stones set in grey gleyed clay. Beneath it a mixed and rather loose, void-filled, shattered stone rubble with lenses of pea-grit extending into it from the sides continued as far down into the cut as could be recorded.

The main fill, although mixed with small rubble and less regular, was largely composed of stone similar to that which blocked the Black Dyke ditch. Thorough penetration by tree roots, even at its deepest, and the considerable flow of water, ruled out the collection of samples for pollen or similar

analyses. The local rock-beds are inclined at an angle of 60° to the horizontal to the extent that the north-west side of the ditch presented an unbroken sloping face without footholds. On the steeper south-east side the fractured ends of the strata were covered with smooth yellow clay. To the south-east a layer of fine yellow to pink stone-free sandy clay extended 3 m from the edge of the ditch.

SITE 2

Some 130 m to the north-west of Site 1 a narrow trench was laid across both banks of the 'gateway' (sec H; illus 10, 11). The bank at the south-west had been almost completely destroyed, leaving only a raised ridge of stony subsoil. The ground at the north-east of the entrance was somewhat higher and supported a rubble and earth bank built on redeposited turves which covered a layer of grey sandy silt containing charcoal flecks. The latter was interpreted as the old ground surface. In the centre, between the



ILLUS 10 Site 2, plan and pit sections (key illus 9)

banks, the topsoil and weathered upper rock had been scraped away to afford a slightly sunken passage with a surface of fine stone-free yellow sandy-clay lying immediately over rock. The bottom of the dip was 60 cm below the level of the buried soil of the north-east bank.

At the north-east of the bank a V-shaped ditch dug into the rock and filled with stone had been re-cut. The re-cut contained larger flat angular stones and light grey clay (section H; illus 10). On the south-west slope of the ditch a flat slab of stone covered the truncated ends of the old ground surface. The ditch terminated 1·40 m north-west of the face of section H.

Once the turf and ploughsoil from the recent levelling had been removed north-west of the terminal, a line of three identical peat-filled circular pits (1 m in diameter, spaced 1 m apart) were exposed in the bottom of a 10–25 cm deep depression that continued the line of the ditch parallel to the bank (plan, illus 10). A hard, grey, leached layer of fine material had formed both over the bottom of the depression and the pits, underlying the peat. Aligned with the depression, the pits which had similar dimensions were all cut into the rock.

Under the leached layer the filling of the first pit (1 m from the ditch terminal) (sections G, F; illus 10) contained an enriched B-horizon of iron-stained small rubble over yellow to orange pea-grit. In its centre, a pocket of very solid, black, indurated stony matter cemented together with a deposition of iron appeared to have been cut by a circular hole containing soft reddish brown sand. The second pit (section E; illus 10) was similar except that the indurated zone was not present and a circular feature of loose reddish-brown soft sand was exposed immediately under the leached layer. In the third pit (section D; illus 10) the central feature was slightly larger and contained cobble-sized stones under a thin layer of iron panning.

The main fill in all the pits was pea-grit or pea-grit containing some sandy clay in the lower parts. There were few stones of any size except in the northernmost one.

Dimensions of the pits respectively from south-east to north-west were

diameter at top:		at bottom:	depth
152 cm	to	85 cm	87 cm
130 cm	to	45 cm	80 cm
137 cm	to	55 cm	77 cm.

The depths were taken from the top of the peat horizon which itself lay within the 10 to 20 cm-deep depression.

One metre to the north-west the line of pits was continued by a segment of ditch in excess of 2·50 m long and 0·75 m maximum depth below the buried soil horizon. It was filled with loose shattered stone under a dense layer of fine leached material and discontinuous iron pan. The south-east terminal had a gradual slope. To the south-west the bank, which was much degraded, encapsulated a buried soil layer 1·50 m wide. No relationships between the two were established (section B, illus 11).

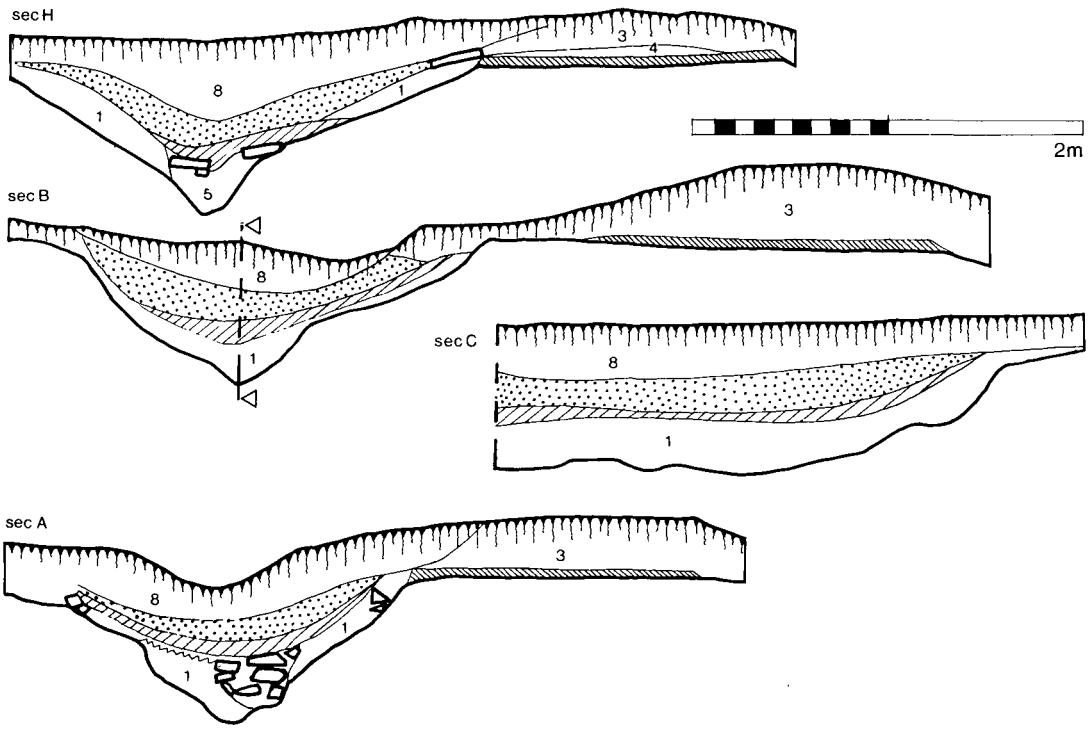
Beyond this a further segment of ditch, more than 3·50 m long but less regular both in shape and line, began with a rounded end 8 m from the northernmost pit and extended north-westwards out of the excavated area. In this sector the buried soil under the bank appeared to have been cut by the ditch (section A, illus 11). A central recut under the leached layer was filled with flat stones. This section was otherwise similar to the other segments (sections E and H).

The shape of the ditch seems to have been influenced by the rugged nature of the bedrock. The jagged, almost vertical, strata lay in planes north-east/south-west across it. Together the segments formed a discontinuous, interrupted, and irregular ditch within the general shallow trough which accompanied the bank throughout the length of the excavation trench. Causeways of undisturbed bedrock divided segments and pits. In contrast, the three pits had steep or near-vertical sides and were regular and circular in shape. The nature of the rock into which they were cut was mostly friable, frost-shattered and easily flaked, unlike the solidity of the substrate in other areas. The pits were in excess of 20 cm deeper than the general depth of the ditch segments.

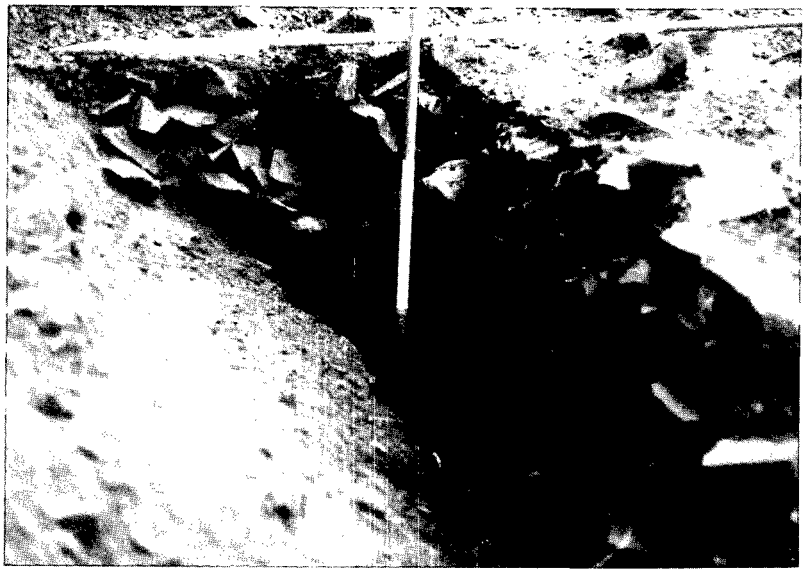
FINDS

A stone ard was found in the lower part of the rubble fill of the first ditch segment in Site 2 (section H; illus 14). This was made of hard sandstone and showed signs of wear at both ends consistent with the description of similar objects classified in Rees (1979) as type A.

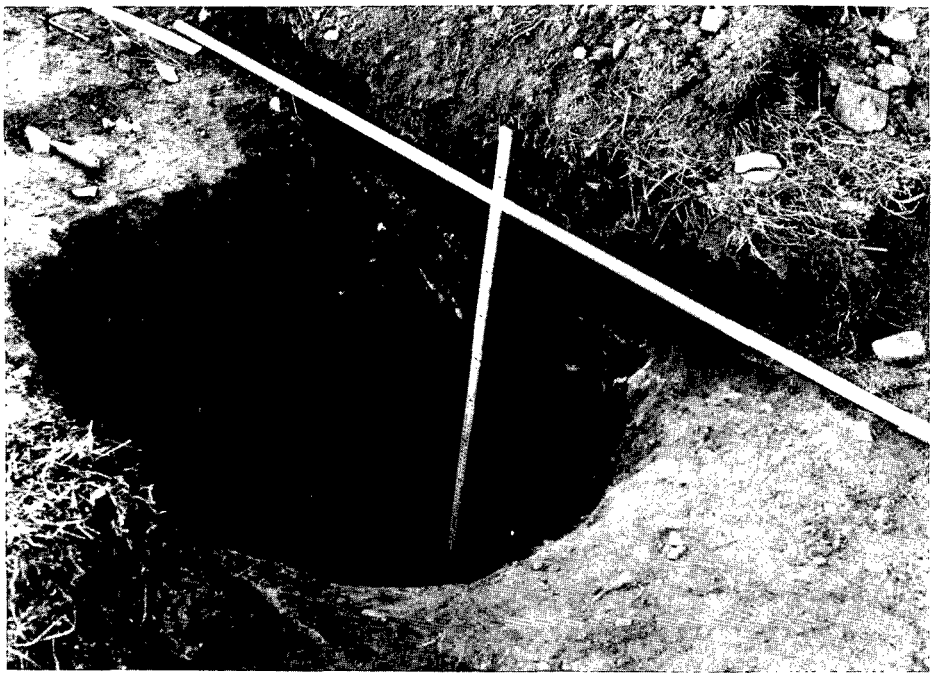
Two plain stone balls were found in the blocking of the Black Dyke ditch in Site 1. One of these was spherical (4 cm in diameter) and the other near-spherical (38 mm) and both were made from



ILLUS 11 Site 2, ditch and bank sections (key illus 9)



ILLUS 12 Site 1, blocking of Black Dyke ditch (section K)



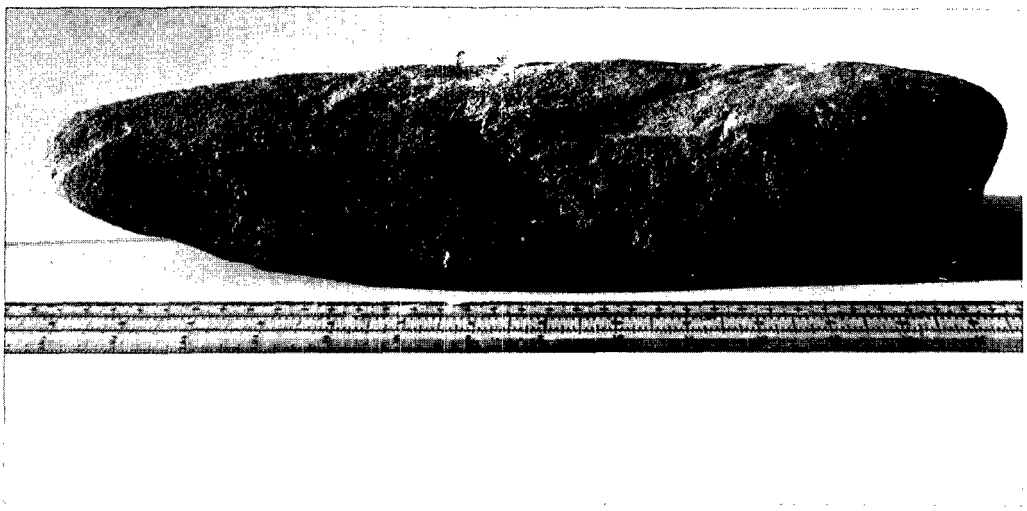
ILLUS 13 Site 2, partly excavated pit (section E cut back)

doloritic sandstone with smoothed surfaces. They are similar to those reported on in Cool's assessment of 94 from Broxmouth (Cool 1982). She associates stone balls of this type with Broxmouth Type 1 pottery from her Middle assemblage and dates both to a period of c 200 years centred on the fourth century BC on the basis of radiocarbon dates from relevant deposits at both Broxmouth and Kaimes. The distribution of a total of 197 examples from eight sites is confined to the East Lothian plain, with the exception of two each from Bonchester, Coburn Law and Edgerston.

INTERPRETATION

Site 1 demonstrates that the enclosure associated with the fort had been contained by a large rock-cut ditch with banks on either side. The nature of the rock had been exploited by the builders who had cut the ditch so that the tilting planes formed a sheer incline on the north-western side. On the steeper, opposite, slope the fractured end of the strata had been plastered-over with fine yellow clay, perhaps to exclude the possibility of footholds. A 3 m-wide band of buried soil south-east of the enclosure ditch was all that remained of the inner rampart bank and probably indicates its size.

The excavation shows that where the enclosure rampart turned from its north-east/south-west course through a right-angle to the south-east it had been laid across the line of the Black Dyke. Some 3 m of the earlier ditch had been filled in with large flakes of rock laid horizontally as a foundation for the construction of a north-west side rampart bank. The builders were careful not to obstruct the drainage when they blocked the ditch (illus 12). No evidence survived to show if they had incorporated the bank of the earlier earthwork into their rampart. A continuous spread of buried soil along the



ILLUS 14 Stone ard point from the ditch in Site 2

south-western side of the ditch of the Black Dyke was consistent with a bank in excess of 1·50 m wide. The south-western edge of the bank had probably been truncated when the plantation walls were constructed. Sections K and J show washdown layers from the deterioration of a south-west side bank. The patch of buried soil at the north-east had probably been preserved by the outer rampart bank.

The line of the rampart on the south-western side of the enclosure presumably continued over the approximate alignment of the Black Dyke at least as far the junction with the Marygoldhill Black Dyke 70 m to the south-east.

Within the excavated area of Site 2 three posthole-like pits were equally spaced between two ditch segments. Separated by a gap from this alignment, outwith the site to the north-west, a continuous line of about 20 regularly spaced pits of apparently similar size and interval, accompanied by a bank, extended for 35 m to where another gap separated it from a negative feature apparently continuing the line towards the north-west.

Not enough substance remained of the 'gateway' to confirm that it was what it had been assumed to be. The supposed bank on the south-west side was composed of loose, weathered rock with no buried soil surviving. The shallow gully running between the two banks resembled a hollow-way and the fine, sandy clay is taken to be a soil formed after the scraping off of the weathered loose rock. In contrast to the gap through the dyke 40 m further north-west, the 'gateway' might have been built to accommodate an existing track running obliquely to the east-south-east. The vertical air photographs taken in April 1946 (106G/Scot/UK. no 5298) show a possible track from the 'gateway' to a gap in the enclosure rampart at east-south-east. The two gaps at the north-west appear to relate to an east-west track marked on the OS map for 1857 which is presumed to be later and possibly associated with the Thief's Road along the ridge. The scanty soil cover and surface soil changes leave the relationship of the pits and ditches to the bank uncertain; examination of section H, however, does suggest that they were contemporaneous.

A fine, compacted, leached layer covered all the negative features but continuity over the banks, if it existed, had been truncated. (At Site 1 neither the blocked Black Dyke ditch nor the enclosure ditch were under such a layer.) Central narrow recuts through ditch segments in Sections H and B had been dug, presumably for drainage, shortly after construction.

Presuming that it was in its primary position, the ard from the stony lower fill of a pit indicates that there was probably at least some cultivation in the vicinity after the Black Dyke had been constructed.

The pits, with their steep sides, regular shape and similar dimensions, have to be considered as post-holes. It may be that the softer rock where they were located allowed for their construction whereas it had not been possible elsewhere. In each of the three there were features which might suggest a post-socket. In the first from the south-east a mass of indurated material obscured any definition. The round patch of soft sand and central nest of stones may have been the top of it. Larger stones, although present in the pits, were not obviously for packing and were grouped in the centre of each pit, the remaining volume being mostly occupied by pea-grit.

DISCUSSION

The results of excavation at Site 1 are consistent with earlier observations that the Drakemire Black Dyke pre-dates the enclosure associated with the Bunkle Edge forts. The large ditch, with banks on either side emphasizing its depth, was clearly dug for defence of the enclosure, and so is presumed to be of Iron-Age origin. Halliday (1982, 78) infers that similar enclosures around the forts at Torwoodlee and Big Chesters, Bowshiel were constructed when the forts were still in use; at the former, use did not continue beyond the beginning of the first century AD.

There is no clear proof of the presence of a continuous outer bank alongside the enclosure ditch over the 'Black Dyke'. The blocking terminated at the cut for the big ditch. Argument for a north-west side-bank rests solely on the blocking having been 'placed' in the ditch as a foundation and not tumbled in as part of a process of the deterioration of, say, bank terminals on either side of a drain cut through a pre-existing bank. Pre-levelling photographs possibly show a continuous bank. The Royal Commission survey is consistent with what both Lynn and Craw report in general terms but showing a rather smaller bank at the point of intersection than elsewhere.

Although the finds do not decisively help the investigation, evidence of stone balls in East Lothian helps to verify the assumption of an Iron-Age date for the construction of the enclosure rampart and hence the blocking of the Black Dyke ditch which appears to have been at least half-silted up by the time the enclosure rampart was built.

The character of the round pits at Site 2, too deep to excavate without getting into and too narrow to allow for freedom of movement once in them, made excavation difficult. This point must have some bearing on their construction, and hence function. The evidence that they were post-holes is not entirely convincing, although it is difficult to suggest other functions for them. Their form seems unnecessarily restrictive for them to have been operated as quarry pits, which would have required space for movement and use of tools as well as extraction of the hardcore; on the other hand the segments of the ditch, because of their openness and irregularity, can hardly have been anything else. The recutting of the ditch has the character of later expediency for local drainage.

There is evidence that the pits or ditch continued south-eastwards as far as Site 1. Intermittent boggy patches in the ploughed ground, as well as some irregularity of the topography shown in the pre-levelling photographs, suggest an interrupted ditch. Pit X on illus 8 may have been the bottom of a round pit similar to those excavated. Aerial photographs (RCAMS BW 3879) and the Royal Commission's unpublished survey show an almost straight and continuous ditch-like feature from Site 1 to the 'gateway' with one gap at 30 m, and a distinct kink at 70 m, north-west of Site 1 (illus 6).

From the air the Marygoldhill Black Dyke running off to the south-west of the enclosure seems to be part of the rampart for a separate enclosure around the south-west fort (illus 5), although its

dimensions are not comparable to the main enclosure rampart. Craw and others reported it to have had an interrupted ditch. If their observations have substance it seems likely to be related to, or broadly contemporary with, the 'Drakemyre Black Dyke'. It too may have been blocked by the Iron-Age builders who exploited the Drakemire earthwork for the south-west run of their much larger rampart.

Aerial photographs and the Royal Commission's survey show that, over the staggered 'gateway', the bank and ditch in Site 2 are not in alignment with those in Site 1. This and other ambiguities such as traces of a possible ditch veering away from the line 50 m to the south-east of the 'gateway', and the remains of a negative feature on the slope 100 m to the north-west on the original alignment, suggest an unresolved complex of activity in the area to which the pits and ditch segments must belong.

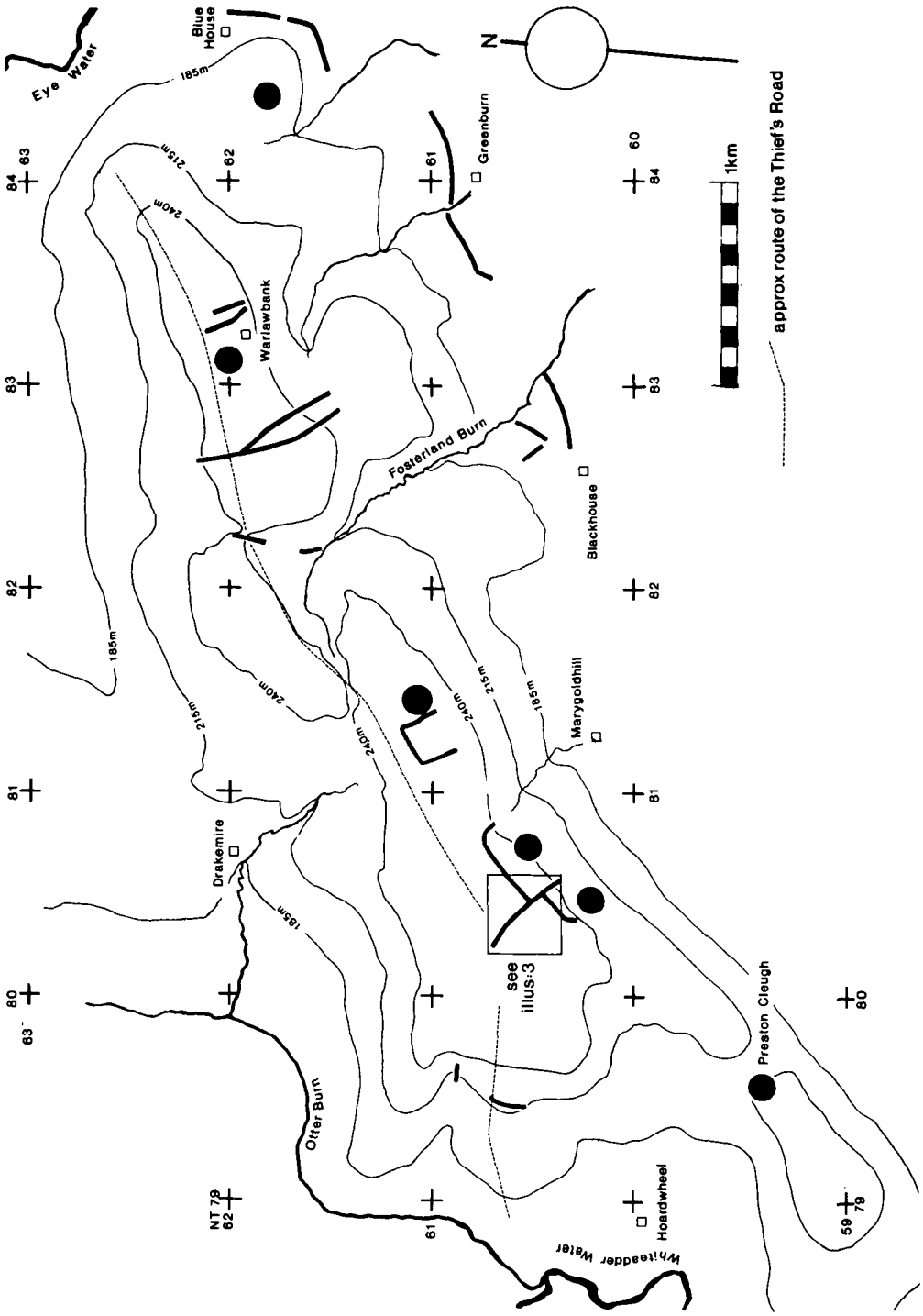
Halliday (1982) links pitted boundaries and staggered entrances as being primarily for the purpose of controlling stock. At Chesters, Drem and Kaeheughs pitted boundaries probably pre-date the forts.

The pit alignments excavated at Fyfield Plain, Northumberland (Miket 1981) and Chesters, Drem (MacKay, forthcoming) were presented as having held posts on doubtful evidence. Excavation at Eskbank (Barber 1985) showed pits spaced at 3 m intervals without evidence of posts. Posts were clearly demonstrated, however, during the Neolithic at Meldon Bridge, Peeblesshire (Burgess 1976), where a stockade of heavy timbers enclosed the site. Barber (forthcoming), in an inventory of linear earthworks, equates pit alignments to linear earthworks with segmented ditches and dismisses any generalization that they contained posts. From the photographs of the cropmarks, pits at other sites in the area appear to be wider apart and less regular than those of the Drakemire alignment.

The Marygold–Drakemire pits in Site 2 are unusual in that they seem to be combined with the segments of a ditch in the same alignment and are spaced as if part of a unitary design. The question arises as to whether the pits were of the same building phase as the segmented ditch. Evidence for the two different phenomena being dug at different times and perhaps with different motives is not available. A continuous line of regular pits, which only survived in two stretches, may have been dug into in antiquity in other places to provide stone for building or repairing a bank once the original function of the pits had ceased. There is the further possibility that the line of the new bank (with interrupted ditch) coincided at this point with an earlier boundary composed of bank and round pits, on a slightly different alignment. This would explain the irregularity of the ditch segments. The three pits appear to be substantially deeper than the average depth of the ditch. If, however, a continuous line of these deeper round pits had existed prior to the quarry pits, then some trace of them should have been found. Pit X and a similar dip 2 m to the south-east in the bottom of the Section L trench are too indefinite to settle the argument and thus the possibility must be left open.

The shallow depression alongside the bank in Site 2 may have been caused by the digging of turf, earth and loose weathered rock for the initial construction; this being supplemented later by deeper quarrying at intervals. Evidence of redeposited turf at the base of the primary bank is seen in Section H. Irregular quarrying for a regular bank implies that the function of the bank was more important than the ditch in the design of the earthwork. It may be possible, however, that ditch segments were dug where it was easier to obtain stone for building.

From 2 km to 4 km to the east, between Blackhouse, Greenburn, and Blue House respectively, four sectors of cropmarks (NT 8278 6034–8305 6045; 8354 6073–8376 6094; 8386 6092–8432 6104; 8458 6153–8470 6201) with an aggregate length of almost 1·8 km show a ditch accompanied by a non-contemporaneous, and almost continuous, line of pits which seem likely to be part of an unitary scheme following the contour around the south slopes of the eastern part of the ridge (illus 15). In at least five instances the courses of the ditch and pit alignments cross each other. The Cleave Dyke on



ILLUS 15 Map of the Horsley Hill–Bunkle Edge area showing forts and linear cropmark sites

the Yorkshire Wolds is an example of an alignment of pits which has been subsumed by a bank and ditch construction at a date later in prehistory (Spratt 1986).

The Blackhouse–Blue House cropmarks show rebuilding with different techniques on much the same, although not exactly the same course. It would not, therefore, be without precedent to propose that the pits in Site 2 and the longer line of pits at the north-west together are the relic of an earlier earthwork which has been reorganized; the new scheme being represented by the bank and ditch of Site 1 and the bank and interruped ditch of Site 2.

At Castlesteads and Newton in Midlothian a system of four long parallel pit alignments, one of which is double, runs north and south between 300 m and 400 m apart, enclosing upwards of 140 ha extending over an area of 1 km by 1·5 km (Halliday 1982).

The Cleave Dyke, in an extensive area also over 250 m OD, is part of a widespread system of dykes dividing up high ground. The Drakemire Black Dyke may be a part of larger system of pre-Iron Age dykes and land division similarly related to the uplands, most of which must have been destroyed if Lynn's observation (above) of a continuing line northwards to Blackerstone is anything to go by. Crossing the Quixwood (otherwise Quinxwood) ridge beyond Blackerstone an ancient dyke of similar dimensions still exists today (NT 765 629 to NT 771 635), although this seems more likely to relate to the dividing up of the quite separate mass of high ground to the north of the Otter Burn.

Craw (1928) had also observed a bank flanked by pits, ('Horsley Black Dyke') 2 km north-east of the site, which was then 90 yards (82·3 m) long running across the ridge north-north-east/south-south-west. A bank and line of pits 120 m long has been confirmed by aerial photography (RAF sortie 541/A/437 no 3804) at NT 8221 6186–8225 6200 which accords with his description. About 1 km beyond this, east of Warlaw bank fort, there is a pit alignment, perhaps partly replaced by a ditch, at least 220 m long (RCAMS BW 2316), which straddles the ridge from north to south (NT 8325 6212–8339 6199).

If the Blackhouse–Blue House combination of ditch and lines of pits and other pit alignments over Horseley Hill are roughly contemporary with Drakemire we may be seeing the appearance of an integrated system of parallel cross-ridge boundaries within, or related to, a dyke along the side of the hill which separates the high ground from the wetter land of the valley, and which is earlier than the forts. There is evidence that at least some parts of the system have been rebuilt over the line of the earlier version. Any further linear cropmarks occurring in this area will have to be examined carefully.

ACKNOWLEDGEMENTS

I am grateful to Jamie Hamilton, Rod McCullagh and Peter Buchanan for assistance with the excavation; and to Raymond Harrison of Drakemire Farm, Grantshouse for permission to excavate on his land and allowing access to the site. I am indebted to Jack Stevenson of the Royal Commission on the Ancient and Historical Monuments of Scotland for drawing my attention to an unpublished plan of the monument completed shortly before destruction and for reading and correcting the draft report.

The project was supported and financed by the Historic Buildings and Monument Directorate of Scottish Development Department.

REFERENCES

Barber, J 1985 'The Pit Alignment at Eskbank Nurseries', *Proc Prehist Soc,* 51 (1985), 149–66.
Barber, J forthcoming *Inventory and survey of Linear Earthworks in Scotland.*
Burgess, C B 1976 'Meldon Bridge: A Neolithic defended promontory complex near Peebles', *in*

Burgess, C B & Miket, R (eds), *Settlement and Economy in the Third and Second Millennia BC*, Oxford, 151–79. (=*Brit Archaeol Rep*, 33.)

Christison, D 1898 *Early Fortifications in Scotland*. Edinburgh.

Cool, Hilary 1982 'The Artifact Record: some possibilities' *in* Harding 1982, 92–100.

Craw, J H 1928 'The Black Dykes of Berwickshire', *Trans Hist Berwickshire Natur Club*, 26 (1928), 363–9.

Halliday, S P 1982 'Later Prehistoric Farming in South-eastern Scotland', *in* Harding 1982, 74–87.

Harding, D W (ed) 1982 *Later Prehistoric Settlement in South-east Scotland*. Edinburgh. (=*Univ Edinburgh, Dept Archaeol Occas Pap*, 8.)

Lynn, F 1894 'Bunkle Edge Forts', *Trans Hist Berwickshire Natur Club*, 15 (1894), 364–76.

Mackay, Ghillean forthcoming *Report on excavations at Chesters Drem*.

Miket, R 1981 'Pit Alignments in the Milfield Basin', *Proc Prehist Soc*, 47 (1981), 137–46.

RCAMS 1980 Royal Commission on the Ancient and Historical Monuments of Scotland, *The Archaeological Sites and Monuments of the Berwickshire District, Borders Region*. Edinburgh.

RCAMS 1915 *County of Berwickshire Inventory*. Edinburgh.

Rees, E Sian 1979 *Agricultural Implements in Prehistoric and Roman Britain*. (=*Brit Archaeol Rep*, 69 (i).)

Spratt, D A & White, R F 1984 'Further information on the Cleave Dyke System', *Yorkshire Archaeol J*, 58 (1986), 195.

Ordnance Survey Maps 25″ Berwickshire sheet x.8 1906. 6″ Berwickshire sheet xNE 1898. 6″ Berwickshire sheet x1857.

The aerial photograph references prefixed by BW are to the catalogue of the National Monuments Record of Scotland.

This paper is published with the aid of a grant from the Historic Buildings and Monuments Directorate (SDD).