THE ROLE OF MONUMENTS IN THE NEOLITHIC
OF THE SOUTH OF SCOTLAND

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INTRODUCTION

This Gazetteer presents a discussion of the character of and neolithic evidence from each of six Regions which constitute the study area. The Regions vary in size, geomorphology and settlement potential, and in the level of material survival and the extent of local research; inevitably the quality of the evidence for the Neolithic is also varied. Given the very different record from each Region, statistical comparisons would do poor justice to original neolithic realities. Rather than attempting to force the data into supposedly uniform sets, the range of material in each Region is discussed and evidence is tabulated according to availability; maps are provided for Regional distributions, as appropriate. The Gazetteer, together with the Catalogue of Sites in Volume II, thus provides a statement of present knowledge of the Neolithic of each Region, supplying the evidential basis for the discussion paper of Volume I.

Each Regional division contains sections on physical background, on the local Mesolithic and on evidence for neolithic settlement and artefact distributions, followed by discussion of funerary remains, ritual enclosures, inscribed rocks and beaker distributions. A short summary is provided at the end of each Regional presentation, characterising the Neolithic of the area.

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I:1 Physical setting and environment in the
Firth of Clyde Region

The Ayrshire Basin forms a well defined natural region rising from the coastal plain towards encircling hills, to which, for present purposes, have been added the Renfrewshire hills to the north and the basin of the lower Clyde which they overlook. The resultant Firth of Clyde Region thus covers the whole of the north west of the study area. The Clyde basin is a central focus for hill country to the north as well as for the Renfrewshire Hills to the south, but the former area lies outwith present study limits. The truncated Clyde basin, in which urbanisation and industrialisation combine with the natural forces of valley alluviation and flooding to reduce archaeological survival, does not figure largely in a discussion of the evidence for the Neolithic in the composite Firth of Clyde Region.

A series of rivers drain into the Ayrshire Basin: the River Garnock, joined by the Lugton and Annick Waters from the north; the Rivers Irvine and Ayr from the east; the River Doon from the south east. The Water of Girvan, running south west through hills to join the Firth of Clyde at Girvan, marks the southern boundary of the Region.

Basalt hills form an expanse of high ground from Greenock, at the north west tip of the study area, south east to Darvel and Strathaven at the Irvine - Avon
watershed. The Lesmahagow hills, a Silurian inlier, continue the upland mass south east to Muirkirk, where the system is cut across by the north east - south west line of the Southern Uplands fault. An area of carboniferous rock and Old Red Sandstone is here interposed between the Ayrshire lowlands and the Silurian hills of the Southern Uplands bounding the south of the Region.

The Ordnance Survey in 1953 classified c 2400km² within the Region as being 'improved land'. This includes a large area of Class 3 land, capable of average production, in the Ayrshire Basin, between the Annick Water and the River Ayr, and between the Rivers Doon and Girvan. These areas consist of glacial drifts and Brown Forest Soils, imperfectly drained and subject to gleying, much improved by modern drainage, but still largely unsuitable for cereal growing. In the two Districts of Kilmarnock and Loudon and of Cumnock and Doon Valley the 47,185ha of crops and fallow recorded in 1989 included only 3000ha under tillage, with the remainder being under grass (Department of Agriculture and Fisheries for Scotland June Census 1989). The Soil Survey monograph points out, however, that not only are there restricted areas with natural drainage on the raised beaches around the coast, where there is a strip of Class 2 land, but there are also similar soils on fluvi-glacial outwash sands and gravels in some of the main valleys (Bown, Shipley and Bibby 1982, 16). Thin, stony drifts derived from lavas on higher ground up to 300m OD also carry
well drained Brown Forest Soils, although in restricted areas only, often broken up by rock outcrop.

The raised beaches have been left by the fall in sea levels since maximum post glacial transgression as a well defined feature along much of the Ayrshire coast; a narrow shelf continues along the foot of the cliffy scarp to the north of Largs, where the Renfrew hills meet the sea. The southern end of Ayr Bay is marked by the cliffs of the Heads of Ayr, Dunure and Culzean, but raised beaches resume in the Girvan area and southwards. The chronology of marine regression is discussed in Volume I, Chapter 5, as a complex and varied event. The open shores of the Firth of Clyde offer a generally more straightforward sequence than is seen in the Solway, but particular locations were affected by local topography. For example, inland of Girvan lagoonal conditions persisted into the period of regression around the lower Girvan river (Jardine 1977). A study of the sand dune area at the mouth of the River Irvine by Boyd (1982) showed this to have been a varied environment during regression. The gently sloping open beaches south of the river were backed by sandy and gravelly ridges with dune heath, behind which fresh water lagoons were trapped. The present Shewalton Moss dominated the area as ombrogenous bog with scrub woodland of birch, alder and willow. The river mouth itself formed a 3km long sinuous tidal estuary with sandy tidal flats and some solid rock. The shore line was 1.5 to 2.0km inland of the present
position and the raised beach here could not be shown to have been dryland before c 1900 bc. A similarly late date for completed regression may be generally applicable to the gently shelving coasts of Ayrshire. Lithic collections generally derive from immediately behind the old coastline, and even Bronze Age funerary sites seem all to be located above 10m OD.

The Ayrshire climate is oceanic, mild and moist but exposed to the south west prevailing winds. Lapse rates are high, particularly on south west facing, exposed hillsides, although these upland areas have warmer, drier summers than do the coasts. Bown (1973, 18) gives figures for a growing season of 262 days per annum near Girvan, being reduced to 230 days at 150m, 200 at 365m and probably only c 150 days at the highest levels.

A palynological study by J. Turner (1975), comparing pollen cores taken from different points in Bloak and Kennox Mosses, aimed at demonstrating the differences between local genera and the regional vegetation picture, according as to whether the core came from the centre or the edge of the moss. The sensitivity of the results to such effects has been questioned by Edwards (1979), but the study is frequently quoted for its information on a lowland situation, in contrast to the usual reliance of palynologists on upland bogs. The mosses, at c 70m OD, lie between the Lugton and Annick Waters, c 13km inland from the mouth of the Irvine and Garnock rivers (NT 34NE).
Comment was made on the minimal amount of evidence for clearance before the second millennium BC, with effects, even at this period, being episodic. However, even at the time of the elm decline, which was not dated, the high levels of coryloid pollen and of bracken suggest there to have been a considerable amount of open ground, in confirmation of which ash begins to appear at the same period. The potential for small scale agriculture, unrecorded in the pollen diagrams, was clearly present.

The extent of grassland cultivated in the Region, referred to above, has reduced opportunities for cropmark record. John Linge has made the comment that traditional small farming enterprises in north Ayrshire, based on low capital units, may have reduced the extent of destruction of major monuments, such activity needing the resources of improving landlords (1987, 30). Nonetheless, enclosure, drainage and small scale tillage in the post-Improvement period must have effectively eliminated minor obstacles to agriculture. In the post-war period forestry has transformed much of the uplands. Older forests in the Galloway Hills and around Dalmellington now extend northwards covering the hills in the Muirkirk area and the basalt ranges of the north west. Major destruction of the landscape is then occurring in countryside which has never been covered by survey for an Inventory by the RCAHMS.

Beach pebble flint and other workable stone is freely available along the coasts. At Kilwinning the River
Garnock has exposed flints in the shell bed of the raised beach (Wickham Jones and Collins 1978, 11, no.19). Chert is not so common as in the Southern Uplands (ibid, fig.2), but agate and jasper have been noted in the Irvine valley (Cameron and Stephenson 1985, 39), quartzite is common, and Arran, with its pitchstone outcrops, lies only 20km across the Firth of Clyde. The rarity of pitchstone in lithic collections from Ayrshire (Thorpe and Thorpe 1984) suggests that little need was experienced for extraneous sources of flakeable stone.
The Mesolithic of the Firth of Clyde Region

Map 1:1 showing the distribution of mesolithic material in this Region displays a heavy coastal emphasis. The wide scatter of inland findspots, however, suggests that the potential for recovery in such areas has not been fully explored. Recorded evidence depends on the presence of a few individual collectors.

In Renfrewshire Frank Newall reported some density of lithic material at Gryfe Reservoir on the moors above the Clyde estuary, spread over 600m from NX 282 711 to 288 712 (DES 1966, 40): 'A large microlithic assemblage largely of small obsidian points and scrapers'. Some quartz was also reported. Thorpe and Thorpe (1984, 33) list the Arran pitchstone from this site as consisting of flakes, chips and cores, so it may be that the microlithic, and hence mesolithic, aspect of the assemblage has been misidentified. Pitchstone recurred in Newall's excavation at Knapps, Houston (NS 3693 6885) some 10km further to the east (Newall 1965). Neolithic artefacts were found at this site, and, again, the pitchstone 'microliths' reported, one of which is illustrated (ibid. fig.4), could be small blades, characteristic products of the raw material rather than mesolithic artefacts. The same comment must be applicable to three 'microliths' found with neolithic
pottery below South Mound, Houston (NS 401 664), said to be of 'dark green flint, possibly Arran pitchstone' (DES 1974, 57).

The only other mesolithic material reported from the north of the Region comes from the slopes to the north of Woodend Loch, to the north of the Clyde (Lacaille 1945; 1954, 189-193). Artefacts of chert, mudstone and, in a few cases, flint included rod microliths, suggesting a Late Mesolithic date for the assemblage.

Around the watershed of the Rivers Irvine and Avon, c25-35km inland from the Irvine estuary at Shewalton, a few reportedly mesolithic finds have been recorded (DES 1984, 31-3; McFadzean 1981; 1985). These are mainly of local chert, quartz or agate, with a little flint and some pitchstone occurring also at Glengavel, to suggest coastal contact. Agate pebbles from the glacial drift had been worked in situ on an esker at Priestland, Darvel. This material is all from surface collections, and cannot be assumed to be all mesolithic.

Work is currently being carried out on mesolithic material from the Galloway Hills to the south of the Region (Edwards, Ansell and Carter 1983; Finlayson 1990(a), (b)). A site at Starr, on Loch Doon, 30km inland from the mouth of the River Doon, where mesolithic finds have been made (e.g. PSAS 1970, 295), has been excavated by Affleck (1986). No mesolithic material has been collected along the intervening course of the River Doon,
however, and Starr, one of several sites with lithic material on Loch Doon, may more appropriately be linked to lithic collection along the Water of Ken, 15km to the east, or on Loch Dee, 15km to the south, thus forming part of a Galloway distribution. Contacts may thus have been with the Solway rather than the Firth of Clyde (see VI:ii). Finlayson, however, has noted differences in the mode of utilisation of flint at Starr and at Smittons, on the Water of Ken (1990a), leading to suggestions that procurement patterns were not the same. Flint made up nearly 50% of the overall Starr assemblage, with still higher proportions in early levels, but the care with which the material was handled suggested that, unlike chert, flint had to be collected at a distance from the site, presumably from the coasts.

Excavation at Starr on a ridge beside the loch produced slight structural traces - pits, gullies and stake holes - indicative of light shelters. It was suggested that the site was used recurrently by small family groups (Affleck 1986). Microliths showed no evidence for use as projectile points (Finlayson 1990(a)(b)), making it inappropriate to regard the parties as hunting groups. Food processing may have taken place on the site, and fishing is a probable activity; the use of boats is suggested by the occurrence of lithic material on islands (Edwards 1989, 147).

Coastal collections are almost continuous from
West Kilbride to Girvan, along the upper edges of the old shore line (Morrison 1980). Earlier collectors concentrated on the sand dune area at the mouth of the River Irvine (Smith 1895, 30-45, 107-118); Lacaille 1930; 1954, 287-8). M. Macneill has extended this work to plough soils, allowing Morrison to map over fifty find spots in 1980 (445, fig.4), and the number is still growing. Plough soil collections are likely to be mixed, and the protracted regression period suggested in section I: i means that occupation of these levels was probably multi-period. Nonetheless Morrison is able to show that the collections have a clearly mesolithic aspect. They include flakes, cores, blades, scrapers and a few microliths, chiefly backed blades, bladelets and points. Flint was the main raw material, together with a little quartz and chert, all of which could have been gathered from the beaches. Particular density of findspots occurs around inlets of the old sea, such as at West Kilbride and the probable lagoonal areas behind Girvan.

The sites at Shewalton Sands discussed by Lacaille (1930; 1937; 1954; 287-8) show greater artefactual variety, and include a range of geometric microliths, including, probably, some broad blade material of the earlier mesolithic (Morrison and Bonsall 1989). Boyd's palaeoenvironmental study of the area (1982) discussed in section I: i, showed the maximum transgression
shoreline to have been lower than previously supposed (Jardine 1984), so that no post-regression implications need apply to Lacaille's main area of collection around the OS trig point at NS 3322 3662 (NMR: NS 33NW 16, Site A), which would have been a sand and gravel ridge behind the mesolithic shoreline. Occupation evidence from such situations will, however, lack stratigraphy, and collection is likely to have derived from a long period of use of the sites (Schild 1989). A second site visited by Lacaille centred on NS 3238 3726 (NS 33NW 16, Site B). This situation, described by Lacaille as his 'Classic Mesolithic to Bronze Age site' lies to the west of the transgression shoreline indicated by Boyd. It may be that Lacaille's material from this site, which cannot now be separately identified, derives from later periods. It must be possible, however, that one of the gravel ridges extended northwards from Shewalton Moor as a strip of dry land, being still over 10m OD. The River Irvine deflects to the north in a great bend eastwards of this ridge, clearly encountering an obstacle.

It was in the bed of the River Irvine on the inner side of this bend that a biserial antler point, dated to 3890 ± 80 bc was picked up in 1938 (Lacaille 1939; Bonsall and Smith 1989). The find was not in situ but may have eroded out of the river bank. Lacaille had earlier noted fragments of a whale skeleton below sands and lying on peat exposed in the river bank on the opposite side of
the bend (1930, 34). The stratigraphic sequence may represent the estuarine mud on which the whale was beached overlain by river alluvium. Clearly the estuary would have been ecologically attractive during transgression. In contrast to the Oronsay sites and Cumstoun, Shewalton provides coincidence of barbed point and microliths in the same general area. The estuary, however, must have been a settlement focus over long periods of time.

Both Smith (1895, 116) and Mann (1918, 144) refer to finds of pitchstone on the sands by Baillie Downes, a local collector, whose material was later donated to Greenock Museum. Thorpe and Thorpe (1984, 33) record c 30 small flakes and a similar number of curved pieces of pitchstone from the sands in this museum, but no mesolithic attribution is possible. Lacaille does not himself seem to have found pitchstone here, and while occasional flakes have more recently been recorded (DES 1965, 14; 1969, 20) the quantity is clearly not great, despite the proximity of Arran.

Pitchstone has been found inland at Glengavel (see above) and Loch Doon (Mulholland 1970), but the context, again, is not necessarily mesolithic. None occurred in the excavated assemblage from Starr, on Loch Doon (B. Finlayson, pers. comm.).
I:iii  Neolithic settlement in the Firth of Clyde Region

A timber structure below the mound at Court Hill, Dalry, excavated in 1873, is discussed as a Catalogue entry I:6; the structure would appear to have been a building, not an enclosure, but speculation regarding its neolithic date cannot be substantiated. On the whole, Scott's reconstruction of the remains as an early medieval hall, its destruction immediately predating the addition of an overlying Norman motte, seems most acceptable (Scott 1989(a)).

The only other possibly neolithic structures in the Region are two poorly defined 'huts' found in excavation at Knapps, near Houston at NS 3693 6885 (Newall 1965). A medieval farmstead, built on a dry, glacial platform in a damp valley, was found to overlie a post-built sub-rectangular house within a palisade. Below this structure were traces of earlier remains and several shallow pits. Both 'flat rimmed' and neolithic pottery were recovered from post packings and in 'primary occupation earth', and the former was suggested to provide a Late Bronze Age dating for the palisaded house. The neolithic pottery (see Table I:1:2) was less fine than that from Whitemoss, but considered by the excavator to fall into the same Western neolithic classification. Some lithic material and saddle querns from the site
cannot be assigned to neolithic or to bronze age contexts. The nature of the structures and the circumstances of association with pottery, may be compared to those at Auchetegan, across the Firth of Clyde in Glendaruel, where Grimston ware was associated with ephemeral structural traces (Marshall 1978), or to Balloch Hill, Kintyre, where Rothesay style pottery occurred on a hilltop, again with possible structural associations (Peltenburg 1982).

So called 'hut circles' on the Wellwood Estate near Muirkirk, producing beaker and probable neolithic impressed wares, have been convincingly re-classified by Ritchie (1970, 127-8) as funerary sites (see I:iv; I:vii and Table I:1:3).

Extensive lithic recovery from Shewalton Sands, including a few leaf arrowheads, together with impressed and grooved wares, suggests settlement. Several rings of burnt stones, whether hearths or burnt mounds, were reported from the same area (Smith 1895, 114), but no direct association can be made. At one spot on Stevenston Sands Smith (p.40) describes 'many roasted pebbles, generally in a fragmentary state, charcoal (of wood), burnt bones, urn fragments of the handmade kind'. The handmade urns may have been the Late Neolithic pottery found by Smith on the sands, but no certainty is now possible.

Grooved ware and beaker sherds found with lithic
scatters in two areas beside Gryfe Reservoir (NS 267 718; NS 282 711 - 288 712) suggests settlement, but no structural features were reported (DES 1965, 34; 1966, 40; Newall 1974, 9).

A small, rudely made chert axe was found in excavation of Cleaves Cave, a riverside cave near Dalgarven at NS 3177 4744 (Smith 1895, 62-5). Other finds relate to later prehistoric or Viking periods, but there was evidently a depth of stratigraphy in the cave, and the find could be evidence of earlier occupation.

Less suggestive are finds of axes from crannogs, for example at Lochlee (NS 455 301), where a well used axe was found in the 'relic bed' with other occupation material (Munro 1882(a)), or of flint scrapers from the crannog at Lochspouts, near Kilkerran (Munro 1882(b), fig.2). More substantive evidence for an early prehistoric presence is needed here.

Neolithic hilltop occupation, as found on Balloch Hill, Kintyre (Peltenburg 1982), may be suspected where artefacts occur in similar locations. As an example, Peltenburg (p.195-6) drew attention to pitchstone finds from Carwinning Hill (NS 288 528), its 200m summit topped by a multivallate fort. Small scale excavation in advance of quarrying found several cairns on this hilltop, one containing a collared urn, bronze chisel and half of a stone battle axe reused as a hammer (DES 1977, 8; T. Cowie), and while these finds point to the early
importance of the hilltop, they also provide a possible bronze age context for the pitchstone. Pitchstone flakes also came from a kerbed cairn, with food vessel sherds, within the hill fort on Knockjargen Hill (NS 2355 4730), N of Carwinning Hill. However, on Castle Hill, sherds, possibly of grooved ware, were found, apparently deposited on a rock ledge (Table I:1:5). Other finds from the fort on this hilltop, now destroyed by quarrying, were either chronologically undiagnostic, or derived from later periods (Smith 1919).

A group of pits within the Roman fort at Whitemoss, Bishopton (NS 4182 7208), containing greasy soil, lithic material and western neolithic pottery, were considered by the excavator, Professor Piggott, to constitute a ritual setting. The deposition of domestic refuse must, however, suggest adjacent occupation (Table I:1:1).

Pre-cairn occupation was suggested in relation to finds from below South Mound, Houston (NS 401 664) which included 'Neolithic domestic pottery', charcoal, burnt hazel nuts and some lithic material, perhaps pitchstone blades. A shallow pit c 0.60m in diameter contained burnt animal bones and charcoal (DES 1974, 57). Again, the finds may be referable to a ritual rather than a domestic context.
I:iv Neolithic pottery from the Firth of Clyde Region

Pottery from the Region is listed in Table I:1. The most important collections, from the Shewalton/Stevenston sand dunes and from Whitemoss, Bishopton, have not been published, which restricts the possibilities of useful comment.

The only western neolithic pottery appears to be that from Whitemoss and from nearby Knapps homestead on the south side of the Clyde. To these assemblages should be added a small collection from Knappers, on the north side of the river, 9km east of Bishopton (Henshall in Ritchie and Adamson 1981, 184-7, fig.5), with a flanged rim and two others (nos.1 and 2), with everted and in one case, rolled rims, which Henshall is happy to group with the assemblage from Townhead, Bute, the type site for Scott's Rothesay style (1977). Henshall (ibid p.185) notes several of the same rolled and everted rims at Whitemoss, and Scott has mentioned both rim forms and ripple fluting found at this site as suggesting Rothesay affiliations (1977, 32). Nonetheless shouldered vessels, including one stepped carination reminiscent of a Cairnholy vessel, has Grimston/Lyles Hill similarities, which would also be relevant to the unthickened rims occurring at Knapps. Grimston pottery has been recognised at Auchetegan, Glendaruel on the Firth of Clyde (Scott 1978), with perhaps an Irish Lyles Hill influence
responsible for some of the vessels with upright necks and sharp carinations. Ripple fluting is common on Grimston style pottery in north east Scotland, as at Easterton of Roseisle (Henshall 1983) and Boghead of Fochabers (Burl 1984). At Hilton cairn on Bute both everted Rothesay style rims and Irish stepped carinations were found (Marshall 1976), and it seems that it may be more useful to see the assemblages from Whitemoss and from Knapps as lying within the general traditions of the Firth of Clyde, than to attempt to define culturally exclusive styles. Rothesay style features would seem to be a single strand of preferred development within those general Firth of Clyde traditions.

No similar pottery is known from the sand dunes at the mouth of the River Irvine, where impressed wares are generally reported but little illustrated. Grooved ware is apparently also present, but has not been defined or described (see Table 1:1:4).

Only occasional finds of impressed or grooved ware are reported from other sites in the Region, although, again, grooved ware occurs at Knappers, Dunbartonshire (Henshall in Ritchie and Adamson 1981). It is of interest that impressed ware sherds were found with those of AOC beaker on a site re-used for funerary deposition with later beakers, at Muirkirk. The same association is seen in a cist at Drumelzier, Peebleshire (Table III:1:11), and perhaps also at Old Kilpatrick, Dunbartonshire (Callander 1929, 37).
Lithic collection in the Region has mostly been coastal, and assemblages have been discussed in relation to the Mesolithic (I: ii). On Stevenston and Shewalton Sands, however, arrowheads were a relatively common find, and it seems probable that much of the material collected was of neolithic or bronze age date. John Smith's executors donated fifty four arrowheads from Ardeer Sands, Stevenston to the NMAS in 1931, forty eight barbed and tanged, five leaf shaped and one lop-sided (Callander 1933, 267). There are other arrowheads from the same area in the NMS, including five lop-sided and two hollow based (AD 1696-1703), while one fine triangular arrowhead of dark grey flint measured $2\ 9/16'' \times 1\frac{1}{2}''$ ($65\text{mm} \times 38\text{mm}$) (PSAS LXI 1926-7, 26). There are also arrowheads from Shewalton Sands to the S of the river, including leaf shaped, triangular and lopsided forms, and one large tranchet in the Dick Institute (SM 524; NMS: BMC 379-81, ABA 19-23, 64-6; GAGM 04 153g, 40s, A61 33f, Hunterian B1951-312, 327). Collections in Greenock Museum, which houses donations from a local collector, Baillie Downes, have not been examined. There are also arrowheads in the NMS from Troon, a little to the south (AD 1093-7, 1963-5).

Callander commented (1933, 28-9) on the imbalance
between leaf and barbed and tanged arrowheads in Smith's Shewalton collection, and the contrast with Luce Sands, where leaf arrowheads preponderated in the Museum collections by 2:1. There are also numbers of Late Neolithic arrowhead types from the Shewalton/Stevenston areas, and given the absence of Western neolithic pottery and the rarity of axeheads from the sands, it may be questioned whether Early Neolithic settlement is represented here. Smith's collection included ninety small flint scrapers, seventy large ones and nine hollow scrapers, thirteen knives, ten borers and a fabricator (ibid), but no further information has been published on this material; the scrapers may include mesolithic pieces, contemporary with microlithic collections from the sands.

Little field walking has been carried out elsewhere in the Region, and collected material has usually been ascribed to the Mesolithic. Yet around Loch Doon, for example, occasional leaf arrowheads have been found as well as microliths (DES 1968, 24; 1969, 31). Frank Newall collected arrowheads with other lithic material at NS 28 71 beside Gryfe Reservoir in N Renfrewshire (Hunterian A 1971-79), and lopsided and hollow based arrowheads at NS 3442 6792 beside a tributary of the River Gryfe (DES 1960, 43; 1963, 47). A little to the north east, at Knapps, a lopsided arrowhead of dark grey
brown flint measuring 2.55" (65mm) in length has been found, described by R.B.K. Stevenson (1947, 179-182) as the largest in the NMS (AD 2246).

Some other exceptional flint artefacts are known from the northern half of the Region. Seven flint 'spearheads' ranging from 2½" to 3¼" (64-95mm) in length, were found at Formakin House (NS 4099 7096) and are now in Paisley Museum (NS 47 SW25). An oblong flint implement measuring 3 5/16" x 1 9/16" (84 x 40mm) comes from Water Yett, Lochwinnoch, at c NS 37 57 (NMS AA 21). A 3" (76mm) leaf shaped spearhead of brown flint was found with a small stone adze at Highthorn, West Kilbride at NS 1991 4992, the site of an urn cemetery (PSAS 1890, 280). A large, kite shaped projectile point of Irish type was probably associated with a battered Duggleby adze ploughed up at Lochgoin (NS 53 46) (Kenworthy in Ritchie and Adamson 1981, 1904), the linkage being similar to that of flint point and Seamer axe in a grave pit at Biggar Common long mound (III:4). The distribution of these large flint implements coincides closely with that of a series of fine flint axes and adzes from the Region (see I:vi).

Arran pitchstone has been suggested to be a possible indicator of the Neolithic (Peltenburg 1982, 195-6), and was found with neolithic pottery at Whitemoss and at Knapps, besides being picked up on Shewalton Sands and near Macawston long cairn (I:7). As discussed in
section I:iii, however, bronze age associations are also recorded, and no certainty on dating is possible. A scatter of numbers of flint chips below a mound on Cuff Law (NS 379 550) was suggested to indicate flint knapping on the spot (1876, 290), but the material does not survive and no assessment is possible.
Flint and stone axeheads from the Firth of Clyde Region

Records have been collected of c 120 axes from this Region, excluding seven unprovenanced axes in the Carnegie Library, Ayr, four in Rutherglen Museum and twenty two in the Dick Institute, Kilmarnock, where records were lost in a fire in 1909. The axes omitted were not necessarily found in the Region, or they may represent axes recorded in other references, their 'present location unknown'. Numbers are the same as for the Nithsdale Region, and slightly higher than for the Lothians, but much lower than those for the Biggar Gap and the Tweed Basin. The density of finds is one to every 20km$^2$ of improved land (c 2,400km$^2$), again much lower than in the Biggar Gap Region (1 to 4km$^2$) and the Tweed Basin (1 to 7km$^2$), and also somewhat less than in the Lothians (1 to 15km$^2$) and Nithsdale Region (1 to 15km$^2$). The extent of dairy farming in Ayrshire must, however, have reduced opportunities for finds in this county within areas classified as improved land by the Ordnance Survey. Most dated finds were made in the 19th century when arable cultivation was more widely practised. A useful source of information on such finds has been John Smith's *Prehistoric Man in Ayrshire* of 1895.

Seven of the 120 axes are known to be of flint. These include a broken piece of a rough axe of brown flint.
from the River Irvine at NS 356 376, near Shewalton Sands (DES 1978, 29) and a 113mm long axe from Asloss Farm, Kilmarnock (Dick Inst A 428). The other five are all large, but one specimen, measuring 6.6" x 2.1" (168mm x 53mm) was found in Cloak House, Lochwinnoch (NS 3525 6200) and is not certainly local (DES 1980, 33). Another flaked flint axe found on Duchal Moor (NS 25 67) is now lost, but was said to measure c 7" x 2\(\frac{1}{2}\)"-2" (178mm x 57-51mm) showing it to have been a large adze like implement (DES 1959, 30; Newall 1962, 170). The other three may all classify as Duggleby adzes. One, battered example, was ploughed up in c 1860 at Lochgoin (NS 53 46), probably with a kite shaped projectile point (GAGM A 672a). A fine example from near Dalgarven, Kilwinning (NS 29 45), 24km west of Lochgoin, is 7\(\frac{3}{4}\)" (187mm) long (GAGM LA 6436b). Another from Holytown, near Bothwell (NS 76 60), 28km north east of Lochgoin, measures 7" x 2.5"-0.9" (178mm x 64-23mm) (Hunt B 1951-888), and is compared in the Museum catalogue to the adze from Knappers, Dunbartonshire (Kenworthy in Ritchie and Adamson 1981), the cemetery and ritual site, 24km north of Lochgoin. These four finds from around the Firth of Clyde, together with a Seamer axe from Biggar Common long mound in Clydesdale (III:4), make up an important local group of artefacts, almost certainly imported from England, to add to the further distribution in north-eastern Scotland (Kenworthy 1977).
Eighteen axes from the Region have been thin sectioned for petrological examination (Ritchie and Scott 1989). As the results show, this was not a random selection, but specimens were selected with the express intention of identifying 'factory' products, and seven of the axes have been shown to be of Group VI Langdale tuff, while seven are of Group IX Antrim porcellanite. This latter group comprises four unprovenanced axes from Renfrewshire (REN 3-6), one from a moss, near Bishopton, also in Renfrewshire (REN 2), and two from Shewalton Sands (AYR 1,2). Sizes range from 3½" (89mm) to 5½" (140mm). Two further axes from Shewalton Moor in the Hunterian Museum (Hunt B 1951 328) are catalogued as being 'roughs' of Antrim porcellanite, while an axe from the Marquess of Ailsa's collection, said to be from Lochspouts crannog, Maybole (but see below), now in the NMS (AF 1077), is also thought to be probably of Group IX stone. Very few axes from Galloway are of Antrim porcellanite (Sheridan et al 1992, fig.6), and direct import into Ayrshire and the Clyde estuary seems likely, with travel onwards from the latter area producing the scatter of such axes in the Lothians (II:vi) and the Biggar Gap Region (II:vii). This route may, perhaps, have been the reverse of that travelled by the flint adzes. The cluster of Group IX finds at Shewalton contrasts with a general paucity of axes from the
dunes, which, unlike Luce Sands, clearly did not have a role as a general trading station in axes.

One sectioned axe from Auchenfoyle (NS 312 710), beside the Gryfe Water, was of greywacke, unexpectedly, given the distance from north Renfrewshire to possible sources in the Southern Uplands (REN 1). Seven sectioned axes were of Group VI stone, five of these being moderately sized specimens, ranging from 98m to 138mm in length, as is also another probable Group VI axe, said to be from Lochspouts crannog near Maybole in the south of the Region. Three of these axes come from the south east of the Region, one from Polquhirter (NS 63 13) and another from Borland Smithy (NS 587 175), both near New Cumnock, and one from Drumbowie (NS 466 154), near Ochiltree (AYR 4, 6 and 7). New Cumnock is in the valley of the Upper Nith, and the first two finds at least may have travelled up Nithsdale, where axe finds congregate, including a group in the upper reaches of the river, near Sanquhar (VI:vii.). Two of these medium-size Group VI axes come from the north side of the River Irvine, one from Pyatbog Pit, Kilwinning (NS 319 430), the other from West Kilbride on the coast (NS 20 48) (AYR 9 and 10). This last is one of a group of four 'felstone' axes in the NMS (AF 294, 295, 297, 418), two of them found together and purchased at the same time as the Group VI axe. There is also a pair of axes from Ardrossan, a little further to the south, one of which was sectioned but assigned no
petrological details (AYR 13). There would seem likely to have been an import of Lake District axes by sea, perhaps by way of Luce Sands.

The other Group VI sectioned axes comprise a large, but doubtfully provenanced fragment, perhaps from the Heads of Ayr, and a large Cumbrian Club from Mount Pleasant, Newmilns (NS 536 371) on the upper Irvine (Table 1:2:13 and 10). A sectioned axe from Ferniegair on the Clyde (NS 73 54) was described as being of fine grain tuff (LNK 23) and could come from some secondary Lake District source, or from an unknown Scottish outcrop. Another sectioned axe from Dalry Station (NS 2973 4900) is given no further description by Ritchie and Scott (AYR 11), but is listed by Fell (1964, 52) as a 'Cumbrian Club' and is likely to be of Lake District stone. Fell lists two more 'Cumbrian Clubs' from the Region, one from Sauchiehall Street, Glasgow, the other from Lagg, Dunure, and museum catalogue information suggests that large axes from Fenwick and from Giffnock Quarries are probably of Group VI stone. Details of all the very large axes are given in Table 1:2. Apart from the find from Dunure and the fragment possibly from Heads of Ayr, the probable or certain Group VI large axes come from the River Irvine or northwards (four axes), a distribution in contrast to that of the smaller Group VI axes clustering in the south of the Region. Regression analysis predictions might have expected the larger axes to be
found nearest to source, or at least, perhaps, nearest to the coast if the method of transport is assumed to be by boat. Chapell has, however, noted (1987, 284) that Group VI axes over 200mm in length exhibit no decrease in size with distance from source, although they do not travel as far as smaller axes. These are prestige artefacts, their circulation driven by considerations other than the purely practical, and it is thus not unexpected to find that their distribution overlaps with that of the large flint adzes and other Late Neolithic flint artefacts.

In the same area there is also a find of a fine jadeite axe, from below St. Enoch's church, Glasgow (NS 5892 6494) beside the Clyde, less than 1km from the spot where a large Cumbrian axe was found in Sauchiehall Street. The St. Enoch's axe (Smith 1963, 167, no.54) is plump in form (Class II), not the thin triangular Class I shape of the majority of the Scottish jadeite axes; it resembles a jadeite axe from Monzievaird, Perthshire (Sheridan 1992). Another report of a large jadeite axe 'from a landslip' near Prestwick (Table I:2:14), concerns a find considered by the NMS to be of ethnographic origin, and it can be excluded from further consideration.

Discussion of exotic sources tends to overshadow the very high numbers of axeheads made of local stone. These include specimens of volcanic ash and basalt from Renfrewshire, found at East Green, Lurg Moor, Kilmacolm and Knappshomestead (PSAS 1950, 229; DES 1963, 40,
similar sources may be involved in the manufacture of axes described as being of diorite, dolerite or porphyry. Other axes are said to be of 'claystone', 'felstone' or 'greenstone', and while these terms may include the tuffs of Lake District origin, they could also encompass Perthshire hornfels or local rock. One axe from the Clyde, near Bothwell Castle, is considered by the NMS to be probably of Killin stone (AF 1082). Another, found in the Bedside Kype Burn, Strathaven (NS 70 40), has been suggested by the NMS geologist to be of local sandstone (NMS Daybook 1990(34)). An axe found in Cleaves Cave, near Dalry, was made of chert (Smith 1895, 62-5), as was a flake of an axe, re-used as a scraper and deposited under a cairn at Linburn, near Muirkirk (NMS EQ 495). Chert artefacts will very probably be of local material.

As is usual with such finds, circumstances of recovery are ill-recorded. Deliberate deposition may be supposed in respect of the watery contexts recorded for the Killin axe from the Clyde, the piece of a flint axe from the Irvine and the sandstone axe from the Bedside Kype Burn; the latter was in pristine condition, with flake scars still showing. A 6" (152mm) axe of clay ironstone was found in the Burn of Need near Mountgarwood farmhouse (NS 530 276) in 1875 (NMS AF 71). The jadeite axe from St. Enoch's church was found 7.6m deep and was said to be in a log canoe (Wilson 1851, 35); the
association with a canoe cannot be taken as entirely reliable, but is repeated in the case of 'six stone celts, an oaken war club and a considerable piece of deer's horn' found in a hollowed canoe on the north side of the Clyde near Milton Island, Dunbartonshire, found on the bed of the river (Buchanan 1870, 77). Some of the finds said to be from crannogs may likewise have been found in wet conditions near, rather than on, the crannogs. No details are recorded of the circumstances of an axe from a crannog found by L. McL. Mann (GAGM 1955, 96), or of two axes in the NMS (AF 1077, 1078) said to come from Lochspouts crannog near Maybole (NS 287 058), but not mentioned in the detailed list of excavation finds published by Munro (1882(b)). Only a wellworn axehead from Lochlee crannog, Tarbolton (NS 455 301) is described as being an in situ find from the 'relic bed', 2.6m below the upper hearth (Munro 1882(a), 105).

Besides the flake of reworked chert axe found in a ring ditch under a cairn at Linburn (see I:vii), three axes come from flat cremation cemeteries, but without details of direct funerary context. A small adze (AF 634) was found with a spearhead of brown flint at the site of an urn cemetery near West Kilbride (PSAS 1890, 280; Fullarton 1858). An axe from High Glencairn Street, Kilmarnock (Dick Inst. HG 271 AR 174) is said to have been found during excavations when a collared urn containing three barbed and tanged arrowheads was found, although
the report of the urn find by Smith (1895, 104-5) does not mention the axe. An axe of fine grained tuff (LNK 23) is said to have come from Fermigair, and was donated to the Glasgow Museums by the excavator of this cemetery site, James Davidson (GAGM A 69 15d), but no details of the circumstances of recovery are known.

Even where excavation contexts are documented they are not always informative. An axe from Knapps was not found in association with primary structures and neolithic pottery on the site, but in the core of the wall of the overlying medieval homestead (Newall 1974). Newall reports another axe from Site 5 on Gryfe Reservoir (NS 282 711), apparently a hut circle (1974, 11; Hunt. A 1971, 41). Most finds, however, are casual and without site or artefact associations, being picked up in fields, or found while ploughing, draining or digging the garden (seven finds are from gardens), or during construction work.

A histogram of known axe sizes in the Region (Fig.I: i) , based on inches as the most commonly quoted unit of measurement, follows a fairly normal distribution curve, peaking at 4"-5" and falling off slightly more gradually to nearly zero before producing a 'hump' of axes over 10" (254mm) in length. 74% of the sized axes are between 3" and 7" in length, 14% over 7½" (190mm), and 11% over 9" (230mm) (see Table I:2 for large axes). Such a profile might be the result of enhanced
recording of very large axes, but does not occur, for example, in the Lothians where only 9% of sized axes are over 190mm in length (II:vi). In the Tweed Basin, where 13% of the axes are over 190mm, the majority of these large axes measure 190-230mm, although there is a scatter of larger finds up to 328mm in length, a different pattern from the Firth of Clyde cluster of finds in the range 250-20mm. In the Firth of Clyde Region the group of large axes appears to be a function of the presence of a set of large Lake District products, the 'Cumbrian Club', made in a particular size range.

Distribution patterns can be broken down into sub-regions. Over one third of the Region lies to the south of the valley of the River Irvine, but only c 25% of
finds come from this area. There are no flint axes here, but four large specimens including a 'Cumbrian Club' from Dunure, on the coast, and two axes from Tarbolton, to the north of the River Ayr. One of these, illustrated and described by Macdonald (1882, 70-71 Fig.1), is clearly a prestige artefact, a tapering axe with rounded ends of very fine grained silicious stone probably from a hard band of such stone in metamorphic rock. Four axes, or perhaps five including the Heads of Ayr find, have been confirmed as being of Group VI stone, besides the Cumbrian Club, above, and a suggested Group VI classification for one of two axes said to be from Lochspouts crannog; the other is probably of Group IX stone. There would appear to be a widespread reliance on Lake District sources in this area, whether from Nithsdale or Luce Sands.

Nearly 25% of the axe finds come from the small county of Renfrewshire, with a dense cluster of axes occurring around the upper Gryfe Water, largely created by the work of Frank Newall in field walking, excavation and collection of local information. Five Group IX axes from the county have been confirmed, and there are records of two large flint axes, although one is lost, the other unprovenanced and perhaps not found in the county. Many of the finds are of local volcanic stone, and there are no known Group VI axes. Patterns of axe circulation were clearly very different here from those in the south of the Region.
Less than 25% of finds come from Lower Clydesdale and the Avon Water, taking in the hills between Newton Mearns and Hamilton which overlook the Clyde valley from the south. These include a fine jadeite axe, a large flint adze comparable to one from Knappers on the north side of the lower Clyde, and four very large axes. These last consist of a Cumbrian Club, a probable Group VI axe, an axe of local sandstone and another said to be of pinkish rock. No smaller Group VI axes have been reported and the large specimens appear to represent prestige artefacts, one of them, like the jadeite axe, being recovered from a watery context. A probable Killin stone axe has also been found in the River Clyde. There is no information on the likely raw material source used to make the more utilitarian objects in this area.

Nearly one third of all finds come from North Ayrshire, from the Irvine valley and its tributaries from the north with their surrounding hills, and from the Irvine estuary and the coastal strip to the north. These finds include four flint axes, four probably Group IX axes from Shewalton, four very large axes, two of which are probably of Group VI stone, and two smaller Group VI axes. Apart from the small, local concentrations in north Renfrewshire, this area of north Ayrshire has the greatest density of axe recovery in the Region, a distribution which incorporates several axes of high, intrinsic value, and finds coming from a variety of sources.
Funerary sites in the Firth of Clyde Region

Five long cairns and a relict chamber have been listed in the Catalogue, together with one doubtfully neolithic Category C site at Dalry. The six acceptable sites are fairly widely dispersed, except in the case of a pair of very long cairns on either side of the Irvine valley, near Darvel. The fragmentary nature of all the surviving sites, however, and the history of destruction which attaches to them, makes it clear that long cairns are likely to have vanished without trace throughout the Region. The restoration of one or two sites, perhaps, in the 18km gap between Dod Hill and Darvel, could create a much greater impression of clustering among the central sites.

Two of the six sites may be regarded as being peripheral to this central cluster not only in geographical but in cultural terms. No information survives on the original appearance of the cairn at Haylie, Largs, other than comment on its exceptional size. The segmented chamber, however, must suggest the cairn to have been a member of the Clyde Group, as found around the seaways of the Firth of Clyde. Its nearest analogues are in Bute, Kintyre and Arran, and the site may fairly be regarded as being a member of this west coast set, unrelated to the upland north Ayrshire series.

The small long cairn at Macawston, near Girvan, is
even further distant from the other Ayrshire long cairns; equally, it is clearly unrelated to the round cairns of the Bargrennan Group which are its nearest neighbours to the south. There is no sign that it contains a megalithic chamber or facade, and although it is possible that such features remain concealed, the absence of visible orthostats offers a major point of difference from all the long cairns on Arran. Analogies on grounds of form, size and coastal siting can, however, be found at Lochhill and Slewcairn, on the Nith, at Street House, Cleveland, and at the Cumbrian sites, Haverbrack, Sampson's Bratful and Skelmore Heads (Masters 1984). 23km south of Macawston, on Balnowlart Hill, Ballantrae (NX 1014 8356), a round cairn, apparently with a 'tail' to the SW, seems best interpreted as a round cairn overlying a long, the composite monument c 27m in length (RCAHMS 1981(b), 8, no.12). There may be a widely spread and primarily coastal class of small, trapezoidal long cairns constructed to seal Early Neolithic features, which, in three excavated cases, consisted of large split timbers, later mortuary structures and facades of timber or of small boulders (see VI:viii on the Nith estuary sites).

In thus identifying a 'North Ayrshire Group', however, it should also be pointed out that the four cairns concerned effectively form two separate pairs. Dod Hill and Cuff Hill, 11km apart, are medium sized
(32m and 42m) cairns with lateral chambers built beside cliffs of volcanic outcrop. Loanfoot and High Hendryton, on the other hand, are exceptionally long cairns (105m and 87m), 3km apart, in hilly agricultural country on either side of the Irvine valley. Nonetheless, there are shared characteristics, particularly between Loanfoot and the other pair, all three sites having lateral chambers, no evidence for a forecourt, and a dramatic situation. Loanfoot may have grown in size over time, perhaps as a result of competitive emulation of its Irvine valley neighbour.

Loanfoot is not only one of the longest cairns in north Britain, but is broad and high built, incorporating immense amounts of stone. Achievement of its full dimensions seems unlikely to be the work of a small family group. The proximity of High Hendryton does not furnish evidence for territory size, as the River Irvine, between the two cairns, could have formed a boundary between two local settlements, or between the whole of north and south Ayrshire. The siting of the four cairns does, however, suggest them to have been in places apart from settlement, selected for aspects of specialness involving rock and water. All four are directly related to prominent hilltop landmarks, making them easy to locate from afar despite the seclusion of the actual situation. On the other hand, the cairns are not in upland wildernesses. Most are at a junction of
ecosystems, with hills to one side, valleys to the other. Only Dod Hill, on its craggy peak, lacks adjacent agricultural land, and here Brown Forest Soil along the hill ridge, and a hut circle on a neighbouring hillside suggest that presently degraded soils formerly had a higher base status. An interpretation of the sitings as being related to summer grazings is perfectly possible, but there is no need to suppose that the cairns must have been at a distance from agriculture and settlement.

Probable loss of sites impedes conclusions on territory sizes and site relationships, and every effort should be devoted to identification of missing sites. Several reported 'long cairns' were inspected in the course of field work, but all were found to be of relatively recent agricultural origin as field clearance often on outcrop, or old walls (D:6; 7; 10; 11). One oval mound at Kennox Moss (C:1), remodelled to form the basis for an enclosed plantation, could have been a prehistoric funerary site, but in its altered state no firm diagnosis is possible.

The upland siting of surviving long cairns may suggest them to be atypical of lowland sites, but no crop marks suggestive of long barrow ditches have been reported from the Region. There are a number of round barrows, and it is possible that these may have included neolithic examples, as at Pitnacree in Perthshire (Coles and Simpson 1965). A large round barrow at Blackhill,
Lesmahagow (NS 827 440), ploughed down, but still in 1974 c 26m in diameter and 1.7m in height (RCAHMS 1978(a), 46, no.12), was trenched in 1897 (Young 1897, 501), when it was said to be 3m in height, and already much reduced. It was found to be a ring enclosure, consisting of 'a wall of clay and small stones 12ft. (3.7m) thick', within which 'was a rich fat soil and pieces of bone and on the top had been laid a layer of pretty large stones'. The black soil was suggested to represent decayed human remains. The circumstances of deposition would be unusual for bronze age funerary ritual, and might represent a form of neolithic multiple inhumation.

John Linge has drawn attention to the existence in north Ayrshire of a series of large, flat topped earthen mounds which, by analogy with the excavated example at Court Hill, Dalry, he suggests to have been prehistoric burial mound (Linge 1987). The sites concerned are listed in Table I:3 and Court Hill, Dalry is given a full Catalogue entry (I:6). Three serious difficulties arise over this thesis. The first is the very disparate nature of the sites listed by Linge, which range from a stone built cairn at Lawthorne Mount (no.8), to a steep sided earthen motte at Law Mount, Castleton (no.4). The second is the uncertainty which attaches to interpretation of the 1873 excavation at Court Hill, Dalry. Below the mound were preserved the charred timbers of a straight ended, buttressed rectangular structure which seems undoubtedly
to have been a building rather than a free standing enclosure. Scott's reconstruction of the remains as an early medieval timber hall, destroyed by fire and immediately enveloped in a medieval motte (1989) seems entirely plausible. Even if a primary mound sealed both beaker cairn and preceding timber structure, the final addition of a steep sided earthen mound seems likely to have been for use as a medieval motte. This observation leads to the third difficulty with the thesis, the inappropriateness of diagnosing original function on the basis of final external form. Accounts of examination of the Greenhill 1 mound (no.5), within the farm steading, suggests this large mound to have been multiphase, with a core of large stones, very probably a cairn, engulfed in an earthen motte. Among the sites discussed by Linge no.2 Knockrivoch and no.1 Gallow Hill, Largs have a gentle 18° angle of slope and seem likely to be prehistoric barrows. A nineteenth century 'excavation' of the mound at Largs found a mass of burnt material, including human remains, suggesting to the excavator that it was the site of a funeral pyre. The record here, as at Blackhill and at Court Hill, Dalry, is illustrative of the excellent anaerobic conditions of preservation under these sealed mounds, which must make the sites very valuable targets for future excavation. Another example is recorded by the NSA (VI, 690), concerning a mound at Govan known as Doomster Hill, c 40m in diameter by 5.2m in height. When a
reservoir on the summit of the mound was deepened to c3.7m, three or four rudely formed planks were found, together with small fragments of bone and a bed of what appeared to be decayed bulrushes.

Other antiquarian records suggestive of neolithic funerary practices can be found. Early in the 18th century Sir John Clerk of Penicuik examined a cairn in Ayrshire in which he found partially cremated human bones and a flint adze or axehead (Wilson 1851, 61). The Statistical Account (I: 328) describes the discovery in South Mound, Houston (NS 4009 6647) of 'several chests or coffins of flagstones set on their edges, sides and ends' with 'many human bones of a large size and several sculls in some of them'. Although a jet necklace with spacer plate was found in one cist, the emphasis on skulls recalls deposits at Haylie and Cuff Hill, suggesting possible neolithic activity. As described under Settlement (I:iii), occupation debris including neolithic pottery was found under the mound in 1974 (DES 1974, 57), while further excavations at the south end of the rocky ridge on which the mound is sited found a disturbed pit or hollow in the bedrock, measuring 3.8m x 1.5m in which food vessel sherds, jet beads and spacer plate might have been redeposited by the eighteenth century explorers (Morrison 1979). There was no sign of the slab built cists, and the excavator suggested that these were perhaps above ground features, again reinforcing the neolithic hypothesis.
Other records concern details of 'dolmens' or 'Druid's temples' which could have been megalithic chambers. The List of Category C sites includes one such setting, the Witch's Stone, near Craigie, south east of Kilmarnock (C:3), and another (C:4) in Rutherglen churchyard, where there is also a record of a tumulus. The survival of another such group of boulders at Wallacetown, Lugar, however (D:8), shows how deceptive the most promising antiquarian description can prove to be.

The re-use of neolithic cairns for bronze age funerary use, as may have happened at South Mound, Houston, is a well known prehistoric phenomenon. It is evident, also that many bronze age flat cemeteries can produce evidence for an earlier neolithic presence. At Knappers, Dunbartonshire this activity, unusually, took a directly funerary form (Ritchie and Adamson 1981), with one grave containing part of a mudstone adze (p.198, SF 57), a boulder built cist (p.174, 1) containing a fine Duggleby adze (SF 14) and a decorated stone (SF 58), and another such cist (p.179, Burial 53) a Rothesay style bowl (SF 1) besides traces of calcined bone. Within the Region recovery of neolithic artefacts from bronze age cemetery sites cannot so clearly represent neolithic funerary activity. Three stone axes come from bronze age cemeteries, at Kilmarnock (Smith 1895, 104-5), West Kilbride (PSAS xxiv 1889-90, 280; Fullarton 1858, xvi)
and Ferniegair (GAGM A 6915d; LNK 23), but none of the circumstances of recovery are well recorded. At the latter site another indication of neolithic activity was the use as a side slab for a cist with unaccompanied inhumation of a stone decorated on both sides in angular passage grave art style (Welfare 1975). As Welfare pointed out, the presence of decoration on both faces of the slab shows that it was not likely to be in its originally intended position. Decorated cist slabs regularly show evidence for such secondary use, and Burgess (1990) has made the case for the neolithic origin of the stones, as in the case of the slab, decorated with a cup and multiple rings, set up in the inner chamber at Cairnholyle I. Supporting evidence is present in the use of angular and spiral passage grave motifs on the cist slabs at Ferniegair and at Knappers, as also on a slab, now lost, from a cist at Coilsfield (NS 44 26), and, in the Biggar Gap Region, at Wester Yardhouses (III:x). Another slab in a cist in a kerbed cairn at Beoch (NS 522 084) between Nithsdale and the Doon Valley, carries pecked concentric rings, but none of the central cups so characteristic of carvings on rock outcrop. Nonetheless, while all these slabs may be neolithic objects, their re-use in bronze age cists fails to illuminate their original role, which, despite the single southern Scottish example from Cairnholyle, and the slab with plain cupmarks from Dalladies (Piggott 1972), need not necessarily have been funerary.
Similarly, the deposition of impressed neolithic sherds together with AOC beaker among the stones sealing a pit containing a later beaker with cremation in Site No. 2 at Wellwood, Muirkirk (Ritchie 1970), in a reversal of expected stratigraphic sequence, must be the result of activity accompanying or post dating the latter cremation, and no neolithic association with the ring cairn site can be deduced. 5km to the north of Wellwood, at Linburn, on Middlefield Law (NS 6886 3042), excavation of a 6m diameter cairn recovered a flake from a polished chert axe, reworked along one edge, from the fill of a small ring ditch under the cairn, surrounding a central cremation deposit (Fairbairn 1922). Again, the funerary activity may post date the period of use of the original axe.

Little progress has then been made over identification of neolithic funerary activity beyond that at the long cairns, in the Region. It may be that deposition was non-monumental and without accompaniment. The bronze age cemeteries alluded to above, produce simple deposits, besides the cists and urns of second millennium type. Undated deposits are also of common occurrence below cairns, as, for example, at Coilsfield, where a yellow clay sealed not only an urn but several heaps of cremated bone under a cairn at NS 4469 2624 (not the site with decorated cist slab) (Paterson 1847, i, 2). One of the Muirkirk cairns excavated by Fairbairn
(1927, 276) covered only a layer of yellow clay sealing a 'deposit of oak charcoal mixed with dark grey mould containing a sprinkling of bone in fine particles'. At Borland sand quarry, near New Cumnock (NS 585 173), a paved pit measuring 3.7m x 1.2m appeared to have been used for an in situ cremation, sealed under a layer of boulders; beaker sherds were found 6m distant (McLeod 1940).

Another possibility is that ritual activity during the Neolithic was more concerned with formal deposition than with funerary rites. At Knappers one deposit in a deep pit contained quartz tools, a wicker basket and a round based wooden bowl resembling a carinated neolithic pottery vessel, but no evidence for funerary deposition (Ritchie and Adamson 1981, p.177, fig.3). Similarly the pits at Whitemoss, Bishopriggs contained pottery and lithic material in a black, greasy soil (I:iv). Carvings on a rock face at Ballochmyle (I:ix) suggest this to be a sanctuary site, and it is possible that a similar role was originally played by the re-used carved slabs. A food vessel cemetery on a hill at Knocken, near Lesmahagow (NS 814 405) appeared to centre on an unusual 'shrine' on the hill summit, a paved area, 2.1m x 0.7 - 1.1m, surrounded by a low wall, on which was a black deposit containing bone fragments; around the structure flat slabs on the old land surface covered deposits of animal bone, many of these being the jaws of sheep in their first year (Young 1897, 500-1).
Attention may also be drawn to the use of hilltops for unusual ditched enclosures. One, on Reoch Hill, at NS 5660 3223, consists of a shallow penannular ditch c.12m in diameter between internal and external penannular banks (NS 53SE 3). Another more denuded site, using the same structural formula, c.20m in diameter within the ditch, is on the summit of Mochrum Hill at NS 264 100, beside a small summit cairn (RCAHMS 1983(a), 12, no.59). It is possible that a reported rath-like 'circular mound or vallum' on Cuff Law, near the Four Stones four-poster stone circle, at NS 379 550, which covered a large number of flint chips, was another such site (Love 1876, 202). These ditched enclosures, however, may more properly be considered in the next section.
I:viili Ritual enclosures in the Firth of Clyde Region

(a) Henges

Only one site in this Region has been included in the Catalogue as a probable henge, a 36m diameter Class I hilltop enclosure at Lindston, south east of Ayr. The monument is not only isolated in relation to other henges, but is in an area with no known long cairns and little in the way of neolithic artefacts.

Nearly 50km to the north north east on the Cathkin Brae golf course at NS 613 577 is a sub-circular ditched enclosure, c 42m-46m in internal diameter, with a single entrance facing slightly north of east through its 5.5m broad and 1m maximum depth ditch (RCAHMS 1978(a), 153, no.312). The artifically raised interior has been converted for use as a golfing green, leaving the remains sadly distorted, but the extensive views from the site over the Clyde to the hills beyond make for comparisons with Lindston, or with Cairnpapple, another 40km to the east. It is possible that this was the site described by Chalmers, following Ure (1793, 216), as 'a large carn, which is surrounded with a narrow ditch, and a small dike of earth, and is surmounted with a very large flat stone', on the summit of the Cathkin Hills (Chalmers 1807, 75-6). Although present remains are undistinguished, it is possible that this site carried a sequence of structures, henge ditch and bank being succeeded by cairn with
summit standing stone. The history of development here could have been as complex and as varied as that at Cairnpapple. One large (8") axe of pinkish rock is reported from the farm of Muir on which the golf course is situated (Table I:2:12).

A mini-henge is recorded as a cropmark at Easter Cadder (NS 6425 7343) on the northern limits of the study area (RCAHMS 1978(a), 160, no.333). A broad, penannular ditch opening to the south south east has an internal diameter estimated at 6m by the RCAHMS and at 7.5m to 10.0m by Harding and Lee (1987,393, no.295). A circle of twelve pits is enclosed. The site closely resembles Phase 1 at Moncrieffe, near Perth, where a penannular ring ditch, c 9m x 10m in diameter, enclosed a concentric circle of nine pits with a sterile and largely featureless fill; only four of the pits contained small packing stones (Stewart 1985). Beaker and grooved ware both occurred on this site, which may fairly be classed as a Late Neolithic mini-henge. Account must also be taken, however, of the similarity of some later ditched cemetery sites. At Balneaves, Angus, for example, a similar broad penannular ring ditch, c 7.5m in internal diameter, enclosed a series of cremation pits dated to c 1500 bc (Russel-White et al 1992). The pit circle at Easter Cadder is so regular that it may preferably be regarded as a henge, but the scale, and therefore, presumably, the function of such sites is very different from that of the generality of henges in the study area.
Problems of interpretation of aerial photographs, particularly if the undiagnostic form of the Class I henge was adhered to in the Region, have probably resulted in henges escaping recognition. Excavation of a suspected Class I site at Shiels, Govan (NS 5233 6674) produced dates from early in the first millennium AD, and this site is clearly not a henge (Harding and Lee 1987, 431). Another sub-oval cropmark enclosure at Dailly in the Girvan valley (NS 259 008) has rightly been categorised by Harding and Lee (p.393, no.294) as being 'unlikely to be henge related'. Nonetheless artefact recovery from the northern half of the Region, including transverse and lopsided arrowheads and flat axes and adzes, indicates the presence here of a status conscious Late Neolithic social class, and some form of monument construction, successive to the long cairns of the same area, might have been expected.

Henges are rare in western Scotland, although a very characteristic Class II site appears at Ballymeanoch in the Kilmartin valley, and their place may generally have been taken by stone circles. As, however, the series of earthen mounds, some possibly ditched, in north Ayrshire shows, this Region does not conform to Highland monument typologies, and ditched monuments would seem an entirely appropriate expectation. A set of small, penannular ditched enclosures in south Ayrshire is described in relation to the Lindston henge (I:a, Monument.
context), with a funerary role being suggested as probable (and see also I:vii, above). These are all, however, hilltop sites, and while suggestive of ditch-digging traditions in the area, do not provide the lowland henges which might have been expected in the Region.

(b) Stone circles

The place of henges in the Firth of Clyde Region does not appear to have been filled by stone circles, of which no example survives. Two stones remain in situ at a Four Poster on Cuff Law at NS 3790 5503, near Cuff Hill chambered cairn. This small setting, 4-5m across, belongs to a class of monument which appears to be dateable to the second millennium (Burl 1988(a)).

A site at Beoch, at NS 522 084 high above the Doon Valley near Dalmellington, has been listed as a stone circle (Burl 1976, 355), but would fall more satisfactorily into a category of kerbed cairns, perhaps having a false portal of transverse slabs on the south west, as, for example, at Culcharron cairn, Benderloch, for which a short term open phase as a ring of uprights was postulated (Peltenburg 1972). The complex site at Beoch, 11m in diameter, was partially excavated by Macleod (1938), and is referred to again in relation to finds of cup-and-ring marked stones and beaker from a cist in the cairn (I:ix; I:x).
A second site explored by Macleod, on the nearby ridge of Rig Hill, can no longer be identified, but again seems certain to have been a funerary cairn rather than a stone circle (Burl 1976, 355: Nith Lodge).

Seven prostrate stones at NS 4775 5323 on Moyne Moor, near Neilston have been suggested to be remains of a stone circle (DES 1963, 45, F. Newall). This site has not been visited in the course of present fieldwork, but in 1964 the OS reported that the stones lay in two parallel rows, making it difficult to suggest reconstruction as a circle, but perhaps indicating a diameter for such a circle of c 8m (NS 45SE 3). The setting has clearly been a small one.

John Smith makes reference to three stone circles in Ayrshire, which can all be rejected in favour of three different alternative interpretations. A suggested circle in Gogo Glen on the north Ayrshire coast at NS 2242 5920 (Smith 1895, 4) is identified by the OS with 'a fortuitous boulder assemblage' in an area 'littered with random boulders' (NS 25NW 16). Another on Blackshaw Moor at NS 2313 4815 (ibid, p.12) is considered by the OS to be a possible homestead, its earth and rubble walling revetted by substantial inner and outer facing stones (NS 24NW 22). Smith's record of a stone circle 60 feet (18.3m) in diameter at Molmont on the south side of the Irvine valley (ibid p.101) seems to be derived from a report in the Statistical Account (II, 73) involving
the removal of a 'Druidical temple'. The site can probably be identified with the remains of a cairn, 17.0m in diameter by 1.0m in height in 1956, on Gallow Law at NS 5313 3528, the stones having been a substantial kerb (NS 53NW 35).

One more detailed account from near Kirkoswald, at the south of the Region may be an acceptable record. At NS 2444 0791 the ONB reports a circle of whinstones averaging 0.9m in height, the tallest 1.1m. The circle, known as Kingsree (ONB 40, p.8) may be regarded as an outlier from the Galloway stone circles (RCAHMS 1983(a), 15, no.89).
Map I:6 shows the location of cup-and-ring marked outcrop and decorated portable slabs in the Firth of Clyde Region. Site details are given in Morris (1981; 1989). All but one of the sites with carved outcrop lie to the north of the River Irvine, and in this area they can be seen to consist of a small group of sites near West Kilbride, looking out to Arran, and a more scattered set along the north side of the hills to the south of the Clyde. The latter sites are in high exposed situations with open view over the Clyde to the hills beyond, and may appropriately be regarded as being Clyde-centred, and the southern half of a distribution which continues on the north side of the river. Morris lists twenty four sites in the Dunbarton area, with a big group around Bowling, including extensive cover of outcrop at Greenland Quarry discussed by MacKie and Davis (1989). Separated from either of the above groups is an unusual and complex set of carvings on a secluded rockface beside the River Ayr at Ballochmyle (NS512 255), which, besides many cups, cups-and-rings and spirals, includes designs which Morris suggests to be of later date (1989, 53). The closest analogy may be the rockface carvings at Hawthornden beside the River Esk in the Lothians Region (III.ix).

The portable slabs form an interesting group both for
their design vocabulary and for the contexts of recovery. Morris (1981) lists seven such pieces from the Region, but one, on Blackshaw Moor (AYR 2) may have been broken off the nearby decorated rock outcrop (AYR 1). Nothing is known of the circumstances of recovery of a large, thin slab in the Dick Institute (AYR 6), but all the others appear to have been found as loose slabs. One piece from Langside House (GLW 20) carries three large sets of cups-and-rings; another, from Dalgarven Mains (AYR 6), with simple cup marks joined by grooves, may possibly have been a cist cover. A small broken slab with a cup and two rings was found in excavation of Lochlee crannog, a not uncommon example of late prehistoric use of such pieces (AYR 7). A slab which is now missing was found in the 18th century in use as a cist cover over what was probably a food vessel at Coilsfield (NS 44 26), 4km south of Lochlee crannog and 6.5km west of the Ballochmyle outcrop. The stone appears to have been broken for use. Its designs included one cup with six rings and an unusual series of wavy lines and spirals having affinities with Irish passage grave styles; similar motifs appear on a slab at Hollows Tower, Dumfriesshire (DFR 1; V:ix).

Within a disturbed and otherwise empty boulder built cist in the south east quadrant of the cairn at Beoch, discussed under stone circles (I:viii:b), lay a dolerite slab on which were carved several sets of two or three concentric rings with no cups (AYR 1). Again, the
slab may have been broken, but appeared to be well worn. One end of the 0.6m long stone is without carvings and narrows, perhaps having been at one point earthfast (Macleod 1938 fig.4; NMS:EP 54).

A rather larger slab, 1m x 0.25m, formed the side of a cist with unaccompanied inhumation at Ferniegair cemetery (GLW 11; Welfare 1975). Again there are no cup marks, but on one face a set of three concentric rings and on the other a spiral; both faces also carry a series of angular and curving lines in Irish passage grave style. Welfare suggests that the unusual occurrence of carving on both faces could suggest that the stone was once a free standing block. It may have been reduced from a larger piece, designs being apparently incomplete or broken off, and Welfare draws attention to an area of dense pockmarking, 'conceivably an attempt at erasure'. Similar pocking over to erase designs occurs in the Irish tombs. Funerary use at the cemetery involved chiefly food vessels and cinerary urns, but beaker associations are discussed below.
Beaker distribution in this Region has been mapped and discussed by Ritchie (1970). The pattern is a curious one, with a complete absence of beaker in lowland Ayrshire south of the River Irvine, but an upland distribution dispersed all around the hills surrounding the Ayrshire basin. Above Glasgow, the only find in lower Clydesdale consists of sherds of a 'domestic' FN beaker from Ferniegair cemetery (Welfare 1975) not noted by Ritchie. An archer's bracer from a cinerary urn at Ferniegair may also suggest beaker associations here.

The lacunae in the map do not derive from an absence of opportunity to recover funerary pottery. Agricultural areas should produce greater discovery potential, and, indeed, Simpson's map of food vessel distribution show dense clusters of finds from lower Clydesdale and from the lowlands around Ayr (1965, fig.1), the effect suggesting possibly a complementary distribution to that of beakers. Cinerary urns, too, occur in these areas, besides spreading inland up the Ayr valley, and northwards up the coasts north of Shewalton (Morrison 1968, fig.1).

AOC beaker has been found on Shewalton Sands, at one funerary site at Muirkirk, and, as a single sherd, at Loudon Hill in the upper Irvine valley. Another, probably early find was a Step 3 N/MR beaker from a
cist below a cairn under the mound at Court Hill, Dalry. In the first two instances neolithic pottery comes from the same site. The Loudon Hill find was made only a few hundred yards from the chambered cairn at Loanfoot, just as beaker sherds of unknown type from Moyne Moor were not far from the chambered cairn at Dod Hill, and a beaker burial at Largs was only 140m from the chamber at Haylie. Sherds from Beoch and from Ferniegair both coincide with the location of cist slabs decorated in passage grave style. It is possible to suggest that beaker styles were only adopted in areas with a settled and successful neolithic population.
I:xi Summary

The two geographical components of the Forth of Clyde Region, the Ayrshire Basin with its bordering uplands, and the truncated Clyde estuary basin from which Dumbartonshire on the north side of the river has been excluded, are in part reproduced in a duality of patterns of prehistoric activity in the Region, although with some additional complexities.

Mesolithic material comes largely from Ayrshire, where rich coastal collection is supplemented by a substantial element of inland recovery, whether representing seasonal variation or alternative populations.

Long and chambered cairns occur around the peripheries of the Ayrshire Basin, suggesting to Hughes (1987; 1988) continuity from the Mesolithic in the use of traditional hunting grounds as places for monuments. The thesis appears to over-generalise the situation (Murray 1991), particularly in view of the morphological integrity of sets of long cairns - the Bargrennan Group of round passage graves to the south (Murray 1992), and the laterally chambered long cairns, displaying no sign of facade structures, in the north Ayrshire uplands. Macawston, in south Ayrshire, may be a Galloway outlier, or a member of a set of small, trapezoidal long cairns found around the coasts of northern England and
southern Scotland. Neither Macawston, nor the elongated cairns of north Ayrshire, resemble Clyde cairns, characteristically possessing axial chambers and orthostatic facades. The segmented chamber at Largs may be a member of this Group, its closest analogues lying in Bute and south Argyll, distinguishable, in turn, from a variant set on Arran. Related cairns in Dunbartonshire (DNB 2,3,4) and Stirlingshire (STR 1,2) show the Clyde Cairn distribution to extend up the Clyde estuary, and it would not be surprising if cairns on the south side of the river had been destroyed by urbanisation.

The occurrence of Western Neolithic and Rothesay style pottery in Renfrewshire and at Knappers, Dunbartonshire re-inforces the connection between the Clyde estuary and the Firth of Clyde, similar pottery being known on Bute, at Auchetegan, Glendaruel and in Kintyre. The absence of such wares from Ayrshire, even at the pottery rich sites beside the mouth of the River Irvine, underlines the differences between the two parts of the Region. The distinction recurs in the distribution of cup-and-ring marked rocks, found in the north of the Region as a supplement to the rich Dunbartonshire material, but extending southwards only along the shores of the Firth of Clyde, as far as West Kilbride. Similarly, axeheads of Lake District tuffs, common in Ayrshire, are absent from Renfrewshire with only two prestige 'Cumbrian Clubs' reaching the
In the Late Neolithic the 'frontier' seems to shift southwards. Grooved ware and imported flint adzes are found from the Clyde to the Irvine, and axes of Antrim porcellanite are also relatively frequent here, whereas only one comes from south Ayrshire. The presence of a henge in the latter area, as well as the use of passage grave art motifs on slabs, show that the south of the Region was not a Late Neolithic backwater. The exchange networks established in the north of the Region seem to have failed to penetrate the south, where links with the Solway, maintained through the import of Lake District axes, probably remained stronger. The peripherality of beaker finds in this part of the Region could be a function of use of these alternative contact routes, in particular the line through Nithsdale.

In summary, an Early Neolithic distinction between a Clyde based culture in the north of the Region and a north Ayrshire centre of long cairn building, gives way to a Late Neolithic sharing of prestige artefact exchange across both areas. South Ayrshire, orientated through axe traffic towards the Solway, remains outwith these networks, choosing other means of cultural expression throughout the Neolithic.
Table I: Neolithic Pottery from the Firth of Clyde Region

1. Whitemoss, Bishopton  
Excavation Notes in PPS 24 1958, 218 report:  
'Beneath the Roman fort Professor S. Piggott found eight shallow oval or circular pits containing black greasy soil, a flint leaf shaped arrowhead and a scraper, two chips of Arran pitchstone and pottery of the type found at Bantaskine (Falkirk), Easterton of Roseisle (Morayshire) and Lyles Hill (Belfast). The site is interpreted as an irregular version of the ritual monument, similar to that at Dorchester-on-Thames.'

The pottery, which has not been published, is in the Hunterian Museum (A 1965 30-45). Notes in the Museum Catalogue show that apart from one thin sherd with fluting on everted rim and body and one with small, deep punctuations below the small, rolled rim, the pottery is undecorated. At least two fabrics are present among the undecorated wares, neither very fine. There are some rather slack shoulders, one sharper shoulder, comparable to that on a vessel from Cairnholy forecourt blocking, and some possible carinations. Rims are thickened, everted, rolled and hooked, and Scott (1977, 32) has drawn attention to some sherds reminiscent of Manby's Towthorpe ware, which Scott regards as having a direct, formative relationship with the Rothesay style.

2. Knapps homestead, Houston  
Excavation by Newall (1965) of a farmstead in Renfrewshire found the medieval site to overlie a palisaded, rectangular house, which, in turn, overlay traces of earlier settlement and several pits. 128 sherds were recovered in excavation, one possibly of beaker and others of flat rimmed ware, assumed to relate to the palisaded house. Up to fifty sherds may have been neolithic, of less fine a fabric than pottery from Whitemoss, and smoothed, not burnished. Rim forms were, in general, less emphatic than at Whitemoss, but thickened and slightly everted (Newall op cit fig.4).

3. Muirkirk Hut No.2  
Excavation of a group of supposed hut circles near Muirkirk (Baird 1914; Fairbairn 1920, 1922, 1924, 1927), probably funerary sites (Ritchie 1970, 127-8), included this banked site, c12.2m in diameter, with cobbled 'floor', which Ritchie would classify as an 'enclosed cremation cemetery'. Within the bank, one pit contained a cremation, another a comb impressed beaker. Sherds of earlier AOC beaker were found among the cobbles, as were eight sherds of a large flat based vessel decorated with circular impressions (NMS: EGA 9; Ritchie op cit 140, no.10; Fairbairn 1927, 273, fig.6). Callander (1929, 95) compares the vessel to impressed wares from
Glenluce and Hedderwick Sands, and also suggests that a vessel from nearby Hut 3 (NS 671 251) could fall into the same 'Overlap Period'. The sherds of this vessel have finger pinching below an outward bevelled flattish rim (EGA 2), and Ritchie considers that they may belong to a late beaker (op cit, 135, 141, no.11).

4. Stevenston and Shewalton Sands NS 24SE and NS 33NW

John Smith (1895, 38, 108) commented on finds of pottery, mostly wheel-turned, from both Stevenston Sands to the N of the Irvine estuary and Shewalton Sands to the S. In both areas there were 'rather rare' or 'few' finds of 'very coarse handmade pottery', Smith's illustrations of some of the Shewalton finds (p.108-9, figs.183-186) include rim sherds with herring bone patterns, with thumb print indentations, and with grooved designs, probably both impressed and grooved ware. Childe (1935, 80) listed Peterborough ware from Shewalton in the Dick Institute, Kilmarnock, the mention serving as a source for later reference by Sir Lindsay Scott (1951, 73), Atkinson (1962, 35) and Kinnes (1985, 50). Kinnes also lists grooved ware from Shewalton (ibid).

One rim sherd with a horizontal row of perforations from Smith's collections was in a bequest to the NMAS in 1931 (BM 34) where it was catalogued simply as 'from Ayrshire'. Smith's comparison of a perforated sherd from Castlehill fort (no.5 below) to finds from 'the Ayrshire raised beach surface' (1919, 127) may be recalling this sherd, which can therefore be attributed to the sand dune sites. It has been assumed to come from Stevenston Sands, and under that heading compared with western neolithic pottery (PPS 1936, 188; Scott 1951, 73), or, perhaps more convincingly, to a grooved ware sherd (P 16) from Balfarg (Henshall and Mercer 1981, 132). Henshall and Mercer also compare Smith's sherd to pieces in an assemblage from Walney Island sand dunes, Lancashire (TCWAAS 65, 1956, 1-16).

In 1965 grooved ware was found in a sand quarry at NS 332 367 (DES 1965, 14, M. Macneill), a site on a gravel ridge at Shewalton in the area in which Lacaille made his chief collections.

5. Coalhill or Castlehill forts

The NMS Catalogue lists two rim fragments from Coalhill fort. These are of a coarse, dark pottery, one sherd having two holes under the lip, the other one (HH 337). Reference is made to Smith (1919), an excavation summary relating to three Ayrshire forts, including a dun at Coalhill. There is also, however, an account of excavation at Castlehill fort, Hourat, a site now destroyed by quarrying, and it is in a list of relics from this site that Smith (p.127) itemises 'two fragments of a coarse handmade urn resembling pieces found on the Ayrshire raised beach sands. These had evidently been
thrown over the side of a rock onto a ledge'. Henshall and Mercer (1981, 132) compare this sherd, as No. 4 above, to a grooved ware sherd from Balfarg.

6. Gryfe Reservoir NS 267 718 and 288 712-282 711 Grooved ware is said to have been found with beaker and lithic material at two sites beside Gryfe Reservoir (DES 1965, 34; 1960, 40; Newall 1974, 9). One carinated sherd in the Hunterian Museum (1971-9), 63mm x 50mm x 12mm max thickness, was presented to the Museum by F. Newall as coming from Site B on Gryfe Reservoir.

7. South Mound, Houston NS 401 664 Excavation in advance of road widening of part of this bronze age cairn found, below the mound, a pre-cairn soil which 'yielded fragments of Neolithic domestic pottery with sherds from at least seven vessels' with other domestic refuse. No details of the pottery are known (DES 1974, 57, Renfrewshire Archaeological Society).

8. Moyne Moor NS 476 5322 'Several sherds of either Late Neolithic or Beaker pottery were discovered in upcast from a drain 100 yards SW of the Covenanter's Stone at NS 476 532'. (DES 1965, 14, F. Newall).

Table I:2 Axes from the Firth of Clyde Region over 190mm (7½") in length

Information is from museum catalogues and quoted sources. NGR (all NS) given to six figures only where a findspot is indicated.

Hunt = Hunterian Museum, Glasgow University.
GAGM = Glasgow Art Galleries and Museums.
Dick Inst. = Dick Institute, Kilmarnock.
NMS = National Museums of Scotland
L = length.

1. Fenwick Hunt A 36, acquired 1807
   L 292mm ?Great Langdale Ploughed up in parish
   46 43
2. Sauchiehall St and Buchanan St Junction
   GAGM 172-48 1948
   L c280mm Fell 1964, 54 Cumbrian Club
   590 658
3. Giffnock Quarries Hunt A 39
   L 279mm ?Great Langdale Found in 1860 2.7m under surface: Palace of History
   1911, 844 no. 39
   57 59
4. Mid Lanbroughton With finder, Aug. 1962
   L 274mm Inf Dick Inst ML228 ?whinstone
5. Brownhill Lost Macdonald 1882, 70 fig.1
   L 267mm 'Siliceous fine grained stone,' like a whetstone' Dug up from drain in
   1830s - NSA V, 747
6. Bedside Kype Burn, Strathaven With finder
   NMS Daybook 1990/34
   L 258mm Fine grained sandstone, probably
   local, flake scars still visible
7. Lagg, Dunure NMS AF 39 1880
   L 254mm Fell 1964, 54 Cumbrian Club
8. Auchenhavie Sands, Seabank Lost
   Macdonald 1882, 71-3
   L 254mm Found 1879 40 yards above high
   water - possibly ballast? Dark grey slate
9. Kilkerran, Dailly Mearns 1882, 44
   L 235mm In GAGM
10. Mount Pleasant, Newmilns GAGM 1943-25
   L ?over 230mm Ritchie and Scott 1989
   AYR 5 Gp.VI Fell 1964, 53, large
   Cumbrian Club
11. Near Tarbolton Smith 1895, 154
    L c200mm 'In the Kilmarnock Museum'
12. Muir Farm DES 1973 37, T. Welsh
    L est. 200mm Not seen by Welsh.
    Whereabouts unknown 'Pinkish rock'
13. 'Point of Ayre' ?Heads of Ayr
    Dick Inst AR/A 73 Purchased 1975 from
    Salisbury Museum, Blackmore Collection
    ETS 32. Ritchie and Scott 1989 AYR 3
    Gp VI Blade fragment of a large heavy axe
    could be from Point of Ayre, Isle of Man,
    or from Point of Air, Dee Estuary, N. Wales
14. Prestwick PSAS xii 1906-7, 418
    L 225mm 'Jadeite' Found in a land slip
    Museum notes in NMS suggest this find to
    be an ethnographic specimen

Table I:3 Flat-topped mounds in N Ayrshire listed by
John Linge (1987)

1. Gallowhill, Largs
   NS 2022 5949
   31m x 24m diameter; 3.5m in height; 10m x 5m
   across top; angle of slope- 18°
   This tree covered mound in Largs Churchyard is 100m
   from the shore in a built up area. It was traditionally
   regarded as the burial place of Norwegians killed at the
   Battle of Largs in 1265, and human bones were found in it
   before 1822 (Dillon 1822, 383). Excavation in 1873 by
a Dr. J. S. Phene was briefly described in a letter to The Times quoted by Dobie (1876, 305) and Munro (1910, 277). Within the mound were found oak charcoal, burnt and unburnt lumps of clay, bright green flakes thought to be parts of copper or bronze armour, burnt and partly burnt bone and human teeth. The centre of the mound consisted of 'one mass of fat unctuous earth, dotted all over with red and black formed by pieces of burnt clay and charcoal'.

The bright green coloured flakes were probably created by chemical reactions of natural substances in anaerobic conditions (G. J. Smith 1993).

2. Knockrivoch
   NS 2534 4510
   30m x 24m diameter, perhaps reduced on N side and originally circular; 3.3m in height; 9.5 x 6.0m across top; angle of slope:- 18°.
   There is no evidence for use of this gently sloping mound as a motte. Scott (1989(a), 278) accepts Linge's classification of the site as a barrow.

3. Hutt Knowe, or Bonshaw Mound
   NS 3754 4415
   17m diameter; 2.7m in height; 9m x 9m across top; angle of slope:- 37°.
   This is the smallest of the mounds listed, its profile almost as steep as that of Courthill (38°). Large stones are visible around its base and John Smith (1895, 85) also noted 'two penns (i.e. culverts)' on the E side. Linge refers to recent RCAHMS and OS suggestions that the mound may have been a kiln, but draws attention to the absence of comparable kilns in the district and calls for 'a fresh assessment'. If the stones constitute the kerb stones of a prehistoric barrow, their continued visibility and the steep profile of the mound appear remarkable. The summit, however, is small for a motte.
   Visited 31 May 1989

4. Law Mount, Castleton
   NS 4112 4478
   19m diameter; 3.5m in height; 12m across top; angle of slope:- 45°.
   This mound, utilising the W end of a natural ridge overlooking the Annick Water 200m to the NW, is beside the farm of High Castleton, a name suggestive of a history of use as a motte. There are traces of a ditch on the uphill E side of the mound, where the ridge appears to have been utilised as a bailey. The very steep profile is entirely consistent with a medieval origin, and the presence of a very similar motte 2km to the W at Chapelton, across the Annick Water, provides a local context for the site type.
   Visited 1 Aug. 1989

5. Greenhill 1
   NS 4013 3916
   33m diameter; 4.2m in height; 21m across top; angle of slope:- 35°.
This large, steep sided mound, set within the farm steading at Greenhill, appears likely to have been a motte. When a well was being dug beside it in the 19th century 'soft pulpy soil' was found under a few feet of surface clay, consisting of 'chaff and short lengths of charred wood' (McNaught 1912, 350). The farmer's son, suspecting this find to represent a ditch, examined the opposite side of the mound, and confirmed the reoccurrence of the feature there. He dug into the top of the mound, and, at c.1.5m depth, found an extended, headless skeleton, legs apart, judged to have been a large man. A few feet further down stone was encountered, and, with increasing depth, the stones grew bigger and impossible to move. A later excavation made at one side of the mound for the erection of a farm building, found it to consist of 'ashes, charred wood, bits of bone and the hard enamel of teeth' (ibid, 37). It seems probable that this is a composite mound.

6. Knockentiber NS 3974 3877
   No trace remains of this mound, levelled before 1856, but said to have been similar in appearance to the Greenhill 1 mound (ONB 1856, 36, p.40).

7. Greenhill 2 NS 4009 3961
   This mound, 400m N of No.5, has been destroyed by railway sidings. Four, or alternatively six, cists are said to have been found in it in the early 19th century (ONB Paterson 1847, ii). Paterson refers to an account of it as 'one of three large barrows', that of Greenhill 1 being the largest. Linge comments that the symbol on the 1st ed. OS 6-inch map suggests it to have been larger than Greenhill 1, and with the same flattened top.

8. Lawthorne Mount NS 3465 4078
   20m diameter; 3m in height; 5m x 3m across top; angle of slope:- 22°.
   This stone cairn, enclosed by a fence and tree planted, is said to have been partially excavated before 1956 (NS 34SW 10). It appears to be the robbed remains of a much larger cairn, perhaps c30m in diameter. A concrete slab is sunk into its top, and a large stone, 2.1m x 1.1m lying on the summit may suggest disturbance of a cist. Visited 31 May 1989

9. Glen Mount NS 2103 5012
   c25m diameter; 2m in height; 18m across top; angle of slope:- 30°.
   This mound is beside the Bush Burn, which has eroded its N side. Linge comments that ploughing has reduced its former flat top to a low domed profile. Scott would prefer to maintain the classification as a motte for this site. Visited 29 Sep.1992
10. Lickprivick, East Kilbride, Lanarkshire

25m x 23m diameter; 2.5m in height; 7m across the top; angle of slope: - 16°.

Scott (1989(a), 278) suggests this mound to be a member of Linge's group of flat-topped mounds. It survives as a gently sloping grassy mound in a public park, probably originally circular, but with its NW side, at the top of a slope, having been eroded. Its profile and situation on a summit with wide views suggest it to be a prehistoric burial mound. It is, however, only 250m SSW of the site of Lickprivick Castle, and is clearly much reduced in size since David Ure described it (1793, 164) as being about 14 feet (4.3m) in height with a square top measuring 12 yards (11.0m) in each direction. The present profile may be the result of recent degradation.

Visited 29 Sep.1992
Map 1: Mesolithic sites in the Firth of Clyde Region

Woodend
Shewalton
Girvan
Loch Doon

20km
Map I:2 Pottery sites in the Firth of Clyde Region

(See Table I:1)
Map 1:3 Axeheads in the Firth of Clyde Region
Map 1:4 Flint axeheads and other special types in the Firth of Clyde Region

*Jadeite  *Flint  ★Gp IX  ★Gp VI  OGP XIII
  • 'Cumbrian Club'
  ( ) Possible identification or doubtful location
Map I:5 Neolithic Monuments in the Firth of Clyde Region

(See Catalogue)
Map 1:6  Cup-and-ring marks in the Firth of Clyde Region
Map I:7 Beakers in the Firth of Clyde Region
II THE LOTHIANS REGION
II:i Physical setting and environment

The Lothian plain forms a well-defined, natural Region delimited on the north by the Firth of Forth and on the south by the steep, northern faces of the Lammermuirs, the Moorfoots and the Pentlands. In the east this southern boundary coincides with the Southern Upland fault which meets the sea at Cockburnspath. To the west the Pentlands crowd in, narrowing the Lothian plain towards the Bathgate Hills and a bleaker carboniferous plateau beyond, the Regional boundary defining itself here by an almost total absence of sites and artefactual finds. The three Lothian counties cover 2190km², in which there are c 1300km² of improved land, constituting the Lothian plain.

The plain consists of coal measure strata and rocks of Calciferous sandstone overlain by glacial drift and fluvio-glacial deposits creating a varied landscape with characteristic elongated drumlin forms. It is interspersed by basalt lava intrusions, including a series of prominent volcanic plugs, such as Binny Crag, Arthur's Seat and Edinburgh Castle rock, Traprain Law and North Berwick Law. A series of rivers flowing north-eastward from the hills to the Firth of Forth cut deep valleys through the sedimentary rocks - the Rivers Avon and Almond, the Water of Leith, the North and South Esk and the River Tyne. The soils of the plain are among the most valuable in modern Scotland, the drifts derived from the sedimentary geology providing
rich loams, and constituting, with the Berwickshire Merse, the only significant stretch of Class 1, 2 and 3 land in the present study area. The well drained Class 1 loams form a narrow band immediately behind the coast on the raised beaches east of Edinburgh. Most of the modern arable farmland, however, is described by the Soil Survey (Bown and Shipley) 1982, 19) as being characterised by slow permeability, although little subject to waterlogging. Such soils, when wet, can be heavy to work, although the low rainfall of the east coast reduces the incidence of this problem. The area shares again with the Merse one of the lowest annual rainfalls in Scotland, at under 800mm throughout most of East Lothian, falling near the coast to under 600mm. West of Edinburgh rainfall levels rise, contributing to the greater gleying of soils on the Bathgate Hills and beyond. The Lothian plain is still an area of arable farming, as it has been for centuries. In 1989 40,000 hectares of cereals were planted in Lothian Region, although other crops, such as rape and potatoes and the active market gardening industry reduce the amount of land with good cropmark potential. There is also an ever-spread ing urban area, especially around Edinburgh and the new town of Livingston in West Lothian. Urban development may produce opportunities for artefact recovery and the discovery of cist burials, although in the former case the effect was more noticeable during nineteenth century urban expansion, before the introduction of mechanical earth
moving equipment. Some recent developments (Inveresk road improvements; South Gyle shopping centre) have provided an opportunity for rescue excavation, usually somewhat limited in scope (except at Elginhaugh Roman Fort). It should also be realised that the rich, repeatedly cultivated loams of the Lothians do not always provide ideal conditions for artefact recovery. Excavating at Monktonhall near Inveresk in advance of road schemes in 1984, Hanson (n.d.) observed that beneath the modern plough soil lay a second cultivated soil of medieval origin, and that this feature, itself sealed by years of intensive cultivation and manuring, had effectively eliminated the recovery of prehistoric material from the surface.

Sea level history has been well studied in the western Forth Valley, in the Stirlingshire carse lands outwith the present Region (Sissons and Brooks 1971). Here sea level was falling by c 4510 bc, although peat was not forming on the carse clays until the end of the third millennium bc. East of Grangemouth there are narrow raised beaches seawards of the old cliff line, the foot of which is marked by extensive oyster middens. The situation of these shell heaps thus suggests storm deposition at, and perhaps for a considerable period, post maximum transgression (Jardine 1984, 5). The chronology of regression along the Lothian coast is not well-known, being complicated in the east by sinking of the land, causing a loss of raised beaches in
East Lothian. Sand dune occupation here may thus have originally been further from the sea, on an upper raised beach.

Pebble flint is available along the shore lines of the Firth of Forth, although it is small and of poor quality. Grey and black flints with shales are reported from exposures in the Lammerlaw Burn (NT 51 62) in the Lammermuir Hills (Wickham Jones and Collins 1978, 11, no.21). Chert is freely available both in the hills and on the coasts. Particularly fine quality 'flint-like chert nodules' are reported from Kirkton to Linlithgow limestones in West Lothian (ibid, p.16, no.39).

II: ii The Mesolithic of the Lothians Region

Several problems attach to the survival and recognition of the Mesolithic of the Lothians. Isostatic land sinking may have truncated coastal evidence, especially in East Lothian. Soil depths may be impeding lithic recovery (see II:i). Raw material limitations produce undiagnostic lithic technology, and resultant narrow bladelet assemblages, such as that at Torness (Mercer 1976, 9), may not belong to the mesolithic traditions that they resemble. It is clear, therefore, that although occasional microliths occur in sand dune
collections and at Cramond, by the mouth of the River Almond (see Table II:1) the continuous recovery of lithic debitage, as seen along the coasts of Ayrshire and the Solway, will not be found in the Lothians.

A possible alternative form of evidence for coastal exploitation lies in the huge oyster shell heaps which stretch along the foot of the scarp of the transgression shore line to either side of the River Avon. MacKie obtained a date of 4060 ± 180 bc from the base of the Inveravon mound, and two late third millennium bc dates from higher levels (MacKie 1972). Woodman points out (1989) that, on the basis of work by Switsur and Mellars (1987), these dates, being on shell, may be c 400 years too old, bringing the first date down to the mid-fourth millennium bc. Earlier, clearly mesolithic dates have been obtained by Derek Sloan both from Inveravon shells, and from another midden further west at Cadger's Brae (DES 1985, 6); excavation at Nether Kinneil, east of Inveravon, produced neolithic dates (Sloan 1982). The trend of earlier dates lying to the west could support a theory of natural accumulation (see II:i), and no mesolithic artefacts have been found in any of the shell heaps. Structures in the Nether Kinneil site had been cut into the mound and were accompanied by possibly Late Bronze Age pottery. If the charcoal 'hearths' present in the mounds represent a mesolithic presence, the sites must have an aspect of special exploitation practices which continued
on into the Neolithic and later, and they remain uninformative on overall subsistence and settlement strategies.

Occasional mesolithic artefacts have been recovered from inland sites (see Table II:1). These include an excavated assemblage from Elginhaugh Roman fort of broad blade Early Mesolithic type (Morrison and Bonsall 1989, 141), demonstrating the time span involved in the mesolithic period in the area, and emphasising the paucity of overall recovery. There are occasional hilltop finds, as from Kaimes Hill and Traprain Law, which may suggest a locational choice (cf Biggar Common III:ii), but could relate merely to recovery bias caused by hilltop erosion. One larger collection, from Crichton, to the north of the Moorfoot, is the work of an individual farmer collecting in the inter-war period. The isolation of the assemblage is striking, suggesting opportunity for further work in the area. Activity here may, however, relate to the prolific material collected in Lauderdale over the hill range to the south (IV:ii).

II:iii Neolithic settlement evidence in the Lothian Region

a) Occupation material from coastal sites in East Lothian provides the most convincing evidence for neolithic
settlement in the region. Richardson and Richardson (1902, 656) described mounds in the sand dunes north of Gullane (c NT 49 85) exposed by the winds, which were covered with bleached periwinkle and limpet shells and consisted 'of a compact mass of dark mould in which are embedded shells, flints, split bones and pieces of urns bearing traces of carefully executed designs, and occasionally smooth rounded pebbles of quartz, along with charcoal.' Two such mounds investigated by A.O. Curle in 1907 were found to consist of dark loam and blackened sand and to contain bones, shells, crustacea, pieces of red deer antler, a bone pin, flint flakes and artefacts and sherds of grooved ware and beaker (Curle 1908). Midden deposits excavated by James Cree (1908) from below a medieval pavement in the garden of his villa at Tusculum, North Berwick, seem to have contained only beaker and beaker related coarse wares, but an excavation of a midden 'on a cliff called Pincod', near Dunbar, produced a sherd of Early Neolithic pottery along with flint chips, an unfinished arrowhead and faunal remains (PSAS 1909-10, 102). J.R.S. Richardson collected artefacts from Hedderwick Sands at the mouth of the River Tyne (NT 64 78) over a long period of time (Callander 1929, 9). These included lithic material and polished stone axeheads, including many flakes, a little Early Neolithic pottery, grooved ware, and large quantities of impressed wares. These finds were not from middens, but were usually revealed by eroding sand; in September 1955, however
Richardson and others recovered a large assemblage of neolithic pottery, primarily impressed wares, from two 'sandpits' in the same area (NMS; BM 581-95). It is not clear whether this account refers to prehistoric pits, or modern. Finally, it should be mentioned that the oyster midden at Nether Kinneil, West Lothian has produced ten 14C dates taken on shell spread over the period from 3110 ± 50 bc (SRR 1486) to 2230 ± 50 bc (SRR 1485) (Sloan 1982). A distortion of up to 400 years affecting Scottish dates on seashells (Switsur and Mellars 1987) may re-assign some of these dates to the second millennium bc, but several still clearly belong to the third millennium. Unfortunately there is no associated neolithic occupation material in these West Lothian oyster middens.

b) **Structural remains** relating to the Neolithic are almost completely absent in this region. The possibility that the post built Hall A on Doon Hill (NT 6834 7552) might be a neolithic structure was raised after the hall at Balbridie on Deeside, whose plan had been described as 'almost exactly the same as that of Doon Hill Hall A' (Reynolds 1980, 56), was found to be unequivocally neolithic (Ralston 1982). Publication of Doon Hill is still awaited and no details are available as yet on, for example, the neolithic and bronze age sherds which are said to have been recovered (Hope Taylor 1980). Nonetheless, weight must be given to the excavator's comments on the extreme improbability of
there being such a chronological gap between Halls A and B when the uprights of the Dark Age Hall B were dug into the soft fillings of the posts of the identically sized earlier hall. Hall A certainly displays some unfamiliar features for a Dark Age structure, for example, the use of axial centre posts (Wilson and Hunt 1966), but known post-built halls of the period are few in number. Recent excavation of the eighth century monastery at Hoddom have found the remains of post built structures, one, measuring 13.5m x 6.75m, with centre posts in the end walls, bowed side walls, and a distinctly curved set of four cross posts (Lowe 1991, fig.4). The Balbridie hall, on the other hand, is an aisled structure, with no axial centre posts, differing also from Doon Hill in the form of its cross posts and its bowed end walls, lacking the buttresses of Doon Hill. There would not seem to be good reason to consider Doon Hill A to be neolithic, although further details of the neolithic pottery would be of interest.

Excavation in 1990-92 at Maybury Park on the west side of Edinburgh found features in Area B (NT 1790 7203) in which were a possible neolithic sherd and an undecorated vessel with beaker affinities. Pits, postholes, stake holes and hearths cannot be interpreted as structures, but must indicate occupation or settlement, possibly in association with a ditched field system (DES 1992, 52).

Similar remains at Linlithgow Friary (NT 003 765) included pits which may have been dug to remove posts,
smaller pits, stake holes, slots, gullies and spreads of cobbles; possible alignments of post-pits, lying E to W, c 2m apart, were detected. Although charcoal from the inner fill of one post-pit was dated to 3315 ± 55 bc - GU 1875, other features contained beaker, and no stratigraphic separation of groups of features was possible. It would appear that successive structures are represented by the remains (Lindsay in Stones (ed) 1989, 61-3).

A semi-circle of post holes within the annexe of the Roman fort at Elginhaugh, near Dalkeith (NT 323 673) was suggested to be a possible beaker feature (Hanson and Yeoman n.d.), but there is no further evidence that this was structural.

c) **Pits** with neolithic contents have been found in a few excavations, but do not necessarily prove domestic occupation. Ritual was suggested in the case of two small, circular pits on the lip of the ditch of a possible cursus at Monktonhall (NT 349 707), one containing 'quantities of burnt hazelnut shells and two broken but almost complete pots of Neolithic/Bronze Age character', the other, hazel nut shells and a flint blade (Hanson n.d.). At Elginhaugh (NT 323 673) the same excavator found shallow pits below the vallum of the Roman fort, containing pottery which gave early neolithic thermoluminescence dates (Hanson and Yeoman n.d. p.10). At Broxmouth hill fort (NT 696 778), within the area of an Iron Age cemetery, a single pit
was found containing hazel nuts, burnt clay and a sherd of impressed neolithic pottery (Hill 1982, 10; Aitken 1983). Some of the pottery from Hedderwick was said to have come from two 'sandpits' (but see above, re middens). Three large pits at Linlithgow Friary were thought unlikely to have held posts, but their fills were evidently no different from that of the smaller features here (Lindsay in Stones (ed) 1989). Several pits at Dryburn Bridge palisaded enclosure are said to have contained later neolithic pottery, while others contained flint and chert flakes (Triscott 1972). Pits at Maybury Park have already been mentioned, above.

d) Enclosures The last two excavations have produced some indication of early fence lines or linear features which cannot yet be associated with the pits mentioned above. Beyond this, neolithic enclosures of domestic type appear to be as elusive as structures. Excavation in 1983 of a possible causewayed enclosure at Spott Dod (NT 665 744) demonstrated something of the problems of using aerial photographs (Mercer 1983). Recuts in the outer ditch of this Iron Age settlement gave the impression of discontinuities, imposing misconceptions of the Neolithic. Use of such potentially misleading information can lead to the erection of elaborate hypotheses on the evolution of social structure which collapse under the realities of excavation evidence (see Macinnes 1983). It must therefore
seem wiser to eschew further examples of possible interrupted ditches (e.g. Whitelaw Hill NT 5719 7157, discussed by Aitken 1983) and to accept that at present no example of the classic causewayed enclosure of southern Britain has been identified in the north. It remains entirely possible, however, that other forms of enclosure were being used during the Neolithic (Mercer 1981(b), 193-5). Identification of such sites may, in the first instance, most appropriately be achieved by recognition of unusual quantities of artefactual material being recovered from appropriate locations. Attention has been drawn to the large number of neolithic finds from Traprain Law (ibid), both lithics (see Table II:3), and polished stone axeheads (II:vi). The prominence of this volcanic hill is such that occupation there must have commanded recognition, (and thus status?) throughout the Lothian plain, and a case has been made out for its having served as a ritual centre in later prehistory (Hill 1987). At least a dozen arrowheads were recovered in excavations on the western shelf, invoking parallel recovery levels from southern hilltop enclosures both causewayed, and, in the case of Carn Brea, fortified (Mercer 1981(b)). The axe finds, however, raise specific problems, discussed below.

Arthur's Seat is another prominent hilltop location from which a number of artefacts have been derived. One small axe of greywacke comes from the hill itself (Inf
NMS 1992), with a portion of a greenstone axe coming from Duddingston, at the foot of the hill (AF 116). A petit tranchet derivative arrowhead and a flint knife come from the hill summit (AD 2402; DES 1979, 19), and a flint sidescraper was found at the upper end of Long Row (PSAS lviii 1933-4). The number of finds is not great, but no excavations, comparable to those on Traprain Law, have taken place here, and the site is one which has attracted occupation in successive periods.

No single location, other than the sand dunes, has produced the quantity of neolithic artefacts of Traprain Law. One possible settlement association which may be mentioned, however, is the fact that an axe of Antrim porcellanite was found on the site of a cropmark of an oval palisaded enclosure at Seton Mains (NT 47NW 11).
Neolithic Pottery from the Lothians Region

(see Table II:2)

The largest assemblages of neolithic pottery in the Lothians Region come from sand dune sites, but there are also small groups from excavations, usually from sites ostensibly of later date, and a number of casual discoveries, particularly from the valley of the River Esk.

Western Neolithic pottery was found at Hedderwick Sands, where strongly projecting rims (Callander 1929, fig. 46, nos. 9, 10, 12) and gently everted ones (ibid fig. 47, nos. 25, 26, 27) both occur, together with one slightly carinated vessel of thin, smooth ware (ibid p. 72, no. 47; BM 10), which seems to be a typical Grimston bowl (cf. Herne 1988). Other finds of Western Neolithic type from sand dune sites are rare, although at Inveresk Gate, near the mouth of the Esk, two sherds of exceptionally fine ware came from vessels with contracted necks (Henshall in Thomas 1988). Other Western neolithic pottery from the Region has the rolled and thickened rims that Henshall (in Cowie 1978, 197) would regard as being characteristic of Eastern Scotland. Early dates, of thermoluminescent and radiocarbon origin respectively, are associated with pottery from Elginhaugh on the Esk and Linlithgow Friary, in the west of the Region.
Most of the pottery from Hedderwick and single sherds from Broxmouth and Dalkeith, were impressed wares. The decorative devices, whipped cord, birdbone and dot impressions, are clearly close to those used at other sand dune sites, notably Glenluce Sands (Callander 1929, figs. 34,55), but the decorated T-shaped rims occasionally present (e.g. ibid, fig.46, no.20) echo the eastern Meldon Bridge style, seen also at Thirlings (Miket 1976) and Brackmont Mill, Fife (Longworth 1967) (see discussion of Meldon Bridge pottery (III:b)).

Small quantities of grooved ware come from Hedderwick and Gullane, as also single sherds from Broxmouth, also near the coast, Dalkeith, and, perhaps, Cairnpapple (see Table II:2).

II:v Lithic Material from the Lothians Region

(see Table II:3)

Lithic collections from the Lothians are sparse, a result, perhaps, of the soil depths, discussed above (II:i). Only at Crichton Mains, on the hill slopes in the south of the Region, has field walking produced substantial numbers of artefacts, and most other material derives either from sand dunes or from excavation.

Raw material is generally local: 'beach pebble'
flint at Cairnpapple; small nodules of flint at Linlithgow Friary; chert nodules at the Catstane. A grey-brown flint found on Spott Dod could have derived from a flint exposure in the Lammerlaw Burn a few kilometres to the south (Wickham Jones and Collins 1978, 11, no.21), but the one leaf arrowhead found here was of a different coloured, grey-buff flint, whether because of chronological disparity or differential selection of raw material. Some pitchstone has been noted from sand dune collections; eleven flakes from Hedderwick and two lumps from Dirleton (Thorpe and Thorpe 1984). A fine leaf-shaped knife from Nunraw, near Garvald, 7 3⁄4" (197mm) long, was certainly not of local flint.

None of the collections listed in Table II:3 can be regarded as homogeneous, and in general they are chronologically undiagnostic. Large numbers of éclats ecaillés, for example from Hedderwick (no.11), could belong to any period. The small blades from Torness (no.14) suggested a mesolithic origin, but, as Cowie pointed out in relation to finds from the Catstane (no.3), small assemblages made from poor quality raw material cannot confidently be given cultural assignation (see above, II:ii).
II:vi Polished Stone and Flint Axeheads from the Lothians Region

(Catalogue numbers refer to the NMS, unless otherwise stated)

From within the 1,300km² of improved land in the Region, records of just over 100 stone and flint axeheads have been assembled, not including the many flakes and fragments from Hedderwick Sands. This density of one axe per 13km² is high compared with the Firth of Clyde Region (1 per 20km²), although much less than in the Biggar Gap Region (1 per 4km²). Coastal locations are well represented, with over a dozen axes from Hedderwick Sands in addition to the more fragmentary remains giving evidence for resharpening at the site. The excavated middens at Gullane did not produce axes, but half a dozen have been found in the coastal stretch between Gullane and North Berwick. Further east, another half dozen come from the Longniddry area, suggesting a similar use of the sandy raised beaches behind the coast. A number of finds have been made around Edinburgh, a total probably inflated by the density of the modern population and land use.

The only other major concentration of finds comes from Traprain Law, where fifteen axes were found in Cree and Curle's excavations on the western shelf. One came from Cruden's 1940 excavation and three more have been
picked up on the surface (GUN 1-17; GU 354). It is noteworthy, however, that only two of these finds were relatively undamaged; eight axes were broken; one, of flint, was represented only by a chip from the blade; the remaining eight were all damaged, with abraded surfaces, two having been used as polishers and one as a hammer stone. Deposition of broken axes could occur as a type of ritual practice. The subsequent wear on many of the finds, however, and their recovery from later prehistoric occupation levels, must suggest re-use of the implements. It is possible that axes were deliberately collected for these purposes during the Iron Age, and not necessarily from findspots on the hill itself.

Circumstances of axe recovery are seldom documented, and the most usual contexts of discovery during ploughing or draining are uninformative. Ritual deposition could explain the recovery of an exceptionally large (236mm) polished axe from the River Esk, near Roslin (NMS: AF 413), and an unutilised miniature (76mm) axe of greywacke, too soft for use, c30m from the summit of Arthur's Seat (NMS Day Book 1988/11). Of the two pieces of axe recovered on the old ground surface during excavations at Cairnpapple, one was of Graig Lwyd, Group VII stone, unprecedented in southern Scotland (EP 167). The finds of two axes of tuff and a stone implement roughly ground into the form of an axe, all from the
vicinity of the henge, should also be mentioned (AF 928; EP 191; NMS Day Book 1979).

Regrettably few of the Lothian finds have been sectioned for provenance (Ritchie and Scott 1989, 236-241). Two small axes, one from Ratho, West Lothian (AF 248), and one from East Lothian (AF 270), have been confirmed as being of Group IX Antrim porcellanite, while another from Seton Mains, near Tranent, is said to be of the same stone on the basis of macroscopic examination (Sheridan et al 1992). A 6.4" (163mm) axe from Nisbet Farm, Pencaitland (AF 1031) is of Group XXII Northmavine porphyry (ELT 2). A small axe from Traprain Law (GUN 10) has been assigned possibly to Group XXIV, Killin (ELT 5). Two other Traprain Law axes, one large (GUN 9) and one small (GUN 6) are of Group VI material (ELT 3,4), as is one medium sized axe from Invereil, Dirleton (AF 680) (ELT 6). In addition, Fell (1964) lists two East Lothian axes, one from Stobshiel (AF 171) and one from Garvald (AF 367), as 'Cumbrian Clubs', presumably, therefore, also of Lake District stone. There are only five axes of flint, three of which are exceptional pieces. These consist of a 'Duggleby' adze from Castlesteads, Dalkeith (AF 1047) of mottled grey flint, 175mm in length, and two all-over polished, broad butted axes, from Gilmerton, East Lothian (AF 60), and from near Craigentinny House, Edinburgh (AF 1102), 235mm and 245mm in length respectively, of a type characteristically found in
eastern Scotland, and probably of Scandinavian origin (Sheridan 1992). There is one small, dumpy jadeite axe from Penicuik (AF 262) (Jones, Bishop and Woolley 1977, 288, no.83). A very large axe from Penicuik in the Hunterian Museum (A 1958-1) is catalogued as resembling jadeite, but may more appropriately be described as greenstone (E. MacKie, pers. comm.).

No place of origin can be ascribed to the remainder of the axes, although the many finds described as being of greenstone, claystone or felstone could include specimens of Cumbrian tuff or Perthshire hornfels. A small axe of greywacke from Arthur's Seat is probably of rock from the Southern Uplands (Inf: NMS 1992). Some axes are of igneous rock, again of unknown origin.

Fig. II:i is a histogram of the known lengths of axes from the Lothians Region. The small average size of axes is here clearly apparent, with nearly half the axes measuring from 3" to 5" in length, 78% being under 6". There are rather few large axes in the Region, and the eight axes over 7½" (190mm in length) are listed in Table II:4. These form 10% of the total of known sizes from the Region, slightly up on the 9% in the Biggar Gap Region, although notably less than the 18% from the Tweed Basin, 14% from the Firth of Clyde and 25% from Nithsdale Region. There are none of the large 'Cumbrian Clubs' in the Lothians, which regularly occur in other areas, the two specimens so classified by Fell (1964) reaching a
maximum length of 6" (152mm). The group includes the two large flint axes mentioned above, but appears otherwise to be a heterogeneous collection. Nonetheless, an element of ritual deposition may be involved in the finding of one large axe in the River Esk, while finds from Fala and Airngarth Hill may be seen as peripheral and upland.

There is little chronological information available on the axes. The finds from Cairnpapple are undated. A Late Neolithic context may be suggested for the Duggleby adze from Castlesteads and for an axe of igneous rock from Hillend (AF 622), 133mm long, flat and straight sided,
and suggested to be an imitation of a copper or bronze flat axe (Clarke, Cowie and Foxon 1985, 85, fig.46). The 'prestige' flint and jadeite axes are undated, but a late context may be appropriate for axes of Group IX, XXIV and XXII stone (Sheridan 1986(a); 1992; Ritchie 1992). The Group XXII axe of Shetland stone comes from Pencaitland, where a find of a Late Neolithic bulbous jet bead (FN 17) may also be mentioned. In general, the wide variation present in axe size, form and raw material must suggest that the implements were in use over a long period of time.

Apart from the localised density of axe recovery from coastal locations and from Traprain Law, there is a more generalised concentration of findspots in the river valleys, notably the Almond, Esk and Tyne. A particular density may be noted around Penicuik in the Esk valley, an area which includes several exceptional finds: large axes from the river itself and from Monkton House, the Castlesteads adze, the jadeite axe, and, from the upper edges of the valley, the Hillend 'flat axe'. The Esk may have formed an access route to the southern Pentlands, beyond the head of the river, where large numbers of axes have been found (III:vii).
The Catalogue of Neolithic cairns and barrows for the Lothians contains only two entries, both Category C sites rejected from the final analysis of acceptable monuments. This is the only Region in the study area to be completely devoid of recognised funerary monuments, and, given the relatively abundant evidence for a neolithic presence in the Lothians, already discussed, there must be a likely inference that this is a classic case of differential preservation of evidence; a region of intensive agriculture and urban development produces finds, but destroys monuments.

Some support for this interpretation may be found in the history of the two Category C sites and the light which this casts on antiquarian perceptions as a factor limiting opportunities for recognition of long barrows. As regards the Inveresk churchyard mounds (II:2), the possibilities of a Roman, a 16th century, or a Cromwellian origin have all been canvassed, but the question of prehistoric construction seems never to have been considered. At Port Seton (II:1), on the other hand, the discovery of a pre-Christian grave, or probable long cist, raised antiquarian interest. However, while Daniel Wilson may have been correct in referring to the site as a long barrow, it must be suspected that the English term was introduced in explanation of a
misunderstood feature. Antiquarian expectations of the prehistoric focussed on megaliths. In the early 18th century Sir Robert Sibbald took a collection of glacial erratics near his home at Kipps to be a 'temple' (D: 14), and it was probably another glacial boulder, now destroyed, at East Bonnington Mains that acquired the name of 'The Witches' Stone', and was classified by David Wilson as a 'dolmen' (D: 15). Attention was thus being misdirected to a site type unlikely to be found within the Region, while less spectacular material was disregarded.

The drumlinoid landscape of the eastern Midlands valley contains a number of long barrow-like features to confuse archaeological perceptions and discourage speculation. Mention may perhaps be made of a long mound at Outerston, on the northern flanks of the Moorfoots (NT 329 562), which has given rise to some discussion during survey. Nonetheless, while it remains wholly possible that long barrows may yet be identified in the Region, the testing of one such mound at Ratho by Historic Scotland in Spring 1993 (NT 134 714) only confirmed a glacial origin (Inf: D. Murray). There are, besides, reasons to suppose that long barrows, rather than being overlooked and destroyed without record, were never a feature of the Lothians.

In the first place there is the record of aerial photography. The combination of cereal growing, dry
summers, and accessibility to national recording centres, has ensured a good level of photographic cover of the Lothians, where it is clear that later prehistoric enclosures abound (Macinnes 1983). The ditches of long barrows, if present, have had good opportunity to attract attention. Instead, however, a triple ditched enclosure has been recorded which appears to have been an unprecedentedly broad cursus (II:a), suggesting that the expectation of long barrows, may, like that of the earlier preoccupation with 'cromlechs', have understated the scale of neolithic monuments in the Region.

Secondly, the complete annihilation of many long mounds seems unlikely when account is taken of the considerable extent of unimproved hill grazings, both around the fringes of the Lothian plain and in the form of intrusive outcrops, such as Traprain Law or the Garleton Hills. In such areas many hill forts and later prehistoric settlements have survived, and it is just such areas that are likely to have offered scope for the often peripheral siting of neolithic funerary monuments.

It is possible that in defining the natural region of the Lothian plain too constricted an area has been chosen to include peripherally sited monuments. The Ayrshire basin is fringed by long cairns at distances up to 17km from the coast (e.g. Loanfoot I:3). A long cairn at Harlaw Muir at the head of the River North Esk and the
Mutiny Stones in the Lammermuirs are little over 20km from the Firth of Forth. The Harlaw Muir cairn, however, is one of a group of such sites around the south end of the Pentlands, an area thick with the occupation evidence of artefactual finds. If the site in any sense 'served' the population of the Lothian plain, an inevitable consequence must have been the creation of social networks facilitating contact between spatially separate groups. The Mutiny Stones is an isolated site, but situated in the valley of the Dye Water, a tributary of the Whiteadder, looking out to the south east, its focus of interest again would appear to have been unrelated to the Lothians. If such sites were fulfilling a role in social integration, the distances involved were such that it can have been on a very occasional basis only. It remains relevant to ask what locally situated monuments or ritual centres existed to fulfill the needs of the people in the lowland plain.

An answer to this problem could lie in a regional preference for an alternative monument form which has not yet been recognised by prehistorians. The obvious candidate for such a role would be the round mound, regularly used during the Neolithic (Kinnes 1979), and represented in eastern Scotland by the early neolithic round mound at Pitnacree, incorporating traditions identical to those at early long barrows (Coles and Simpson 1965). No recent excavation has taken place
of any large round mound in the Lothians other than that at Cairnpapple, which, while a successor to a variety of neolithic forms of ritual expression, was itself firmly of second millennium date. It need hardly be pointed out that older accounts of finds from such sites are biased towards the more dramatic contents, cists, urns, metalwork or stone artefacts, as likely to relate to secondary as to primary use of the site. Neolithic deposition is more often unaccompanied, and where skeletal material is detailed, as in an account of a dry stone cist at Gullane containing the remains of three skeletons and with four human skulls placed outside it under a sandy mound (Richardson and Richardson 1902, 656), it is impossible to date. Kinnes has suggested a possible comparison between this site and early neolithic closed cists, such as Achnacreebeag or Mid Gleniron B (Corcoran 1992(b), 97), but as he points out himself a Bronze Age or Iron Age context is also possible. At nearby North Berwick an Iron Age drystone cist contained multiple inhumations (Longworth 1966), making neolithic attribution of the Gullane structure particularly open to doubt.

It remains possible that neolithic burial rites in the Lothians were so ephemeral in nature that no traces survive. Nonetheless, it is disappointing that where other evidence for neolithic activity, such as the pottery and lithics already detailed, is present, no
burial traces are also recovered. Only at Cairnpapple, perhaps at the Catstane, and at Gullane, is neolithic pottery found in the vicinity of early prehistoric burial cairns. Less explicity, the more common association is between neolithic pottery and burials in long graves or cists. This link occurs at Cairnpapple, the Catstane, Broxmouth, Parkburn, Dryburn Bridge and in the Gullane sand dunes. One explanation might be that the long cist cemeteries continued long standing traditions of burial, evidenced, as regards the second millennium by the discovery of a food vessel cist in Parkburn long cist cemetery, by the finding of two short cists, one with a beaker, at Dryburn Bridge, and by a possible record of a cairn having stood beside the standing stone, the Catstane, as well as in the successive stages of second millennium burial at Cairnpapple. But what is missing from these instances of extended funerary tradition is the evidence from the Neolithic itself. The small pit at Broxburn and others at Dryburn Bridge may have been ritual, but did not produce funerary remains. Neolithic sherds from the Catstane and from Parkburn were casual finds only, and again there is no recognised neolithic burial here, although a cup-and-ring marked slab was found re-used as the side slab of a food vessel cist at Parkburn.

It is thus only at Cairnpapple where early evidence was sealed below a 30m diameter cairn, that any
indication of the nature of neolithic funerary rituals may have been preserved. The problems of interpretation of the pre-cairn features are discussed in the Catalogue (II:b), but some suggestive features may be commented on here. Piggott considered that the earliest activity on the site was represented by a 'cremation cemetery' of seven holes, most of which were associated with cremation deposits, and further such deposits on the old ground surface. If, like the Aubrey Holes (Morton 1990, 276), these pits are re-assessed as post holes, there is here a monumental layout immediately recalling the rather angular line of some early facade structures - Streethouse, Cleveland (Vyner 1984) or Giant's Hill, Skendleby II (Evans and Simpson 1986). It would be possible to suppose the total destruction (apart from one possible post hole 'x', 1m to the E of the centre of the setting) of an above ground mortuary structure or chamber to the east. Alternatively, the two arms of the setting could be supposed to have enclosed the east end of a funerary monument lying to the west (cf. Nutbane). 10m to the west of the centre of the timber 'facade' are the three large holes, dubbed the 'Cove' which, if reconstructed as sockets for horizontally laid orthostats, would have resembled a small megalithic chamber, measuring internally 1.8m by 1.5m. Burl (1988(b),7) has drawn attention to this resemblance in looking for an origin for coves in the rectangular
chambers of megalithic chambered cairns, citing as nearby prototypes for Cairnpapple Burngrange, 23km to the south, and The Lang Cairn, Dunbartonshire, over 50km to the west. It is possible to envisage the Cairnpapple structure as a free standing chamber, resembling a portal dolmen, itself acting as an Early Neolithic monument on the hill.

Perhaps a more probable candidate for the role of mortuary structure, however, is the demolished feature which occupied the site of the central scooped pits. This complex, lying within the arms of the timber 'facade', is closely comparable in dimensions (10.4m x 6.7m overall) to Early Neolithic domestic buildings and would be equally acceptable within the corpus of banked mortuary structures. Clearly such reconstructions are speculative only. Nonetheless the existence of these unexplained features does draw attention to the wide range of structures which could have fulfilled a ritual function during the Neolithic, but which are unlikely to be immediately identifiable as cropmarks. Fig.II:ii is a transcription of a set of cropmark features at Skateraw, near Dryburn Bridge in an area in which both long and short cists have been found, including beaker burials (and see Tolan 1988, no.21). The transcription shows several ring ditches, a pit circle c 10m in diameter (discussed again below in relation to stone and timber circles), and, 50m NE of the pit circle, an angular C-
Fig. II:ii Skateraw: Cropmark complex from Tolan 1986 and aerial photographs
shaped feature, c 12m across the arms, facing a group of pits, five of which form an arc, and a ring ditch. It would be rash to claim this group as a neolithic mortuary complex with 'cremation cemetery' and facade trench. Nonetheless, such possibilities must be present, and interpretation is subject to testing through excavation.

It is also salutary to note how deliberate much of the destruction of features at Cairnpapple had been. Both the 'cove' and the structure occupying the site of the 'scooped pits' had been removed and their stances apparently scoured out before refilling and concealing below later monuments. There may be a parallel here with the treatment accorded to some long cairns (Easton, III:4; Drumwhirn KRK 9) which seem to have been robbed out for the construction of an overriding round cairn. There are round mounds in the Lothians amply large enough to have enveloped and concealed a long cairn, such as Earl Cairnie cairn (NT 158 791), now 30m in diameter but said to have measured 500 feet in circumference (c 45m diameter) in 1791 (Stat Acct 1, 238). The standing stones set eccentrically around the 30m round barrow at Newbridge (NT 126 726) could, like the henge and circle at Cairnpapple be commemorating the site of earlier activity rather than relating to the surviving mound.

In sum, although the total absence of long cairns or barrows from the Lothian plain may be accepted as
relating to a genuine original shortage of such sites, this conclusion does not mean that the neolithic population of the area lacked ritual foci. Smaller monuments and many variant monument forms may have supplied local needs, while occasional major monuments outside the plain itself could have been resorted to for more significant occasions. One such major site which escaped all notice before excavation lay at the centre of the Lothian plain: the Monktonhall cursus.
II:viii Ritual enclosures in the Lothians Region

a) Cursus enclosures and double pit alignments

A possible cursus enclosure of exceptionally large dimensions lying alongside the River Esk at Monktonhall is described in the Catalogue (II:a). The ditches have been shown to be certainly prehistoric, and, in the light of the early features in the neighbourhood there would seem to be sufficient reason to accept its probable neolithic character. Its position near the mouth of the River Esk, along the course of which a concentration of finds of pottery and of high status axes has been noted, supports an interpretation of the site as a meeting point for people, including, most probably, people from across the Firth of Forth. The context for the creation of elongated monuments can be found in eastern Scotland north of the Forth, where early dates come from rectangular enclosures at Douglasmuir, Angus and Inchtuthil, Perthshire (Barclay and Maxwell 1991). In Angus a form of cursus appears to have developed in which a long, narrow enclosure is defined by pits or posts, creating a different effect from that of the very broad multi-ditched enclosure at Monktonhall, but within the same family of expression.

Pit alignments do commonly occur in the Lothians, but an examination of the corpus by Macinnes (1983) concluded that their most usual function was one of land
division and enclosure, related to Iron Age settlement (p.92-100). Macinnes did draw attention to one unusual double pit alignment at Kilduff Mains, previously discussed by Mackay (1980, p.56), as a possible avenue of the type seen at Meldon Bridge and Forteviot. The Lothian example, at 100m in length by 20m wide, is longer than the quoted comparisons, and is unusual in that one set of pits is much larger than the other, almost approaching the scale of ditch segments, and the two lines appear to merge as they rise Kilduff Hill to the north. They may merely represent sequential replacement of a land boundary of later prehistoric type. Of considerable interest, however, are the traces of a pit-defined, probably circular enclosure at the south end of the Kilduff alignment, referred to again, below, in relation to timber and stone circles. It is possible that the segmented pits and enclosure together represent some kind of ritual setting, similar, perhaps, to the large pits excavated by Miket (1981) in the Milfield basin, where double pit alignments producing grooved ware, were evidently related to the ritual complex with enclosures along the line of the narrow, meandering Milfield avenue or 'cursus' (Harding 1981).

b) Henge monuments are represented in the Catalogue only by the Class II henge at Cairnpapple (II:b). The location of this site in the Bathgate Hills is particularly
isolated in terms of either neolithic monuments or artefacts, except for small local clusters of axes and beakers, probably themselves a product of the presence of the henge. Its context lies rather in its close similarity to a widely dispersed group of sites - North Mains, Weston, Broadlea, Coupland, King Arthur's Round Table and Arbor Low. Cairnpapple, like Arbor Low, is unusual in being an exceptionally conspicuous site enjoying wide views in all directions, and its role would appear to relate to the outside world, rather than to a local community. Artefact recovery was limited, the ditches containing nothing but one scrap of abraded beaker from the surface of the primary silts. A similar paucity of artefacts from Balfarg and North Mains henges, 40-45km to the north begins to resemble a regional characteristic. The linking factor may be the later conversion of all three sites to funerary use with the deliberate dismantling of earlier structures. At this point pits and ditches and the interior of each henge may have been scoured out and filled in. At Cairnpapple only residual fragments of two exotic axes and two sherds of neolithic pottery survived this treatment.

It has been suggested that a network of small henges in the Lothian plain representing socially distinct groups succeeded to the wider unity of the earlier neolithic, then suggested to be represented by the supposed causewayed enclosure at Spott Dod (Macinnes
1983, 121). The sites in question, however, are all represented by cropmark features only, and it is doubtful whether any of them can confidently be identified as henges. One example of the problems of interpretation occurs at Stonefield (NT 3044 6012) where aerial photographs showed an oval enclosure, 85m by 70m, within a broad irregular ditch with opposed entrances; Welfare (1980, 6-7) drew attention to the need for artefact recovery to confirm identification of this promising site. More recent photographs taken in dry conditions (J. Dewar) show an internal parchmark suggestive of an inner bank, eliminating the site from the list of possibles. Macinnes listed four possible henges in the Lothian plain: Newlands, with two opposing entrances, and Black Loch, Thurston Mains and Northrig, with three (1983, 39-40). Of these, Harding and Lee (1987) have only considered Newlands sufficiently promising to be categorised as 'not to be ruled out as henge-related'. This circular site measures c 62.5m within a ditch which is not exceptionally broad. A lack of clear definition along the inner edge of the ditch suggests silting from a bank on this side, raising doubts over the henge classification. It seems necessary to conclude that while there may well be cropmarked henges in the Lothians, none have yet been certainly identified and there is no site which can presently be justified for inclusion in the Catalogue.
c) **Stone and Timber Circles**

Stone circles are only regarded as being relevant to the present inquiry when they can be classified as being 'ritual enclosures' on the basis of a somewhat arbitrary criterion of size. No large stone circles survive in the Lothians Region, and records of stone circles remain subject to much misinterpretation. The relatively frequent single standing stones of the Region may suggest the destruction of some sites without surviving record.

At Cairnpapple the egg-shaped setting of pits, measuring 35m SSE-NNW by 28m, which stood slightly eccentrically within the henge ditch, was suggested by Piggott to have held the stones, up to 2.7m in length, later used to kerb the food vessel cairn. An alternative interpretation would see them as sockets for upright timbers (Mercer 1981(a)). Both stone and timber circles occur in eastern Scotland, and at Balfarg, 40km to the NE, a stone circle was held to have been a replacement for earlier timber settings (ibid). A roughly circular timber ring at North Mains (Ring A) was shown to have preceded the digging of the henge ditch, which, in turn, followed the line of the uprights so closely as to be regarded as contemporary (Barclay 1983). The geometry of the Cairnpapple ring, however, matches more closely that of Ring B (22.5m x 18.5m), consisting of seventeen pits set within Ring A, with an entrance gap, like that at
Cairnpapple, situated in the apex of the egg towards the SE. This ring was unfortunately undated, the lack of charcoal in the pits perhaps indicating withdrawal of the timbers. Barclay could only invoke Burl's comment (1976,46) that oval rings tend to post date circular and small rings large (Barclay 1983,189). At both sites, however, the entrance gap opens onto the ditch and bank of the henge, centrally so at North Mains, although adjacent to the henge entrance at Cairnpapple. In functional terms, at least, it would seem inescapable that the settings should pre-date their respective henges and, at North Mains, the timber ring A with dates from the primary packing of 2155 ± 70 bc (GU 1353, 1354). Both 'eggs' align to the south-east, not on identical bearings, but perhaps to look out to local summits (Craig Rossie at North Mains; Knock Hill at Cairnpapple). An interest in the south-east is a characteristic of earlier neolithic monuments which is replaced in eastern Scotland by the emphasis on the south-west seen in the Recumbent Stone Circles, Clava cairns, Four Posters, and the timber rings at Balfarg (Mercer 1981(a), 150-3; Burl 1981(b)).

A stone circle may have stood 13.5km east of Cairnpapple around the barrow at Newbridge, although the three surviving stones are not concentric to the mound, and there is no record of further stones here. The three would have formed a circle c 98m in diameter, with a further outlier to the east, thus exceeding the
largest circle in the study area at Holywood, Dumfries (87.8m x 73.8m) (VI:h).

Early reports of 'stone circles' cannot be treated as reliable without convincing circumstantial detail. Thus an account of a tumulus at Newbattle Abbey (NT 333 660) nearly 30m in diameter 'surrounded by a circle of stones' (Chalmers 1810, ii, 566) is as likely to refer to a stone kerb as to a free-standing circle. A circle 12.2m in diameter at Marchwell (NT 2264 6212), which was destroyed before 1843 (NSA I, 317), again could be related to the find of a Food Vessel on this knoll in 1940 (PSAS lxxxv 1940-1, 220) as a cairn kerb or ring bank. No details are known of a stone circle destroyed before 1845 which stood on the west side of Longniddry Dean near the sea (NSA II, 291). This is an area rich in second millennium burials (Curle 1918, 32; Callander 1930, 194), and cropmarks show an enclosure and a small ring ditch to the west of the Dean Burn. Records of four large stones beside which an inverted urn with cremation was found in 1835 at Edinken Bridge (NT 737 732) (NSA II, 242) are unlikely to relate to a large, 'ceremonial' enclosure.

A group of stone settings on the Lammermuirs are discussed as being part of the Tweed Basin Region (IV:ix; Table IV:3:8) since they lie in the catchment area of the Whiteadder Water. However, even if they should be regarded as being peripheral to the Lothian plain their generally small size and funerary character would
exclude most of them from the present discussion (but see the Crow Stones IV:e).

A ring of timber uprights may be represented by a cropmark pit circle c 10m in diameter at Skateraw (Tolan 1988, 21, and see fig.II:ii). The site, with nine clearly defined pits c 3m apart, is c 40m NW of where a beaker cist was excavated in 1972 (Close Brooks 1977), and other beakers come from the vicinity. An Early Bronze Age dagger with gold pommel mount comes from a demolished cairn on the same farm, its site now unknown (PSAS 1893 p.7, Purchases). The pit circle could derive from the site of a vanished stake-barrow rather than having been a free-standing circle.

As mentioned above, another possibly circular pitted feature appears in conjunction with a double pit alignment at Kilduff Mains, north of Haddington. Photographs are unfortunately indistinct, and it is to be hoped that a clearer image of the site may yet be obtained.

Note: The cropmark of a probable cursus has been recorded, too late for incorporation into the above discussion, at NT 590 779, on Drylawhill, East Linton, near the estuary of the River Tyne (DES 1993, 57: I. Armit). Parallel, E-W ditches, 60m apart, are visible over nearly 300m, without reaching either terminal. The site is 3km north of Traprain Law.
A sporadic distribution of carvings is shown on Map II:4, based on Morris (1981). Note should also be taken of a large group of cup-and-ring marks on rock outcrop at Castleton, in Stirlingshire, on the south side of the Forth. Four of the Lothians occurrences concern carved outcrop, with three hilltop sites (Kaimes Hill; Tormain Hill; Traprain Law) and one cliff face in a gorge of the River Esk at Hawthornden. This last site is distinctly inaccessible, with carvings under rock overhang in a narrow part of the gorge. Use of hilltop locations could be conditioned by the availability of outcrop, but account must also be taken of the visual prominence of the volcanic mass of Traprain Law, and to a lesser extent, of Kaimes Hill. Both hills are steep, and the carvings on their summits may be regarded as being deliberately set in places apart. The Traprain Law carvings include some crude markings, perhaps a later addition to the cups-and-rings. At Hawthornden, too, the complex repertoire may include much later work; this set lacks the normal cup-and-ring mark, seen at their best on Tormain Hill, but does have rings, concentric rings, grooves and spirals, suggesting perhaps the influence of passage grave art style. The addition of motifs, however, makes assessment difficult. A spiral at Cockles Smithy, East Lothian, listed in the Inventory (RCAHMS 1924, 50, no.80), is now admitted to be 20th century work (OS record).
There are eight moveable carved slabs in the Region, all with concentric rings or cups-and-rings. Three of these were found in use in short cists, the carved side consistently facing inwards, and with some of the designs being broken across, for example, at Parkburn Quarry, Midlothian, re-use of stones from an earlier context seems probable. The other stones include both flat slabs and boulders. Most have been moved from their original positions, for example to be built into walls. One stone, from the Braid Hills, was said to have been found embedded in the ground, with the carvings all being on the exposed portion, and could perhaps, have been in situ. Several of the pieces were found on prominent hills - the Braids, Blackford Hill and Craigie Hill (a cist cover). The largest number of stones come from Midlothian, and there are none from the vicinity of Cairnpapple, where cup marked stones without rings, do appear, or from the eastern end of the Region, where beakers are concentrated.

II:x  Beakers from the Lothians Region

Most of the beakers from this Region are of developed Northern type and post date the focus of the present study. A reading of 1770 ± 80 bc - GU 1356 from a
cist at Ruchlaw Mains with Late Northern beaker is similar to dates from both beaker and unaccompanied inhumations at Dryburn Bridge (Ashmore et al 1982, 547) and probably offers a generally valid horizon for a large proportion of the finds from this Region. All-Over-Cord beakers from coastal sites and two from a sandpit near Bathgate could indicate earlier deposition, but such styles yield some relatively late dates (Case 1977, 74) and the duration of use may have been protracted.

By far the largest number of beakers come from East Lothian east of Dunbar, where Close Brooks commented (1979) on ten or eleven beakers listed by Clarke (1970) in an area measuring 4 miles by 1\frac{1}{4} miles as being a total equivalent to numbers from the rest of East and Mid Lothian together, omitting sand dune finds. To this set can now be added beakers from Dryburn Bridge, again, like the rest of the group, in funerary contexts, but here with possible indications of adjacent settlement. At nearby Skateraw a cist with N2 beaker and inhumation formed part of a cemetery of later graves beside a pit circle (see II:vi and II:vii:c, above); other beaker graves are found in dispersed locations.

A date of 2469 ± 130 bc was obtained from the Skateraw inhumation (Close Brooks 1977), clearly too early for the context, but raising the possibility of distortion as a result of a marine diet (Switsur and Mellars 1987). Other sea edge sites, in sand dunes at Hedderwick, North
Berwick and Gullane producing AOC beaker together with coarse wares of beaker related type, similar to that from sites at Ross Links, Northumberland and Luce Sands, Wigtownshire, may have been settlements pursuing a fishing economy, although a naked barley impression from Tusculum, North Berwick, as others at Luce Sands, shows agriculture to have also been practised (and see Gwithian, Cornwall; Rosinish, Benbecula). The occurrence of two AOC beakers without funerary associations in a sandpit at Bathgate may show a preference by AOC users for sandy soils, perhaps because easily cultivable. The question of marine diet, however, is one that it should be possible to test further.

The continued attraction of the henge at Cairnpapple into beaker times is shown by the use of the site for burials accompanied by northern beakers; a cist with N3 beaker has also been found on the adjacent farm of Tartraven; and the AOC beakers from Bathgate, 4km to the south, may reflect the continued presence in the area of a status conscious society.
Four areas have been recognised as producing especially rich evidence for neolithic activity in the Lothians.

1) Cairnpapple – Bathgate: a restricted area of the Bathgate Hills has produced a number of axe finds and several beakers, some of early AOC type. The perception that this material is directly related to Cairnpapple henge may be somewhat modified by excavated evidence for a long term neolithic presence at Linlithgow, 5km to the north, besides dates from the shell middens at the Avon mouth. Similar evidence from beside the River Almond at the Catstane and at South Gyle, together with good numbers of axes from the Almond valley and several sites with cup-and-ring marks, all help to show that neolithic activity in West Lothian was more considerable than has hitherto been recognised.

2) The Esk Valley: a number of pottery finds and a good distribution of axeheads, including some high status implements derive from this valley. The finds may be related to a possible cursus near the mouth of the river at Monktonhall, a rockface with a complex of cup-and-ring markings in the gorge of Roslin Glen, and the long cairn near the source of the river at Harlaw Muir.
3) **The East Lothian Coast:** sand dune sites have had the richest artefactual recovery rate in this Region, partly generated by the ease of collection in such areas. Axe finds, however, also tend to hug the coast, even when derived from plough soil rather than sand blow. Inland sites related to this coastal settlement must include Traprain Law, and it is also possible that the cropmark evidence for enclosures, pit alignments, ring ditches etc. includes some neolithic input.

4) **Dunbar to Cockburnspath:** This area has produced a remarkable cluster of beaker burials, but the evidence for the earlier neolithic is patchy. Excavation of later sites has produced some pottery and flintwork, but axe finds remain sparse. No neolithic monuments can yet be identified.

In summary, despite the total absence of neolithic funerary sites in this Region, the presence of only one recognised henge, and no reliable records of stone circles, artefact recovery suggests that the role of the Neolithic in the area should not be underestimated. Possible alternative forms of monument have been discussed although the most convincing remains the likelihood that a triple ditched feature at Monktonhall represents a major cursus, located at the mouth of a river providing a link with the inland neolithic of the Biggar Gap Region. The location of this feature may be compared with that of the group of cursus enclosures around the estuary of the River Nith (VI.ix:a).
Table II:1  Microlith findspots in the Lothians

a) Coastal locations
1. Cramond       PSAS 1967-8, 201; DES 1988, 18
                NT 19 77
2. Gullane       Lacaille 1954, 275, 278; PSAS 1922-3, 199; 1926-7, 327; 1955-6, 458
                NT 48 84
3. North Berwick  PSAS 1955-6, 458
                NT 55 85
4. Hedderwick    Lacaille 1954, 278
                NT 62 78

b) Hilltop locations
                NT 13 60
2. Crichton Mains PSAS 1927-8, 18; 1928-9, 21; 1929-30, 18; 1930-1, 175; 1935-66, 21; 1974-5, 224
                NT 39 61
3. Traprain Law  PSAS 1922-3, 199; 1926-7, 327; 1939-40, 59
                NT 57 74

Table II:2  Pottery finds from the Lothians

1. Cairnpapple henge
   Piggott 1948, 81, 162; NMS EP 170, 176
   EP 170: a sherd of undecorated pottery from near the rim of a shallow, carinated bowl, found on the old ground surface beneath the Period III (food vessel) cairn.
   EP 176: an undecorated sherd of gritty ware with a rounded lug found in the fill of the North Grave with beaker inhumation. McInnes (1964, 47) suggests that this sherd may be grooved ware.

2. Linlithgow Friary
   Cowie in Stones (ed) 1989, Fiche 11, G 9-10
   Excavation recovered five body sherds and some smaller fragments of pottery of probably Early Neolithic type. The fabric was compact and the surfaces burnished. One sherd exhibited a possible carination. Some of this material came from features of Period I date, and may be associated with a ¹⁴C date on charcoal from one of these features of 3315 ± 55 bc - GU 1875.

3. The Catstane
   Henshall, p.197 in Cowie 1978
   Excavation of the long cist cemetery at the Catstane beside the River Almond recovered three rimsherd of neolithic pottery from scattered, unstratified locations.
SF 6 and SF 11 were of fine, hard ware with rolled or thickened rims characteristic of Early Neolithic pottery in the east of Scotland.
SF 14 was thicker and more heavily gritted with a bevelled rim, but could belong to the same context.

4. Maybury Park
   DES 1992, 52-3
   Excavation of this prehistoric open settlement in 1990-2 found a sherd of possible neolithic pottery in a pit, part of a larger complex of features.
   Another broad, shallow pit contained a near complete undecorated vessel similar in form and fabric to beakers.

5. Parkburn Cemetery, Lasswade
   Henshall 1966(a), 206; NMS EO 983
   In the fill of a long cist of post-Roman date was a small sherd of abraded pottery of hard, black ware with large grits, apparently of Western Neolithic type.

6. Oatslie sandpit, Roslin
   Stevenson 1948, 294-5; NMS EO 776
   A small bowl with thick projecting rim, encrusted with sooty material inside and out was recovered from Oatslie sandpit beside the River North Esk in 1948. The style has been compared to bowls from Rothesay (Henshall 1981, 185 in Ritchie and Adamson 1981).

7. Elginhaugh
   Hanson and Yeoman (n.d.), 10
   Several shallow pits in the NE corner of the Roman fort above the River North Esk contained pottery which thermoluminescence suggested to date to c 4000 BC.

8. Woodburn Housing Estate, Dalkeith
   Henshall 1966(b), 312; NMS EX 34
   In c 1937 four sherds were found of a vessel, measuring c 356mm in internal diameter at the rim and decorated with short string impressions and curved incisions.

9. Monktonhall
   Hanson (n.d.)
   Rescue excavations in 1984 found two pits on the edge of the ditch of a possible cursus enclosure one of which contained two broken but almost complete pots of Neolithic/Bronze Age character.

10. Inveresk Gate
    Henshall, p.171 and fiche 1: G 10-11, in Thomas 1988
    Two neolithic sherds found in disturbed contexts during excavation came from large bowls of exceptionally hard fabric with contracted necks and, in one case, a
heavy rolled rim, comparable to bowls from Rothesay. The large size of the vessels and the exceptionally fine fabric is unusual in Scotland.

11. Archerfield, Gullane  
   NT 491 859  
   a) Curle 1908; NMS HR 562-5, 884-5  
   Excavation of two loamy mounds in the sand dunes north of Gullane recovered sherds both of beaker and of at least four grooved ware vessels. Motifs on the latter included raised rib decoration and vertical panels of incised herring bone patterns.  
   b) Younger 1936; NMS HR 884-5  
   Excavation of an Iron Age site in the same area as the above produced fragments of a round bottomed bowl probably of Early Neolithic type.

12. Tusculum, North Berwick  
   NT 5438 8532  
   Cree 1908  
   Excavation of a midden sealed below a medieval pavement recovered beaker pottery and also coarse wares of beaker related type.

13. Hedderwick Sands  
   NT 636 786  
   Callander 1929, 35, 67-72; NMS BM 2-63; 566-70; 581-595  
   Quantities of neolithic pottery have been recovered over a long period by J.S. Richardson from eroding sand at the mouth of the River Tyne. These included Early Neolithic pottery with both projecting and everted rims (BM 2-10) and two sherds of grooved ware (BM 62-3). In 1955 Richardson found pottery in two sandpits in the same area of the dunes. This material included one Early Neolithic rim sherd (BM 581), impressed pottery (all in the West pit), and grooved ware (BM 595).

14. Pincod, Dunbar  
   NT 67 NE  
   PSAS 1909-10, 102; NMS HR 578  
   A donation to the NMAS from a 'kitchen midden' on a cliff called Pincod included a rim sherd of an Early Neolithic vessel.

15. Doon Hill  
   NT 6867 7552  
   Hope Taylor 1980, 18-19  
   Mixed deposits in trenches and postholes excavated on Doon Hill included a handful of neolithic and Bronze Age sherds.

16. Broxmouth  
   NT 696 778  
   Hill 11982, 10; Aitken 1983  
   A pit found in the area of the Iron Age cemetery on the side of the hill outside the hill fort at Broxmouth contained burnt hazel nut shells, burnt clay and fragments of maggot impressed neolithic pottery.
17. Dryburn Bridge
Triscott 1982, 117-9
Several pits were found during excavation of a later prehistoric palisaded enclosure; some contained 'later neolithic pottery'.

Table II:3 Lithic Collections from the Lothians

1. Cairnpapple Hill
   Piggott 1948, 104, 106; NMS EP 163, 184
   Small flint flakes, apparently of beach pebble flint, were found at several points on the old ground surface beneath the food vessel cairn and its enlargement. Burnt chips of flint (EP 163) occurred with the cremation in hole C (stonehole, or cremation pit). A steeply retouched, scale flaked round scraper found in topsoil (EP 184) was suggested to be an Early Bronze Age type.

2. Castle Greg
   DES 1989, 53
   An area of 25 acres around Castle Greg Roman fortlet was ploughed for forestry in 1989, and the furrows walked by J. and P. Taylor. A small collection of flints, including a blade, a scraper and two broken possible arrow points were donated to Biggar Museum.
   A knife of grey flint, 2.7" (69mm) in length, found in the bank of the Shear Burn, near Castle Greg, at NT 058 586, is in the NMS (AA 263).

3. Linlithgow Friary
   D. Lehane in Stones (ed) 1989, fiche 12, E 6-10
   Thirty six pieces of flint and seven of chert were recovered during excavation of the Friary. Only two flakes were from Period 1 contexts, which included pottery finds, features and a radiocarbon date of 3315 ± 55 bc - GU 1875. The flint used was weathered pebbles derived from alluvial gravels or river beds, and the poor quality of the workmanship reflects that of the material. Two single platform cores and two core rejuvenation flakes suggest in situ knapping, but no primary flakes were found. Various types of scraper were present, and retouched and utilised flakes. The only culturally diagnostic piece was an unfinished or broken petit-tranchet derivative arrowhead of light grey flint.

4. Kaimes Hill
   Simpson 1969, 23; PSAS 103 1970-1, 242; NMS HM 767-774; 778-80; 877-8
   Six flint flakes were recovered in excavation of Hut 2, in a hollow on the highest point of Kaimes Hill.
Further flakes, blades, chips and cores of flint and chert, together with several microliths, have been found in overburden moved from the summit of the hill.

5. The Catstane
Cowie 1978, 196-7
Three flint flakes and c twenty five pieces of struck chert were recovered during excavation of the long cist cemetery at the Catstane. These included a petit tranchet arrowhead of chert. The poor quality of the raw material meant that chronological diagnosis was impossible.

6. Rullion Green
Cowie 1978, 196-7
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Cowie 1978, 196-7
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9. Traprain Law
   Curle 1915, 191; Cree 1916, 134; Curle 1921, 167, 173;
   Cree 1922, 207; 1923, 191, 199, 208; 1924, 248;
   Cruden 1940, 58
Excavations from 1914 to 1924 produced a
considerable quantity of flint and chert flakes,
scrapers and other artefacts, including seven leaf
shaped arrowheads, four lozenge shaped, one lop-sided
and one of uncertain type, and a brown flint knife 2.25"
(57mm) in length. A flint knife also came from the NE end
of the hill during Cruden's excavations.

10. Tusculum, North Berwick
    Cree 1908, 263
Excavation of a midden with beaker pottery produced a
quantity of worked flint - flakes, scrapers and knives,
including a black slug knife 2 3/16" (55mm) in length.

11. Hedderwick
    NMS: BM 93-516
Large quantities of worked flints from the sand dunes
west of the Hedderwick Burn have been donated to the NMS.
These include blades, flakes, knives, saws, scrapers,
cores, twelve leaf shaped arrowheads and two fragments of
the same, one triangular arrowhead, four lopsided, one
halberd shaped and twenty nine petit tranchet derivative
type. Mercer (1971, 26) has noted fifty eclats ecaillés
in this collection.

12. Spott Dod
    Mercer 1983, 13-15
Excavation of an Iron Age hilltop enclosure in 1983
recovered twenty four pieces of flint, mostly of grey
brown material available from the Lammermuirs, and
including one leaf shaped arrowhead made of a grey-buff
coloured flint.

13. Broxmouth
    Hill 1982
Two flint scatters were found on the flanks of
Broxmouth Hill (25m OD) during excavation of the hill
fort.

14. Torness
    Mercer 1976, 9
Excavation of a probable 17th century enclosure in
the sand dunes at Torness yielded fifty three fragments
of struck flint made from beach pebbles. Three small
cores used to produce narrow bladelets suggested a
possible mesolithic origin for the assemblage.
Table II:4 Axes from Lothians Region over 190mm (7\(\frac{1}{2}\)"") in length

Information including descriptions of material, is from museum catalogues and quoted sources.

NGR, all NT, approximate only
AF numbers refer to axes in NMS
Hunt = Hunterian Museum, Glasgow University
L = length

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<td>1</td>
<td>Fala</td>
<td>AF 11 1865</td>
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<td></td>
<td>L 267mm sandstone</td>
<td>Found ploughing in 1848</td>
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<td>2</td>
<td>near Lasswade</td>
<td>Hunt A. 1958-1</td>
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<td></td>
<td>L 249mm</td>
<td>? jadeite/greenstone</td>
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<tr>
<td>3</td>
<td>near Craigentinny House</td>
<td>AF 1102</td>
<td></td>
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<tr>
<td></td>
<td>DES 1992, 54</td>
<td>L 245mm all over polished axe of marbled grey flint, found during trench digging between 1926 and 1930</td>
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<td>4</td>
<td>River Esk, near Roslin</td>
<td>AF 413 1893</td>
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<td>L 236mm greenstone</td>
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<td>5</td>
<td>near Gilmerton</td>
<td>AF 60 1782</td>
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<tr>
<td></td>
<td>L 235mm all over polished axe of yellow flint, 'turned up by the plough'</td>
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<td>6</td>
<td>'Haddingtonshire' (East Lothian)</td>
<td>AF 3 1878</td>
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<td>L 229mm granite</td>
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<td>7</td>
<td>near Monkton House</td>
<td>PSAS 1884-5, 329</td>
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<td></td>
<td>L 216mm diorite (not in NMS Catalogue: an ethnographic import?)</td>
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<td>8</td>
<td>Airngarth Hill</td>
<td>PSAS 1923-4, 322</td>
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<tr>
<td></td>
<td>L 194mm polished all over</td>
<td>Found 2 feet (0.6m) below the surface</td>
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Map II:1 Neolithic pottery in the Lothians Region

Contour At 250m.
Map II:2 Lithic findspots in the Lothians Region

Lithic Scatters (●) And Arrowheads (○)

Contour at 250m.
Map II:4 Cup-and-ring marks in the Lothians Region

Cup & Ring Marks - Outcrop (○) & Portable (●)

Contour At 250m.
III THE BIGGAR GAP REGION
The Rivers Clyde and Tweed both rise high in the Southern Uplands and flow north in parallel courses through the acid grasslands of these hills. Both rivers reach the Southern Uplands Fault south of Biggar and broaden out into nearly level terrain. The Clyde follows a meandering course through an open valley curving around Tinto, Cairngryffe and Carmichael Hills and falling only from c200m OD to 170m OD before reaching the Falls of Clyde near Lanark where it drops 100m in a series of waterfalls over a distance of 6km. The lower Clyde is a very different river, and the Falls thus demarcate the limits of the present Region in the west.

The upper reaches of the Clyde and its tributary the Medwin which joins it from the north-east are apparently 'captured' watercourses which originally flowed east at Biggar to join the Tweed. The 10km stretch between the two major rivers is so level that in times of flood the Clyde still overflows into the Tweed at Drumelzier across the 'Biggar Gap' (Whittow 1977, 99-103). From Drumelzier to Peebles the Tweed falls only from c190m to 160m OD in a distance of c15km, joined by the Water of Lyne from the north-west and the Manor Water from the south. Its flat-bottomed valley is relatively narrow with hills on either side, and east of Peebles the hills crowd in, reducing the valley to a narrow gorge beyond Innerleithen. The
upper Tweed is thus physically separated from the Tweed Basin and closely linked to the middle Clyde. The two rivers with their tributaries form the focus of the present Biggar Gap Region, measuring 35km from Lanark to Peebles.

This Region has clearly been a central one in terms of prehistoric settlement from the Mesolithic on, an area accessible from all points of the compass. The deep penetration of the Southern Uplands by the Clyde and Tweed headwaters offers natural routeways to the Solway Firth via Nithsdale and Annandale respectively. As the two rivers divert to the west and the east they open out towards the Firth of Clyde and the North Sea. Their northern tributaries, the Medwin and Lyne Waters, rise in the Pentlands near the source of the North Esk, offering an easy link to the Firth of Forth. Yet this facility of access is counterbalanced by the sharp definition of the core Region itself, delimited by the Southern Uplands Fault to the south, the Pentlands to the north, the Moorfoot Hills to the east and the Lesmahagow Hills to the west. The valleys which give onto this central area, the upper Clyde with the Duneaton, Douglas and Medwin Waters, and the upper Tweed with the Lyne, Manor and Eddleston Waters, complete this Region which is the richest in the study area in terms of prehistoric settlement evidence.

The Southern Uplands, the Lesmahagow and Moorfoot
Hills consist of Ordovician greywackes and shales, while the south Pentlands are made up of red sandstones of Upper Devonian age. Between the two is a complex area of interlying Lower Devonian sandstones, lavas and tuffs, interspersed by a variety of igneous intrusions, rhyolites and andesites, and including the laccolithic felsite intrusion of the prominent Tinto Hill and its outliers. Glacial ice moved through the central passage from west south west to east north east, and extensive fluvio-glacial deposits form a belt along the Pentland edge. Outwash sands and gravels created a striking system of eskers around Carstairs, and deposits of pure sand are quarried near Dolphinton. In places the lower slopes of the S Pentlands are masked in a sandy cover visibly suffering severe erosion.

Within the Biggar Gap Region there are c 700km² of 'improved land'. This includes a belt of Class 3 agricultural land associated with the sands and gravels of the Carnwath-Carstairs area and soils of similar status in alluvial valley bottoms, particularly around the bend in the Clyde and south to Wiston. These latter areas have been subject to flooding which may have restricted prehistoric usage to summer pasturage. Such conditions are inimicable to the recovery of prehistoric artefacts and may give poor cropmark recording. Most of the Region, however, consists of Class 4 land on which a range of limitations on agriculture apply, caused in
particular by thinness of the soil and by climate. Modern farming practice here favours livestock rearing, but the light soils and gentle slopes may have offered suitable drainage conditions for early arable agriculture. Evidence for neolithic agriculture on the Pentlands is discussed in section III:iv, but it may be noted here that removal of small cairns in the Hare Law area, west of the River North Medwin, was said to reveal a rich red soil no longer a feature of these moorlands. Some moorland has been reclaimed in recent years, and sites upstanding in the 1970s are now reduced by ploughing and barely visible (e.g. RCAHMS 1978(a) 63, no.94 Newbigin cairn; 145-6 no.275 Brownsbank possible mortuary enclosure). Forestry is also expanding, for example on Broughton Knowe, Biggar Common and the southern Pentlands, where it surrounds the sites of remaining long cairns.

Climate must always have imposed constraints on cereal cultivation in this upland Region. Rainfall levels are moderately high, increasing with altitude. The valleys can be quite sheltered, but are subject to moderately severe winters. The Soil Survey classifies the hill country as being 'exposed, with rather severe winters' (Birse and Robertson 1970). Such a regime may have been ameliorated in periods of Atlantic conditions with milder winters, allowing full advantage to be taken of the relatively dry, sunny summers which the Region enjoys, away from the 'haars' of the east coast.
Little work has been carried out on vegetation history in the Region. A study by Newey (1969) is without radio-carbon dating and is based on cores from peripheral, upland locations. The lowest altitude included in Newey's work is in the upper Eddleston valley at 260m OD. This diagram shows little evidence for clearance before the Iron Age when, at this altitude, heath rapidly takes over. It may be noted, however, that oak is an important component of the early forest with elm at significant levels showing a clear-cut elm decline. Alder increases rapidly at and after the Elm Decline, possibly an effect of local conditions, but perhaps, an indication of increased general wetness. Blanket bog began to grow at Kitchen Moss in the Pentlands at the same horizon.

One further resource available to prehistoric peoples should be mentioned. This is the recurrence of chert outcrops, particularly along the valleys of the Tweed tributaries in Peeblesshire (Wickham Jones and Collins 1978). Although pebble chert and some flint was also available in river beds and fluvio-glacial deposits, it seems that these outcrops were being exploited at some period in prehistory (Wickham Jones 1986, 6; DES 1989, 8).

The upper levels of the Clyde and its tributaries pass through hill country containing a variety of mineral resources. In particular it is known that gold has
been found in this area, with records of gold being found after heavy rains on Crawfordmoor (Gough 1806 IV, 78) and at Leadhills.

III:ii The Mesolithic of the Biggar Gap Region

Map III:1 shows sites in this Region which have produced artefacts suggested to be mesolithic; it is not restricted to assemblages with microliths, since such finds are extremely rare in this Region. When Mulholland listed the mesolithic industries of the area in 1970, the only microliths that she recorded were a single tool from Slipperfield, West Linton (NMS; AA 145) and a report by Lacaille (1954, 188) of microliths from Eastfield on the Clyde (NT 014 361). More recently finds have been made on the southern Pentlands and on the Tweed (see below), and it may be that the earlier absence related to a failure to observe or recognise such pieces. Equally, however, local reliance on chert may have reduced the tendency to produce microliths, or some functional or chronological factor may be involved in the shortage of the type.

In support of this second hypothesis, that microliths are genuinely rare in the Region, are the results of field walking by the Lanark and District Archaeological Society on Biggar Common. A series of
seasons' work in newly ploughed forestry furrows have amassed quantities of lithic material (DES 1987, 44; 1989, 60; 1990, 37), yet no microliths or other recognisably mesolithic artefacts (T. Ward, pers. comm.), although the Society had experience in recognising such material from Corse Law (see below). Yet sealed below a layer of redeposited soil under Biggar Common long mound (III:4) a series of postholes forming an L-shaped feature yielded charcoal giving the following dates:

\[
\begin{align*}
4350 \pm 130 \text{ bc} & \quad \text{GU 2987} \\
4130 \pm 60 \text{ bc} & \quad \text{GU 2988}
\end{align*}
\]

These uncompromisingly mesolithic dates would be contemporary with microlith producing industries in Wigtownshire, Cumbria, the Stewartry and Fife (see Chapter 6). The site is only 3km from 'mesolithic' artefact scatters on the Clyde, Cornhill and Eastfield, the latter site producing microliths, although no contemporaneity can be proven. It would seem that, whether for functional or other reasons, some mesolithic sites in the Biggar Gap Region cannot be recognised by virtue of their artefactual assemblages.

The bulk of the mapped 'mesolithic' findspots are in riverine situations. Mulholland showed no mesolithic sites on the Tweed above Ashestiel, near Galashiels, although she noted a group of sites on the tributary valley of the Eddleston Water. Recent finds of flint
and chert flakes, including microliths, come from Peebles itself (NT 240 404) beside the Tweed, near its junction with the Eddleston Water, and from Manor Bridge (NT 230 398) where the Manor Water joins the Tweed (DES 1986, 49). The site mentioned by Lacaille at Eastfield is one of five sites on the banks of the Clyde as it curves around Tinto Hill, the other four having no microliths. Chert and pebble jaspilite was the main raw material used, but at Eastfield there was also flint, while the chert employed was a selected variety, green in colour.

To Lacaille's group of Clyde sites can now be added Cornhill (NT 025 355), where a mesolithic knapping site has been identified on the opposite bank from Eastfield, also utilising green chert (DES 1985, 41), and Thankerton, with chert implements, again from beside the Clyde (DES 1986, 33). The distribution has also been extended to the upper waters of the Clyde through excavation of later sites. A chert assemblage comes from Crawford Roman fort at NS 954 215 (Maxwell 1972, 188), and chert with some flint has been recovered at Crookedstane Farm, south of Elvanfoot at NS 969 161 (DES 1991, 64). Chert artefacts from nearby Normangill henge may belong to the same tradition (III:e). Although riverside sites, at 250 - 270m OD, the finds come from an upland area.

Microliths and other chert artefacts have also been reported from the hillside above Weston henge, at 250m OD, between the North and South Medwin (NT 04NW 31),
moving away from the Clyde terraces towards the Pentland hills. 4km further north, on the hillside beside the North Medwin, an important addition to the Mesolithic of the area has been achieved through field walking carried out by Lanark and District Archaeological Society in forestry ploughed areas on the south Pentlands. Some 120ha beside the River North Medwin were gridded and walked and the resultant recovery of over 2,200 flaked lithics has been analysed by Ann Clarke (1989). Finds were concentrated on a terrace beside the river at c 250m OD, although they also extended up the slopes of Corse Law (NT 019 505) to c 290m OD. The material is clearly multi-period, including leaf points and barbed and tanged arrowheads, but 17% of all retouched pieces were microliths (fifteen artefacts) suggesting a substantial mesolithic component. 75% of the total assemblage was of chert, 21% of flint, with 3% of pitchstone and the remainder including quartz and agate. Ten of the microliths were of chert and five of flint. The pitchstone was not culturally diagnostic. It is understood that other forestry areas have been walked by the Lanark Society and it would be useful to have some information on this work if only as negative evidence. Nonetheless it seems that the Corse Law exercise, and the excavation in Upper Clydesdale mentioned above, suggest that mesolithic activity was much more widespread than previous information would have indicated. The
recovery also of possible mesolithic flakes from Mountain-blaw (NS 970 562), a farm in a bleak moorland situation at over 300m OD 7km north west of Corse Law, suggests that the potential for extending areas of recovery through fieldwalking is very much present in the Region.

All the above assemblages demonstrate a heavy reliance on the use of chert. This characteristic is not peculiar to the Mesolithic of the area alone; at Cloburn Quarry (NS 947 414) post-cairn levels were dominated by the use of chert (Clarke 1989, 53). Nonetheless, the selection of green chert at Eastside and Cornhill on the Clyde may suggest that already, in the Mesolithic, outcrop sources were being exploited, and chert extraction sites identified in Peeblesshire (DES 1986, 49; 1989, 8; Wickham Jones 1986, 6) could well have been utilised from this period. The westernmost exploitation area identified above the Kilbucho Burn (NT 070 348 - 090 356) is only 6km from Eastside and Cornhill.

In conclusion, while the majority of mesolithic sites identified in the Region are riverine, the uplands were certainly also being exploited, and perhaps, on the basis of the Biggar Common evidence, for settlement rather than hunting. Nonetheless account should also be taken of the recovery of a broken bow from a peat bog at 600m OD at Rotten Bottom on the border between Peeblesshire and Dumfriesshire. With a radiocarbon
date of 3090 ± 100 bc, and no accompanying lithic artefacts, this find could belong to either a relict mesolithic pattern of upland exploitation, or a supplementary activity practised by neolithic agriculturalists (DES 1992, 21).

III:iii Settlement evidence in the Biggar Gap Region

Recent excavation in Clydesdale District, particularly that in advance of pipeline construction and upgrading of the A74, has produced much new evidence for possible neolithic settlement not yet fully analysed or published. This section can therefore provide only a tentative account of a fast changing subject.

a) Structural remains

Field walking of forestry furrows on Biggar Common by Lanark and District Archaeological Society recovered considerable amounts of lithic material and neolithic pottery. The first three areas investigated by LADAS under Tam Ward and by Historic Scotland (AOC) did not produce convincing structural remains, suggesting that erosion had removed such traces from unprotected hilltop locations. Under the protection of the long mound (III:4) postholes gave mesolithic radiocarbon dates (see
III:ii, above), while a neolithic hearth directly below the mound, had no associated structural evidence. The dates from the hearth, $3300 \pm 50$ bc and $3200 \pm 70$ bc (GU 2985-6), did demonstrate, however, an early neolithic presence on the hilltop.

In 1991 a fourth area with a concentration of artefacts at NT 002 388 was opened by Tam Ward, c 100m north west of the long mound, but just out of sight of it. $140m^2$ were examined, finding undoubted structural traces, some hundreds of western neolithic pottery sherds, and some artefacts of chert with a little pitchstone and flint. Structural features included twenty three possible postholes, clusters of stakeholes and a hearth (see DES 1991, 68, fig.24). The 8m broad trench allowed only restricted interpretation, but the apparent linearity of the features suggested the possiblity of a neolithic long house. The usual location for such structures is on riverside terraces (Balbridie; Sprouston; Lismore Fields), but this may be a function of the cropmark potential of such sites. Hilltop location is certainly a feature of the early neolithic, particularly in the form of causewayed enclosures, some of which contain structures (e.g Crickley Hill). An alternative interpretation of the postholes offered by the excavator is that they represent at least one circular building c 5m in diameter (DES 1991, 67). On present evidence this
would seem a less convincing reconstruction, but remains a possibility. The features appear to have been unambiguously associated with western neolithic pottery, with some Grimston ware traits, and the structure could be as early as the hearth below the nearby mound.

Possible structures within the promontory enclosure at Meldon Bridge cannot be so confidently assigned to the Neolithic. A boat-shaped feature, measuring 14m x 6m survived as a shallow groove with no evidence for upright timbers. (Fig. II:4b). A circle of postholes, 9m in diameter, was suggested to be a domestic building, but could fall into the category of ritual post rings, commonly found in contemporary henges. Neither 'structure' can be associated with the enclosure itself or the neolithic artefacts found within it.

Round houses are found near several of the neolithic monuments of the Region, but in structural forms generally assigned to later prehistoric periods. Ring ditch houses occur close to Easton and Broughton Knowe long cairns (III:3; III:7), but this very specific house type is likely to date to the first millennium bc (Reynolds 1982). Platform settlements with groups of circular house sites scooped into a hillside are found a few hundred metres from Normangill henge (III:e), from Stoneyburn neolithic pits (DES 1991, 68, fig.25) and from Late Neolithic pits below Harehope cairn in the Meldon valley (Jobey 1980). In this last case the house
sites at Green Knowe were dated a thousand years later than the pits, and the juxtaposition of sites can only illustrate the continued attractiveness of the location in prehistoric terms.

Hut circles, again, would generally be expected to be later than the Neolithic, although beaker has been recovered from a hut circle on Arran (Current Archaeology 83, 1982, 359). In general stone built neolithic houses, as seen in the Northern and Western Isles, avoid the circularity of hut circles. There is, however, a possible hut circle near the stone circle at Wildshaw Burn (III:j), and two sites 100m to the east of the chambered cairn at Burngrange (III:1). These last form part of an interesting settlement cluster on a sheltered terraced which includes two raised circular platforms, possible sites of timber round houses (Fig. III:1:4). The area is surrounded by small cairns, while the remains of a large round cairn under a sheepfold 100m north east of the settlement suggest continuity of use of the area into the Bronze Age. The visible house sites may well be the successors of earlier neolithic settlement structures.

Account must certainly be taken of the likelihood that neolithic settlement sites were too ephemeral to leave easily identifiable structure traces. Excavation of an area at the entrance to the souterrain at Wester Yardhouses (NS 0042 5079) found neolithic pottery and the lithics in a black deposit, possibly occupation
material (Fairbairn 1924), but no structural traces were noticed. At Wellbrae (NS 9661 4010), on the E side of Swaites Hill, near Blackhouse Burn, excavation by GUARD has suggested that one of a pair of subrectangular cropmark enclosures may have been in use as a Late Neolithic domestic enclosure (DES 1991, 65; D. Alexander, Clydesdale conference paper 3 Oct. 1992). The high density of pit and posthole features within the 40m x 14m ditched or palisaded enclosure could not be reconstructed either as internal house sites or as structural supports for the enclosure itself, which must almost certainly have been unroofed. The enclosure ditch was associated with grooved ware use, although in internal features impressed wares were more frequent. There was a possible hearth with a stone edging, and one pit contained naked barley. As at other sites the most significant evidence for domestic use came from pits.

b) Pits

Pits, then, appear to be the form of evidence most likely to survive from settlement sites. Certainly these were the most informative features at Meldon Bridge enclosure, yielding quantities of impressed pottery and giving two sets of radiocarbon dates grouped around c 2730 bc and c 2250 bc. There remain problems of interpretation, however. The high proportion of rim sherds in at least one of the pits, a polished stone axe in
another, and the general absence of lithic debris, all suggest that these pits may have been not so much domestic rubbish pits as loci for ritual deposition. The contents may, nonetheless have consisted of occupation debris, even if deposited in special circumstances.

Similar problems attach to other pits and pit deposits in the Region. Grooved ware found in pits excavated by the CFA between two cropmark enclosures at Hillend, Roberton (NS 945 279) probably represents ritual deposition associated with use of one of the enclosures as a henge (Table III:4:10). Other pits are found on sites which have been later developed as bronze age funerary cairns, leaving it doubtful whether the original use of the site was domestic or ritual. At Stoneyburn, near Crawford (NS 9606 1963), pits below one of three small cairns contained pottery ranging from Late Neolithic to Bronze Age and a variety of flint artefacts. The other two cairns covered cremation burials, one with a pygmy cup (DES 1991, 67-68). Some cremated bone was in pits under the first cairn, but it is not known whether this was in association with neolithic artefacts. Two shallow pits under the Bronze Age cairn at Harehope gave Late Neolithic dates (c 2140 ± 90 bc - GU 1213, 1214). These pits contained charcoal, and one of them was itself fire-reddened (Jobey 1980), but again could have been either domestic fire pits or cremation pits.
c) Enclosures

Enclosed neolithic sites raise the same problems of classification in terms of domestic or ritual function. Essentially, the antithesis may itself be based upon a false dichotomy, but for present purposes the numbers of suspected henges and Late Neolithic enclosures in the Region are discussed under 'Ritual Enclosures' below. The search for causewayed, hilltop and other types of enclosure probably of the earlier neolithic is pursued here, although of course acknowledging that such enclosures will have played an important symbolic role in the lives of local communities, very probably involving an element of the ceremonial.

A site beside the River Clyde at West Lindsaylands is described in the Catalogue (III:a) as a possible neolithic 'causewayed enclosure'. While the site is a promising one in morphological and locational terms, its presence emphasises the shortage of such enclosures within the study area. Only Sprouston, on the Tweed (IV:a), a rather larger enclosure, with palisade lines in addition to robust ditches (see fig.IV:a:2), appears to fulfil the criteria for such a classification.

Ian Smith draws attention (1991) to the possibility that the 'unfinished' fort on Hamildean Hill, above the Water of Lyne (RCAHMS 1967, i, 118-9, no.283) could be a neolithic enclosure with interrupted ditch, and it is possible that other hilltop sites may conceal a neolithic
phase of use. As the evidence from Biggar Common has shown, hilltop locations were certainly utilised during the Neolithic in the Region. No attempt has been made to survey hilltop remains during the present research programme, but a few possibly suggestive references may be picked out.

The provenance of one large stone axe is given as 'a camp near Libberton' (PSAS xxiv 1899-1900, 434, Acquisitions). The site is not further identified, and there are many possible locations in the area. Another large axe is said to come from the fort at Harrowhope, near Stobo (NMS: AF 218). The site indicated is presumably the palisaded enclosure at Hammer Knowe (RCAHMS 1967, i, 118, no.284). At this enclosure the RCAHMS describe segments of discontinuous ditch at the N end as possible indications of an unfinished defence, an interesting repeat of the circumstances at Hamildean Hill.

The location of the long cairn on Broughton Knowe (III:7), on the ridge between that hill and Langlaw Hill, raises the possibility of an association between the cairn and the Langlaw hilltop fort which overlooks it. The complex, multiphase fort, with outworks, which occupies the summit of this hill, could well encompass an early phase related to the cairn (see fig.III:7:3).

A constructional feature observed at Blackhouse Burn was the use of large slabs to revet the wall both
externally and internally. External revetment slabs can be observed at some supposedly Iron Age hill forts, as for example, at the fort on Cairngryffe Hill, near Blackhouse Burn, excavated by Childe (1941). The outer rampart here was 'bordered externally, with large undressed blocks set on edge', but the stony bank was only c 2.3 - 3.0m in breadth, a very much lesser feature than the Blackhouse Burn bank.

An unusual enclosure at Park Knowe, on the E spur of Tinto Hill (RCAHMS 1978(a), 153-4, no.314) had angular stones set on edge as revetment for its inner and outer stone banks, which measure as little as 1.2m in breadth. The slightness of construction suggests a relatively recent date, but there is a record of a large mound of earth having stood in this enclosure (Stat Acct i, 192-3), which was assumed by antiquarians to be a 'Druidical temple' (ibid; Trans Soc Antiq Scot I 1792). There is no obvious functional explanation for the double walls, and the perception of the enclosure as being a ritual site may be the correct one.

Finally, the site at Wellbrae included an enclosed phase, apparently with grooved ware associations (DES 1991, 65). The rectangular cropmark is not obviously indicative of the Neolithic, and recognition of other similar enclosures has not yet been attempted.
III:iv Neolithic agriculture in the Biggar Gap Region

Below the long mound on Biggar Common hearths giving dates of c 3200 and 3300 bc overlay a thick layer of soil, evidently redeposited, containing charcoal and an occasional pottery sherd. Full analysis is awaited, but there is a possibility that it was a manured soil, deriving from cultivation. The hearths themselves contained hazelnuts, weed seeds and a single seed of barley. Cereals were certainly being grown on the hill by the second millennium, in the immediate vicinity of Cairn 1, the beaker cairn. Choice of this hilltop location for cultivation at 320m OD, and 120m above the R Clyde at the foot of the hill, was presumably deliberate, whether for agrarian or other reasons. Certainly, the S facing slopes would receive maximum sunlight exposure, and perhaps it was wished to avoid saturated soils in the valley bottom. It is stated in the NSA (VI, 355) that before the lower land in Biggar parish was drained, early in the nineteenth century, lowlying farms suffered so severely from autumnal frosts that seed corn could only be gathered once in every four or five years.

If cultivation was indeed taking place on the hill in the Early Neolithic the choice of location has general implications for neolithic settlement strategy, showing that use of the uplands was not merely a facet of Late
Neolithic settlement expansion (cf. Bradley and Hodder 1979). The distribution of long cairns in the Region also emphasises the uplands, but this pattern could be regarded as being an aspect of ritual practice. It is, however, clear that the areas chosen for these monuments were also, in most cases, the scene of prehistoric agricultural activity, albeit without demonstrable association with the cairns. The ridged cultivation on the grasslands of Broughton Knowe suggests cultivation stretching back through the first millennium bc (Halliday 1986). Small cairns around three of the Pentland sites indicate land use from at least the second millennium bc. Clearly, the cairns were being sited in areas attractive to prehistoric farmers.

The small cairnfields of the south Pentlands occur in discontinuous groups, from Yardhouse in the west, over Greens Moor, Horse Hill, Stoney path, Easton and Cairn Knowe, to Slipperfield, near West Linton, in the east. Large round cairns appear within all these groups, and a very few of the small cairns contain cists. A beaker cist in a small cairn at Wester Yardhouses was covered by a re-used slab decorated in passage grave style. It has been suggested that such cairnfields cannot have been created during clearance of primary forest, when a rich brown forest soil should have buried stones, but that they must have been a product of long term land use and clearance of secondary woodland (Fleming 1971). Nonetheless, there
is a record of thick red soil being found below small cairns in the Yardhouses area (Rankin 1874, 61), and in a glaciated landscape stony detritus is likely to have been a feature from earliest time.

No direct relationship between long cairns and small cairnfields can be discussed on the basis of field evidence. One problem lies in the distortions created by the biases of selective survival. For example, at Easton, where the long cairn lies at the junction of cultivated land and moorland, the cairnfields, which are in moorland, are largely out of sight of the cairn; a few dilapidated small cairns in the steepest enclosed field to the south of the long cairn show, however, that the original distribution must also have extended to this downhill side, where the long cairn makes its chief visual impact, at least from a distance.

Survival of the landscape around the long cairn on Greens Moor is more complete, but the relationship with the small cairns remains equivocal. The small cairns which run down the spine of the ridge to the south of the long cairn have a good view of the monument, but others, over the crest of the ridge to the south west are out of sight of it, and relate more closely to two large round cairns.

At Burngrange the best view of the chambered cairn is obtained from boggy ground on the lower terrace to the west where no traces of land use survive. The cairnfields
which stretch to north and east of the cairn are mostly out of sight of it. It is of interest that the 50m broad terrace immediately north east of the long cairn is free of small cairns, as if having been kept clear for agricultural use. Such use need not, of course relate to the Neolithic, particularly since the settlement of round houses, discussed above (III:iii) is immediately adjacent to the terrace.

What the above evidence does show is that long cairns were regularly built in areas attractive to prehistoric farmers, although it remains an open question whether the small cairns are indicative of arable or pastoral activity. The only direct evidence for cultivation during the Neolithic in the Biggar Gap Region comes from the possibilities suggested by the soil layer under the Biggar Common long mound, the single seed of barley from the hearth here, and the contents of an undated pit in the Late Neolithic enclosure at Wellbrae. This pit contained a pure deposit of naked barley, suggesting that processing had been completed (DES 1991, 65; D. Alexander lecture 1992). It seems significant, however, that the so called 'domestic pits' at Meldon Bridge contained hazel nuts, but no grain.

Direct evidence for livestock farming is totally absent, not an unusual situation in the acid soil conditions prevalent in Scotland. Nonetheless it must not be overlooked that stone clearance may be an
adjunct of livestock management as well as of ploughing. Possibly suggestive is the size and situation of some of the large enclosures. The promontory enclosure at West Lindsaylands (III:a), delimited on the S side by the bank of the River Clyde, slopes gently on the west to a hollow originally presumably drained by the stream now ditched along the field boundary, which would have been an accessible watering place for cattle.

The 8ha extent of Meldon Bridge is most explicable in terms of livestock herding. The stockade here could certainly have been cattle-proof, and the lower riverside terraces would serve as meadow grazing. Size again points to cattle farming at Blackshouse Burn, and the springs rising within the large enclosure provide water. The original stony bank seems an impractical cattle fence, but the insertion of posts may have formed a suitable reinforcement.

The small henges in the Region are not likely to have acted as livestock enclosures, although it is possible that such a function was sometimes employed. Most of the henges are beside water, a concomitant of their valley bottom situations. This locational shift from the uplands used for long cairn building is not necessarily an aspect of subsistence change. The interrupted ditch enclosure at West Lindsaylands, presumably of the early third millennium, is also riverside, while the barley from Wellbrae and on Biggar Common points to cereal cultivation in the Late Neolithic.
Finally mention should be made of the long bow of yew wood from Rotten Bottom, above the head of the R Tweed. Dated to $3090 \pm 100$ bc OXA - 3540, this find suggests that hunting continued to be of importance at the point of change over from mesolithic to neolithic in cultural terms (DES 1992, 21).

III:v Neolithic pottery from the Biggar Gap Region

Table III:1 lists sites at which neolithic pottery has been found in the Biggar Gap Region. Ten of the twelve sites concern relatively recent finds without full or any published details, and much information was derived from papers given at a conference entitled 'Clydesdale Archaeology - Recent Discoveries' held on 3rd Oct. 1992, in particular a paper on pottery finds given by T. Cowie. These recent discoveries act as a reminder of the inadequacies of the archaeological record and of the need for modern work.

Western neolithic pottery comes chiefly from Biggar Common, with small amounts from neighbouring sites across the Clyde at Annieston and Wellbrae, and one find from Wester Yardhouses on the Pentland edge. It is
particularly gratifying that the large Biggar Common collection can be associated with early dates from below the long mound and with structural evidence from which dates are still awaited.

Impressed wares came in large assemblages from two sites, the Meldon Bridge enclosure on the Tweed, and the small enclosure at Wellbrae on the Clyde. Interestingly the two collections, both of which came from pits with some similarities of deposition practice, such as the 'packing' of sherds around the pit edges, appear to have been of slightly different type in terms of rim form and decoration. Dates from Wellbrae will be useful, but it must be noted that problems attach to the dates available from Meldon Bridge. These suggested two periods to be involved, early and late in the third millennium. Widely spaced dates were obtained from two adjacent pits, both lined with crushed pottery and giving every appearance of being contemporary. It is possible that old midden material was being deposited in freshly lined pits in some form of ritual disposal, thus creating an apparent association between Late Neolithic pottery and earlier charcoal. The distinction in forms between Meldon Bridge and Wellbrae may be a regional rather than a chronological construct, demonstrating a lack of unity across the Biggar Gap Region as defined for present purposes. The style at Meldon Bridge recurs at Drumelzier cairn on the Tweed; in the Milfield Basin,
a Tweed tributary area; at Hedderwick, East Lothian and Brackmont Mill, Fife. The Wellbrae style is found on Biggar Common and in sand dune sites on both sides of the country. A more detailed analysis of these relationships would be welcome.

Grooved ware has now been found for the first time in central southern Scotland, at Wellbrae and at Hillend, perhaps suggesting a link with the Annandale material from Beckton (VI:v). In view of comments on the absence of grooved ware from Meldon Bridge (e.g. Mercer 1981(a)) it is interesting to find it appearing on the impressed ware site at Wellbrae, and, indeed, it is perhaps to be associated with the creation of the enclosure here. Despite the density of impressed ware features, none are cut by pits with grooved ware, suggesting that the former may have been marked in some way. This is an argument for a strong element of ritual being involved in the disposal of this 'rubbish', at Wellbrae, as also at Meldon Bridge. It also suggests a minimal time gap between the two periods of use, a continuity which stretches on into the period of beaker deposition. The more complex nature of the decoration on the grooved ware in pits at Hillend suggests a rather more overtly ritual context at this site, which may prove to be henge related (see Table III:3).
There are no early records of field walking in the Biggar Gap Region to match those from the Tweed Basin. The collections of L. McL. Mann and A.A. Henderson Bishop which included finds from the area, now in the Hunterian Museum, appear to consist of purchases from farmers. Likewise large collections in the NMS donated by T.B and P.F Dunlop include no documentation other than the names of the farms on which pieces were found, and sometimes the names of the farmers who found them. Other finds were purchased direct by the Museum in the early century, the period when the collectors were at work.

Practice of field walking has recently been resumed, notably by the Lanark and District Archaeological Society, with encouraging results, but without as yet enabling an overall picture of distributions to be established. Work undertaken by LADAS in the wake of forestry ploughing, including projects on Biggar Common and on Corse Law, has demonstrated the potential of environments beyond the ploughlands usually explored.

The collection from Biggar Common has still to be analysed. It is evident, however, that flint and chert artefacts, including several willow leaf arrowheads, have been recovered on various parts of this hilltop at altitudes above 300m OD. In some areas western neolithic pottery was also found (DES 1987, 44; 1990, 37).
Excavated evidence from the hill shows activities to have taken place there from the fifth to the second millennium bc, making it probable that the lithic collection also is multi-period.

The collection from Corse Law, beside the North Medwin, analysed by Clarke (1989), offers further illustration of the problems of period attribution on the basis of surface scatters. 75% of the raw material used was chert and most of the pieces were not culturally diagnostic, but included microliths, leaf points, an oblique arrowhead, a possible chisel arrowhead and seven barbed and tanged arrowheads. Again the site was clearly in use over a long period of time, and different assemblages could not be distinguished on the basis of spatial distribution, stylistic attributes or the raw material employed. It may, however, be noted that while all the pieces with invasive retouch were of flint, only one third of the microliths were of this material, suggesting either increased circulation of lithic materials in the later period or greater selectivity. Use of poor raw material obtained from pebble sources reduces the opportunities for stylistic variation, and it is noteworthy that the assemblages from the presumably Early Neolithic structure on Biggar Common, and from the Late Neolithic enclosure at Wellbrae were not culturally diagnostic (Clydesdale conference, 3 Oct.1992). At Wellbrae scrapers were the only recognisable tool type, and blades were absent.
The most reliable method of identifying neolithic material must therefore be by tabulating the presence of leaf arrowheads and related types. This has been done on the basis of records and published sources, some which are non-specific as to type of arrowhead (see Table III:2). The distribution is shown on Map III:2.

As the map shows there is a marked absence of arrowheads from the south of the Region, despite the recent find of a bow from the hills above the upper Tweed dated to 3090 ± 100 bc -OxA 3540 (DES 1992, 21). The Tweed Valley is entirely without finds above Peebles, despite the presence of the Meldon Bridge enclosure; two findspots, Table III:2 nos.28 and 30, lie just off the edge of the map to the east. Almost all the arrowheads therefore come from north of Biggar, with the greatest density deriving from the foothills of the Pentlands, around the North and South Medwin, the West Water and the Water of Lyne. One factor here may be the sandiness of the soil, facilitating a natural surface sorting of artefacts; the collecting activities of T.B. and P.F. Dunlop have also made an impact. It must be observed, however, that the distribution coincides closely with that of the long cairns and small cairnfields, although survival patterns create a slight altitudinal difference between monuments, found mostly on moorland, and artefacts, derived principally from ploughsoil.

The majority of the arrowheads listed are
leafshaped or triangular in form. This latter may include some unfinished barbed and tanged arrowheads (see No.18 Yardhouse), but the numbers involved suggest that most are finished pieces. The numbers of Late Neolithic types are very low: one petit-tranchet derivative type, one transverse, two lopsided, one hollow based and one oblique arrowhead. These small numbers are in contrast to the position in the Tweed Basin (IV:vi). Equally there is an absence of discoidal and edge polished flint knives in the Biggar Gap area, while several are known from the Tweed Basin. The large, bifacially flaked flint point, or knife, from the long mound on Biggar Common, found in association with a 'Seamer axe' of flint, is thus something of an exception in the Region. A flint 'dagger', 6¾" (171mm) in length found in a cairn at Glenlochar, near the headwaters of the Clyde in 1817 (Black 1894, 113) is a rather later implement type, characteristic, according to Ritchie and Shepherd (1973, 29), of a Step 5/6 Beaker context.

A flint spearhead is said to have come from Huntfield farm on the north side of Biggar Common, but apart from the fact that it was exhibited in 1909 nothing more is known of its appearance or present whereabouts (NT 04SW 17). There is a narrow leaf-shaped implement, 5" (127mm) in length, purchased by the NMS in 1900, which was said to have been found on the Pentlands (AA 187), but such an attribution does not necessarily fall within the
present Region, which encompasses the S end of the Pentlands only. There is also a pressure flaked leaf-shaped knife, 'like a small dagger blade', 3.18" (81mm) long, from Linton Bank, West Linton (NMS; AA 283) (and see also Table III:2 no.27, Cottage Farm). In general artefacts from the Biggar Gap Region are small, with the flint knives from the Dunlop Collection, for example, rarely exceeding 2" (51mm) in length.

It may be concluded that little or no good quality flint suitable for the manufacture of these larger implements was being imported into the Region. The same conclusion is reached in relation to flint axes (III:vii); in both cases there are occasional fine pieces brought in as finished products. There is probably a relationship between the absence of good quality flint and the small numbers of lopsided and transverse arrowheads in the Region; in the Tweed Basin such implements were frequently made of a chocolate brown flint of unknown origin. Most of the flint used in the Biggar Gap Region appears to be grey, but the transverse arrowhead from West Linton (Table II:2) no.25) is of dark brown flint. A scraper from Garvald is of translucent dark brown flint (AB 2838-53) and there are some large flakes of the same material, one from Garvald 2.9" (74mm) long (AA 281), another from Townhead 1.8" (46mm) long (AB 2835).

Pitchstone, on the other hand, is regularly found
in the Biggar Gap Region, as also in the Tweed Basin; on Biggar Common it appears to have been associated with the posthole structure which has produced western neolithic pottery (T. Ward, lecture on 3 Oct. 1992). A large amount of pitchstone was found on the Common, and at Corse Law it constituted 3% of the total assemblage (Clarke 1989). A small amount was found in Late Neolithic pits in the Wellbrae enclosure (D. Alexander, lecture on 3 Oct. 1992). Pitchstone has also been picked up in field walking at Annieston, just across the Clyde from Biggar Common, and at Castledykes, again just above the Clyde (DES 1988, 25).

The heavy reliance on chert in most assemblages reflects the general use of local materials, and may derive to some extent from chert outcrops, referred to in discussion of the Mesolithic (III:ii). No such exploitation sites have been reported from the Pentlands vicinity, and most of the material at most sites, whether chert or flint, is likely to have been glacial or river pebbles. Agate and quartzite, both locally available, are reported from Corse Law and Biggar Common, while a collection of worked grey quartzite, with some flint, from Lamington (NS 977 307) was said to be suggestive of neolithic debris (DES 1988, 25). One scraper from Wellbrae was of agate (D. Alexander, lecture).
Records have been collected of c 177 axeheads from the Biggar Gap Region, a smaller number than in the Tweed Basin, with 288 specimens, but displaying a far greater density than that Region in relation to areas of improved land. With c 700km² falling into this classification in the Region, overall density is one axe to every c 4.0km², as against one to c 7.0km² in the Tweed Basin. In fact, as Map III:3 shows, distribution is very uneven, and in certain localities, notably around West Linton and Dolphinton, density is nearly one axe to every 1.0km².

No finds at all have been recorded in the upper Tweed Valley, and only a scatter of axes come from the middle reaches of that river. There is a dispersed distribution in the Clyde Valley, the only sizeable cluster, from Coulter, forming the south west tip of the main spread of finds which extend from the upper reaches of the Water of Lyne, along the south side of the Pentlands to Biggar itself and Coulter. As discussed in relation to lithic finds, some of this profusion may be attributable to the light, sandy qualities of the soil in the area. The presence of local collectors, Adam Sim of Coulter and P.F. Dunlop, who, like J.J. Henderson Bishop, made collections from the West Linton and south Pentland area, has undoubtedly also had an effect. On the advice of
Roy Ritchie half a dozen West Linton axes from the Henderson Bishop collection in the Hunterian Museum have been omitted from the map as possible fakes. It must, nonetheless, be accepted that these areas with prolific finds are representative of some kind of prehistoric reality, and the significance of the clusters is returned to at the end of the present section.

Only four axes in the Region (2%) are of flint, and three of these are exceptional specimens related to the Yorkshire Seamer and Duggleby series. A Seamer axe of brown and grey mottled flint, 111mm in length, was found in the W grave in the Biggar Common long mound (III:4) together with a large leaf point of similar material (Sheridan 1992). The other two were found in unknown circumstances in the nineteenth century: a polished axe from Biggar, 146mm long, is of rather darker grey mottled flint than the Biggar Common example (NMS: AF 296); a 'chisel shaped axe' of black flint, only the blade polished, 127mm long, was found on Slipperfield farm, West Linton (AF: 133). The only other flint axe was found during forestry ploughing at the extreme east side of the Region at Kirnie Law on Innerleithen Golf Course (NMS: Day Book May 1970). It was retained by the finder, and no information on its characteristics is available. Flint axes would not seem to be a normal component of the Neolithic of the Region, appearing in occasional circumstances as imported prestige items of the Late
Neolithic. It should be noted, however, that the three fine items, found within a 16km stretch, were all of differently coloured flint, presumably from different sources.

The only piece of a jadeite axe from the Region is the butt end of a very fine Class I axe found in the 18th century near Douglas Castle on the Douglas Water (NMS: AF 86). This find has long been attributed to Castle Douglas, appearing as such both in the National Museum Catalogue and in Campbell Smith's list of jadeite axes (1963, 166, no.51). The original entry in the List of Donations to the Antiquarian Society (p.88 no.211 March 5th 1782) states, however, that the axe was 'found in an outfield, on tilling, within a mile and a half of the ancient castle of Douglas'. The re-attribution to Douglas, Lanarkshire provides a somewhat unexpected location in that the item is the only axe find known from the whole of the valley of the Douglas Water, although the sloping sides and alluvial floor of the valley would appear to offer considerable attractions to neolithic agriculturalists.

It may be added that a jadeite axe held at Traquair House, Innerleithen (Smith 1963, 169, no.65) is displayed there beside a purpose made tooled leather case described as being of late 18th century French work. There seems to be little doubt that this axe is a collector's item, not a local find.
Twenty four axes from the Region have been sectioned by Ritchie and Scott (1989), selection of specimens to test being primarily designed to identify products of the known factory sites. Four Group IX axes of Antrim porcellanite have been confirmed, and to these can be added as a probable specimen an axe in the Dunlop Collection (AF 955) 3.2" (81mm) long, re-used as a rubbing stone, possibly from Townhead, Dolphinton. Three of the other Group IX axes come from around Dolphinton, these ranging from a tiny 2" (51mm) miniature from Kippit (PBL 1) to a 5" (127mm) axe from Kirklands, Dunsyre (LNK 3). The remaining findspots, shown on Map III:4., are Coulter on the middle Clyde (LNK 1) and Braidwood in Lower Clydesdale (LNK 2), the former axe 4\(\frac{3}{4}\)" (114mm) in length, the latter another tiny 2\(\frac{1}{2}\)" (64mm) one. The generally small size of these axes reflects the distance from Antrim source, with access presumably up the Clyde valley. The small numbers involved, 3% of the total from the Region, may suggest that the axes travelled as exotica rather than as utilitarian items. The largest examples, from Dunsyre and Coulter, could, by any standards, be regarded as prestige items.

Only one axe has been confirmed as being of Group XXIV Killin stone, a 4.7" (119mm) axe from Townfoot, Dolphinton (LNK 16), although a tiny 1.8" (46mm) axe from beside the River North Esk, near Carlops, may be from the same source (NMS; AF 1014). The Perthshire raw
material is not so easily distinguishable visually as Antrim porcellanite, and there are likely to be other unrecognised examples in collections from the Region.

Sixteen axes have been confirmed as being of Group VI material, with another two sectioned axes described as being of 'tuff'. This latter pair includes an axe listed by Fell (1964, 54) as a 'Cumbrian Club' (LNK 13), and it would seem probable that both axes are from Cumbria, although not the Great Langdale source. Map III:4 shows the distribution of these axes, together with other axes described either as 'Cumbrian Clubs' or as being probably of Group VI material. The significance of the mapped distribution is, however, doubtful. Many axes from the Region are catalogued as being of 'felstone', 'claystone', 'greenstone' or 'clay slate', descriptive terms which may well often be indicative of Cumbrian tuff. Thus, for example, the relatively small numbers of Group VI axes from West Linton and Slipperfield may be merely a reflection of sampling bias; none of the Henderson Bishop axes in the Hunterian has been sectioned. A cluster of possible Group VI axes around Biggar has arisen out of a recent cataloguing of the collection in Biggar Museum. There is no doubt, however, that large numbers of axes in the Region are from Cumbria. The only recorded rough out is a giant 398mm specimen from Crawford, too large to be regarded as part of any normal supply system (Annable 1987, 60), but pointing to the
Clyde valley as the route by which these axes travelled. Beyond the margins of the map a probable Group VI axe is recorded from Troloss (NS 915 083) at the watershed (338m OD) between the northward flowing Pottrail Water and the Dalveen lane, leading south to the Carron Water and the Nith. Axehead density in Nithsdale is far greater than in Annandale, and, indeed, a cluster of finds in upper Nithsdale, around Mennock and Sanquhar, suggests that northward routes could have been along the Mennock Water, crossing a watershed at 466m OD between Wanlockhead and Leadhills, or, more probably, by way of the Crawick Water to Crawfordjohn, over a watershed at 257m OD. This latter route is marked by the recovery of a few axes in Crawfordjohn parish, including one Group VI 'Cumbrian Club' (LNK '6; see also DES 1979, 39, and Dfs. Mus. 1946/2(b)). Given the small numbers of known Group VI axes involved there can be no statistical validity in an examination of axe lengths in any exercise of regression analysis.

Recognition of the large numbers of Group VI products in the Region should not obscure the fact that many other types of stone were being used for axe manufacture. Excavation in 1991 at Wellbrae enclosure (see Table III:4:11) found an axe buried between two enclosures made of dolerite, probably collected as a local erratic cobble, two flakes from ground or polished stone implements in the larger enclosure, one of dolerite, one of
quartzose grit, both probably local, and a ground stone wedge, deposited with beaker sherds also of local dolerite (Inf: Sheridan, NMS). One of the sectioned axes, found on Harlaw Muir, a limestone ridge, was made of fossiliferous limestone (AF 473; PBL 5), and other axes from West Linton are described as being of limestone (AF 513, 601). A chisel from Cambwell (NT 0740) is said to have been made on an 'elongated parallel sided pebble of brown sandstone' (AF 1029), and an axe from Mount Herrick, Crawfordjohn (NS 85 22) was made of a pebble with only the blade end polished (Dfs. Mus. 1946 2(b)). Other axes are described as being of granite or granitic stone (e.g. AF 261; AF 495), of igneous rock (AF: 944, 954) serpentine (AF 474, 489), basalt rock (AF: 602, 615) porphyry (Chambers Institute), quartzite (AF 581), and agate (Greenshields 1864, 35).

Map III: 5 and Table III: 3 present the distribution of the largest axes in the Region, specimens over 190mm in length. The sixteen axes listed amount to 9% of the total distribution, appreciably less than the 18% in the Tweed Basin and 15% in Nithsdale Region. As Fig. III: i shows the commonest length for axes in the Biggar Gap Region is between 3" and 6" (76mm and 153mm), the histogram of sizes tailing off above that figure. Although only one of the large axes has been positively identified as being of Group VI stone (Table III: 3 no.17 Huntfield), three others are listed by Fell as being 'Cumbrian Clubs'
(nos. 3, 6, 9) and the two largest axes, the rough out from Crawford (no. 1) and an axe from Lochyloch on Tinto Hill (no. 2) are probably of Group VI stone. Only two axes in the list, no. 4 Candybank and no. 14 Westsidewood are definitely not from Cumbria, and it seems that the majority of the large axes do come from that source.

The distribution of the large axes is dispersed throughout the Region, although with a tendency towards clustering. These clusters do not, however, coincide with the areas of densest overall axe distribution, and, indeed, there seems to be a direct correlation between

Fig. III:i Axe lengths in the Biggar Gap Region
general density and an absence of large axes. This effect
is seen not only in the avoidance by the large specimens
of the West Linton - Slipperfield - Dolphinton district,
but also in the pattern of finds around Biggar itself.
General distribution here clusters around Biggar town,
whereas the large axes come from locations peripheral to
this grouping, - Candybank (no.4), Huntfield (no.16) and
Biggarshiels, with three large axe finds (nos.6,7,12).
Similarly three large axes from around the junction of
Clyde and Medwin Water (nos.9,10,15) are not central to
any general cluster; finds from Westsidewood in the
north (no.14) and Crawford in the south (nos.1,5) are
well outside the main distribution area; while three
axes from the flanks of Tinto Hill, that potent central
symbol of the Clydesdale Region (nos.2,3,6) appear, like
the jadeite axe from Douglas, to have deliberately
selected a special area for deposition, set aside from
the mundane.

Circumstances of recovery of the early axe
collections are poorly documented, but there are some
indications of the processes involved in deposition.
Recent excavation results have also proved extremely
fruitful. Deliberate deposition is illustrated by the
recovery of an axe from a pit within the Meldon Bridge
closure (III:b). An axe recovered from the body of the
inner bank of an undated double ring enclosure on
Broughton Knowe may best be regarded as probably a casual
residual inclusion (RCAHMS 1967 i, 66, no.115). More
significant are sketchy reports from Cloburn Quarry platform cairn excavation of the recovery of one axe 'from below the cairn' (DES 1987, 46), and another axe flake from a cremation pit containing other artefacts (DES 1989, 60). Most striking of all were the two axes found in burial pits at either end of the Biggar Common long mound (III:4). The fine Duggleby adze found with a large leaf point of the same flint in the pit at the west end of the mound is one documented example in the Region of a Late Neolithic elite burial practice known in eastern England (Kinnes et al 1983). The find of a small, battered stone axe beside a beaker at the east end of the mound presents not only a virtually unprecedented example of the association between stone axe and beaker, but a very unusual case of the deposition of an axe as grave goods. Two interesting records suggest that this may have been a regular local practice. The Statistical Account (Vol.X, 186) tells of an 18th century find at the bottom of the Mount, a hill just under 10km east of Biggar Common, of a boulder built cist, gravel floored and with a single cist cover, 1.4m long by 0.8m wide and deep, containing a crouched inhumation with 'three flint stones, one resembling a halbert, another of circular form and the third cylindrical', besides a small ring. There is also an account (Irving and Murray 1864 1, 20) of the removal of a cairn in the early 19th century at Borland Mill, on the south side of the South Medwin,
nearly 10km NNW of Biggar Common. In one cist were two jet ornaments; in another a stone axe. Jet in the shape of axehammer beads recurs in a find of six jet and three amber beads from a tumulus at an unknown location in Lanarkshire (NMS EQ 1108-116). A ground stone wedge deposited with beaker sherds in the smaller enclosure at Wellbrae, and a stone axe buried beside the enclosure, suggest similar use of stone artefacts (Table III:4, no.11).

It may be noted that the stone axe, wedge and other implement flakes from the Late Neolithic Wellbrae enclosure were all of local stone; the axe with a beaker in the Biggar Common long mound was not of Group VI stone. This is in contrast to the three axes found in association with the possibly Early Neolithic structure on the summit of the ridge, all evidently of Group VI stone. It is possible that the Late Neolithic witnessed increased exploitation of local sources in contradistinction to an Early Neolithic reliance on imports. More information would be needed to establish the validity of this point.

Other evidence for special deposition of axes is less substantial, and, indeed, may sometimes derive from associations projected wishfully by collectors. In this category are two 'felstone' axes, one confirmed as being of Group VI stone (PBL 4), from Harestanes (AF 476, 477), where there is also a small stone setting (Table
III:5, no.3), not necessarily related. Similarly the remarkable group of five axes from Biggarshiels (Table III:3, nos.6,7,12) have no known connection with the 'four large stones ... the remains of a Druidical circle' which stood on top of a 'round hill' on Biggarshiels, although arrowheads are reported from near the site (NSA III,363). There is an axe from Harlaw Moor (AF 473), but not necessarily from near the long cairn.

The density of axe finds around monuments is given detailed consideration in each Catalogue entry under 'Artefact Context', but the information has not generated any overall conclusions. A few sites (Easton; Balwaistie) coincide with a local density of axeheads; others (Greens Moor; Burngrange; Weston) have no certain finds from within a 2 - 3km radius, although finds proliferate at a little greater distance. One tentative possibility could be that axe deposition is attracted to landmarks near monuments: two axes come from Bizzyberry Hill above Balwaistie henge; one from Dunsyre Hill beside Easton long cairn; three massive axes from around Tinto Hill, on the other side of which is Westside henge.

These examples may, however, represent activity quite unrelated to the monuments. The strongest indication of ritual deposition derives from the association of axe finds with natural features, notably watery locations. Four finds come from rivers, the
West Water (AF 475), the Water of Lyne (AF 615), the Linton Water (Hunt. B 1914 231) and the Leithen Water (AF 602). Several finds come from peat mosses, including a group of four small axes found c 0.9m deep in peat moss at Fairslacks, Carlops (NT 15 54; AF 510-513), and another of three axes, two of them damaged, found in Biggar Moss (NT 05 38; Biggar Museum 26,27,28). An axe was found during peat cutting at Westloch, Eddleston (NT 25 51; AF 931), another in a peat moss at Grassfield (NT 20 50; Chambers Institute P 5096), and one in peat at Little Sparta, Stonypath (NT 0526 4892; NT 04NE 39).

Finally it must be asked whether any depositional reason can be given for the dense cluster of finds from around West Linton and Dolphinton. As discussed above this collection includes examples of all types of material, from possibly local limestone to exotic flint, and including several Group VI specimens, two probable Killin axes and two of Antrim porcellanite. None of these axes is over 190mm in length, although nine are over 150mm. Deposition practices include the use of rivers and bogs. One tentative suggestion might see this area, remote from external sources of supply, becoming somewhat isolated in the Later Neolithic, and failing to keep up with the general abandonment of the axe as symbol in the second millennium. There is a shortage of Late Neolithic flintwork in the same area, and the only find of Early Bronze Age metalwork concerns a flat axe from
Harlawmuir (NMS: DA 68; Coles 1969). The closest henges, Weston and Balwaistie lie nearer the Clyde, 8 and 10km respectively from Dolphinton. The only beaker find consists of sherds from a Bronze Age cemetery discovered in 1992 in West Water reservoir (F. Hunter, Clydesdale Archaeology conference, 3 Oct. 1992). Continuing use of an article in diminishing supply could account for the absence of large axe specimens from the area, the reduction of many axes to tiny sizes and the re-use of others as polishing stones or hammers. The numbers of imports may be a reflection of these high survival levels rather than any original prevalence of distant contacts.
III:viii Funerary monuments in the Biggar Gap Region

a) Long mounds

The dates from the hearth below the long mound on Biggar Common of c 3300 and 3200 bc set this feature, with its associated Grimston Ware pottery, at the very inception of the dated neolithic, not only in Scotland, but throughout the length of Britain. The circumstances here give support to the apparently precociously early date from a pit with Grimston Ware at Thirlings, Northumberland of 3282 ± 150 bc - HAR 877 (Miket 1976). Strictly speaking, the Biggar Common dates can provide no more than a terminus post quem for that part of the mound which covered the hearths. Nonetheless the excavator believes that mound material was added shortly after the latest fire on the site was extinguished, preserving the sharply defined edges of the blackened pile uneroded. Creation of the primary barrow would thus have occurred within the same period as, or even before, the mortuary structure at Lochhill was built in its supporting cairn, the long timber enclosure was erected at Inchtuthil (Barclay and Maxwell 1991) and facade trenches were dug at Skendleby (Evans and Simpson 1986) and at Fussell's Lodge (Ashbee 1966).

In terms of the actual remains on Biggar Common, comparison with these complex contemporary structures
may appear anachronistic. Nonetheless, this simple, perhaps round mound sealing a hearth seems to have carried some of the same messages as a trapezoidal long cairn built over a mortuary structure; several hundred years later it still commanded such respect that it was regarded as a suitable receptacle for prestige burials. There must be a tendency to suppose that this Late Neolithic activity reflects original function; inhumations laid on the prepared ground surface below the cairn would leave no archaeological trace, and just such a procedure was suggested in explanation of two small ring ditches at North Mains, Strathallan, probably of neolithic date (Barclay 1983). An oval mound at Boghead of Fochabers, covering a burnt layer dated only marginally later than the Biggar Common hearths, also concealed a backfilled, central pit, presumed to have held an inhumation (Burl 1984). There is, however, no necessity to invoke a funerary role for the Biggar Common mound. A celebratory function, commemorating activity on the site, perhaps associated with a demonstration of achievement of neolithic status, could have conferred symbolic continuity in the use of particular sites for ritual practice is a commonplace in British prehistory. Just across the Clyde at Wellbrae (Table III:4:11) deposition of pottery in pits took place by successive groups using Western Neolithic vessels, impressed wares, grooved ware and beaker before the site, by now enclosed, was taken over for funerary deposition.
In a late phase of use the Biggar Common long mound was renovated and given a stone capping to resemble a long cairn. The oval outline of the final mound still bore little resemblance, however, to the elongated, trapezoidal or near parallel-sided long cairns of the Region. Even in decay, Greens Moor and Harlawmuir, 83m and 61m in length respectively, retained their character as strictly linear monuments. There is, however, one site, at Easton, evidently a complex accretion of parts, which may represent externally the multi-phase adaptation only discovered by excavation at Biggar Common. The oval cairn which constitutes the east end of the Easton monument is closely comparable in size with the Biggar Common mound. It could be supposed that the long tail of stones to the west was added in an attempt to aggrandise the monument and to achieve a resemblance to local long cairns, comparable to the conversion of the Biggar Common barrow into a stone faced cairn. Addition of a round cairn on the western extremity of the tail represents the conversion to funerary use which occurred at Biggar Common in the Late Neolithic, although the Easton round cairn may be a second millennium construction, contemporary, perhaps, with the building of a round cairn over the handled beaker on the hilltop overlooking the revamped north side of the long mound on Biggar Common. The sequence at Easton remains open to other interpretations, however. It is possible that an
Early Neolithic elongated narrow cairn received the later addition of an oval 'head' on the east end. This reverse sequence would parallel the Biggar Common history by placing the oval mound into the Late Neolithic, as an addition to an Early Neolithic monument; at Easton the oval mound forms an appendage to the early cairn; at Biggar Common it envelopes and conceals the smaller monument.

The evident complexity of both the above sites, and the ambiguities which attend interpretation must act as a warning over the substitution of classification for interpretation at the remaining four long cairns in the Region. External trapezoidal form may conceal a multitude of variables in the history of each site. One variation is clearly displayed, at Burngrange, where a surviving chamber and indications of two other structures allows the monument to be classified as a chambered cairn. When complete, however, the cairn must have possessed a regular trapezoidal outline, almost identical in form and in dimensions to such a classic long barrow as Willerby Wold (Manby 1963, 178, fig.3). The Burngrange cairn has been 'lithicised' by the addition of large upright kerb stones, an act which accords with chambered cairn practice in the Clyde province and in south west Scotland (cf. Cairnholly I; Boreland). Sequences elsewhere suggest stone chambers to post date non-megalithic structures, at least in stratigraphic
terms (Kinnes 1992(b)). Given the complexities of re-use and adaptation at sites such as Lochhill and Slewcairn, however, no linear progression of types can be supposed inevitable. The chambered cairn at Burngrange cannot be regarded as being a successor to the giant Greens Moor monument, which must clearly have continued to make its presence felt in the valley of the Westruther Burn, where the two sites, only 750m apart, are intervisible. Burngrange does, however, provide further evidence for variation in the choice of monument form. In so doing it may give some support to early records of a 'dolmen' called Arthur's Table having existed beside the River Tweed at Lour, near Stobo (C:7).

Greens Moor, Harlawmuir and Broughton Knowe remain enigmatic in terms of their internal structural form and function. It may be supposed that in common with excavated trapezoidal mounds in the north each site covers some form of defined mortuary space, or 'chamber', whether axial, as at Street House, or lateral as at Dalladies. At Greens Moor structures may include megalithic chambers, their positions indicated by the upright slabs visible in cairn material. Whether the convex proximal ends of these cairns represent original cairn outline, as at Dalladies, or infilled crescentic forecourt, as at Slewcairn and Lochhill, is unknown; the suggestion of a forecourt at Harlawmuir may be merely an effect of robbing. The regular outline of the
Harlawmuir cairn suggests a unitary structure, although no neolithic long mound should be supposed to have had a simple history. Greens Moor, on the other hand has a slight change of alignment, suggestive of phased construction, although the effect may be the result of adaptation to the slope in the ground. Both mounds probably incorporate evidence for different phases of use, but the classic, elongated trapezoidal form of the final monuments is likely to have been imposed by the mid third millennium bc at the latest.

In planning, the outline of the badly robbed cairn on Broughton Knowe was not easy to distinguish. Intensive archaeological activity on the hill in the form of survey for the Peeblesshire Inventory and investigation by excavation of adjacent sites failed to observe the quarried mound before aerial photography made plain its classic trapezoid outline. It is clear that even the most formally regular sites may easily become difficult to recognise.

Cropmark photography has suggested the possibility of an elongated mound, or perhaps two overlapping round mounds, existing on Sheriffmuir, just across the Water of Lyne from Meldon Bridge (see III:b Prehistoric Landscape). Two pairs of gently arcuate ditches define an area measuring c 25m x 10m. While the feature cannot be classified as a normal neolithic long barrow, nonetheless it may be a candidate for identification.
as a complex mound, on the lines, perhaps, of the barrow on Biggar Common. The recent recognition of a banked and ditched mortuary enclosure at Brownsbank (III:5) increases the range of possible site types to be expected, perhaps also dating to the Early or Middle Neolithic.

The irregular outline of the Biggar Common mound has encouraged an examination of small elongated cairns in the Region in the search for comparanda (C:6). No sites have been identified as being probably funerary on the basis of their elongated form, a major difference from the Biggar Common situation being the absence of clearance cairns in the vicinity of the latter site. Excavation by the CFA in 1992 of an oval heap of stones on Fagyad Hill at NS 9171 2206 (DES 1992, 68) did produce the possibility of a neolithic date for this site, a 9m x 7m x 0.5m mound, which stood alone in a prominent position on a terrace above the Glengonnnar Water, near Abington. A pit containing quantities of burnt material, but no bone, was sealed below the SE edge of the cairn. A scatter of worked chert in contexts sealing the cairn suggested an early period for the site, although it has not been dated. There may be some parallel here with the Biggar Common mound, sealing a hearth, or the pit deposition at, for example, Meldon Bridge.

The six long cairns and the possible mortuary structure in the Biggar Gap Region all lie within a
stretch of country measuring only 22km from north east to south west by c 10km. The nearest neighbours are at least 40km distant in the Lammermuirs (the Mutiny Stones), the Lowther Hills (Stidriggs) and the Ayrshire uplands (Loanfoot). The cluster of sites thus appears to represent a genuine prehistoric phenomenon, however depleted surviving numbers may be. The clustering must increase the possibility that more sites existed, perhaps including one in the 'black hole' in the Dolphinton - West Linton area. Away from the site clusters, 'monuments' may have been simpler in form, on the lines of the pit and cairn at Fagyad Hill, and perhaps also the hearth and simple mound on Biggar Common.

The surviving sites all lie between 260m and 320m OD, an altitude which should be viewed in relation to a base level set by the Rivers Clyde and Tweed at 180 - 190m OD. The sites are thus all upland, but the Pentland cairns are only c 80m above the rivers. On the steeper hills to the south similar gentle slopes are seldom available, and on Biggar Common and on Broughton Knowe the cairns were built on the ridge summits at 320m OD. In every instance evidence for prehistoric or later agriculture and settlement is not far distant, and none of the cairns can therefore be categorised as remote. The association with agricultural evidence might suggest a direct relationship with stone clearance to be a factor in cairn creation. The ditched monument at Brownsbank, and the
cropmark on Sheriffmuir may represent adaptation to different soil conditions. Larger monuments may thus have been more likely to have been created in stony upland areas than on valuable agricultural soils. On the other hand, elevated situations may have been selected as suitable sites for ritual activity. All the sites have long views, which all include a view of Tinto Hill.

b) Other funerary evidence

It is possible that the Early Neolithic mound which sealed the hearth on Biggar Common was a round one, only extended in order to accommodate a beaker burial. If this interpretation is correct the original mound would have given no surface indication of its date and excavation would not have helped without the benefit of radiocarbon dating. It thus seems probable that one category of neolithic ritual site, perhaps including the oval cairn on Fagyad Hill, was essentially non-monumental, and perhaps, also, non-funerary. Another site, excavated by Greenwell (1862) at Ford, Northumberland, consisted of a 5m mound covering discontinuous patches of burnt material, c 5cm thick, from which were recovered burnt bone, flint and sherds of Grimston bowls. Although this mound was not re-used for later burial, the hillside on which it was situated became a cemetery area. A similar sized barrow 100 yards distant, also excavated by Greenwell, contained a food vessel cist.
Greenwell does not discuss whether the burnt bone at Ford was human or animal. Animal bone was certainly present in a similar burnt layer at Lyles Hill, Co. Antrim, with, in this case, sealed pits containing partly burnt human bone (Evans 1953). At Boghead of Fochabers another black layer under a mound was suggested to have been a funerary pyre, but the burnt bone which it contained was so comminuted that it was supposed that it was dry bones that were being consumed, and no evidence that these were human was published. The layer covered a blackfilled pit suggested to have held an inhumation (Burl 1984). An analagous site may have been a round mound at Blackhill, Lesmahagow (NS 829 442) now ploughed down to become a mere swelling in the field c 26m in diameter, but when trenched in 1897 still standing to 3.0m, and considered to be much reduced from its original height (Young 1897). Within the mound was found a ring of clay and small stones, 3.7cm thick surrounding a central deposit of 'rich fat soil and pieces of bone' deriving from a large number of human burials, sealed under a layer of largish stones. The site, at 190m OD on the lower north west facing slopes of Black Hill, overlooking the River Nethan, is 600m from the large kerbed summit cairn (RCAHMS 1978(a), 46 nos.12,13). A standing stone, 1.8m high, now vanished, stood in 1897 100 yards north of the mound, near the site of another such stone while a third stone stood on the farm of Clarkston on the south end of the hill (Young 1897, 501).
Nearly 4km south of the Black Hill barrow, just above the River Nethan at Knocken, Lesmahagow, Young reports another unusual site (ibid 500-1). A paved area on the summit of the hill 2.1m x 0.7 - 1.1m, had been surrounded by a low wall of stones. The paving was covered by a thin layer of black material containing charcoal and fragments of bone. Nearby were more than sixteen cists, some containing food vessels, while deposits of animal bones lay in hollows in the old land surface covered by flat slabs; these included a high proportion of jawbones of sheep under one year old.

Neither of the above sites can of course, be confidently assigned to the Neolithic. The only sites with ritual connotations in the Region, apart from the long mounds, which can be so attributed are the pits with pottery deposits at Meldon Bridge and at Wellbrae, the one producing dates of c 2730 bc, the other containing western neolithic sherds. The sites are discussed below in relation to Ritual Enclosures (III.ix), but it may here be pointed out that the pit contents share some similarity with the material from below mounds at Biggar Common and Boghead of Fochabers. It is possible that the two types of deposition, in pits and under mounds, represent alternative methods of disposing of the residues of ritual activity, whether or not that activity included funerary functions. In all the cases cited, as also at Blackhill and at Knocken, the 'disposal sites'
became the centres for later ceremonial activity, including funerary rituals.

There is certainly evidence from the Region for continuity in the use of sites from the Late Neolithic into the Bronze Age. Two pits under an outer ring of cairn material, perhaps primary, at Harehope Cairn gave dates of 2140 and 2180 ± 90 bc - GU 1213, 1214, predating by nearly a thousand years a collared urn cremation inserted into the cairn edge (Jobey 1980). Late neolithic pottery was found in pits under the largest of three cairns at Stoneyburn, on the upper Clyde while a pygmy cup covered a cremation under one of the smaller mounds (DES 1991, 67-8). At Cloburn Quarry neolithic and Early Bronze Age material was deposited on the site over a long period before being sealed by a layer of earth and feldspar chips, forming a platform cairn into which deposits continued to be inserted (T. Pollard, Clydesdale Archaeology conference, 3 Oct.1992). Such instances point to there being no major discontinuity between Late Neolithic and Early Bronze Age ritual practices in the region.

The same conclusion may be drawn from instances of shared neolithic and beaker deposition, the impressed ware and beaker in the same cist at Drumelzier cairn, beside the Tweed (Table III:1:11) and the stone axe and beaker in one burial pit in the Biggar Common mound. The stone wedge found with beaker sherds in a pit at
Wellbrae seems to echo the Biggar Common practice, if not involving so characteristically neolithic an implement. The beaker in a cist with decorated cover slab at Wester Yardhouses may be another instance of this overlap (see III:xi Beakers, below). There are also two interesting references to stone axes being found in cists not far from Biggar Common (see III:vii Axes, above). A collection of three amber and six jet beads in the shape of axehammers from an unknown tumulus site in Lanarkshire (NMS EQ 108-116) may be another instance of continuity in local axe deposition practices into the second millennium.

There remains a problem over how to recognise neolithic funerary or ritual sites which have not been sealed under a long cairn. The primary mound at Biggar Common seems to have been turf built, and perhaps c 10m in diameter. There may have been an Early Neolithic preference for barrows over cairns, found also in the composite mounds at Boghead of Fochabers (nearly 15m in diameter), Pitnacree (27m), and Ford (barely 5m). Such a principle cannot be diagnostic, however. The large, ditched round barrow at North Mains, Strathallan, proved to be uncompromisingly second millennium in date, and a similar context must be suggested for the large, ditched round barrow 200m from the cropmark henge at Balwaistie. Nonetheless, as with the large barrow at Blackhill, an earthen content may be suggestive. Not many such large mounds survive in the Region, although attention may
be drawn to an 11m mound 800m NNW of Burngrange chambered cairn at NT 0272 5017, which rabbit burrows show to contain both earth and stones. There are also a number of cropmark ring ditches in the Region, although mostly small, and probably including some timber round house domestic sites. One larger site at Corbiehall, near Carstairs (NS 9291 4493) consists of a broad, circular ditch enclosing an area c 20m in diameter with central feature. A pair of much smaller ring ditches at Annieston, on the bend in the Clyde, were trenched by the CFA in 1992 (DES 1992, 69). Although both were c 11-12m in overall diameter, one consisted of a narrow ditch, probably representing the wall slot of a timber house, but the other had a ditch up to 4m broad and 1.1m deep, leaving an internal area of only 3m - 6m, suggestive of ritual or funerary function. No dating evidence was obtained however.

A number of small barrows, some ditched, and small ditched cairns exist in the Region. Excavation of two barrows on Broughton Knowe unfortunately failed to recover dating evidence (MacLaren 1967; Ward 1970). Both had been disturbed, but in neither was there a central pit, and funerary deposits may have lain on an old ground surface. The smaller (3.4m) barrow was within a back filled ditch and produced traces of cremation, features suggesting similarities with a series of ring enclosures excavated at Rullion Green, Midlothian (Watkins
1984(a) and (b); Watkins and Murray 1990). A radiocarbon date at Rullion Green of 635 ± 105 bc - GU 1755 might suggest that the Broughton Knowe sites could be related to the series of ring ditch houses on the hill. Two small ditched cairns in Lanarkshire, excavated by the RCAHMS (1978(a), 44 no.7; 53-4, no.55) each covered a central pit. In one case the pit had been disturbed; in the other it was filled with earth and stones, having presumably held an inhumation. There is nothing here to suggest a neolithic origin, but every indication that surface similarities conceal a wide variety of practice and probably derive from a long spread of periods.

A double concentric banked ring enclosure on Broughton Knowe excavated by the RCAHMS during the course of survey (1967, i, 66, no.115A) produced no structural evidence beyond that of the earthen banks, 0.9m thick and 0.23m in maximum height. A small polished stone axehead found within the inner bank need be no indication of date; two chert knives and a scraper were also found, on the surface of the interior. A neighbouring ring enclosure (B) produced neither structural traces nor relics.

Despite the negative evidence from the ring enclosures, one ring site, at Weird Law in Upper Tweeddale, was found to enclose a number of cremation deposits in pits, one dated to 1410 ± 90 bc - NPL -57, and a stone packed central pit measuring 1.6m x 0.8m x 0.3m deep. The deposits were sealed by a layer of burnt
debris under a small cairn of stones, 7.6m x 5.8m (MacLaren 1967). The site type has been dubbed 'Enclosed Cremation Cemetery', but it may be noted that a similar ring bank and central mound near Wildshaw Burn (III:j) has produced a stone packed pit, as at Weird Law, but no cremations. Unlike the rather different site on Whitestanes Moor, Dumfriesshire (Scott Elliot and Rae 1965), the Weird Law enclosure produced no artefacts other than two flakes of chert. The ring bank may have been intended to enclose a central inhumation, essentially undated, and the dated cremation pits, burnt layer and covering cairn, could represent a later use of the site.

The purpose of the above discussion is to make the point that while burial sites in the Biggar Gap Region are many, firm information on their origins is rare. Given the repeated evidence for extended periods of use of ritual and funerary sites, it must be considered at least possible that a large number of neolithic sites exist unrecognised in the Region. The chances of rescue excavation that brought about discovery of the Stoneyburn cairns and the Wellbrae enclosure have established a realisation of the limitations of present knowledge.
A possible interrupted ditch enclosure on the banks of the Clyde at West Lindsaylands has been suggested to be an Early Neolithic site, and is discussed under settlement evidence (III:iii, above). A further ten enclosures of various types, but all possibly or probably of Late Neolithic date, are listed in Table III:4. These sites range from the 8ha site at Meldon Bridge, to a sub-rectangular enclosure measuring c 40m x 14m at Wellbrae and a circular ditch c 25m in diameter at Hillend. Despite the variability, at least seven of these sites seem very probably to belong to the final third or perhaps quarter of the third millennium bc.

Dates from the basal level and pit packing of the timber stockade at Meldon Bridge averaged 2240 bc (ignoring a weathering cone date of 1791 ± 70 bc); a waterlogged post at Blackhouse Burn, regarded as being a secondary insertion into the bank, gave a date of 2085 ± 55 bc. There is thus a close overlap with dates from two excavated henges to the north of the Forth. At Balfarg, oak from the filling of the post holes of timber circle A gave dates averaging 2343 ± 42 bc, while alder from the same context averaged 2158 ± 35 bc (Mercer 1981(a),45). The very circular, 65m diameter, ditch here may be compared to those of the slightly larger but doubtfully neolithic sites at Rachan Slack and Craigie Burn. Two
dates from oak charcoal in the primary packing of postholes of Ring A at the Class II henge at North Mains average 2122 bc (Barclay 1983,133). Morphologically North Mains is very similar to the sites at Normangill, Balwaistie, Weston and the rather larger Westside. The unusual enclosure at Wellbrae was associated with grooved ware, which was also found in pits outside the Hillend site, with a higher quality of decoration at the latter site. Locally, grooved ware appears within the same date range as those quoted above, being found at Balfarg and in the Milfield Basin, for example at Whitton Hill, where associated dates average 2020 bc (Bowman et al 1990). All the enclosures may therefore be regarded as contemporary, although pottery associations could suggest some phasing. At Wellbrae both impressed and grooved ware was found in spatially discrete clusters of pits, suggesting temporal seperateness. Burgess has suggested that the absence of grooved ware at Meldon Bridge could relate to the earliness of this enclosure. Grooved ware, however, was also absent from the Class II henge at North Mains, while only one, doubtful sherd was found at Cairnpapple (II:b), and none were found in the admittedly very restricted investigations at Blackshouse Burn. Despite the possible chronological or cultural difference that the pottery may suggest, it would appear archaeologically reasonable to regard all the ten sites as part of a single distribution.
This distribution is shown on Map III:Q. Topography has imposed a certain linearity on the pattern, nonetheless a regularity of distance between sites can clearly be observed. Moving from south to north, the distances between Normangill, Hillend, Westside, Balwaistie and Weston are respectively 6.5, 7.6, 7.6 and 6.4km; from Westside to Blackhouse Burn II, a more henge-like site than either Wellbrae or Craigie Burn, is 7.0km; the stone circle at Wildshaw Burn (III:j) joins this pattern at 6.2km from Hillend. The Clydesdale henges thus appear to follow a territorial pattern similar to that of many sets of long cairns (e.g. on the Keir hills, Nithsdale VI:viii), and at only slightly greater distances apart. Each site can be assigned to a locally overlooked stretch of river valley, easily identifiable as its 'territory'.

The doubtful site of Rachan Slack, near the Tweed, is 9.2km SE of Balwaistie and 10km north of a stone setting, possibly the remains of a circle, at Tweedsmuir (see below), while Meldon Bridge enclosure lies 11km downstream. If the Tweed valley is to be regarded as a component part of the same distribution as the Clydesdale sites, account must be taken of the more constricted agricultural opportunities of the narrow Tweed valleys. It would also seem likely that missing sites could be postulated for the area to the north of Rachan Slack and east of Balwaistie, thus narrowing the distribution gap.
Artefact densities around Dolphinton and West Linton certainly favour this area, north-east of Balwaistie, as the location of at least one henge.

The apparent cluster of sites around Blackhouse Burn may be reduced by eliminating the doubtful site at Craigie Burn, and by treating the Wellbrae enclosure as a different type of site, not included in the network. Although the Wellbrae site was used for deposition over a long period, starting during the currency of western neolithic pottery, and although its area at c 560m² is larger than that of the circular ditched site at Hillend, nonetheless, if a choice is to be made between the inclusion of the site or that of the smaller site at Blackhouse Burn, 1.5km distant over Swaites Hill, the Blackhouse Burn nearly circular, apparently ditched, enclosure is the more henge-like.

Given a distribution of c 6-10 sites there is a temptation to analyse the pattern in terms of a rank size hierarchy, setting the two major enclosures on pinnacles as central places. While such a technique may be admirably suited to the hill forts of Wessex (Groube 1981) there are reasons to consider it as inapplicable to a set of Late Neolithic enclosures, particularly the present unusual sites types. One factor must be the almost complete absence of prestige artefacts, other than impressed pottery, from the major sites, a position which is repeated in the paucity of most artefact
types from the vicinity of the sites. A second factor is the difference in the relationship between each of the two major sites and the remainder of the distribution.

Meldon Bridge, on the east side of the Region, is in a pivotal geographical location at the meeting of several valleys, but is at a distance from other Late Neolithic enclosures. Balwaistie lies 21km to the west; Rachan Slack, 11km to the south west is a doubtful site. So far from being central to a group of small henges, Meldon Bridge perhaps acted as a substitute for them. The only certain neolithic activity recorded within the enclosure was the deposition of domestic refuse and impressed ware in pits. Impressed ware is generally alien to the henge tradition, although found in small hengiform enclosures in the Milfield Basin - the western ring ditch at Yeavering and an excavated causewayed ring ditch at Whitton Hill (Ferrell 1990). Nonetheless, similar pit deposition, involving grooved ware, does occur on henges, for example at Old Yeavering henge (Harding 1981), and in both cases the activity may represent the disposal of the residues of feasting. Thus, within a slightly different cultural context, the enclosure at Meldon Bridge may have functioned in the same way as a henge. Its size may be related not to superior rank within a closed set, but to the large area served and the numbers of people, deriving from a dispersed uplands settlement, participating in site construction and
use. This interpretation would accord with the nodal position of the site in relation to several valleys. 3km to the north, below Harehope cairn, the presence of a contemporary population is attested by two dates from pits averaging 2160 bc; 11km to the south impressed pottery similar to that at Meldon Bridge, was found in a cist in a cairn. The continuing role of the enclosure as a focus for second millennium burial is also entirely characteristic of Scottish henges (see Cairnpapple II:b); besides burial within the enclosure, there are cairns just across the Water of Lyne on the opposing promontory of Sheriffmuir.

Within the above interpretation, it remains of interest that the format chosen for the Meldon Bridge enclosure involved timber stockade rather than ditch. The choice gives intimation of the farflung networks of information across neolithic society; particularly indicative, if inexplicable, is the use of avenues of eight pairs of posts at Forteviot, Perthshire and at Dunragit, Wigtownshire as well as at Meldon Bridge. It is possible that the choice also involved a deliberate expression of difference from the henge building traditions of Clydesdale.

Blackhouse Burn, like Meldon Bridge, and several of the large earthwork enclosures in the south, such as Durrington Walls, is in a low situation in relation to the encircling hills, with an outlook directed towards
Tinto Hill, perhaps much as the avenue at Meldon Bridge looks out at Hamildean Hill. It is close in dimensions and plan to the pitted enclosures at Forteviot. Nonetheless, it shares none of the accessibility provided by the meeting of rivers at the latter site but seems, rather, secluded from passing traffic. Nevertheless, it was not remote from settlement if the evidence of surviving agriculture, hut circles and cairnfields on the surrounding hills is to be believed. Excavation of the platform cairn at Cloburn Quarry demonstrated the likely contemporaneity of some of the activities on this site. This cairn, and others on the hillsides around the enclosure, suggest that the area long continued to attract prestige burial. Small cairns within the enclosure may also indicate funerary use; beaker sherds were found here, and 'urns' are said to have been discovered in the stone bank.

Directly adjacent to the large enclosure is the small site, Blackhouse Burn II, evidently consisting of an uneven ditch refilled with stones. The site would appear to be henge-related, but its relationship to the large enclosure is not known. It could have been used contemporaneously, servicing ritual activity in the major site, but perhaps it was out of use, and had been sealed by stones as a method of closure when superseded by the larger site. In either case its proximity to the main enclosure emphasises the significant relationship
between this site and local henges. There are three such sites within 10km of Blackhouse Burn, even excluding the doubtful site at Craigie Burn. The unusual Wellbrae site lies only 1.5km to the east of the enclosure, and western neolithic pottery here suggests that practices of ritual deposition began early at a location only enclosed within a grooved ware phase of use. It does seem that the henge building tradition was strongly established in the vicinity of Blackhouse Burn, an area of comparatively rich economic opportunity in the Clyde valley. The major enclosure is thus likely to have been constructed by these henge building groups, the stone bank being, perhaps, an adaptation to the upland environment, possibly encouraged by difficulties already encountered in ditch digging at the smaller site. The choice of a liminal location avoids over-proximity to any one particular group. The addition of timber uprights into the bank aggrandised the appearance of the site perhaps as a direct response to events at Meldon Bridge. Association between timber enclosures and henges recurs at Forteviot, again with no indication of chronological precedence.

The suggested paradox then, is that the exotic format of timber enclosure with avenue was adopted by a dispersed upland population, while successful henge building groups combined their resources to construct a locally idiosyncratic monument, which later adopted
the fashion set by apparently less prosperous neighbouring peoples. The situation may be used to throw additional light on the nature of the henges themselves. The Class II format is not only locally prevalent, but is shared over many parts of Britain; Arbor Low in Derbyshire is a close copy of Cairnpapple, while at Bow in Mid Devon a 40 - 45m diameter Class II henge with internal pit ring, could stand as a close comparison to North Mains, very much at home in the Biggar Gap Region (Griffiths 1985). Despite this apparent universality, evidence for direct contact between members of a henge building elite class remains elusive. There was no grooved ware at North Mains, and only one, doubtful lugged sherd at Cairnpapple; the only exotic artefacts at North Mains were of pitchstone, and at Cairnpapple were two broken axe pieces, one of Group VI stone, one from Graig Llwyd. It does seem necessary to acknowledge that the shared information networks of Late Neolithic Britain do not appear to have involved much exchange of exotic artefacts by social hierarchies at henges. The monuments may be more suitably viewed as being the meeting places for locally based and largely egalitarian society.

Stone circles are, perhaps surprisingly, almost entirely absent from the Biggar Gap Region, their place being presumably taken by the henges. Circles are
common to the south, in Dumfries and Galloway (V:ix; VI:ix), and it may be from those Regions that the initiative came to erect a stone circle at Wildshaw Burn (III:j), a project which, it seems, may never have been completed (cf. Whitcastles: Table V:1:1). The size of the planned circle is directly comparable to that of local henges, but in the upland situation, and near to suitable rock outcrop, the alternative format would offer an obvious choice.

10km up the Tweed valley from Rachan Slack at Tweedsmuir, where the Talla and Fruid Waters join the Tweed in a relatively broad part of the valley, are three small standing stones (RCAHMS 1967 i, 58-9, no.63). They measure 1.6m, 1.1m and 1.0m in height, and are spaced from 17 to 24m E and S of a 13.4m diameter cairn; possibly they represent the remains of another circle just over 30m in diameter, with the cairn placed eccentrically within it. The location, beside the Tweed, could be regarded as henge-like, but is shared by the Eskdalemuir circles, the Girdlestanes and the Loupin Stanes (Table V:1, nos.2,4) just over 30km to the SE. On the far side of the Tweed from Tweedsmuir, on the farm of Oliver, a cist was found in c 1877 containing a N3 beaker (RCAHMS 1967,i,62,no.93).

2km higher up the Tweed valley, on Nether Dod, a small site was listed as a possible stone circle by the RCAHMS (1967,i,64,no.108), and as an embanked circle by Burl
(1976, 362). It consists of a ring of cairn material around three earthfast boulders 0.5m - 0.8m in height, and may be the remains of a cairn or 'Enclosed Cremation Cemetery'.

Another small stone setting, the Harestanes, at Kirkurd (NT 1240 4432), consists of six large close-set boulders, not all earthfast, enclosing an area c 4m in diameter. The size rules out ceremonial enclosure, and the stones may be the remains of a funerary site, perhaps a robbed-out cairn (RCAHMS 1967,i,63,no.107).

Four large stones regarded as being the remains of a 'Druid Circle' stood on a hillside on Biggarshiels in 1835 (NSA VI,363). The hill in question could be Ewe Hill, on the west summit of which, at NT 049 405, an OS triangulation cairn has damaged one of a pair of barrows (RCAHMS 1978(a),53,no.50).

Records of a 'Druidical temple ... perhaps the largest in North Britain' at the foot of Tinto Hill (Trans Soc Antiq Scot I 1792, 124-9), appear to derive from a description in the Statistical Account (I, 193) of an unusual enclosure on Park Knowe, comprising two narrow concentric stone revetted banks and said to have contained a large mound of earth. Whatever the date and function of this site, it cannot be classified as a stone circle (RCAHMS 1978(a),153,no.314).

Other records of 'Druid Temples', such as one concerning a site alleged to have stood on the hill
near Carmichael manse (NS 92 38) (Irving and Murray 1864, ii, 32), are non-specific and need not have referred to stone circles.

III:x Decorated slabs in the Biggar Gap Region

No earthfast decorated rocks are known in this Region, and the only slab to have been found carrying the usual design of cup and concentric rings is a small stone from the Roman fort at Hallyne, 1.5km W of Meldon Bridge, with a broken cup and three gapped rings (Morris 1981, BDR 2).

Single and double rings, without central cups, decorate a slab of red sandstone found in 1863 in a grave bank at Lamancha, on the NW side of the Cloich Hills, east of the Pentlands. Unusually, some of these designs are carried over onto the broken edge of the slab (Morris 1981 BDR 7).

Small double and single rings also decorated a large slab found outside the enlarged kerb of the cairn at Drumelzier in which the central cist contained Neolithic pottery and an AOC beaker. Craw suggested that the slab could have originally covered the disturbed and empty Cist 2 cut into the adjacent part of the inner kerb of the cairn (Craw 1931, fig.12; Morris 1981, BDR 1).
The most unusual decorated slab was found acting as the cover for a cist containing a beaker in a small cairn at Wester Yardhouses on the W side of the Pentlands. The uppermost side of this red sandstone slab appears to have been flaked off, possibly the result of detaching the piece from living rock rather than representing later damage. On the underside were three sets of concentric rings and other curvilinear designs, with indications of further rings having been broken off at one side. In addition, two triangles were defined by pecked lines and solid small pecked triangles within each angle. These motifs are quite different from the cup-and-ring designs usually found on rock art in southern Scotland, and must, in some sense, be related to the passage grave art of Ireland (MacLaren 1970; Morris 1981 GLW 28).

III: xi  Beakers from the Biggar Gap Region

As Map III:§ shows, beaker finds are distributed widely throughout the Region, the more peripheral specimens tending to be of later types. Clarke's N3 beakers, all now in the NMS, come from a cist at Oliver in Upper Tweeddale (EG 55), from a cist in a cairn at Crawford in Upper Clydesdale (EG:138), found with a bar armlet, and from a cairn at Mossplatt on the hills.
above the Mouse Water in the north of the Region (EG 25). Several beakers or parts of beakers, all probably of developed types, came from a cairn at Limefield, at 290m OD on the moorland edge below Dungavel Hill. This cairn, like others in the Region, covered a wide variety of deposits including food vessels, urns and unaccompanied cremations, below the cairn and among its stones, cisted and uncisted (MacLaren 1984). The site would appear to have been used for burial over an extended period.

At some of these complex burial sites in the Region the period of use can be traced back into the Neolithic. At Drumelzier cairn, on the bank of the Tweed, both neolithic and beaker sherds were found in the same central boulder built cist that also held an upright AOC beaker; other finds included cinerary urns and a fragment of a jet armlet (Craw 1931). At Harehope cairn, on the Meldon Water pits were found containing charcoal dated to $2140 \pm 90$ bc and $2180 \pm 90$ bc - GU 1213, 1214. An AOC beaker appeared to have been disturbed from another pit in which were a Step 5 beaker and an abraded sherd of a Step 4 vessel. The cairn continued to be used for deposition throughout the second millennium (Jobey 1980). The dated pits are not likely to have been significantly much earlier than the beaker.

Apart from an anomalous date of $811 \pm 85$ bc - BM 451 from a cremation in the beaker pit at the centre of the Limefield cairn, above, the only dated beaker from the
Region is the Step 4 example from a cist at Boatbridge Quarry, Thankerton, where the accompanying inhumation gave a date of 1780 ± 60 bc - GU 1122 (Clarke et al 1984). Despite the doubts which have been cast on the validity of typological seriation in establishing beaker chronologies (Kinnes et al 1991, 38), it would seem likely that the AOC beakers from the Region could be 200 to 300 years older than this. Perhaps the earliest beaker would be the European Bell Beaker found under a small cairn in a pit dug into the long mound at Biggar Common, which was accompanied by a polished stone axe and lithic material; an AOC beaker had been broken over the cairn. This association of beaker and stone axe resembles the circumstance at Drumelzier of association between beaker and impressed ware. This is not simply an issue of continuing use of an old site, as represented perhaps by the find of an AOC beaker sherd within the Blackhouse Burn enclosure. Such an occurrence may mean little more than the insertion of a beaker cist into an esker at Newbiggingmill Quarry (Welfare 1977), perhaps under the illusion that this was a long barrow. At Biggar Common, on the other hand, not only is there direct association between neolithic artefacts and beaker, but the act of deposition of stone axehead with inhumation echoes the same event seen in the Late Neolithic burial at the W end of the mound, albeit with a rather less ornate implement. The same type of association is seen at Wellbrae.
where a stone wedge was found in a pit with beaker sherds beside an enclosure containing Late Neolithic pit deposits. Beaker was also found in grooved ware pits in this main enclosure, and occurred in topsoil in an extension to the main enclosure.

These instances of direct neolithic-beaker continuity will be increased by publication of the detailed excavation results at Cloburn Quarry cairn to the N of Blackhouse Burn; again a variety of neolithic and later artefacts have been recovered from pit deposits below a cairn (T. Pollard: Clydesdale Archaeology conference 3rd Oct. 1992). Only the beaker is missing from a similar sequence of events at Stonyburn cairn (DES 1991, 67-8). More enigmatic is the re-use of a slab decorated in neolithic style as a cist cover in a beaker burial cairn at Wester Yardhouses (MacLaren 1970).

It would seem that the beakers of the Biggar Gap Region represent, in their earliest appearance, one additional status symbol adopted by the flourishing Late Neolithic society of the Region. The most common burial rite using early beakers involves inhumation in a pit or cist below a cairn; the most usual other grave goods are broken sherds either of another beaker, or, as at Drumelzier, of neolithic pottery. Only three unmounded beaker cists have been discovered in the Region, probably the earliest of these dated to c 1780 BC, as against over a dozen such cists in East Lothian. These practices

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continue habits of pit deposition already adopted during the Neolithic, as at Meldon Bridge and at Wellbrae, and occasionally involving individual inhumation, as at Biggar Common.

Introduction of beakers thus did not involve any major break in tradition, and indeed the same sites continued to be enlarged and used throughout the second millennium. The long mound on Biggar Common was given a stone casing subsequent to the inclusion of the beaker pit; the greatest effort was expended on 'monumentalising' the north side of the cairn, which would be viewed from a new cairn site on the summit of the ridge containing an unusual handled beaker. At Limefield cremations may still have been being added to the cairn in the first millennium bc if the radiocarbon date of c 811 from the central cist is reliable.

III:xii Regional Summary

This inland Region, defined very much on the basis of its monument distribution cluster, covering a range of different environments, is perhaps of doubtful overall unity.

The earliest known monument may be the Late
Mesolithic structure on Biggar Common, on a site which was to be used for Early Neolithic ceremonial and Late Neolithic funerary deposition. There are five other long mounds in the Region, representing variations on the theme of long trapezoidal cairns, besides one possible mortuary structure. From the Late Neolithic there are a number of henges and other enclosures, including two exceptional large, but very different sites. While the funerary cairns tend to the higher ground, the enclosures are generally in lower positions, sometimes on the lower slopes overlooking individual valleys.

Numerical richness of artefact collection, particularly around the south Pentlands, supports the impression given by the monuments that this was a densely settled area. There is little in the way of prestige artefacts, however, other than a series of large 'Cumbrian Clubs' and a jadeite axe piece, all found in relatively remote locations, and three good quality flint axes. Antrim porcellanite and Arran pitchstone occurs in the Region, but relatively little good quality imported flint. There is a fair scatter of beakers, found principally in funerary contexts, but no cup-and-ring marked rocks.

It may be suggested that a large population was present in the Biggar Gap Region, probably throughout the period, in touch with current trends, but involved relatively little with the outside world. The
monument building patterns suggest an integration of local communities, perhaps rendering display of exotic artefacts superfluous. Thus the burial on Biggar Common falls into local patterns in the practice of monument building, perhaps even in the inclusion of axes as burial accompaniments, and is only exceptional in its use of imported flint artefacts.
Table III: Pottery Sites in the Biggar Gap Region

1. Stoneyburn cairns, Clydesdale NS 9606 1963
   DES 1991, 67-8, I. Banks 260m OD
   Excavation by the APG in 1991 of three small cairns on a knoll beside the A 74 found that while the two smaller cairns concealed cremation pits, one with a pygmy vessel, the largest covered a number of pits dug into redeposited natural soil. 'These produced pottery ranging from Late Neolithic to middle Bronze Age in date and a variety of flints'.

2. Hillend, Roberton, Clydesdale NS 9440 2795
   Inf: J. Hamilton, B. Finlayson, CFA; 220m OD
   T. Cowie, NMS
   Excavation by the CFA in 1991 of a narrow trench between two cropmark enclosures beside the River Clyde encountered pits between the two enclosures, containing grooved ware. The sherds display incised patterns in panels between vertical ribs in the Durrington Walls style. The two enclosures are listed in Table III:4.

3. Annieston, Thankerton Quarry, Clydesdale NS 992 375
   A scatter of artefacts, among which were neolithic sherds, including rim sherds, were found in ground disturbed by sand and gravel workings on the S bank of the R Clyde. Finds were donated to Biggar Museum. The pottery was of Western Neolithic type, of the same kind as has been found on Biggar Common (no.7).

4. Cloburn Quarry cairn, Clydesdale NS 947 415
   DES 1987, 46, M. Kemp; 1989, 60, E. Archer, G. Hamilton
   T. Pollard, lecture, 3 Oct.1992
   A platform cairn excavated by HBM and others, in 1986-89, sealed a land surface on which deposition had continued over a period spanning the Neolithic and Bronze Age. Neolithic pottery was among the finds including pieces in a shallow scoop which also contained burnt bone, charcoal and lithics.

5. Wellbrae enclosure, Clydesdale NS 9661 4010
   Excavation in 1991 by the CFA of a subrectangular cropmark enclosure (see Table III:4) found a high density of pit and posthole features. c 600 pottery sherds and other artefacts were recovered from the pits. Three periods of use were identified on the basis of the ceramics.
   Earlier Neolithic  Broken sherds of plain bowl pottery representing c four vessels were found in a few pits. These features, which were not postholes, were identified as rubbish pits.
II Later Neolithic  A large collection of impressed pottery formed the major ceramic assemblage. Rims were angular and vessels narrowed towards the base, although actual bases were poorly represented. Decoration on the rims included corded lines and cord-impressed maggots. On the bodies there was a wide range of impressed designs using bird bone, stick or fingernail, and, again, cord impressed maggots. Comparisons with wares from sand dune sites, Hedderwick and Luce Sands, seem closer than with Meldon Bridge. Sherds from single vessels were found in different pits. There was no sign of post pipes in the pits which contained pottery although the disposition of sherds around the pit edges could suggest packing.

III Late Neolithic  grooved ware and beaker were found together in a few pits in the SE corner of the main enclosure (excluding the annexe to the E), and the enclosure ditch itself was also associated with grooved ware. No grooved ware pit cut any of the more numerous pits with impressed wares. Ribbed decoration in the Clacton style and use of applied pellets, as at Rinyo are noted, and plain vessels were also present. The pottery was not in as good condition as the other types.

6. Castledykes Roman fort, Clydesdale  NS 928 441
DES 1985, 40, E. Archer  200m OD
Several pieces of prehistoric pottery with 'dot decoration' were found outside the southern defences of the Roman fort.

7. Biggar Common, Clydesdale  c NT 007 385 -
DES 1987, 44, E. Archer, M. Brown  010 390
1989, 60, A. Sheridan  320-350m OD
1990, 37, D.A. Johnston, T. Ward
1991, 66-8, T. Ward
Clydesdale conference, 3 Oct.1992
Neolithic pottery, amounting to over 2000 sherds, has been recovered from Biggar Common in field walking and in excavation. The overwhelming majority of the pieces were of western neolithic type, shouldered and unshouldered plain bowls in the Grimston Lyles Hill traditions. A range of sizes and quality of wares were present, and cooking residues attached to some vessels await analytical results. Besides a general scatter of finds, clusters of sherds occurred and excavation has investigated four of these occurrences. One concentration of sherds proved to coincide with posthole evidence of a structure; pottery was found in the postholes and other features, and dates from these features are awaited. A few sherds were sealed under Cairn 1, on the old land surface, and more were recovered from hearths under the long mound giving dates of 3300 ± 50 bc and 3200 ± 70 bc - GU 2985, 2986. The pottery from these different contexts was all of identical type.

A very few sherds of impressed wares, similar to those from Wellbrae enclosure (5), were found scattered over the Common. These include pieces of a large bowl with horizontal flanged rim found in upcast from ploughing near Cairn 3 (NT 0105 3889).
8. Wester Yardhouses souterrain, Clydesdale

Fairbairn 1924; T. Cowie, pers. comm. NT 0042 5079

260m OD

Sherds of pottery, including rim sherds were found in excavation of the area outside the entrance to the souterrain at Wester Yardhouses in 1924. These sherds are from western Neolithic vessels.

9. Broughton Knowe round barrow, Tweeddale

Maclaren 1967, 100-2 NT 09 39

300m OD

Excavation of a small ditched barrow found three small sherds of pottery in the lowest levels of the loose filling of a pit; two further sherds, with scraps of cremated bone and charcoal, were found below the undisturbed barrow. Three wall sherds of fairly hard black ware with pale speckled granite grits, the internal surface lost, but surviving to 13mm of thickness, were compared by the excavator to wares from Kildalton, Islay (NMS: HM 327) and Knappers, Dunbartonshire (NMS: EO965), the latter a Rothesay style bowl. Two small wall sherds, 10mm and 15mm thick, of fairly hard dark grey ware, buff on the exterior, were compared to wares from Bicker's Houses and Glecknabae, Bute, and from Hedderwick sands, again within a western Neolithic tradition.

10. Brownsbank enclosure, Clydesdale

RCAHMS 1978(a), 145-6, no.275; M. Brown, pers. comm. NT 0741 4283

265m OD

On sectioning the ditch of this possible mortuary enclosure in 1975 the RCAHMS recovered from topsoil two small fragments of coarse, handmade pottery. At the time these were thought to show 'a marked resemblance to certain Iron Age wares of the Tyne Forth Province'. Re-assessment of the nature of the enclosure on the basis of aerial photographs taken in 1992, may require also reconsideration of the pottery.

11. Drumelzier cairn, Tweeddale

Craw 1931, 366-8, fig.9(c) NT 1231 3265

220m OD

Several sherds of an impressed ware vessel were found in 1931 at one end of the small, central, boulder built cist below the cairn beside the R Tweed at Drumelzier. In the centre of the cist was an upright AOC beaker. The sherds came from a vessel with angular, impressed rim, similar to pottery found at Meldon Bridge enclosure. Sherds from another beaker lay with the impressed pottery.

12. Meldon Bridge enclosure, Tweeddale

Burgess 1976; DES 1977, 27 C. Burgess NT 2205 403

180m OD

The majority of the pottery found in excavation of this Late Neolithic stockaded enclosure was of impressed 'Peterborough' type exhibiting characteristics which have been held to constitute a 'Meldon Bridge style'. Most of the pottery came from pits or depressions, while some sherds were scattered on what may have been an old
ground surface. Pits containing pottery, just inside the W perimeter stockade gave the following dates:

<table>
<thead>
<tr>
<th>Date</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>2736 ± 90 bc</td>
<td>SRR 640</td>
</tr>
<tr>
<td>2726 ± 180 bc</td>
<td>SRR 643</td>
</tr>
<tr>
<td>2132 ± 80 bc</td>
<td>SRR 645</td>
</tr>
<tr>
<td>2336 ± 50 bc</td>
<td>SRR 646</td>
</tr>
<tr>
<td>2290 ± 55 bc</td>
<td>SRR 647</td>
</tr>
</tbody>
</table>

The pottery from these various contexts was all of impressed type, with angular, often T-shaped rims bevelled to the inside. Although the pits should provide a closed context with securely associated dates, it must be recognised that ritual deposition of domestic refuse may result in the incorporation of earlier material. Further 'Late Neolithic' sherds, presumably of similar type, were recovered in 1977 in the upper levels of a 'substantial palisade trench' which was located in the eastern part of the enclosure.

One pit on the S side of the site, Pit H5, contained plain, coarse sherds unlike any others on the site. One pit, 12m inside the entrance, Pit F22, had been filled with stones, smashing two bucket shaped urns with decorated rims which had contained cremations. Although described as being 'no ordinary cinerary urns' there is no suggestion that they were neolithic.

Table III:2 Arrowhead finds from the Biggar Gap Region, excluding barbed and tanged

1. Stoneyburn NS 9606 1963
   One leaf shaped arrowhead, from excavated area around small cairns; DES 1991, 628

2. Cloburn Quarry NS 947 414
   A 'dummy arrowhead', from cremation pit below platform cairn, with neolithic pottery, an axe flake etc.; DES 1989, 60.

3. Swaites Hill, E side of NS 95 43
   'Several flint arrowheads', now lost, from a cairn; Greenshields 1864, 30.

4. Bagmoor, Pettinain NS 95 43
   Lozenge shaped arrowhead, 1961; NMS: BME 144

5. Mountainblaw, Forth NS 97 55
   Lopsided arrowhead, with other flint and chert artefacts; donation by Forestry Commission 1976; PSAS 107, 333.
   Tiny leaf shaped arrowhead; NMS: BME 155.
6. Easter Heathland, Forth
Leaf shaped arrowhead, pale grey flint, bifacially retouched, 26mm x 4mm; donation, with other flints, by Forestry Commission, 1978; NMS: AD 2394.

7. Biggar Common
Several leaf and willowleaf arrowheads of chert and flint; from forestry ploughing; DES 11987, 44; 1990, 31; Inf: T. Ward.

8. 'Borrowmuir', now Burghmuir
'Flint arrowheads have been picked up upon Borrowmuir'; Hunter 1867, 4.

9. Skirling
Leaf shaped arrowhead, 1860; NMS: AD 546

10. Weston Camps
Leaf shaped arrowhead found 1979, R. S. Murray; NT 04NW 38.

11. Dunsyre Moss
Leaf shaped arrowhead of grey stone, 1.5" x 1" (38mm x 25mm), 1884; NMS: AD 2266.

12. Dunsyre
Lopsided arrowhead, pale grey flint, 1.7" x 0.9" (43 x 23mm), 1889; NMS: AD 2261.
Eight leaf shaped arrowheads; NMS: BMA 2449-50, 2460-5.
Three triangular, three leaf shaped arrowheads; GAGM Mann Coll, M 183, 226.

13. Easton
Leaf shaped arrowhead, grey stone, 1.4" x 0.85" (36mm x 22mm), 1887, NMS: AD 227.
Two triangular flint points, 0.95" x 0.6" (24mm x 15mm), 1891; NMS: AD 2291-2.

14. Townhead
Five leaf shaped arrowheads, four flint, one grey-green chert, some broken; NMS: AD 2272-3, 2326-8.

15. Medwyn Bank
Two triangular, three leaf shaped flint arrowheads, some broken; NMS: AD 2263-4, 2267-9.

16. Oldshields
'Several arrowheads of flint were lately found near these stones' (four large stones on top of a round hill); NSA VI, 363.

17. Walston
'A broken arrowhead of flint'; Anderson and Black 1888, 349 (said to be in Hunterian Museum).
18. Yardhouse
Triangular arrowhead with incipient tang, white flint, 0.8" x 0.7" (20mm x 18mm), 1887; NMS: AD 2278.

19. Corse Law
Two leaf points with broken tips, an apparently unfinished point, an oblique arrowhead, a possible chisel arrowhead and seven barbed and tanged point, all of flint, from forestry ploughing; A. Clarke 1989.

20. Dolphinton
Two leaf shaped arrowheads, one of radiolarian chert found in 1922, the other of grey flint, its tip broken, 0.9" x 0.6" (23mm x 15mm); NMS: AD 1466, 2270.
Two triangular arrowhead, one of pale grey mottled flint, 1.4" x 1.1" (36mm x 28mm), the other of dark grey flint; NMS: AD 2265, 2777.

21. Meadowhead, Dolphinton
Triangular arrowhead, grey chert, 1.0" x 0.55" (25mm x 14mm), 1863; NMS: AD 2276.

22. Newmill, Dolphinton
Petit tranchet derivative arrowhead, mottled grey flint, 1.75" x 1.1" (44mm x 28mm); NMS: AD 2329.

23. Kippit, Dolphinton
Two triangular arrowheads, one of grey stone, one of red chert, 0.75" x 0.6" (19mm x 15mm) and 0.9" x 0.6" (23mm x 15mm), 1890; NMS: AD 2274-5.

24. Loch, or Slipperfield Farm
Twelve leaf shaped or triangular arrowheads, 1" - 1.5" (25mm - 38mm) in length, 1902; NMS: AB 1014-25.

25. West Linton
Thirty one leaf shaped arrowheads, purchased 1902, 1910; NMS: AB 993-1002; AD 1379-1409.
A collection of flint implements from West Linton purchased by the NMAS in 1910 (AB 1315-53) includes a transverse arrowhead of brown flint (AB 1338).
Three leaf shaped arrowheads, 0.8" - 1.0" (20mm x 25mm); Hunt B 1914 1032.
Two broken arrowheads, 0.95" and 0.87" (19mm and 22mm); Hunt B 1914, 224/8,9.
One trapezoidal arrowhead, 0.9" (23mm); Hunt B. 1951, 1034.
One hollow based arrowhead, 1.1" (28mm); Hunt B. 1951, 1035.

26. Laidlaw Hill, West Linton
Implement collection including pointed tools and leaf shaped arrowheads, purchased 1907; NMS: AB 1163-1218.
27. Cottage Farm, West Linton NT 15 52
   Point of grey flint, pressure flaked, elongated oval, 2.6" x 0.7" (66mm x 18mm), found 1923; donated 1971; NMS: AD 2348.

28. Kailzie Home Farm NT 276 383
   Leaf shaped arrowhead, yellow flint, triangular form, 1.4" x 0.95" (36mm x 24mm), 1963; NMS: AD 2305.

29. Eddleston District NT 24 47
   Leaf shaped arrowhead; NMS: BMA 2255.

30. 'Between Cardrona and Traquair' NT 33 NW
   Part of a leaf shaped arrowhead, with other flints, private possession; Inf. NMS 1982.

Table III:3 Axes from the Biggar Gap Region over 190mm (7½") in length

   Information, including descriptions of material, is taken from museum catalogues and quoted sources:
   NGR to 6 or 8 figures only where findspot identified.
   AF numbers refer to axes in NMS.
   B 1951 = A Henderson Bishop collection acquired by the Hunterian Museum in 1951.
   LNK = a Lanarkshire axe, numbered by Ritchie and Scott 1989.
   L = length

1. Crawford B 1951 - 906; Annable 1987, 60 NS 95 20
   L 396mm. Largest known rough-out of Cumbrian stone.

2. Lochyloch Biggar Museum D 26; NS 92 29 3505
   NS 93NW 5; found at 250m OD L 315mm; probably Group VI

3. Tinto Hill AF 38; LNK 13 NS 95 34
   L 292mm; tuff; Fell 1964, 54 Cumbrian Club

4. Candybank AF 495 NT 06 21 4095
   L 267mm; 'granitic stone'; found ploughing

5. Crawford B 1951 905 NS 95 20
   L 264mm

6. Burnhouse, Wiston AF 251 NS 93 32
   L 254mm Fell 1964, 54, Cumbrian Club

7. Biggarshiels AF 21 NT 04 40
   L 241mm 'felstone'
8. Biggarshiels AF 22
   L 229mm 'felstone'
   NT 04 40

9. Bankhead AF 483
   L 222mm 'claystone' Fell 1964 54, Cumbrian Club
   NS 98 44

10. Carnwath AF 484
    L 210mm 'felstone'
    NS 98 46

11. Dunsyre AF 98
    L 206mm; 'rough pecked greenstone axe'
    NT 07 48

12. Biggarshiels AF 23
    L 203mm; 'felstone'
    NT 04 40

13. Castlehill, Peebles AF 252
    L 203mm; 'felstone'
    NT 248 403

14. Westsidewood AF 598
    L 201mm; 'dark, porphyritic stone'; a well finished axe.
    NS 97 51

15. 'From a camp near Libberton' AF 485 c NS 99 42
    L 197mm; 'greenstone'; but not tuff; rounded section.

16. Huntfield AF 1023; LNK 8
    Butt end only of large axe, surviving length 183mm; Group VI
    NT 01 40

Table III:4  Late Neolithic Enclosures, Henges etc. in the Biggar Gap Region
Nos. 1-8 all have Catalogue entries III:b - III:i

1. III:b Meldon Bridge; stockaded promontory enclosure; 500m x 240m
   NT 205 405
   180m OD

2. III:c Blackshouse Burn I
   Sub circular, timber revetted, stone banked enclosure; 300m x 280m
   NS 9527 4050
   290m OD

3. III:d Blackshouse Burn II;
   Circular enclosure, its segmented ditch refilled with stones; 40m internal diameter.
   NS 9509 4053
   290m OD

4. III:e Normangill; Class II henge;
   c 35m internal diameter
   NS 9725 2212
5. III:f Weston; Class II henge  
   62m x 36m internal diameter  
   255m OD

6. III:g Westside; probable Class II  
   henge; 75m x 60m internal diameter  
   230m OD

7. III:h Balwaistic; Class II cropmark  
   henge; c 52m x 38m internal diameter  
   250m OD

8. III:i Rachan Slack; possible henge  
   88m x 76m internal diameter  
   210m OD

9. Craigie Burn; circular ditched  
   enclosure; RCAHMS 1978(a), 149, no.29;  
   215m OD  
   Harding and Lee 1987, 393, no.293  
   Traces remain of the ditch of this circular, double  
   entrance enclosure on the terraces on the E bank of the R  
   Clyde. Originally it had both inner and outer banks, now  
   ploughed away. The 1st ed OS map shows the interior to have  
   been in use as a Curling Pond, and it remains a dished and  
   sometimes waterlogged area. The ditch encloses an area  
   nearly 80m in diameter. Although Harding and Lee consider  
   this to be a possible henge, it seems as probable that it is  
   a later prehistoric earthwork, many of which, such as  
   Burnfoot (NS 94SE 32), 1400m to the S, are circular and  
   occupy equally non-defensive situations (cf. also Rachan  
   Slack, above).

10. Hillend, Roberton (Fig. III:4)  
    Two enclosures; grooved ware pit  
    220m OD  
    Two cropmark enclosures lie 20m apart on the W bank of  
    the R Clyde, 700m S of Roberton (RCAHMS 1978(a), 152,  
    no.303)  
    The W enclosure is the larger, 65m E-W x 45m, within a  
    broad sub-rectangular ditch with expanding terminals at  
    the 10m wide entrance. Welfare (1980) has suggested a  
    possible Roman date for the enclosure.  
    The E enclosure, on the bank of the river, falls partly  
    into rough ground, and only the W part is visible on APs.  
    Two curving ditch terminals at a SW entrance suggest the  
    enclosure to be circular, c 25m in diameter. Harding and  
    Lee (1987, 397-8, no.296) consider this enclosure  
    'unlikely to be henge-related'.  
    Excavation of a 3m broad trench between the two  
    enclosures by the CFA in 1991, in advance of pipeline  
    construction, found pits between the two enclosures. Three  
    pits contained artefacts, including grooved ware in  
    Durrington Walls style, with incised patterns in panels  
    defined by vertical ribs, besides flints and carbonised  
    organic material, bone, hazel nuts, seeds etc. Resistivity  
    survey of the W enclosure suggested internal structures;  
    topography rendered the E enclosure unsuitable for  
    survey.  
    (Inf: B. Finlayson; T. Cowie; Clydesdale Archaeology  
Excavation by the CFA in 1991 in advance of pipeline construction examined a pair of cropmark enclosures at the foot of Swaites Hill, 400m SSW of Wellbrae farm steading. The S enclosure centred on a cremation pit with beaker pottery. The adjacent enclosure to the N, however, proved to have a long history of use. It was sub-rectangular, measuring c 40m x 14m, including one subdivision or extension to the NE. The eroded shallow ditch forming the outline may have held a palisade, but does not appear to have been the wall of a roofed structure.

The majority of the dense scatter of pits contained Late Neolithic impressed wares, similar to vessels from sand dune sites, such as Hedderwick. These pits did not appear to have held posts, although some placing of pottery around the edges resembled packing. Sherds of a single vessel were found in separate pits.

A few pits contained grooved ware, and the enclosure itself appears to be associated with this ceramic. Some beaker sherds were found in grooved ware pits, and beaker was the only pottery type found, in topsoil, in the NE extension of the N enclosure. None of the grooved ware pits cut any of those with impressed wares.

In addition, and undated, were many postholes in the main enclosure, a pit containing a clean deposit of naked barley and a pit containing stones and charcoal, possibly a hearth. There was also a collared urn with a bead of cannel coal.

Finds included chert, some flint, a little pitchstone and two axe flakes of local stone, besides an axe deposited between the two enclosures, again of local stone, and a battered stone wedge in the beaker cremation pit.

A domestic function has been suggested for the enclosure, but the long continuity of use, including for funerary deposits, the structured nature of the deposition, and the respect for earlier pits, presumably marked above ground, all suggest ritual practice.

Map III:1 Mesolithic sites in the Biggar Gap Region
Map III:2 Arrowhead finds in the Biggar Gap Region

- Single finds
- Groups
Map III:3 Axeheads from the Biggar Gap Region
Map III:4  Group VI and Group IX axeheads

- Gp VI
- Probable Gp VI or Cumbrian type axe
- Gp IX
- Probable Gp IX
- Jadeite
Map III:5 Large axeheads, over 180 mm in length
Map III:6  Funerary monuments in the Biggar Gap Region
(See Catalogue)
Map III:7  Henges and Late Neolithic enclosures in the Biggar Gap Region
(See Catalogue)
Map III:8  Beakers in the Biggar Gap Region

- Single beaker
- Several beakers
IV THE TWEED BASIN REGION
IV:i Physical setting and environment in the Tweed Basin

The series of rivers which flow from north and south to join the R Tweed before it reaches the North Sea at Berwick create a natural region encompassing considerable local variety. To the north, west and south west the region is surrounded by hills of Silurian greywackes and shales, the Lammermuirs, Moorfoots and Southern Uplands; to the south rise the andesite lavas of the Cheviots. The Tweed itself has carved a narrow passage through the hills from Peebles to Caddonfoot and its upper waters are not regarded as being part of the Region here under discussion, but are included in Region III, the Biggar Gap. The Yarrow, Ettrick and Gala Waters all lie in steep sided valleys with restricted settlement opportunity, which may, however, be regarded as constituting peripheral parts of the Region. East of Melrose the basin proper opens up. Geologically it consists of an extensive swathe of Old Red Sandstone, stretching from Hawick, Hobkirk and the Jed Water in the south, up Lauderdale, to curve round eastwards to Duns and the Whiteadder in the north. A band of igneous rock surrounds Kelso, stretching up towards the Cheviots in the south, and outcropping among the Old Red Sandstone in the form of intrusive plugs (e.g. Little and Great Dirrington Law). North east of Kelso is a large area
of carboniferous sandstone, largely concealed under thick drumlinised drift, constituting the Berwickshire Merse.

Old Red Sandstone is the dominant rock of Lower Lauderdale and Teviotdale, in the latter case spreading up the valleys of the Ale Water to the west, the Rule, Jed and Oxnam Waters to the south, and the Kale Water to the east. Upper Lauderdale and Teviotdale both consist of Silurian rocks, in the latter case constituting a relatively low plateau area. The sandstones of the Merse spread south of the Tweed, outcropping in a range of low hills which divide the coastal plain of Northumberland from the gravel outwash of the Milfield Basin around the junction of the Rivers Glen and Till, a major southern tributary of the Tweed.

The soils of the Tweed Basin include some Class 2 land in North Berwickshire, in parts of the Merse, in the main Tweed valley from Coldstream to St. Boswalls, and in Lower Teviotdale. Here sandy loams or loam topsoils overlie sandy loam in the subsoil allowing for free or imperfect drainage, dependent on slope. More widely present is Class 3 land, found in much of the Merse, Lauderdale and lower Teviotdale and its surrounding tributaries. More slowly permeable soils may be subject to gleying, although an alternative problem of shallowness and stoniness of soil sometimes arises. Certain areas with coarse textured sandy or gravelly
subsoil suffer from a lack of moisture retention, and the Soil Survey handbook (Bown and Shipley 1982, 140) pick out in this regard the Yarrow Association soils of Selkirk and the Lauder Association of Lauderdale. On high ground soils are less suitable for modern agriculture, but are often coarse textured and freely draining, which might suggest advantages for prehistoric farming. Even at 250 -350m OD shallow, stony soils of the Ettrick and Lauder Associations are regarded as being suitable for establishing and maintaining improved pasture (ibid, 145). Upland grazings of bent-fescue grassland in the Southern Uplands and Cheviots can be of considerable value in modern livestock farming regimes.

The climate of the Tweed Basin is notable for its low rainfall and shelter from prevailing south west winds. Hope Taylor notes that at Yeavering erosion of subsoil features suggests that no change in wind direction occurred from the prehistoric to the Anglo Saxon periods (1977, 15). Temperature drops sharply with altitude, curtailing growing seasons, and Parry suggests that in south east Scotland most land between c 175m OD and 340m should be regarded as marginal in terms of the probability of harvest failure (Parry 1985, 39, fig.2:2). Moderate winters are experienced, however, well inland, beyond Hawick, in the lower ground of the river valleys. On the east coast haar, or sea mist,
is a problem of the spring, postponing the advent of warmer weather.

Bands of chert occur in the Old Red Sandstone providing ample pebble chert in the streams and rivers. Flint also occurs rarely in river exposures in Berwickshire (Wickham Jones and Collins 1978, 11). Copper has been mined in Priestlaw granite in the Lammermuirs (Greig 1971, 105), in an area where a series of small stone settings may be attributable to the Bronze Age (Table IV:3:8).

IV:ii The Mesolithic of the Tweed Basin Region

The Mesolithic of this Region was given detailed treatment in 1970 by Helen Mulholland, who examined museum collections and conducted exploratory excavations at three sites, Springwood, Kelso; Kalemouth; and Rink Farm, Selkirk. Collectors have long been interested in the ploughed fields on the terraces above the River Tweed and its tributaries. Mulholland's excavations showed that the material was in topsoil, having apparently eroded downslope from the valley sides.

Mulholland's map of 'mesolithic' sites in the Tweed Basin showed a remarkable density of findspots.
particularly on low hills rather than in river valleys. For example, there are numbers of sites to either side of Lauderdale, between the Bowmont Water and the Tweed and south east of Selkirk, while a few sites penetrate up the Yarrow to St. Mary's Loch. The material from the majority of these locations is not, however, detailed, and it is not clear on what basis a mesolithic attribution has been given. Although ninety four findspots are shown, only fifteen sites had produced microliths, and of the total of 505 microliths identified and examined 227 (45%) came from Dryburgh Mains. The absence of such tools could be in part attributable to poor raw material, particularly in the south of the Region, where coarse rocks, such as quartzite, were much in use; flint is entirely absent from the sites on St. Mary's Loch. On the other hand, the resultant assemblages are likely to be culturally undiagnostic, and attribution to the Mesolithic doubtful.

Mulholland's analysis of the six richest sites (p.108-9 Table 1) shows that a tiny number of microliths came from Crumhaugh, near Hawick, leaving five sites as the major producers of microliths in the Region. Of these, Craigsford Mains in Lauderdale has been suggested to have an assemblage of broad blade, Early Mesolithic character (Morrison and Bonsall 1989, 141). Airhouse, also in Lauderdale, produced an even higher percentage of obliquely truncated points and a predominance of
flakes over blades, suggesting that it, too, may be characterised as early; this site also produced a large amount of neolithic material (see IV:vi). The three valley sites of Dryburgh Mains, Kalemouth and the Rink, Selkirk thus present themselves as the most important microlithic sites of possible Late Mesolithic date. All three are at the junction of two major rivers, respectively the Leader and the Tweed, the Teviot and the Kale, and the Ettrick Water and the Tweed, thus giving access to two different river systems in three directions. All three produce a wide range of microlith types and were probably in use over long periods, but all would have been suitable sites for base camps, with both riverside and upland ecosystems within easy reach. Small quantities of identifiably neolithic material come from all three sites, leaf arrowheads from Dryburgh Mains and the Rink, polished axes from the Rink and Kalemouth; Kalemouth is only 2.3km from the site of the long cairn at Caverton Hillhead.

Map IV:1 shows the sites in the Region with a record of microlith recovery, a very much reduced number from the sites mapped by Mulholland. It may be noted that the absence of sites in the lower Tweed valley would not be remedied by inclusion of English material. Excavations in rock shelters in the Fell Sandstone crags of Northumberland have produced a very small quantity of mesolithic material, thought to be indicative of short
visits only (Weyman 1984, 40). Coastal recovery is absent near the mouth of the Tweed, the nearest sites occurring 20km to the south of Berwick along the sandy shores south of Holy Island (ibid), although it is possible that this coastline may have suffered some truncation by sea level rise. Finds of microliths from Crichness in the eastern Lammermuirs (DES 1966, 25) represent at present an apparently isolated occurrence, perhaps related to East Lothian coastal sites rather than the Tweed river system. However, microliths are found in small numbers on low hills, at Airhouse, and again southeast of Selkirk, representing perhaps some duality of interest in subsistence strategies. The possibly early horizon of the Airhouse site has already been noted, however, while palynology suggests a clearance episode at the Dod, south of Hawick, to be dated to the sixth millennium bc (Innes and Shennan 1991). Pollen cores from sites in Roxburghshire suggest that tree density rose to 80% by the climatic optimum of c 4000 bc, leaving little scope for Late Mesolithic activity in the forests (Hibbert and Switsur 1976; Mannion 1978). Despite the apparent wealth of mesolithic activity in the Tweed Basin charted by Mulholland, it would be possible to argue that any Late Mesolithic presence is likely to have been confined to waterside locations exploiting aquatic resources as a primary subsistence activity.
Excavation of an early ecclesiastical site at the Hirsel (NT 830 406) recovered traces of neolithic occupation on a fluvioglacial gravel terrace at 25m OD beside the Leet Water, just over a kilometre from the Tweed (Cramp 1980). The evidence has been discussed by G. Ferrell (1990). A Grimston ware vessel was said to be associated with the 'floor' of a structure; a second, black burnished vessel in a pit to the west of the structure was probably also neolithic. One pot, presumably the Grimston vessel, gave a thermoluminescence reading of 3500 ± 1000 BC (Prof. Cramp, pers. comm). Worked flint was scattered over the area of excavation. The location, the nature of the remains, and the pottery all resemble those at Thirlings, beside the River Till, 14km to the south-east. Here excavation of an Anglo Saxon settlement found neolithic pits and post-pits with quantities of Grimston and impressed pottery. A radiocarbon date of 3280 ± 150 bc (HAR 877) was obtained from a post-pit (Miket 1976). Although the post holes suggested structures, the evidence was not reconstructable.

A cropmark in a similar riverside location beside the Tweed at Sprouston has been discussed as possibly representing a neolithic structure (Smith 1991). There is a palimpsest of evidence here relating to a large Anglo
Saxon settlement which is described in the Catalogue in relation to the adjacent interrupted ditch enclosure (IV:a). It seems distinctly possible that the pitted feature noted by Smith 200m to the south of the main settlement is a neolithic long house, measuring c 22m x 8m, with bowed gable ends, similar to the larger timber hall at Balbridie, 12m in breadth (Ralston 1982). The alternative interpretation, seeing it as an outpost of the Anglian settlement, would relate it to Hall A at Doon Hill, Dunbar (II:iii), closer in dimensions (23m x 10.4m), but displaying slightly different construction details. The location of the Sprouston structure, on the riverside terrace, resembles neolithic settlement choice elsewhere, from Balbridie on Deeside to Lismore Fields, Buxton (Garton 1987), and including the Hirsel and Thirlings in a more local context. Another such building may have been identified recently at the Clash, near Callander, Perthshire (NN 60NW 22), and it must be hoped that aerial photography will now begin to increase the numbers of such sites. The cropmark at Sprouston was not immediately obvious; it did not appear in earlier transcripts of the cropmarks (see, for example, Reynolds 1980), and was only recognised after repeated photography of the area. The use of river terrace situations may result in such features tending to be concealed under hillwash, flooding and alluviation, and pit defined structures are always elusive. At Sprouston,
however, the current danger would appear to be erosion of the remains. Despite restrictions on ploughing depths of the Scheduled area traces of features on the terraces are evidently becoming fainter (Smith, op cit), and, ironically, the protected status of the site as an Ancient Monument will probably preclude investigation by excavation.

Neolithic structures are notoriously difficult to identify (Whittle 1988, 47-8), with sites consistently being discovered by accident, often during excavation directed to other purposes, as at Thirlings, the Hirsel and Balbridie. The extent of excavation undertaken in the Tweed Basin is extremely limited, and usually directed towards visible upland sites, forts and settlements, in locations perhaps unlikely to have been selected for major early settlement. In particular, very few funerary sites in the region have recorded excavations. Attention may therefore be drawn to a record in the NSA (Vol.III, p.212) of a discovery at Langrew, near Bonchester Bridge (NT 58 11) of a circular patch of ashes and burned bones c 5.5m in diameter below which were 'four holes drilled in the chert or sandstone shale' containing packing stones for posts. Whether these remains were funerary in character, or, as Hardy suggested (1884, 147), domestic, they provide evidence for some form of early activity on the fringes of the Cheviots.
The Cheviot acid grasslands provide a first class environment for the preservation of many forms of structural traces obliterated elsewhere (Reynolds 1982, 44). Palisade trenches, ring ditches and even the ring grooves supporting the walls of timber houses remain clearcut. Steepness of terrain led to the platforming of house sites into slopes, so that house stances survive when structures have vanished. Yet the earliest dated settlement evidence of this type comes from platform settlements of the late second millennium (Jobey, 1980). Sequences of construction at Houseledge, Northumberland suggest the earliest structures to have been the most ephemeral (Burgess 1984, 81-2), and it is likely that among the remains of later prehistoric settlement some evidence for neolithic structures could be obtained. There is a temptation to suppose that spatially adjacent sites should be related chronologically. For example, the stone circle and cairn on Borrowston Rig lie 250m to the east of two possible hut circles which articulate with a cross ridge dyke bisecting a small cairnfield. While the open ground of the ridge is likely to have been utilised from an early period, and indeed, the small cairns could derive from original clearance activity (see below, IV:iv), such use has probably been of long duration and the hut circles themselves are unlikely to be contemporary with the ritual sites.

In one area, however, coincidence of artefact
recovery and settlement traces is sufficiently striking to merit attention. A collection of flint and stone implements from the farm of Airhouse, in Upper Lauderdale (NT 482 538), given to the NMAS in 1925, was described by J. G. Callander (1928; see Table IV:1:3). This large collection, deriving from many parts of the farm, included microliths, arrowheads, scrapers and knives of flint and chert, eight stone axes and one of flint. The most striking group of finds consisted of forty two 'sub-triangular implements', or petit tranchet derivative arrowheads, all found 'in a restricted area of one field about 300 yards west north west of the dwelling house', near the north west edge of the field, below which the ground drops precipitously to the Mountmill Burn. The majority of the stone axes, most of which were badly damaged, came from the field to the south west, where the ground slopes down more gently to the burn. The flint axe and many of the other flint artefacts came from the same field as the arrowheads. The main focus seems to have been along the brow of the hill, at c 300m OD, where Callander commented that small flakes of flint could be seen. The field is now under permanent pasture.

The top of the steep slope and the rocky summit of the hill have been quarried for stone. Despite this damage, however, two possible settlement sites can be identified scooped into the south facing side of the summit and overlooking a boggy hollow in the centre of the field...
which drains to the south west. The larger oval scoop (NT 4793 5372) measures 14m x 10m internally, and has probably been deepened by quarrying which has left a heap of upcast on its north edge. 40m to the south south west a small hollow into bedrock is probably only a quarry. 30m to the west of this quarry, however, at NT 4787 5371, is a circular, saucer like depression, scooped 0.7m into the slope of the hill, measuring nearly 14m in diameter overall, or 7m to 8m across its interior, opening to the east south east. 200m to the south west is a more complex type of Borders settlement, a small circular house platform opening onto a lower yard which measures some 15m across internally (NT 4773 5359); this site overlooks the field in which stone axes have been found. There are thus certainly settlement remains in the area of the lithic finds, and the potential for finding contemporary domestic sites must be present.

Another area which has produced exceptional density of artefact recovery is the farm of Foulden Moorpark, c 3km north of the Whiteadder Water and 5km from the Berwickshire coast (see Table IV:1:13). In 1924 R. Kinghorn, the farmer who had tenanted the land since 1911, published an account of the artefacts which he had collected over this period, detailing the areas of highest density (Kinghorn 1924, fig.1). The farmlands consist of a ridge of land rising to 140m OD at the west end, with south facing slopes looking out over the
valleys of Whiteadder and Tweed, with extensive views to the Cheviots beyond the Milfield Basin. Aerial photographs show that immediately to the west of the farm the ridge is crossed by pit alignments, and on the low ground of Westmains Moor below this there is a complex of field boundaries (NT 95NW 22 and 34). East of the farm a double palisaded circular enclosure c 50m in overall diameter (NT 9230 5725) occupies a knoll from which Kinghorn specifies that no flints originated, but 100m further east, another low knoll produced 'numerous implements', while at the bottom of the slope five implements of an identical yellow-brown mottled flint were found. Six axes and many of the flints, including a lopsided arrowhead, came from Freestonehill Field immediately west of the farm buildings, chiefly from the south edge of the terrace overlooking a Food Vessel cairn excavated by Craw (1914, 316-25). 200m to the north east, at NT 9194 5762, Kinghorn excavated what he took to be a cist, several of which have been found in the vicinity. Kinghorn's account of finding nothing but charcoal in a pit 18 inches below ground surface, under stones, suggests that this may have been a simple pit or a hearth rather than a cist; no dimensions are given. In one form or another it would seem that neolithic settlement occurred on the farm from which up to fifteen stone and flint axeheads and c forty arrowheads have been recorded.
A rather less concentrated recovery of finds from the vicinity of Ruberslaw (NT 580 155, 424m OD) (Stevenson 1957) may raise the possibility of hilltop fortified settlement here, of the type, perhaps, found in SW England at Carn Brea and Helman Tor (Mercer 1981(b); 1986(a)). The rocky summit of this isolated hill forms a prominent feature in the local landscape, with well drained fields of red soil derived from Old Red Sandstone around its flanks; complex remains of a hill fort would make identification of early phases difficult. Finds come particularly from the southern slopes of the hill, where scrapers, knives, arrowheads and axes are all reported. At least two arrowheads (NMS: AD 2294, 2295) were said to come from near the top of the hill. About a dozen stone axes are recorded from the vicinity, including an 11 inch long 'Cumberland Club' from the south side of the hill (Hawick Museum HAKMG 4113).

There is no visible evidence for hilltop enclosures which can be ascribed to the Neolithic. The possibility of simple ramparts, uninterrupted ditches as at Bury Hill, Sussex (Bedwin 1981), or palisades as at Knowth (Eogan 1986), makes identification of such enclosure forms difficult, as there are, of course, many such sites in the Border hills. As has been mentioned above, however, the Tweedside site at Sprouston reveals the cropmark of a curving arc of interrupted ditch which would fall very happily into expected neolithic
patterns (Catalogue IIA:a). The site is clearly a complex one, and includes both an internal double pit alignment and external palisade lines which visibly articulate with the ditches. A small subrectangular feature is situated in the mouth of the central entrance to the enclosure, and this item is enclosed within part of a rectangle of palisade lines. The nature of the feature is entirely obscure, but its placing seems deliberate, suggesting either exploitation of the ditched enclosure for ritual functions, or the use of its ditches as part of a later field system around a domestic structure. Either interpretation would tend to confirm the priority and the early date of the interrupted ditches. The enclosed area measures c 180m x 100m representing a large and presumably major site. It is perhaps surprising that other sites of the same nature have not been recognised on the Tweed and its tributaries, although one more possible example is listed in the Biggar Gap Region, beside the Clyde (West Lindsaylands III:a). It may be that other neolithic enclosures with identical function are defined by continuous ditches, and have thus escaped recognition.

A possibly relevant record from the edge of Coldstream (NT 846 400) concerns double ditches between embankments, discovered when the road to Coldstream Bridge was being constructed above the north bank of the Tweed (Craw 1921, 251). 'Deers' horns and wild boars'
tusks were found in one ditch, although comparisons with finds from neolithic ditches lose some of their force with the mention of 'a stone font' found beside the remains. The site is a kilometre from the settlement location at the Hirsel.
Evidence for Neolithic Agriculture in the Tweed Basin Region

While studies of the Roxburghshire environment by Hibbert and Switsur (1976) and Mannion (1978) show little evidence for a reduction in tree density during the Neolithic, a recent unpublished study of sites in the Bowmont Valley by Dr. R. Tipping suggests that the extent of human interference with the vegetation may have been underestimated (pers comm 1993). Little woodland clearance accompanied the Elm Decline on lower ground at Yetholm Loch, but at the upper end of the valley, at Sourhope, there is evidence for the establishment of pasture in the fourth millennium, which was maintained throughout the first half of the third millennium. Meanwhile both at Yetholm Loch and at higher levels on Swindon Hill cereal cultivation seems to have been taking place by the second quarter of the third millennium, although a relatively dense woodland cover appears to have been maintained throughout the neolithic period at both these sites, any reduction in tree cover being apparently due to grazing pressure.

In view of the above evidence, it would not be surprising if some remains indicative of early cultivation survived in the grasslands of the Cheviots, where preservation qualities are generally excellent. Traces of agriculture from later prehistoric periods
survive well, and Peter Topping (1989) has addressed the question as to whether in Northumberland signs of earlier agriculture are not also present.

Topping draws attention to the sequences of land utilisation observable at Houseledge, where settlement remains, reaching back into the Early Bronze Age, articulate with field systems consisting of stone walled plots. The walls overlie a system of terraces, suggesting to Topping an Early Bronze Age *terminus ante quem* for the terracing (p.173). It would undoubtedly be over-simplistic to identify specific phases of land use with particular chronological periods, and it cannot be concluded that precedence establishes a neolithic date for the terraces. Nonetheless, Topping quotes other examples of terraces, sometimes associated with cairnfields, which represent the earliest visible phases of land use around unenclosed settlements. Within Scotland, terraces can be seen to pre-date scooped settlements, for example at Hayhope Knowe and Bucht Knowe Roxburghshire (Halliday, Hill and Stevenson 1981, 62), and themselves often display complexity of use, with one set of terraces overlying another. The labour involved in the construction of terraces on slopes would suggest that it was unlikely to be undertaken in the primary phases of agricultural land use. As discussed in relation to other regions, therefore, it seems likely that it is the small cairns, generally found on
natural terraces or ridges, which should be related to the earliest periods. A date of 2890 ± 90 bc - Gak 1507 was obtained from charcoal below a small cairn at Chatton Sandyford, Northumberland (Jobey 1968), although this may relate to primary clearance of vegetation rather than to the gathering up of stones into heaps. However, an area such as Hairny Law, above Sourhope Burn, on the Cheviots, where, at 410m OD, a large round cairn (NT 842 214: RCAHMS 1956 ii p.360, no.712) occupies the prominent nose of a ridge carrying small cairns above terraced slopes, would suggest that the potential is present for evidence to have survived from the earliest phases of land use documented by the pollen evidence.

Other possibly neolithic agricultural features consist of cropmarks, either of pit alignments or ditched field systems. The latter occur in conjunction with the interrupted ditch enclosure at Sprouston (III:a), but their relationship with a small feature blocking the central entrance to the enclosure suggests them to be of later date. The narrow ditched lines do, however, edge the segments of an interrupted ditch, clearly utilising their presence, and the chronological gap between the two features cannot be long. It is possible that the field systems belong to the Later Neolithic or Early Bronze Age, and similar systems elsewhere must be examined carefully.

Pit alignments in the Milfield Basin have produced
grooved ware suggestive of a relationship with henges in the area (Harding 1981; Miket 1981). Two site types appear to be at issue here: the short, double pit alignment excavated by Harding can probably be regarded as a ritual setting. The pits excavated by Miket, near Ewart, on the other hand, were components of an extensive layout suggestive of field systems. Miket regards the grooved ware association as primary and the pits themselves as post pits. Similar layouts in southern Scotland appear to be Iron Age in date (Strong 1988; Barber 1985), but clearly no confident assumptions can be made. It may be best to regard the pitted features as being in themselves undiagnostic of date, but to examine individual examples for spatial connotations. For example, a 300m long rather wavering line of pits runs from the spur of the hill at Foulden Moorpark on which flint and polished stone axeheads have been found, up to the summit of the ridge (NT 95NW 22); 250m to the SW, at the base of the hill, a rather more regular pit alignment forms part of a system of rectangular fields. The two pitted features could relate to entirely different periods. Another 200m long line of pits at Frogden (NT 72NE 4), again following an uneven N - S line, could be related to a stone circle said to have stood immediately to the W (Table IV:3:7). Although the above pit lines are uneven they do not appear to use the paired pit system of the Ewart alignment in the Milfield Basin, a feature perhaps related to the interrupted ditch system of digging boundaries.
Excavations at the Hirsel (NT 830 406) (Cramp 1980) produced the pottery finds discussed above, a Grimston bowl and a black burnished vessel (Ferrell 1990). This riverside site also produced a flint scatter and settlement evidence, although association with the pottery is insecure.

Excavation of an Iron Age homestead at Hangingshaw, Yarrow (NT 4029 3004) produced the only other neolithic sherd from the portion of the Tweed basin presently under discussion (Marshall 1968, fig.3). This was again a riverside site, 150m from the Yarrow Water at 160m OD. The rim sherd (NMS: HD 1904), which was found on the outer side of the enclosure bank, is of dark, fairly hard ware and has an irregular thickened rim curving outwards; its affinities are with the Lyles Hill - Grimston Ware traditions found in eastern Britain from Yorkshire to Easterton of Roseisle (McInnes 1969).

Kinnes lists a pottery site at Blackburn Mill, Berwickshire at NT 89 59 (1985, 45, no.36), giving as a reference McInnes 1969. No such site is mentioned by McInnes, although there is a well known hoard of metalwork from the location. [See McInnes 1964, 43, 44: NT 89 66].

Mention may be made here of Meldon Bridge, the enclosure site between the Water of Lyne and the Meldon Burn at NT 205 404 (Burgess 1976). Although full
discussion of this site with its impressed pottery finds has been included in Region III, the Biggar Gap, the location of the enclosure, in the valley bottom, at 175m OD in the upper reaches of the Tweed tributary system might seem essentially similar to that of Hangingshaw; the latter, however is only 10km upstream from the junction of Tweed and Ettrick, whereas Meldon Bridge is nearly 30km distant, and closer to the Clydesdale sites.

Atkinson (1962, 35) lists Scremerston Hill, near Berwick on Tweed (NU 00 48) as a findspot of 'Peterborough' pottery. The site is only 3km S of the Tweed, not far from the coast and may be regarded as being geographically part of the Tweed Basin.

In contrast to the extreme paucity of finds in the Scottish part of this region, the Milfield Basin, around the R Till, has produced a rich collection of pottery of three main types (Ferrell 1990). There is Grimston Ware from Yeavering, Yeavering henge, Thirlings and Broomridge barrow; impressed ware ('Peterborough' pottery) from Yeavering, Thirlings, Whitton Hill hengiform enclosure and Crookham; and grooved ware from Yeavering, Yeavering henge, Thirlings, Redscar Bridge, Whitton Hill and Ewart pit alignment. This material all derives from excavation, as, also, do the finds from the Hirsel and Hangingshaw on the Scottish side of the Border. In part the difference in quantity must relate to
the small number of excavations in Scotland. On the other hand aerial photography clearly shows that the Milfield basin contains an exceptional landscape of ritual monuments, their importance emphasised by the richness of the cup-and-ring marked rocks in the vicinity (Bradley 1989). It cannot be assumed that the same wealth of material awaits discovery in the Scottish Tweed Basin.

IV:vi Lithic evidence in the Tweed Basin Region

Long traditions of lithic collection in this Region have filled museum cases, apparently offering good opportunities for analysis of the evidence for a neolithic presence in the Tweed Basin. The material suffers from all the usual defects of haphazard surface collection, being largely unprovenanced beyond the name of the farm of origin, consisting of mixed assemblages, often of selected types only, from areas sampled according to the biasses of collectors; there are besides, some particular problems arising out of local peculiarities in the evidence.

The method chosen to obtain useful information economically from this material has been to compile maps of neolithic arrowheads in the Region on the basis of
published sources and the Catalogues of the NMS and of the Hunterian Museum, which holds an important collection from the area donated by A. Henderson Bishop. This distribution has then been assessed within the context of records of collection and the density of other lithic material from the same area (Table IV:1). It was hoped that the recognisable type fossil of the arrowhead would enable neolithic assemblages to be identified and would even permit some periodisation to be achieved on a typological basis, while avoiding the assumption of a crude equivalence between numbers of arrowheads and population figures (cf. Atkinson 1962; Bamford 1966).

As detailed in Table IV:1 three sites with neolithic assemblages have been published in some limited detail in the Proceedings of the Society of Antiquaries of Scotland: - no.3 Airhouse, no.4 Overhowden and no.13 Foulden Moorpark. Two largely mesolithic sites, no.2 The Rink and no.7 Dryburgh Mains, which have also been published, provide some information, both negative and positive, on neolithic finds in each location. No.1, the Selkirk region, concerns a more extensive programme of field walking described in a published account, while some details concerning no.8 Craigsfordmains were gathered by G.F. Black from a collector who was clearly reluctant to identify his hunting ground precisely. All these areas were exploited by local collectors over extended periods. At Airhouse and at Foulden Moorpark
resident farmers were collecting on their own land, but other field walkers covered large areas. J. Readman, described in the NMAS Catalogue as a Motor Agent from Earlston, produced finds from the length of Lauderdale, from Tweedside and Teviotdale, and from the country around Selkirk, Jedburgh and Kelso. A. Henderson Bishop and J.M. Corrie both gathered collections from local farmers and field walkers, particularly in Roxburghshire. In all these cases it was the artefacts themselves which were held to be of interest, and these were given to museums with no information on the circumstances of recovery, location, density, or association of material, beyond a simple farm name. Nonetheless, within the limits of the information, some interesting patterns do emerge.

First, it is possible to distinguish between various types of arrowhead on the basis of catalogue descriptions. Map IV:2 shows the distribution of leaf and lozenge shaped arrowheads, both types which were probably in use throughout the Neolithic (Green 1980, 93). Map IV:3 covers transverse arrowheads, that is 'sub-triangular' or petit tranchet derivative types, halberd shaped and lopsided arrowheads. 'Triangular' arrowheads have been omitted from the maps, as Green considers it probable that these may have been blanks for barbed and tanged arrows (1980, 142-3), primarily a second millennium production. 'Triangular flakes',
however, is a term probably being used for petit tranchet derivatives (e.g. Sharp 1912), and it is hoped that no confusion between the types has been introduced.

Numbers of transverse arrowheads are generally much lower than of leaf shaped. In north west Lauderdale, however, this position is reversed, largely on the basis of local concentrations of material. On Airhouse Callander detailed fifty one transverse arrowheads to twelve leaf shaped; on Overhowden Sharp reported 32:3. Further south on Bowerhouse and Craigsford Mains proportions were roughly equal, but on the east side of Lauderdale and further east around the upper Blackadder values change to 8:30 and 7:22. In the south of the region, around Selkirk and Ruberslaw and on Foulden Moorpark in the east, transverse types become even rarer, but there are higher numbers in the low hilly areas south of the Tweed at Ancrum and north of Yetholm. It would seem possible that where transverse arrowheads are few, leaf arrowheads may be indicative of early neolithic activity. On the other hand, where both types are present it must be an open question whether the leaf shaped examples represent the early period, or whether they are contemporary with the transverse, in a phase of settlement expansion. This problem will be considered below in relation to the specific issue of the large concentrations of transverse arrowheads at Airhouse and Overhowden.
Secondly, the information on location of finds is sufficient to show that the distribution largely avoids not only the haughlands beside the rivers, but low situations and valley bottoms in general. There is a group of finds from farms around the Blackadder, but these occur at Greenlaw and further upstream where the 'river' is small and flowing through a narrow cleft across an upland plateau rather than a valley. The distribution thus contrasts with the observations made in relation to pottery and settlement evidence of a preference for river terraces. Indeed riverside flint scatters were noted in excavation at the Hirsel and in field walking at Sprouston, so the absence of arrowheads in such situations may be merely a function of reduced recovery rates from alluvial or inwash soils. Frances Healey (1987) has made the point that Early Neolithic material is usually recovered only where the topsoil is thin, perhaps as an outcome of differences in deposition practices from other periods. The high levels of recovery of mesolithic material from riverside locations does, however, somewhat reduce the likelihood that neolithic finds have been completely masked. An alternative explanation would invoke the function of arrowheads themselves, often regarded as a by-product of hunting expeditions, likely to be recovered at a distance from settlement in open, upland country (see, for example, Bradley and Hart 1985). It was with the
intention of avoiding this relegation of arrowheads to a marginal role that Table IV:1 was designed to include background information on circumstances of recovery and associated material. In the event it seems that only the forty two petit trancheet derivative arrowheads from Airhouse and seventeen lopsided arrowheads from Overhowden can be regarded as being from specific locations constituting spatially defined assemblages. Even where large numbers of arrowheads are recovered from single farms, such as the fifteen leaf shaped and two lopsided examples from the farm of Hoselaw, near Yetholm, these may originally have been scattered over 1 or 2km, and could derive from a relatively casual use of the landscape.

Overhowden and Airhouse will be returned to below. There are, however, other instances of clustering of material, less well documented, but suggestive of closed contexts. At Bowerhouse recovery was said to be highest in the field beside the steading. On Craigsford Mains a stretch along the highest part of two fields produced the bulk of a collection which included arrowheads of all types (only one transverse). At one spot within this area density of material was taken to suggest tool manufacture, and therefore presumably included débitage. On Foulden Moorpark, where over 400 flint implements, thousands of flint chips and fifteen axes were collected over a twelve year period on a farm of 126 acres (51
ha), three particular spots 1.2km and 600m apart, were identified as producing most material. All were on the higher, drier ground, although there was also mention of a 'hoard' of five items, including an axehead, made of one shade of yellow brown flint, found in a low flat part, possibly marshy before drains were cut. As on Craigsford Mains the knolls with high density of finds may be interpreted as industrial areas, but in neither case are they likely to be far from settlement. Finally, around Ruberslaw, an area of c 15km² has produced high levels of neolithic material within which certain collectors have identified specific concentrations. Arrowheads here are almost exclusively leaf shaped, and the prominence of Ruberslaw suggests the possibility that the hill may have been an Early Neolithic hilltop enclosure (cf. Traprain Law). Two arrowheads found near the summit (424m OD) are probably from the highest findspot in the region.

These sites with concentrations of material all fall into the pattern of upland recovery and avoidance of low ground already alluded to. In general the availability of plough soil sets an upper limit to recovery of c 300m OD. Certainly the sites in the Lammermuirs, the Mutiny Stones at 385m, Borrowston Rig at 340m, and the Crow Stones at 330m OD, are all in moorland or rough grazing offering little opportunity for local collection, and thus all are at a distance from lithic findspots. It is, however, more surprising that the long cairn at
Caverton Hillhead, at 160m OD in a continuously cultivated field, on well drained soils over Old Red Sandstone, lacks a context of local lithic recovery. The riverside mesolithic site at Kalemouth, 2km to the W, produced a very mixed assemblage, but no arrowheads. Small chert blades and a large quartz scraper were picked up near the cairn at the date of visit, and perhaps the farm has simply escaped the attention of collectors. Ample finds come from the hills north east of the site at c 3 - 8km distant, (Table IV:1:12) including one leaf arrowhead from the farm of Frogden, on which a stone circle once stood (Table IV:3:7). Stone circles at Fairnington and Harestanes (IV:3:5 and 6) also coincide with an area of arrowhead recovery (Table IV:1:9). It is possible that the record represents avoidance of the vicinity of long cairns for settlement, a practice which did not apply to stone circles.

Finally, the exceptional numbers of transverse arrowheads from Lauderdale must be examined. The primary area concerned includes the farms of Airhouse, Overhowden and Bowerhouse which between them cover c 4km along a ridge of undulating hills at 250 -350m OD. A secondary group of finds come from Craigsford Mains, 13km to the south, and from farms around Earlston on the east side of the valley. Seventeen lopsided arrowheads were found within 300m of the henge on Overhowden, and an extraordinary forty two petit tranchet derivative
types from one spot on a hilltop on Airhouse. There are also, however, at least a dozen lopsided arrowheads from the lands of Airhouse, and perhaps two dozen petit tranchet derivatives found on Overhowden. The Airhouse hilltop appears to have been used for flint-working, with many chips reported from the site; the Overhowden concentration, on the other hand, is said to have consisted of finished artefacts only. The distinction seems appropriate to the circumstances of the finds, with the Overhowden deposit representing activity related to the high status henge site, fulfilling a pattern of correlation between henges and lopsided arrowheads repeated at Durrington Walls and at Woodhenge (Wainwright and Longworth 1971, 257). The distance between the finds and the site itself reinforces the importance of directing archaeological attention to areas outside monuments (cf. Barclay forthcoming). Aerial photographs of the henge have not picked out external features, but such an absence is by no means unusual. The finds probably come from the bottom of the slope, where soil cover is thickest. The status of the henge as a place apart from the domestic round is perhaps reinforced by the small number of leaf arrowheads (three) found on the farm, and the single axehead recovered. This paucity of ordinary neolithic material is in contradiction to the situation on Airhouse, perhaps settled from an earlier period.
The Airhouse findspot lies across a steep valley from the site of a demolished stone circle (Kirktonhill), probably about 1km distant. The petit tranchet derivative arrowheads found here might be expected to have grooved ware associations (Wickham Jones in Mercer 1981(a)), and the site should perhaps be regarded as part of the Overhowden complex, being only 1.7km from the henge. The situation, on the brink of a precipitous slope to a burn, echoes that chosen for some long cairns (Loanfoot; Dod Hill), and it seems possible that the hilltop itself acted as a ritual focus, perhaps marked by some insubstantial structure. Possible platformed sites on the hilltop, discussed under settlement (IV:iii), could preserve traces of such a feature. The site is also on a direct line of access to the Lothian plain by the Roman and Medieval roads over Soutra Hill (and a report of cup-and-ring marked slabs from Soutra Aisle is noted below (IV:x)). Travellers coming south over the hill would naturally be directed down beside the narrow glen of the Roughie Burn beside Kirktonhill fort and the supposed stone circle site, to be confronted by the steep north slope of Airhouse Hill, accessible, however from the west end, opposite the Roughie valley.

Edmonds and Thomas (1987) have drawn attention to the importance of style in the change from leaf to transverse arrowheads. Complex messages could be conveyed to those who could understand the significance of the various
meanings involved. In north west Lauderdale the different types of transverse arrowhead demonstrate this use of symbolic meaning in the association of lopsided arrows with a henge, and in the coincidence with a natural routeway. Flint working was carried out at the more peripheral site, the finished objects then finding their way to the ritual centre itself. A similar function may have been fulfilled by the flint working site reported from Craigsford Mains, on the approach to Overhowden from the south.

An important aspect of this activity not yet explored relates to the source of the flint employed in the manufacture of artefacts. Variety in the significance of the arrowhead types is underlined by a marked difference in the colour of the flint used. The petit tranchet derivatives are mostly made of a light grey, sometimes very pale coloured flint, the light grey colour being characteristic of much implement manufacture in south east Scotland (Atkinson 1962) and perhaps available locally, whether from inland glacial deposits or from the east coast. The lopsided arrowheads, however, are predominantly made of a dark, chocolate brown flint (Callander 1928). The preference for a dark colour recurs across Scotland, from Caithness to Wigtownshire, in the manufacture of lopsided arrowheads (Stevenson 1947), but the particular brown variety seemed to Stevenson to be a Lauderdale speciality, and he concluded
that it was likely to be of local origin. The same view was taken by Bamford (1966) who quoted evidence in support of the possibility of Scandinavian flint of this colour being deposited in glacial drift in eastern Scotland. She considered that the infrequency of its use in the manufacture of leaf arrowheads, showed that the material was rare, and she drew attention to its excellent quality as seen in a large blade, from Earlston measuring 4½" by 2". Bamford's 'cursory examination' of the collections in the NMAS did not reveal evidence for the use of the brown flint in microlithic industries, which seems surprising when taken with Mulholland's observation that 22% of the mesolithic assemblage from Airhouse was of this material. As noted above fuller details of the basis of Mulholland's classification of industries would have been welcome. If accepted, the use of the flint during both the Mesolithic and the Late Neolithic must be a strong argument for its local origin. Mulholland found only 3% of the assemblages at Kalemouth, Rink Farm and Dryburgh Mains to be of chocolate brown flint, although at Crumhaugh the percentage rose to 10% (1970, 85). The suggestion must be for a directly local Lauderdale source. Wickham Jones and Collins (1978) record a reference to exposures of grey and black flints occurring beside the Lammerlaw Burn, which flows south from the Lammermuirs to join the Friar's Nose Burn at NT 510 597, less than 8km north of Overhowden. It
certainly seems possible that brown flint also occurred in these hills, and the existence of a local supply of good quality flint could itself have been a factor in the location of the henge at Overhowden and stone circle at Borrowston Rig. On the other hand one collector Tom Scott comments (1900) on the use of yellowish flint on Craigsford Mains a little to the south, with large flakes being found here, and the polished edge knife from Overhowden is of brownish yellow flint, suggesting access to a variety of sources. Axeheads at Airhouse are mostly crudely made and of local stone, which would seem to show that availability of imported material was limited. Positive identification of the source of the chocolate brown flint would certainly be welcome.
Flint and stone axeheads from the Tweed Basin Region

Records of c. 290 axes or portions of axes (excluding mere flakes) have been compiled from within the Tweed Basin, a region which the 1953 OS Vegetation Map shows to contain c. 2000 km² of improved land. This density of one axe to just under 7.0 km² of such land is almost twice that of the Lothians or Nithsdale Regions. Map IV:4 shows the distribution of these finds, weighted towards the south of the region - Teviotdale and the Teviot tributaries of the Rule, the Jed and the Kale Waters; there are also clusters of finds in Lauderdale and eastward into Berwickshire. A comparison with Map IV:2 of leaf arrowheads shows that all areas with numbers of arrowheads also have axes, but that axes are additionally spread into riverside locations, beside the Tweed, Kale and Rule Waters, and into the uplands, pushing up towards the Cheviots, Lammermuirs and Moorfoots. In part the agreement between the two maps depends on the work of individual collectors. The larger symbols on Map IV:4 represent groups of axe finds; that is collections created in the main by J.R. Fortune at Airhouse, by J. Readman and G. Oliver at Craigsford Mains, by R. Kinghorn at Foulden Moorpark, by J.M. Corrie at Fairnington, near Ancrum, and by Lady John Scott from farms around Gordon. The first four collections also included lithics (see...
Table IV: 1) and feature on Map IV: 2 of leaf arrowheads; the last was probably created through contacts with tenant farmers, rather than fieldwalking, and relatively low numbers of smaller artefacts were returned. There have also been several collectors at work on farms around Ruberslaw, especially on Nether Tofts.

Twenty four of the 290 axes (8.3%) are recorded as being of flint, a much higher proportion than the 2-3% suggested by Sheridan (1992) to be the Scottish average. The numbers, when viewed in the context of the high recovery rate of other flint artefacts in the Tweed Basin, are not so surprising. Measurements of nineteen flint axes which are more than mere fragments are known, ranging from 2.19" (74mm) to 7.5" (191mm); only four exceed 5" (127mm) in length. In general the distribution of flint axes (Map IV: 5) closely follows that of leaf arrowheads, although the axes are presumably largely dependent on imported flint. The largest flint axe, however, is peripheral to this distribution, being a record from Southdean, between the Rule and Jed Waters (Table IV:2:37). A handsome 6¼" (156mm) axe of grey flint was a wetland find from Gordon Moss, 'a little more than 100 yards from the site of Cadger's Cairn' (Stobbs 1884, 118, PL III). The finest of the flint axes may thus have been involved in separate patterns of deposition.

Few of the other axes from the Tweed Basin can confidently be assigned to a particular petrological
group. A tiny proportion have been thin sectioned, and selection for this purpose was avowedly aimed at the identification of Group VI implements (Ritchie and Scott 1989, 86). Only three axes have been confirmed as being of Group VI material (SLK 1, Ashybank; ROX 1, Hownam Rings; BRW 3, Cornhill on Tweed), while one is described as being of ?Group VI stone (BRW 1, Preston). A massive 12.5" (318mm) axe from Hexpath was found to be of altered siltstone (BRW 3). On inspection of a collection of axes from the Selkirk to Kalemouth areas made by Walter Elliot, however, Roy Ritchie (pers comm) suggests that eight or nine more specimens resemble Group VI stone. Two or three of Elliot's axes could be of Group XXIV hornfels from Killin, and the presence of such material adds to the difficulty of distinguishing the Cumbrian products. A recent find of a 328mm long 'Cumbrian Axe' (or 'Cumbrian Club') from Hindhope in the Cheviots, is said to be of Group VI material (Sheridan Inf), and three more Cumbrian Axes identified by Fell (1964, 53-5) from Lempitlaw, Cammerlaws and Greenlaw are presumably from the same source. A similar axe from Ruberslaw is in Hawick Museum (HAKMG 4113). Black describes a 10" felstone axe from Cessford, with broad and flat sides, the sides expanding at the butt, which can probably be added to this group (1894, 328) (NMS; AF 661 Kerchester has not been inspected, but might be this axe - see Table IV:2:11). These Cumbrian Axes are all large artefacts carrying intrinsic significance beyond mere utility.
Fig. IV:1 Axe lengths in the Tweed Basin

Fig. IV:ii is a histogram of the lengths of all the complete axes in the region for which sizes are known. Its bimodal distribution shows that the bulk of the axes are under 6" (152mm) in length, but that a lesser group of axes measuring over 7" (178mm) also exists. In order to explore further the significance of the large axes Table IV:2 lists all those over 190mm in length, and Map IV:6 shows their distribution; thirty nine axes, or 18% of the total of known size, fall into this category.

The significance of individual axes of larger size is clearly variable, given a list which includes the
superlatively fine jadeite axes from Greenlawdean and Cunzierton, and a polished axe of white quartz from Ladyflat, Duns, but also an axe from Airhouse made of 'a piece of hard sandstone with its cutting edge ground'. Most of the large axes, however, could be classified as prestige pieces, and it is interesting to observe the difference between their distribution and that of the generality of axes (Maps IV:4 and 6). As with the finer flint axes, there is a peripherality attaching to the large axes, with an emphasis on uplands and specific associations with distinctive hills - Ruberslaw, the Dunion, Cunzierton; there are also clusters of large axes in the Earlston, Gordon and Greenlaw areas.

In a discussion of the Hindhope find, upland and isolated from other neolithic evidence, but 160m from a standing stone, Sheridan (private paper) links the evidence for ritual deposition with use of a route from Cumbria to Tweedside over the Cheviots, as suggested by Manby (1965). To test the importance of such a route it would be desirable to have full information on the provenance of axes within the Teviotdale river system. Although it was suggested above that 'Cumbrian Axes' could be recognised at Ruberslaw, beside the Rule Water, and at Cessford, near the lower Kale Water, such massive axes cannot be used as indicative of normal dispersal systems (Chappell 1987, 284). Almost 50% of the axes in the Tweed Basin measure between 3" and 5" (76mm and 127mm)
in length, and any study of modes of distribution must take account of these more ordinary tools.

Many of the descriptive terms used of the axe material clearly shows that specimens were not of Cumbrian tuff or Perthshire hornfels. These include 'diorite', 'serpentine', 'basalt', 'quartz', 'quartzite', 'igneous rock' or 'slate'. At Airhouse, Callander (1928) describes different axes as being made of 'indurated grit', 'indurated claystone', 'hard sandstone' and 'felstone', clearly recognising that differing varieties of rock were being used. Three further large, heavy axes of greywacke had 'their butt ends struck off in big flakes', suggesting not only use of local stone but a crude manufacturing technique. There are occasional suggestions of the use of local rocks, as in the case of a local basalt which a recent description notes in relation to a find from Borthwickshiels Hill (NMS daybook 1990/33). Use of local sources may, however, involve glacially deposited pebbles, with no identifiable place of origin (cf Fenton 1989).

Simply as a sample check comparison has been made between sixteen axes from 100km² around Jedburgh, close to the presumed 'import' route over the Cheviots (NT 61NW NE 62SW SE) and fifteen from a similar area around Gordon on the R Eden (NT 64). The average length of the Jedburgh axes is 131mm, whereas around Gordon it is 151mm. If, however, five axes from Gordon which cannot be of Group VI
material are removed from the set (one siltstone, one flint, two diorite, one quartzite) the average length falls to 123mm. Similarly three Jedburgh axes (two of flint, one of greywacke) can be excluded, leaving an average length of 139mm. Thus with the axes which could perhaps be of Group VI stone, size regression with distance from source may be recognisable, reflecting the proximity of Jedburgh to the Cheviot 'trade routes'.

Given the speculative nature of the above statistics, it seems preferable to examine specific contexts and the condition of axes as a guide to the type of usage involved. For example, Walter Elliot has found flakes of axe material, suggesting resharpening at these locations. Other axes appear to have been reworked and reduced from larger specimens. Elsewhere several axe fragments are found together, as at Airhouse in Lauderdale and Foulden Moorpark in eastern Berwickshire (Kinghorn 1924), perhaps indicating axe-working in these locations.

These last sites, as also Craigsford Mains in Lauderdale, have produced lithics as well as numbers of axes, and may seem likely to have been domestic locations. Twelve axes are recorded from Craigsford Mains (NMS: AF 901-9; Hunt B 1914, 136-7; Black 1894, 348). Apart from two small axes of flint, all were described as being of grey or grey-green rock, either 'tuff' or 'grit'. Their average length is 4.3"
(109mm) with one axe measuring 6\(\frac{3}{4}\)" (175mm). The range of sizes corresponds closely to the average for the Region as a whole, suggesting the Craigsford Mains set to be representative of normal usage. The Airhouse axes are more varied (NMS; BMA 41-48, 282; Hunt B 1951-396). Two were of flint, one of these having been made into a tranchet arrowhead; three were large, crude implements of greywacke; six were fragmentary; two were neatly made axes 4\(\frac{1}{16}\)" (103mm) and 4\(\frac{3}{4}\)" (108mm) long; one was a large axe of sandstone (Table IV:2, no.25). Most were found in one field, adjacent to the field with the greatest number of lithic finds. Possibly some specialist activity is suggested. Fifteen axes were found on the farm of Foulden Moorpark by R. Kinghorn (1924), six from one field, of which three were broken; many lithic finds came from the same field. Elsewhere on the farm were some distinctive axes or axe fragments. One 5" (127mm) long fragment represented little more than half of what must have been a very large axe. One piece of an axe of white quartz was of a 'beautiful colour and finish'. In a marshy area was found a hoard of five implements of yellow brown flint including an axe 3\(\frac{1}{2}\)" (89mm) long. These finds suggest something more than domestic activity. It may be noted, however, that the chief groups of finds from Airhouse, Craigsford Mains and Foulden Moorpark were all from hilltop locations, with wide outlooks and on well drained soils.
Another upland area which has produced both lithics and a number of axes is on the south west flank of Ruberslaw. From the farms of Nether Tofts and Kirkton there are records of eleven axes, several of them broken or damaged. Again, these are modest implements, the average length 3.6" (92mm); one is 6¼" (159mm) long; one flint axe is only 2.9" (74mm) long (AF 532-3, 977-980; Hunt B 1914 201-2; 1951 1271; HAKMG 4114). The farms are 3km from the summit of Ruberslaw and not, therefore, directly related to any hilltop enclosure there.

In view of the enhanced chances of artefact recovery from thinner upland soils, it should be pointed out that riverside locations are well represented in the axe distribution, in contrast to the situation as regards lithics. Tweedside recovery includes several axes from near Kelso, two from St. Boswells, one from Sprouston, and others from Coldstream, to which could be added a cluster of finds from the English side of the river near Cornhill (Burgess, et al 1981, 8 fig.3). A few axes were retrieved from the rivers themselves, a possible indication of ritual deposition, although the axes concerned are not in themselves particularly striking. There is a 5" (127mm) example from a ford over the Teviot at Hawick (Anderson and Black 1888, 394); a 2 15/16" (75mm) 'claystone' axe of prettily banded stone 'from the bed of the Leet' near the Hirsel (AF 643), and axes of similar small size from the Bowmont Water (AF 368) and
from the Rule Water at Bedrule (Hunt B 1914-179). J.M. Corrie notes the finding of an axe in the bed of a burn at East Ditches, Fairnington (Notebook 1, no.17). Rather more impressive axes are reported from peat mosses, perhaps originally wet sites. There is a big Cumbrian Club from Cammerlaws (AF 647) and two implements from Gordon Moss, one a handsome 6\frac{1}{8}" (156mm) flat axe, the other, of felstone, measuring 4\frac{3}{8}" (124mm)(AF 646; 650). A 'very neat' polished axe 5\frac{1}{4}" (146mm) in length is said to have been picked up in a peat moss on Swinnie Moor, Jedburgh (HBNC XIII 1890-1, 308-9).

It would, perhaps, be wrong to suppose that only exceptional axes were the subject of ritual deposition. Nonetheless, as noted above, the largest finds tend to be recovered from peripheral, upland locations. It is possible that in many instances the association with a striking landscape feature, such as the Dunion Hill, may itself have created the appropriate setting for ceremonial, obviating the need for built monuments. At Hindhope, however, a big Cumbrian Club was found only 160m from a standing stone, and the possibility of ritual deposition and regular association with monuments must be explored. It is not known whether the two jadeite axes from Cunzierton were found near the Dere Street stone settings, Five Stones and Trestle Cairn (IV:3:9), which are close to or perhaps on the farm lands. A flint axe 117mm long has, however, been found in Five Stones
Field, Frogden, in which a stone circle once stood (IV:3:7; Inf. NMS), and a large 7.7" (196mm) axe comes from the same farm (Table IV:2:31). J.M. Corrie reports the finding of half a granite axe in Standing Stone Field, Fairnington (Notebook 1, no. 19), besides a score of other axes from the same area in which two stone circles are recorded (Table IV:3; 5 and 6). It is curious, however, in view of suggested associations between henges and axes elsewhere (Sheridan 1992) that only one axe is known from the farm of Overhowden (AF 298, 4 5/16" (109mm), although half a macehead of banded rock (AM 218) was found 900m SW of the henge. Lithic finds from Overhowden, rich in transverse arrowheads, knives and scrapers, included few leaf arrowheads, whether for chronological reasons or because of the specialised nature of the site (Table IV:1:4). Equally, no axes come from the immediate area of the Swallowdean henge and, indeed, excavations at Balfarg (Mercer 1981(a)) and North Mains henges (Barclay 1983) were totally lacking in either stone axes or leaf arrowheads (but contrast Cairnpapple II:b).

There is no demonstrable association between the two long cairns in the region and axeheads, although a large axe comes from the farm of Byreacleugh on which the Mutiny Stones stand (Table IV:2:32) and a 4½" (114mm) axe has recently been found 1600m from the Caverton Hillhead site, at NT 7483 2697 (HAKMG 4112); a similar sized axe was found on Caverton Edge, the ridge stretching N
from Caverton Hillhead (Anderson and Black 1888, 389). A fine flint axe from Gordon Moss was said to have been dug up little more than 100 yards from the site of a large cairn called Cadger's Cairn (AF 646; Stobbs 1884, 118). Rather more direct association with funerary ritual is represented by a recent find of an axe with two bones, probably human leg bones, at Langton, north of Duns at NT 7708 5649 (NT 75NE 30). A cist found near Aytonlaw steading in E Berwickshire (NT 916 609) is said to have contained an inhumation, a flint arrowhead, a polished flint ball and a fragment of a stone axe (Craw 1922, 177); this group could fall into the category of high status, Late Neolithic individual inhumation (cf. Biggar Common III:4). A large axe is listed as coming from Witch's Cairn, Kerchester, although no further record of the site has been found. There is also an axe from Farm Park, Addinston (HBNC 15, 1874-5,33) a field in which excavation of a long cist cemetery discovered several cremation burials (see IV:viii).

Finally the cluster of three large axes from Earlston should be considered. Two of these are of 'greenstone' or 'tuff', the latter not of Cumbrian origin, while a pecked axe from Earlston Mains is of dark grey, pitted stone. Such a group certainly suggests that the site carried some special social, or more probably ritual significance. The character of the ritual focus remains obscure, however; as discussion of Overhowden
demonstrates, there is no easy correlation between henges and axe deposition. Nonetheless attention may be drawn to the existence of a rather blurred cropmark, apparently representing a circular ditched site c 30m in diameter at NT 5797 3888 on Earlston Mains, directly behind Earlston village (NT 53NE 57).

In conclusion, the distribution of axeheads in the region may provide information both on settlement location and on ritual practice. While the two aspects should not be seen as exclusive, care should be taken to distinguish between the two types of evidence. It seems possible to suggest that settlement distribution as indicated by axe finds is not regularly uniform, but displays a pattern of dispersed clustering, the study of which could shed valuable light on locational preferences. Further, it seems that ritual activity does not always coincide spatially with areas of densest settlement, but shows a tendency to appear in peripheral and upland locations. It may be appropriate to mention also the find of a large, bulbous, neolithic type bead of jet, or perhaps more probably cannel coal (NMS FN 16) from Watch Hill, Loch Skeen (NT 18 16), at over 550m OD above St. Mary's Loch at the head of the Yarrow Water (Inf: Dr. A. Sheridan).
Only two long mounds have been identified in this region: the Mutiny Stones in the Lammermuirs, 82m in length, and the destroyed mound, over 100m long, at Caverton Hillhead, 34km further south. Taken in conjunction with the 109m cairn at Bellshiel Law, above Redesdale, 27km south of Caverton Hillhead, the Region would seem to be characterised by a widely dispersed distribution of immensely long, narrow cairns, the size of monument compensating for a lack of frequency. Caution over this interpretation must be induced, however, by the total disappearance of the Caverton Hillhead site, a conspicuous mound in 1793, but barely discernible by 1859, the destruction occurring during the crucial period for agricultural expansion and increased efficiency in Scotland. Equally the presence of a 24m cairn at Dod Hill, 27km ESE of Caverton Hillhead (Masters 1984, 59), and a 28m cairn at Broughton Knowe (III: j), over 60km to the west, within the tributary system of the R Tweed, demonstrates that expected cairn sizes need not have been on the massive scale of the two listed sites. All these stony mounds appear to have been unditched, and similar sites could easily have been removed without record and without leaving a trace after cultivation. Surviving subsoil features are likely to be confined to small structures, such as mortuary or
facade trenches, unlikely even to be isolated as cropmarks, and certainly unclassifiable as neolithic features. For example a small pennanular ring ditch at Chirnside (NT 866 555) associated with a short length of pit alignment, lies c 40m N of a small, curved cropmark feature, c 10m in length. The conjunction of elements is interesting, but it is certainly not possible to identify the last feature as the facade trench of a long barrow on this evidence alone (NT 85NE 43).

The wholesale removal of cairns long and round is especially likely to have affected sites located, like Caverton Hillhead, on relatively low, well drained hills which in this region are climatically suited to cereal cultivation. Whereas the Mutiny Stones (385m OD) and Bellshiel Law (310m OD) are on moorland, and have suffered only relatively minor depredations for building sheep shelters, the Caverton site, at 160m OD, is and has long been regularly cultivated. Artefactual evidence would suggest that it is precisely these areas of lower hill country that have attracted neolithic settlement. Probable settlement locations range from Foulden Moorpark at 130-140m OD, to Nether Tofts on the slopes of Ruberslaw at 200m OD, and the upper slopes above Lauderdale, again still regularly cultivated, at 250-300m OD. The higher hills of the Cheviots, Southern Uplands and Lammermuirs have produced few artefacts,
partly through an absence of opportunity for recovery, but also, very probably, because they were not attractive to permanent settlement.

Records of the removal of cairns relate to periods of agricultural improvement, and correlate with intensification of use of hilly ground (e.g. NSA III, 212-3, re Ruberslaw; RCAHMS 1956 i, 259, re Linton Hill). A vivid account of changes effected in the Upper Merse, NE of Gordon, at c 120m OD, is given by the Rev. William Stobbs in 1884 who says that 'within living memory a barren moorland' was changed into 'well fenced fields' yielding abundant crops. Land was feued out to the local inhabitants who expended 'incredible labour' in the removal of stones and rocks which strewed the surface; it took 'more than a hundred cart loads of stones' to clear away the Cadger's Cairn here (NT 652 431), and doubtless its destruction was one of many.

Among surviving cairns or records of cairns are a few oval examples which might be considered as possible candidates for the role of neolithic monuments. A rare record of excavation (Oliver 1929) concerns an oval cairn on the north side of the Knock Hills (NT 694 101) at 225m OD, measuring 19.3m x 12.0m. Five graves or lesser deposits were found, apparently on the old ground surface, each sealed under a small individual cairn of stones. The excavator suggested that an original round cairn might have been extended at a later period, but
graves near the centre of the cairn contained jet beads and a V-perforated button and a barbed and tanged arrowhead, so that there seems to be no doubt that the mound itself was a second millennium construction. Other oval mounds are small in size, bearing little resemblance to neolithic long cairns. In this category, for example, are two cairns on Hut Hill above the Bowmont Valley, measuring 7.3m x 5.5m and 6.1m x 3.8m (RCAHMS 1956 ii, 361, no.713) and one on Arks farm, not far from the Knock Hills, measuring 11.6m x 9.1m (ibid, i, 236, no.479). A comparison to these was found in excavation of a large round cairn at Hagg Wood, Moorpark, where an inner cairn covering two food vessel cists measured 5.8m x 4.6m (Craw 1914, 316-325). The Berwickshire Inventory listed a rather larger oval cairn on Doons Law, near the source of the Leet Water, at NT 868 517, measuring 25m x 20m x 1.2m in height (RCAHMS 1915, 164, no.295). This mound is planted with trees and revetted by a modern stone wall, so that its character and original shape are impossible to assess. The height of the mound, however, shows that some feature here pre-dated the enclosure wall, and its elongated shape, rising in height to the NE, would make it seem quite possible that it had been a long or oval barrow or cairn. It occupies the summmit of a low ridge in a field from which cists have been recorded (RCAHMS 1980(a), 17, no.106; 18, no.116), and the resemblance of its silhouette to that of a long barrow has been remarked on (Robertson 1971).
Following the Pitnacree precedent, it is possible that neolithic funerary monuments in eastern Scotland have escaped recognition because of their circular form. There are several untouched large round mounds in the Tweed Basin. Directly across the R Kale from Caverton Hillhead is a large subcircular mound known as Haughead Kip (NT 722 268), measuring 23m x 21m, planted with trees and surmounted by a monument (RCAHMS 1956 i, p.132-3, no.216). Beside the Tweed in the grounds of Ladykirk House at NT 885 458 is a probable ditched barrow up to 26m in diameter and 1.2m in height (RCAHMS 1980(a), 12, no.60). In Piersknowe Plantation on a terrace above the Blackadder Water near Greenlaw is a 19m diameter barrow, 1m in height (RCAHMS 1980(a), 14, no.80; NT 721 472). These riverside locations echo that of Pitnacree, although Bronze Age barrows (North Mains, Strathallan: Barclay 1983) and cairns (Kalemouth: NT 711 274) certainly also appear in such situations.

There is, besides, a likelihood that some neolithic funerary or ritual deposits were sealed under quite insignificant mounds, making identification from field evidence alone impossible. Below a 5m mound at Ford, Northumberland, Greenwell (1862) found neolithic pottery mixed through a 2 inch (51mm) layer of burnt bones, wood and earth. Recognition of the context of such deposition depends both on the inclusion of pottery in the material, and on its excavation by an informed archaeologist.
aware of the significance of ceramic types. Similar remains may have been uncovered north of the Border, but no adequate accounts exist to justify their classification as neolithic. At Langrew (NT 58 11), just south of Ruberslaw, a circular area c 5.6m in diameter consisting of ashes and partly burnt bones was discovered in the earlier 19th century (NSA III, 212). Below the ashes were four holes drilled into the underlying rock (see IV:iii). At Bewlie Hill, Lilliesleaf (NT 56 26) the Statistical Account (XVII, 179) tells that a similar, 6m diameter area was found, consisting of loose black earth containing a great number of burnt human bones. Although neither of these accounts records any mound over the remains, it seems probable that some such protection had been removed prior to discovery.

Other deposits found during excavation of cairns with Bronze Age burials may represent initial neolithic activity which formed a focus for later deposition. The central 'grave' in the cairn on the Knock Hills, referred to above, contained only some very rough pottery fragments and two small pieces of flint; overlying the 'grave' were a few bones and a little charcoal (Oliver 1929, 374). None of these materials have been preserved.

At Sleepy Knowe at 350m OD on Easterhillhead, south of the Ettrick Water (NT 393 203), an 11.0m cairn, revetted with inward sloping slabs, was excavated in 1869.
Below it were found an inverted cinerary urn and a short cist, a deposit of animal bones and palmated deer horns, and heaps of clay, pottery fragments and bone, these fragments being of finer ware than the cinerary urn. At the centre of the cairn, on the old ground surface was a layer of peat ash with bone fragments lying on it; in the same area were two cupmarked slabs one also with incised decoration, buried under a layer of large stones set in dark damp mould; above these, a setting of large stones resembled 'a rudely constructed arch', on which lay a quantity of finely powdered earth with particles of bone and a human skull. Beside this complex was a deposit of small, broken canine bones. Interpretation of such an account is not easy, but if the 'arch' is envisaged as a horizontal setting it might be related to horseshoe shaped mortuary enclosures, although presumably much smaller than, for example, that at Pitnacree around a stone setting measuring 5.8m x 1.2m.

Another 'horseshoe shaped' setting in a similar hilltop position on Woden Law at 420m OD (NT 766 123) was excavated by Craw (RCAHMS 1956 i, 181, no.3440). Here a bank of earth and stone 1.5 - 2.4m thick enclosed an area measuring 4.9m x 4.3m open to the north. A central scoop, 0.6m across and 0.7m deep contained fragments of burnt bone, including human finger bones.

Excavation in Farm Park, Addinstone (NT 519 523)
on the valley floor in Upper Lauderdale (Rosehill 1872; Wallace 1968) found, not only a cemetery of long cists, but several short cists and cremations under small cairns of stones; there was also a heap of burnt stones mixed with both human and animal burnt bone; a stone axe is recorded from the same field.

About fifty years before 1834, when repairs were being carried out at Linton Church (NT 773 262), situated on a knoll on the edge of the terrace above the floor of the Kale Water valley, a large grave was discovered containing fifty decayed skulls, somewhat improbably supposed to represent the victims of Flodden (NSA III, 152). While 'nests' of skulls are known from the Mesolithic in Europe, geographically closer examples of skulls receiving special treatment are found in chambered tombs, for example in Orkney, and at Garrywhin in Caithness, and also, probably, at Haylie and Cuff Law in the Firth of Clyde Region (I:1; I:2) (Davidson and Henshall 1991).

Finally, the possibility of Late Neolithic single grave interment has been mentioned already in relation to some axehead finds (IV:vii): a cist at Aytonlaw containing an inhumation, flint arrowhead, a polished flint ball and a piece of an axe; and an axe find from 'Witch's Cairn, Kerchester, near Sprouston. An axe found with what were probably human leg bones in Langton parish perhaps suggests some more selective form of deposition.
While most of the sites discussed in this section cannot be shown to be neolithic, they do demonstrate the potential for funerary and ritual activities to have been being practised in the region during the period. Returning to the identifiably neolithic long cairns, it must be admitted that evidence for funerary, or, indeed, any other type of use of these sites is absent. Local tradition called the Caverton Hillhead mound 'a place of sepulture', associating it with the burial of plague victims. No account of the discovery of remains survived, however, and, in any case, retrieval of bodies could as easily relate to secondary deposition as to original use. At the Mutiny Stones excavation found indications of structures in the disturbed east end, but a total absence of carbonised material or cremated bone suggests that these did not constitute a cremation trench. At Bellshiel Law excavation found a rock cut grave under the head of the mound (Newbiggin 1936), but there is a distinct possibility that this may have been a later insertion, associated, as Annable (1987, 98) points out, with a rearrangement of the adjacent section of kerb; in 1912 an iron spearhead was found on the ground below the stones at the centre of the east end of the cairn. There is thus no evidence to show that these sites developed from simple mortuary structures, enveloped in modest cairns which were later aggrandised into massive monuments by the addition of long tails. The multi-
period accretion argued for by Henshall (1972, 220) is only suggested by the evidence of external structural form, in particular the bi-partite shape of the Mutiny Stones.

Excavation at Bellshiel Law revealed the interesting point that the cairn, at the east end and in the central cutting, consisted of two parallel banks of small stones bedded in earth, their outer sides being edged by a boulder kerb, the gap between them, c 3m in breadth, being infilled with large, loose stones and boulders. Use of such a technique would explain why robbed long cairns often survive as parallel banks, the interior robbed out (e.g. Easton III:4). While the infill of the interior space may have been immediate, albeit perhaps undergoing partial delay while stone was collected, the existence of this primary 'phase' must reinforce comparisons with open, elongated enclosures, cursus monuments and mortuary enclosures. Dates from a 54m long mortuary structure at Inchtuthil, show that the theme of long, parallel sided monuments was already being explored in eastern Scotland by 3000 bc (Barclay and Maxwell 1991). There must be a possibility, equally, that long, narrow stone mounds were constructed from an early period. The two-part structure of the Mutiny Stones could thus derive from the addition of a high mass of stones at its eastern end, to impose the appearance of a trapezoid cairn. The size of these monuments is such that complete
excavation in elucidation of their history is unlikely ever to take place. Nonetheless, it should be possible to obtain environmental evidence and perhaps a radiocarbon date from below the peat submerged tail of the Mutiny Stones which could shed some light on this problem.

Reference has been made above (IV:iv) to the excellent preservation of monuments of the most ephemeral variety on the acid grasslands of the Southern Uplands and the Cheviots. It does seem probable, therefore, that long cairns and barrows should have survived in these areas if they were ever built there. It may be concluded that the Mutiny Stones and Bellshiel Law, and, indeed, Windy Edge in Dumfriesshire, are not merely isolated survivals of this form of monuments, but originally were rarely constructed in such upland situations. It may be pointed out that the complex cairn on Sleepy Knowe and the banked enclosure on Woden Law are both in elevated positions providing alternative, and less conspicuous forms for funerary activity in this zone. Equally, the spatial association between the enormous Cumbrian Club at Hindhope and a standing stone, may suggest other forms of ritual. The following section (IV:ix) discusses more complicated stone settings in upland areas. It may be concluded, however, by noting that the paucity of funerary monuments in the uplands does accord with the absence of artefactual evidence from these locations, albeit influenced by restricted
opportunities for artefact recovery. It may be more appropriate to suppose that the missing monuments lay within the present agricultural zone and that they have shared the fate of the massive cairn at Caverton Hillhead.

IV: ix Ritual enclosures in the Tweed Basin Region

a) Henges and related sites

Consideration of ritual enclosures in the Scottish portion of the Tweed Basin is necessarily an exercise shadowed by the remarkable ritual landscape of the Milfield Basin on the southern side of the Tweed. The concentration of monuments in this area is, however, a phenomenon which cannot be matched within the Scottish study area, and, for present purposes, it may best be regarded as being sui generis and a problem of explanation within its own context (Miket 1976; Burgess 1984). The monument types involved are distinctly unusual, from the wavering 'avenue' linking a series of enclosures (Harding 1981), to the single and double pit alignments with grooved ware associations (Miket 1981). The small hengiform enclosures, some with segmented
ditches, some with central pits, raise southern rather than Scottish comparisons, but neolithic populations on the northern side of the Tweed must certainly have been aware of this centre of activity along the R Till. The complex of mainly small monuments, however, seems an unlikely focus for ritual activity from other valleys to the exclusion of local developments.

There are, however, in the Milfield area some enclosures directly comparable with the henges of southern Scotland. The Class II henge at Coupland, its internal diameter of 65m three times that of the other Milfield hengiform sites, is of precisely the same dimensions as Balfarg in Fife, if a little larger than many of the Scottish Class II henges (Normangill; Weston; Cairnpapple; North Mains). Harding and Lee point out that the inner ditch of the Iron Age fort at Flodden, 3km NNW of Coupland, could represent an even larger Class II henge, c 75-90m in diameter.

On the Scottish side of the Tweed basin two probable henges have been recognised, 30km apart, at Overhowden in Lauderdale and at Swallowdean, Cumledge, near Duns, on the Whiteadder (IV:A,a,c,b). Both are probable Class II henges, c70m in internal diameter, and thus very close in size to Balfarg in Fife and in size and character to Coupland, 26km S of Swallowdean. The wide separation of such similar monuments is of interest in terms of information exchange and scale of social organisation.
in the Late Neolithic. It may be noted, however, that the monuments are all incorporated into very different social and ritual landscapes. Balfarg appears as the successor to earlier major ritual monuments in the same location; Coupland is a member of a large group of probably contemporary monuments forming the 'ritual landscape' of the Milfield Basin; Overhowden, isolated from other built monuments, is set in a rich distribution of lithic artefacts; while Swallowdean forms the centre for a later cluster of cist burials, some with beaker accessories. It would seem that in the Scottish Tweed tributaries the practice of monument building had not become established, and the henges represent the adoption of an extraneous custom, to be absorbed within a variety of cultural backgrounds.

Although of relatively large dimensions, the henge at Overhowden was not constructed on a massive scale. Its situation on a sloping hillside with little evidence for any levelling of the interior suggests a lack of care or sustained effort. Excavation took the form of narrow trenches across the defining features and gives no information on the interior. The suggestion of a levelled area within the NW entrance might offer the most encouraging prospect for further investigation before the site is entirely ploughed away. The gully on the lip of the ditch is not immediately explicable, and could suggest phases of adaptation in the use of the site.
The possible presence of a similarly positioned palisade line at Broadlea henge (V:a) may also be noted.

The newly identified site at Swallowdean again utilises the Class II format. The segmented appearance of its NE ditch may suggest that it, too, is not deeply dug. An outer ditch or palisade line could, like the gully on the ditch edge at Overhowden, suggest a phase of secondary development or re-use.

Another cropmark enclosure which may be linked with the above sites is a sub-circular or polygonal pitted enclosure at Lauder Barns, just over 8km SE of Overhowden at NT 5432 4616. This site was recorded by St. Joseph in 1949, but has not generally been recognised as a neolithic enclosure, and I am grateful to M. Brown of the RCAHMS for drawing my attention to it. The site occupies a fluvio-glacial gravel terrace at 155m OD 150m SW of the Leader Water at the foot of slopes rising to the west. It measures c 80-90m in diameter with no apparent entrance. The S side is semi-circular, but on the W it consists of straight stretches of pits. The N side is not clearly defined, and possibly becomes more complex with pits leading away from the enclosure towards an elongated natural hollow in the field. The enclosure is situated between this hollow and the Milsie Burn to the south and it is possible that its function relates to the promontory area, measuring c 450m x 120m between the Milsie Burn and the Leader Water. The enclosure itself is
much smaller than other neolithic pit defined sites such as Forteviot, Perthshire, measuring 265m x 220m (St. Joseph 1978), and relates more closely to the size of local henges, such as Overhowden. Its function could relate, however, to demarcation of the promontory, an area comparable to that of the Meldon Bridge pit defined promontory enclosure (III:b).

Harding and Lee (1987, 343, no.243) list another cropmark site at Aytonlaw (NT 904 617) in their compendium of possible henges, but reject it as being probably a domestic or defensive site.

Just under 8km SSE of the Lauder Barns enclosure, a poorly defined, circular cropmark enclosure at Earlston Mains (NT 53NE 57) has been mentioned above, on the basis of artefact association, as a possible candidate for henge status (IV:vii). While not morphologically classifiable under this heading, the location of the site, from the vicinity of which some large axes have been reported, would create a well spaced distribution pattern along Lauderdale.

A suspected cursus at Aytonlaw (NT 96SW 50) has been observed to coincide with the position of an old plantation belt (RCAHMS 1980(a), 37, 304) and must be dismissed.

b) Stone circles

Surviving stone circles of sizeable dimensions are
not much more frequent than henges in the Tweed Basin (see Table IV: 3). The example on Borrowston Rig (IV: d), 41.5m x 36.6m, is considerably more impressive in plan than on the ground. The egg-shape of its geometry, however, appears deliberate, particularly so in that the same figure is used elsewhere in south east Scotland - at Cairnpapple, North Mains Ring B, and Burgh Hill. The diminutive size of the stones could be explained if they were regarded as permanently marking the layout of a monument which periodically took more impressive form, whether by the erection of posts, or simply by being filled with people. Such an interpretation would resemble the situation in East Anglia, where causewayed enclosures and henges appear to have been used occasionally and for short periods (Pryor 1988). The importation of temporary settings for specific occasions has been compared with the practice of a small local football team, placing posts in sockets before each game (Clay 1989, 116). The situation of the Borrowston Rig circle, unobtrusive in a hollow near the summit of a steeply inaccessible hill ridge, merits comparison with that of the Mutiny Stones in the same range of hills. Modern impressions of seclusion must, however, be tempered by recognition of the array of early remains, of settlement, agriculture and funerary activity along the ridge at Borrowston.

The concept of circle stones as constituting mere
ground markers for sites utilised periodically for temporary activity, has made it possible to accept a site known as the Crow Stones, on the Lammermuirs, 13km NNE of Borrowston Rig (IV:e). So insignificant as to have been generally overlooked, the stones were rediscovered by the OS in 1979 (NT 66NW 20) and shown to constitute a regular ellipse measuring 43m x 33m. The site has been included in the present Catalogue, and may serve as a useful warning of the vulnerability of some large enclosures.

In the south of the region another egg-shaped setting on Burgh Hill seems to be a smaller version of the Borrowston Rig circle. Peripheral to the Tweed Basin, the ring is only 10km north of a circle at Ninestone Rig at the north end of Liddesdale, and, with its emphasis on the SW, can, more appropriately, perhaps, be linked to the stone circles of eastern Dumfriesshire (V:viii). It may serve to illustrate the spread and sharing of concepts across neighbouring regions.

Records of destroyed stone circles in the Tweed Basin lack detail and should be treated with appropriate caution. A site at Kirktonhill, Lauderdale (Table IV:3:3), however, is close enough to Overhowden henge and Borrowston Rig circle to be regarded as being part of a Lauderdale complex of sites. Similarly the other three destroyed sites (Table IV:3:4, 5 and 6), form a cluster around the junction of the Kale Water and the Teviot,
joining the long cairn at Caverton Hillhead, a dense
distribution of axeheads (especially from Fairnington),
and a concentration of beaker burials. The social
context for the erection of ritual enclosures would
appear to be present here.

The remaining sites in the Lammermuirs and the
Cheviots are all small, and, where they seem to be genuine
prehistoric monuments, they apparently relate to
funerary activity. It is perfectly possible that it was
local neolithic practice to erect standing stones, as has
been suggested in relation to the deposition of a massive
Cumbrian Club near a standing stone at Hindhope (Sheridan
1992). There are, however, many such stones in the
Region, almost certainly covering an enormous time span.
Neolithic activity cannot be mapped by plotting a
distribution of either the individual standing stones or
the more complex settings, which are listed here largely
in order to elucidate the common use of the term 'stone
circle' to cover a widely various range of monument
types.
There is a total absence of cup-and-ring marks on outcrop in the Scottish Tweed Basin. In contrast, the Fell Sandstone hills overlooking the valley of the R Till and the Millfield Basin produce one of the richest displays of such art in the country (Beckinsall 1983). The abrupt boundaries which limit areas of rock carving are a phenomenon discussed again in relation to the south west region (VI.x). In the present instance the actual rock surfaces available on the sandstone scarplands of Northumberland certainly facilitated the execution of carving in this area. As Bradley has pointed out (1989), there must also be a suspected relationship with the ritual landscape of the Millfield Basin, overlooked by the rock sites.

Morris (1981) does list a few carved stones from the Scottish Tweed Basin, all small, and none with any context of recovery. A small boulder from Kalemouth (BDR 6) and two slabs from Jedburgh town (DBDR 4 and 5), all relate to the vicinity of the lower Teviot, an area which has already been noted for its records of stone circles, besides the presence of Caverton Hillhead long cairn and a rich record of artefact recovery. Besides these, there is one boulder from Harelawside, near Coldingham, in the extreme north of the region (BDR 3), and a doubtful, crude
example from the valley of the Ale Water, between Selkirk and Hawick (BDR 9). No details are known of a find of two slabs with cup-and-ring marks from Soutra Aisle (NT 4525 5841), at 370m OD, recently reported by Dr. B. Moffat, from excavations at this medieval site (Morris 1989, 70). The prominent hilltop site is, however, on the route used in Roman and medieval times as the crossing from Upper Lauderdale to the Lothians.
Nineteen beaker findspots have been identified in the Region from Clarke (1970) and a few other sources, and eighteen of these are shown on Map IV:8; a find from Ettrick, far up the Ettrick Water, lies off the map. Ten of these beakers are known to come from cists, some found under surviving small cairns or barrows, and in most cases they accompanied an inhumation. Apart from sherds of a second beaker or food vessel, and the occasional piece of flint, only one cist contained other grave goods. This was at Springwood, Kelso, where a Step 4 beaker covered five barbed and tanged arrowheads and a small bronze awl lay among the bones of a disturbed inhumation (Henshall and McInnes 1968). Clarke classifies most of the beakers as being of N2 or N3 type.

Finds of beakers are nearly all riverine, cists being more likely than artefacts to be disturbed by the plough in deep soils. As Crichton Mitchell pointed out (1934) the distribution is restricted, vessels occurring principally in Teviotdale, with clusters at Kelso at the junction of the Teviot and Tweed, and along the Blackadder and Whiteadder Waters. The former group is in an area with ample lithic evidence for neolithic activity, but the latter rivers have produced localised finds only (principally at Foulden Moorpark), besides
one henge, at Swallowdean. Many areas, evidently exploited during the Neolithic, are without beakers, notably Lauderdale, where the single mapped beaker from Hillhouse, Lauder is a small sherd of indeterminate type, possibly from a food vessel not a beaker (Clarke 1970: no. 1598). Maps IV:3 of transverse arrowheads and IV:8 of beakers demonstrate the differences in distribution patterns. The only overlap occurs near Gordon, on the upper Eden, where the only AOC sherd from the Region was found in Gordon Moss and an N3 beaker came from a sandpit at Mack's Mill (Clarke 1970: nos. 1597, 1596). One petit tranchet derivative arrowhead was found near Preston, Duns, not far from the henge at Swallowdean and from two finds of Northern Beakers at Grueldykes and at Manderston West Lodge (Clarke: nos. 1594, 1599). More commonly there appears to be avoidance between Late Neolithic lithic types and beakers.

One other peripheral find, also differs in various ways from the riverside inhumation cists. This concerns beakers from a cairn on the Knock Hills, 300m from the oval cairn discussed in section IV:viii. The 11m cairn here was said to have been surrounded by a circle of stones c 50m in diameter. It covered an inner ring of stones, c 2m across within which, apparently undisturbed under large stones were sherds of two broken beakers and some unburnt bone covered by a layer of charcoal (Oliver 1929). Clarke classified the more complete vessel (EG
as belonging to his S2/W group, a rarity in Scotland, although with a distinct cluster in northern England. Although the nature of the 'circle of stones' is uncertain, the complex construction at this pair of cairns would seem to suggest that a strong element of ritual attached to the use of these sites, perhaps suggesting extended continuity of use.
The Tweed Basin is a large Region in which a number of varied valley environments offer potential for separate settlement units, or 'Siedlingskammern'. A settlement site at the Hirsel suggests that the Early Neolithic took advantage of riverside situations, as perhaps also at Sprouston; a single pottery sherd beside the Yarrow is also of Early Neolithic form. Lithic finds, however, concentrate not in the valleys but in the lower hill country, as on the west side of Lauderdale, around the upper Blackadder, on high ground between the Kale Water and the Tweed and south of Selkirk, and on the slopes of Rubjerg. It is possible that valley alluvium reduced artefact recovery in riverside locations; some axes do come from lower ground. A destroyed long cairn at Caverton Hillhead overlooks the valley of the Kale Water.

The one surviving long cairn, high in the Lammermuirs, suggests that in some instances it was regarded as appropriate to build monuments away from settlement areas. Surviving stone circles follow the same pattern, although with a record of destroyed circles in lower hilly country. The association between the most spectacular axe finds and peripheral upland locations also suggests that ritual deposition was preferentially associated with areas remote from settlement. The high numbers of axes and other artefacts in the Region, many of
imported flint, and four of jadeite, suggest that the Tweed Basin maintained active contacts with other areas and that high value was placed on prestige goods. Ritual deposition may have played an important role in this Region.

The two henges identified, both in low hill country, probably greatly underrepresent original numbers. A possibly related palisade enclosure recognised as a cropmark at Lauder Barns reinforces this point of the potential for failures of survival or identification of ritual enclosures. Uncertainty over original distribution restricts the value of comment on the location of such monuments. In Lauderdale, however, the presence of Overhowden henge and Lauder Barns enclosure, beside a dense distribution of Late Neolithic artefact types and numbers of axes, including some very large specimens, all suggest that a flourishing community existed in the Late Neolithic, whether successive to earlier populations, or as a result of settlement expansion. Beakers avoid Lauderdale, clustering in the valleys of the Whiteadder and the Teviot.

Within the Tweed Basin Region settlement sequence and interest in monument building appears to have varied from area to area. Study of the differing patterns is restricted by depletion of the evidence and the lack of chronology. It is clear, however, that the river valleys offered routeways of contact in many directions, and that the Region played an important role in the Neolithic of the south of Scotland.
Table IV:1  Neolithic arrowheads associated with lithic collections in the Tweed Basin

1. Selkirk area  NT 42NE, 53SW

J.B. Mason (1927) describes areas of lithic collection on the low hills, mostly under 300m OD, between the Ettrick and Ale Watersk SE of Selkirk. Others have collected in the same area, and Walter Elliot, of Selkirk Museum, holds a large personal collection. The following areas each produced a leaf arrowhead and other material for Mason:

- Lauriston Scars, Howden, fields above the Ettrick Water
- South Common Farm, near Selkirk racecourse
- Smedhaugh, near a march
  - Also, a leaf and a lopsided arrowhead in NMS: BMA 1089-90
- Greenhead, N of farm
  - Also part of a leaf arrowhead in NMS: BMA 1086 (as 'Gruehead, Selkirk')
- Whitelaw Hill, a leaf arrowhead near the summit (323m OD) and other finds on the SW slope.
  - Also a leaf arrowhead in the Hunterian B 1914-224/751
- Greenhill, on rocky ridges between marshes,
  - Mason found 4 leaf arrowheads and other material
- Haremoss Loch: Mason found c 20 implements not arrowheads, near the loch.
  - Walter Elliot's collection here includes a leaf arrowhead made on a flake of Antrim porcellanite found SW of the loch (D.V. Clarke 1968)

2. The Rink, Selkirk  NT 485 322

W.D. Mason (1931) made a large collection, mainly of assumed mesolithic material from the fields above the Tweed at its junction with the Ettrick Water, including a halberd arrowhead of yellow grey flint (BMA 2013) and a broken stone axe. Near the fort on the summit of the 200m hill (NT 480 327), he found a fine, ripple flaked leaf arrowhead. Walter Elliott's collections from the riverside site include 'one stray arrowhead' (DES 1967, 50).

3. Airhouse and Parkfoot  NT 479 537

A collection of stone and flint implements donated to the NMAS in 1928 by Mr. J.R. Fortune of Airhouse (BMA 41-284; 338-359) was published by Callander (1928). The material came from the fields of Airhouse, with a particular density of recovery in one field on a high point of the farm (see IV:iii, Settlement). Callander drew attention to a group of 42 'subtriangular implements' (petit tranche derivative arrowheads), found together in this field in which a flint axe was also found. Most of the 8 stone axes in the collection came from the next field.
to the NW. There were also 9 lopsided arrowheads, 7 made of a brownish-black flint, 12 leaf shaped, 8 barbed and tanged and 4 triangular arrowheads and a number of other implements. Fortune continued to make donations to the Museum throughout the 1930s and in 1947, and these included arrowheads of all the above types (BMA 524-542; 628-660; 676-706; 718-724; 762-795). In 1974 a final donation from Mrs. Fortune (BMA 2023-47), including 6 more transverse arrowheads, is described as coming from the lands of Parkfoot, the name of a second house on the Airhouse Estate at NT 488 586.

Callander mentioned that a local collector, J. Readman of Earlston, had 30 triangular implements from Airhouse in his possession, and when the late H. Readman left 97 flints from the farm to the NMAS in 1947 (BMA 802-898) these included 22 petit tranchet derivatives of types C and D. The market in prehistoric antiquities may have played a part in dispersing such collections: in 1952 Salisbury Museum gave items from its J. Readman collection to the NMAS, including a few from Airhouse (BMA 2219-46); the Hunterian possesses a hollow based arrowhead from Airhouse as part of A. Henderson Bishop's collection (B 1951-2104).

4. Overhowden NT 486 525

'Great numbers' of flints are said to have been found on Overhowden some thirty years before 1902 (Thomson 1902, 19).

Details of a collection from the farm are given by James Sharp (1912) who states that two thirds of the material came from the field in which the henge (IV:8) is situated, most being found c 200 to 300 yards N of the site. The collection included 17 lopsided arrowheads (all from the henge field), 16 triangular flakes (transverse arrowheads), a large triangular spear head, 4 barbed and tanged and 3 leaf arrowheads, c 16 scrapers and flint flakes. In 1950 when this collection was given to the NMAS (BMA 1851-1943) numbers of most types (but not leaf arrowheads) had increased, and 3 halberd shaped arrowheads were now included. One leaf arrowhead, with a few other flints, was given to the NMAS in 1926 (BMA 1-8) and in 1932 an edge polished flint knife of brownish yellow flint 3" in length was purchased by the Museum (AA 231). Sharp attributed the high incidence of finds to the lack of subsoil, preventing them from sinking, and certainly excavation at the henge showed that shale rock lay only 15 to 20cm below the surface (Atkinson 1950). The quantity of broken pieces of shale in the present plough soil suggests that the depth of modern ploughing is breaking up the subsoil and must be destroying archaeological features.

Atkinson made a trial excavation on an 'eminence' opposite the NW entrance of the henge and c 150m distant (NT 4852 5241), the spot which he understood to be central to artefact recovery, but results were negative. The area of greatest density described by Sharp seems to have been at the base of the slope c 150m further to the NE; during
survey in 1989 a transverse arrowhead of translucent flint was found here, in plough (now in the NMS).

5. Bowerhouse NT 495 507

In 1894 Black (1894 p.325) noted two stemmed arrowheads and part of a leafshaped specimen as coming from Bowerhouse, the farm immediately to the S of Overhowden. The Rev. Archibald Allan (1900, 656-7) made comment on the numbers of flint arrowheads, knives etc. which had been found in the field adjacent to the steading. Several knives in the NMS come from the farm (AA 131; 208; PSAS XLVIII 1913-4, 16), and in 1926 a Mr. Glover donated 2 barbed and tanged arrowheads, 1 lopsided and 1 hollow based (PSAS LXI 1926-7, 19). In the 1920s and 1930s John Readman of Earlston collected here, and part of this collection was given to the NMAS in 1947, including a lozenge shaped, a barbed and tanged and 2 lopsided arrowheads (BMA 899-904). In 1956 the Ordnance Survey examined a collection of flints belonging to Mr. Runciman which included 3 lopsided, 5 leaf shaped and 2 triangular arrowheads from Bowerhouse (NT 45SE 24).

The farms immediately to the S have also produced a few arrowheads:-- a leafshaped one found in 1928 on Inchkeith (AD 2306), another leaf shaped, a barbed and tanged and a transverse arrowhead from Trabroun (BMA 1580, 1581).

6. Ruberslaw NT 580 155

Artefacts have regularly been collected from the slopes of Ruberslaw. The NMS possesses at least 7 leaf arrowheads from the hill, 5 purchased in the early years of this century, along with a large collection of tools and retouched pieces (AA 116-126; AB 1225, 1354-1405; AD 1412-5), and 2 found in 1956 near the summit of the hill (424m OD) (AD 22 94-5). A plano convex flint knife, presented in the same year, found on the farm of Whitriggs on the W side of the hill, was apparently made from a piece of polished axe (AA 267). The Henderson Bishop collection in the Hunterian includes over 30 leaf arrowheads from farms on all sides of the hill (Spittal Tower, Cavers, East Middle, Kirktom, Whitriggs, Lower Tofts, Hallrule, Town o' Rule), a petit tranchet derivative type from Spittal Tower on the N side and another from Town o' Rule on the S, and a lopsided arrowhead from Hallrule on the SE side of the hill. In 1957 the NMAS acquired a collection of flints from Midlaw Field, Nether Tofts on the SW side of the hill, including a lopsided arrowhead (BMA 2372-94). Mr. Cameron of Denholm in 1956 was said to hold a collection of flints from Ruberslaw including a fine example of a halberd arrowhead or knife, and in 1964 Mr. J. Meadows possessed flints from Town o' Rule, including neolithic arrowheads (NMAS Inf.).

7. Dryburgh Mains NT 584 327

J. M. Corrie, who collected mesolithic material from the haughlands beside the R Tweed on Dryburgh Mains, commented (1916, 308): 'Arrowheads are uncommon. Two specimens only have been found and they are of the
barbed type and of very small size'. Callander also observed (1927, 322) that no arrowheads, saws, knives or borers occurred on this site. Walter Elliot found one barbed and tanged and one leaf arrowhead among a large collection of mesolithic material from the S end of the haughlands (DES 1967, 49). However, the NMS possesses 2 leaf shaped arrowheads from Dryburgh Mains presented with other finds by C.J. Brown in 1952 (BMB 518-9), and 7 given by Dr. W.A. Munro in 1962 (BMB 559-64, 649). Possibly these pieces came from higher parts of the farm, which Callander noted as also containing findspots (1927, 318). Brown found a leaf arrowhead and several scrapers on Bemersyde the adjacent farm on the slopes above the river (BMA 2129-45).

8. Craigsford Mains and SW Lauderdale

Black (1894, 336) describes a collection of flints found by Mr. Tom Scott within 'a sharply defined area' between the Leader and Gala Waters 'on the high part of two fields on Craigsford Mains'. No more precise location is given. The density of material in one spot suggested it to have been a place of manufacture. The collection included 35 arrowheads, about half of which were barbed and tanged and the remainder leaf or lozenge shaped, triangular with convex base, and, in one case, transverse. These finds are now housed in Selkirk Museum, and some are illustrated in Trans Ber Nat Hist Club 15 1894-5 Pl.IV. Scott remarked (1900, 184) on the use of yellowish flint on Craigsford Mains and the occurrence of flakes up to 4" (102mm) in length, in contrast to neighbouring farms, such as Sorrowlessfield to the south, where grey flint was used.

Field walking on Craigsford Mains, as well as in other parts of Lauderdale, was continued in the 1920s and 1930s by John Readman of Earlston and by George Oliver, whose collection was given to the NMAS by his family in 1949 (BMA 1639-1850). It includes c 16 leaf arrowheads, 6 lopsided, 6 halberd shaped, 6 'stout triangular or hollow-based points' and 23 barbed and tanged arrowheads, besides plano-convex and other knife types, fabricators, scrapers and microliths. The Henderson Bishop collection in the Hunterian also contains leaf arrowheads from Craigsford Mains, as well as 2 from Sorrowlessfield to the S, 7 from Clackmae to the N, 3 from Mosshouses to the NW, and 3 from Blainslie, 4km to the N of Craigsford Mains. The John Readman material in the NMS includes 3 broken leaf arrowheads from Mosshouses and 1 each from Blainslie, Bluecairn and Wooplaw (BMA 952, 955, 970-2, 982). All these farms are on high ground, rising to over 300m at Wooplaw in the NW, on the W side of Lauderdale.

9. Ancrum

In a compact area, in farmland, just N of Ancrum, between the Rivers Teviot and Tweed, a diverse group of arrowheads has been recovered, together with other artefacts. None of the finds can be exactly provenanced.
Harrietsfield NT 628 262
1 triangular (NMS: AD 1525), 2 lopsided (Hunt. B 1951-102) and 2 petit tranche derivative arrowheads (Hunt B 1951-1081).

Fairnington NT 644 279
3 leaf shaped (NMS: BMA 984; Hunt B 1951-1613) and 1 re-used transverse arrowhead (NMS: BMA 1982).

Muirhouselaw NT 629 285
1 leaf shaped and 1 triangular arrowhead (NMS: BMA 2807-8)

Woodhead NT 613 254
1 tranche and 1 leaf shaped arrowhead (NMS: BMA 2880-1)

10. East Lauderdale NT 53NE 54SE 63NW 64SW
G.F. Black (1894, 324-5) described lithic collections from the Earlston area, including 20 arrowheads of various types, 4 of green chert, and 1, leaf shaped arrowhead, of pitchstone. John Readman of Earlston and A. Henderson Bishop both have material from the E side of the Leader Water, in the NMS and the Hunterian respectively. No exact locations are known, but the following farms produced finds:

Leaf or lozenge shaped arrowheads:

- Earlston area NT 57 38 BMA 935
- Grizzlefield NT 585 398 BMA 383, 927
- The Park NT 591 363 BMA 387-9
- Legerwood NT 588 433 BMA 913; Hunt B 1914-2241 1,2; 1951-688

Lopsided or hollow based arrowheads:

- Earlston area NT 57 38 Hunt A 1937-7
- Hunts Law NT 572 397 Hunt B 1951-490
- Cowden Knowes Mains NT 580 374 BMA 925
- Legerwood NT 558 433 Hunt B 1951-690,1
- Huntleywood NT 617 435 AB 1670; Hunt B 1951-562

Halberd arrowhead
The Park NT 591 363 AD 2250

11. The Upper Blackadder NT 64NE, SE 65SE 74NW, SE
A scatter of arrowhead finds occur in a 10km stretch along the upper waters of the Blackadder, S of the Lammermuirs, and S towards the Eden Water.

Cammerlaws NT 655 505
1 leaf shaped (BMA 991), 1 petit tranche derivative (Hunt B 1951-784)

Harlaw Moor NT 65 49
12. Between the Kale and the Tweed

SE of Kelso low hills rise towards the Cheviots in a triangle of land bounded by the Tweed, Teviot, Kale and Bowmont Waters. The hills, which reach a maximum height of 282m at Linton Hill, form a back drop to the sites at Sprouston (see IV:iii) and Caverton Hillhead (IV:3). Most of the finds are in the Henderson Bishop Collection in the Hunterian (B 1914; B 1951). Only the farms of origin are known:-

Hoselaw
2 lopsided arrowheads (BMA 1050) and 15 leaf shaped (B 1914 224/23; B 1951 1631)

Graden/New Graden
2 lopsided arrowheads, 4 leaf shaped (B 1951 1441, 1442, 1434)

Lochside, Yetholm
1 lozenge arrowhead, 1 transverse and a small leaf shaped point (ABA 1067)

Blakelaw
2 lopsided arrowheads (BMA 1039-40) and 1 leaf shaped (B 1914 224/24)

Hadden
2 leaf shaped arrowhead (B 1951 1621)

Spylaw
1 lopsided arrowhead (B 1951 1414)

Kersknewe
1 leaf shaped arrowhead (B 1951 1454)

Frogden
1 leaf shaped arrowhead (B 1951 1422)
Bankhead

1 leaf shaped arrowhead (B 1914 224/18)
Lurdenlaw

1 leaf shaped arrowhead (B 1951 1393)

13. Foulden Moorpark

Kinghorn (1924) reports on the collection he made over twelve years from his farm of Foulden Moorpark situated on a ridge of ground rising to 140m OD on the N side of the Whiteadder Water. Finds were centred on two knolls on the W side of a small valley (NT 9242 5727 and NT 9253 5780), and on the edge of a S facing terrace at the highest point of the farm (NT 918 574). They included hammer stones, stone axes, well worked flint cores, 200-300 scrapers and knives, mostly of flint with a few of chert or quartz, and 40 arrowheads, all of flint except one, leaf shaped, of chert. 17 arrowheads were leaf or lozenge shaped, 19 triangular, 6 barbed and tanged and 1 lopsided. A knife of pitchstone and 3 other pitchstone fragments were also recovered. In 1992 two pieces of struck flint were picked up on the high point of the ridge; both were pebble flint, with cortex, likely to be of local origin.

Table IV: 2 Axes from the Tweed Basin over 190mm
(7½") in length

Information is from museum catalogues and quoted sources.
NGR (all NT) given to 6 figures only where a findspot is indicated
AF = NMS Catalogue
B 1914, B1951 = A. Henderson Bishop Collection, Hunterian Museum
HAKMG = Hawick Museum Catalogue
L = length

1. Upper Hindhope Sheridan, private paper
   L 328mm Group VI 'Cumbrian Club' 754 100
2. Lempitlaw NMS Loan 1953 2099
   L 324mm Fell 1964, 55 'Cumbrian Club'
3. Hexpath B 1914 148; Ritchie and Scott 1989 66 46
   L 318mm BRW 3 altered siltstone
4. Windshiels AF 12
   L 292mm 'sandstone'
5. Ruberslaw HAKMG 4113
   L 284mm 'Cumbrian Club'
6. Earlston AF 246
   L 279mm 'greenstone', 'pecked surface'
7. Lauder AF 55
   L 267mm 'aphanite'

319
8, Dunion Hill  PSAS LXVII 1932-3, 9-10, Exhibited
L 264mm  62 19
9. Edgerston Tofts  AF 890
L 263mm grey sandstone  69 10
10. Oldcastle  AF 897
L 258mm 'grey stone'  86 58
11. Witches' Cairn, Kerchester  AF 661
L 254mm 'felstone', cairn not identified  77 35
12. Cessford Black 1894, 328(5)
L 254mm 'expansion of sides at butt'  73 23
L 250mm Smith 1963 No.45 Jadeite  70 46
14. Cammerlaws  AF 647
L 248mm Fell 1964, 53 'Cumbrian Club'  92 55
15. Foulden B 1914 141
L 241mm  65 50
16. East Mains, Gordon  AF 1090
L 240mm 'probably Group VI'  656 418
17. Gordon  AF 657; Black 1894, 323(6)
L 229mm 'diorite'  64 43
18. Wester Ulston  AF 528
L 226mm 'greenstone'
19. Earlston W. Elliot, Selkirk
L 225mm 'tuff' - not Group VI (P.M. Ritchie, pers comm)
20. Greenlaw  AF 212
L 222mm 'indurated claystone'  71 46
Fell 1964, 53 'Cumbrian Club'
21. Lumsdaine  AF 648; Hardy 1878(b), 547
L 222mm 'felstone', pointed butt  87 69
22. Rumbleton Black 1894, 329(9)
L 216mm (originally), 'felstone'
23. Legerwood B 1914 139
L 216mm  58 43
24. Ladyflat  AF 681
L 210mm Highly polished quartz  77 50
25. Airhouse  NMS BMA 44
L 210mm 'waterworn piece of hard sandstone with cutting edge ground'
26. Huntleywood  HAKMG 4104
L 205mm 'Great Langdale'
27. Westerhouses  AF 889
L 201mm 'pale grey stone'
28. Lilliesleaf  HAKMG 4116
L 200mm 'light grey'
29. nr. Linton  AF 1020
L 199mm 'flat pebble of grey ?sandstone'
30. Earlston Mains  AF 736
L 197mm pecked stone
31. Frogden B 1914 174
L 196mm  76 28
32. Byrecleugh  AF 649
L 194mm 'felstone'  62 58
33. Marchcleuch, Morebattle Selkirk Museum
No.259; Black 1894, 328(4)
L 194mm 'felstone'  73 21
Table IV:3 Stone Circles in the Tweed Basin

1. Borrowstone Rig
   See Catalogue IV:c
   NT 5576 5232

2. The Crow Stones
   See Catalogue IV:d
   NT 6183 6519

3. Burgh Hill, Allan Water
   NT 4701 0624
   This egg-shaped setting of small stones has been surveyed by the RCAHMS (1956 ii no.1011, fig.592) and by Thom and Thom (1980, 308). 12 stones remain in situ, with as many recumbent. These are flat slabs defining a slightly pointed oval which Burl (1976, 42, fig.5) uses as the type site exemplifying the geometry of an egg shape (Class I). Barnett and Moir (1984, 215) accept this classification and the fact that it is here based on a megalithic yard. The oval measures 15.2m NE to SW by 13.1m. A thin slab 1.1m in length is set horizontally near the apex of this figure, and a stone 1.5m in length lies recumbent near its SW end. The circle is said to have 'been well explored' in the 19th century 'but yielded nothing of a sepulchral nature' (Brydon 1875, 78). The site, at 290m OD on the lower, NE summit of Burgh Hill, has wide views to the E.

4. Kirkton, Channelkirk - destroyed
   c NT 47 54
   In 1869 it was reported (Proc Ber Nat Club 6, p.11) that a stone circle which formerly stood near Kirktonhill fort had been destroyed within the previous five or six years for dyke building. The fort, at 325m OD, is on a steep hillside to the N of the Mountmill Burn, 1km from a flint collection site on Airhouse (Table IV:2:3)

5. Harlaw, Fairnington - destroyed
   NT 667 285
   Jeffrey (1859, III, 177) says that a circle of large stones formerly stood in a field called Harlaw to the E of Fairnington village. The site is at 120m OD, on a gentle NW facing slope. J.M. Corrie collected 17 stone axes from the lands of Fairnington (NMRS: MS/374/3).
6 Harestanes - destroyed

The NSA (III, 177) reported a single stone surviving in 1845 from a circle in the vicinity of Harestanes Cottages. The Roxburgh Inventory (RCAHMS 1956 i, 60, no.22) pointed out that this circle was shown on Stobie's Map of Roxburgh in 1770, to the NE of the cottages whereas Ainslie's Estate Map of 1795 was said to show the 'Druid's temple' at the SW corner of the buildings (Watson 1908, 26). The single stone is no longer standing. The site is near the foot of a SE facing slope, a few hundred metres from the R Teviot, near its junction with the Ale Water.

7. Five Stones, Frogden - destroyed

In 1792 five or six stones were said to form a circle about the size of a cock-pit, called the Tryst (Stat Acct III, 123). By 1845 these 'Tryst Stones' had long disappeared (NSA III, 145). The 'Five Stones Field' slopes to the SE, from 180m OD to 160m.

8. The Lammermuir Group

The following list uses the numbering of the RCAHMS (1924) who identified a group of 'stone circles' around the headwaters of the Whiteadder. None of the sites would appear to represent neolithic ceremonial enclosures, and some are doubtfully prehistoric.

a) No.245 Stone setting, Nine Stone Rig NT 6258 6519
   A setting of five small stones. In 1989 only three loose boulders could be identified.

b) No.245 The Nine stones, Nine Stone Rig NT 6254 6549
   Three upright and five prostrate stones describe a circle c 6.4m in diameter, with a space for a missing ninth stone on the S. The longest of these large stones measures 2.1m.

c) No.240 Kingside Hill NT 0203 6504
   A circle of small boulders, just under 12.0m in diameter, surrounds a small 3m cairn and a prostrate stone 0.6m in length. In 1987 HBM supervised the removal of dumped stone from the site, confirming the nature of the ring (DES 1987, 30-31). It would appear to relate to funerary traditions of the second millennium of enclosed cremation cemetery or ring cairn type.

d) No.238 Mayshiel NT 6298 6465
   Seven boulders around a depressed area c 2.7m in diameter have been suggested to have been kerbstones around a cairn (Feachem 1963, 76; NT 66SW 10).

e) No.185 Spartleton Edge NT 647 675
   Nine small stones, two of them buried under peat, were said to describe a circle 12.8m in diameter within which a shepherd had set up a standing stone. In 1979 the OS could not locate this site (NT 66NW 18).

f) No.172 Zadlee NT 6540 6731
   Seven stones up to 0.2m in height describe a circle 8.2m in diameter.
The following sites are listed by Burl (1988, 124) as possible Four Posters (EL 1-6).

EL 1 The Crow Stones, see Cat. IV:

EL 2 No. 246 Kingside, or Kell Burn NT 6433 6421
Four stones in a rectangle 3m x 2.1m enclosing a fifth stone. Ruggles (1981, 159) reported the removal of all but one of these tiny stones between 1976 and 1979, and suggested that they might have been the remains of an enclosure wall.

EL 3 No. 244 Packman’s Grave (dubious) NT 6417 6439
Four stones in a square measuring c 1.4m.

EL 4 No. 243 Penshiel NT 6402 6309
Four prostrate monoliths, up to 1.8m in length in a line; original positions unknown.

EL 5 No. 242 Penshiel Grange (uncertain) NT 6401 6317
One upright and three prostrate stones define a square measuring c 4.8m. The upright stone is 1.2m in height, but the others are small boulders.

EL 6 No. 241 Penshiel Hill (uncertain) NT 6320 6417
Four small stones in an arc, which the OS suggested in 1979 might be the remains of a cairn (NT 66SW 23).

9. Dere Street Group

A series of stone settings in the Cheviots have been termed stone circles, but do not appear to have been major ritual enclosures although an early prehistoric context is possible. Site numbers refer to the Roxburgh Inventory (RCAHMS 1956).

a) No. 812 Black Knowe NT 7506 1552
Five large boulders on the perimeter of a small cairn and four outlying blocks of stone may represent the remains of some more complex stone setting.

b) No. 811 Trestle Cairn NT 751 161
Upright and fallen stones within the circumference of a 20m diameter cairn appear to represent the remains of an inner ring c 13m in diameter, presumably either an inner kerb or the inner facing of an outer ring.

c) No. 349 Five Stones NT 7526 1686
Three upright and two fallen stones suggest this formerly to have been a circle c 6m in diameter. The relationship of three stones, 15m to the E, is unknown.
Map IV:1 Microlith findspots in the Tweed Basin Region
Map IV: 2 Leaf arrowheads in the Tweed Basin Region

- Single finds
- Groups (4 or more)
Map IV:3 Transverse arrowheads in the Tweed Basin Region

- Single arrow
- Several arrows
Map IV:4 Axeheads in the Tweed Basin Region

- Single axes
- Several axes
Map IV:5 Flint axeheads
Map IV:6 Large axeheads, over 180mm in length
Map IV:7 Neolithic monuments in the Tweed Basin Region
(See Catalogue)

- Long cairn
- Enclosure/henge
- Stone circle
Map IV:8  Beakers in the Tweed Basin Region
V  THE BORDERS REGION
V:i Physical setting and environment in the Borders Region

The occurrence of two long cairns, perched high above Liddesdale, Windy Edge at 300m OD to the north and Lang Knowe at 270m OD to the south, suggests, from a Scottish perspective, a peripheral siting of cairns above settlement. As Lionel Master (1984) has shown, however, the two cairns form part of a distribution stretching along the southern side of the Borders Hills and overlooking valleys draining both to the Solway and to the North Sea. The Liddesdale cairns may, therefore, like the Bargrennan Group of round cairns in the south west (Murray 1992), be better viewed as members of an upland distribution, maintaining contacts across the hills. The present 'Borders Region' is thus a truncated remnant of this larger unit.

It has nonetheless appeared logical to link the uplands of the Borders with the Solway plain below. The distribution of long cairns overlaps with a set of stone circles, with shared characteristics, stretching from the Solway to Upper Eskdale and Liddesdale. The Region has therefore been defined to include the lower Annan, its western limits being set by the valley of the Water of Milk. Central and upper Annandale, linked respectively to the Lochmaben Basin and the Lowther Hills, fall more naturally into the Nithsdale Region to the west.
Geological maps reinforce the logic of this regional division. Whereas Galloway and the Southern Uplands constitute one continuous band of Ordovician and Silurian strata running across the country from SW to NE, the Pennine chain, forming the backbone of England, and consisting of Carboniferous limestones and sandstones, runs transversely from N to S. The two systems abut to the north of Liddesdale, which therefore falls clearly into the southern division. The Carboniferous limestones of Liddesdale run SW to Annan and the Lochar Basin, including within the same ambit the Solway plain, largely masked by boulder clay, but with underlying geology of New Red Sandstone. The soils are nowhere classified as being better than Grade 3 agricultural land, capable of growing a restricted range of crops subject to drainage and climatic restrictions. The climate is markedly more oceanic than in the east of the country, and conditions deteriorate rapidly with altitude. Narrow corridors of alluvial land in Liddesdale and Eskdale lie between sloping valley sides which, when not too steep, as in much of Eskdale, offer better drained ground with some agricultural potential. Similar slopes also exist on the south side of the hills, above the Kirtle Water and the Water of Milk. Both Eskdale and Liddesdale furnish natural routeways from the Solway towards the Tweed Basin.

While the beaches and river gravels provide
supplies of pebble flint, chert outcrops in upland areas must have offered welcome local sources of raw materials. Wickham Jones and Collins list several such chert sources in the region, including sites beside the Esk and Liddle Waters and the Kershope Burn (1978, 14-118).

Early environmental studies in the Region suffer from a lack of chronological control (Nichols 1968; Moar 1969), but recent work by Dr. Tipping (forthcoming) has covered sites at Overrig in Eskdale and Burnfoothill Moss in the lowland parish of Kirkpatrick Fleming. A study from a small bog near Burnswark Hill (Squires 1978) is probably distorted by peat cutting, but gives a useful insight into conditions in Annandale in its description of the third millennium mosaic of oak, birch, elm and alder with a little hazel. The valley basin site at Overrig provided a localised impression of the vegetation only, but was therefore able to record the presence of hawthorn, rowan and cherry at the time of the Elm Decline, shrubs usually screened out by the pollen of larger trees. Both Overrig and Burnfoothill Moss record two elm declines, highlighting the problems of interpretation of undated diagrams; recurrent decline of elm is seen in diagrams from Racks Moss (Nichols 1968) and Bigholm Burn (Moar 1969). The second decline at Burnfoothill Moss, just before the middle of the third millennium, was associated with anthropogenic clearance, in part for cereal cultivation. Forest regeneration
after mid-millennium, however, did not encounter further clearance until the early second millennium (Tipping forthcoming).

V:ii The Mesolithic of the Borders Region

In a review of the evidence for a mesolithic presence in the north of England, Higham (1986, 28) comments on the near total absence of lithic scatters in the uplands of northern England, in contrast to the situation to the south (Central Pennines and Yorkshire) and north (the Tweed Basin). While the same lack of finds is generally true of the hill country of eastern Dumfriesshire, it is important to bear in mind the absence of recovery potential in such territory. To the north of Liddesdale, at the Dod, near Hawick, pollen studies by Innes and Shennan (1991) have registered a clearance episode in the sixth millennium bc, while in the lowland part of the Region, at Burnfoothill Moss, Tipping (forthcoming) notes a similar episode at c 5000 bc.

Absence of opportunity for recovery is emphasised by Jobey's excavation of three Iron Age sites on the upper Tyne, in anticipation of the construction of the
Kielder Reservoir dam. Two of these sites produced evidence for earlier prehistoric activity, discussed below (sections V:iii, iv, vi). At Kennel Hall Knowe (NY 667 898) at 150m OD, beside the river, 168 pieces of flint, chert and other flaked stone were recovered, a mixed collection, including some neolithic pieces, but said to be 'of mainly Mesolithic character' (Weyman, 19-20, in Jobey 1978(b)).

On the Scottish side of the Border, the work of one collector living at Twiglees in the valley of the Black Esk (NY 22 94) accounted for a large assemblage of flint and chert artefacts and debitage being presented to Dumfries Museum (DES 1956, 13; 1957, 13). The collection, which A.F. Truckell and R.B.K. Stevenson describe as being of Mesolithic type (Truckell 1955, 201; 1967, 140), came chiefly from forestry drainage ditches and upcast on the slopes NW of the B723 to Eskdalemuir at c 250m OD. The finds included pitchstone pieces: a core, two unworked lumps and a dozen blades and blade sections (Thorpe and Thorpe 1984, 7).

Evidence for mesolithic activity in the lowland part of the region is also restricted. The coastal finds, associated with the upper edges of the raised beaches, so common further south in Cumbria and to the west around the Nith estuary, are lacking in the inner Solway, apart from one find of a patinated flint blade from Gretna (Truckell 1963, 56). A hearth at Redkirk Point dated to 6000 bc - UB
4445, 2470 (Morrison 1982, 5) must be pre-transgression, and chert and pitchstone cores from the same area, where part of a neolithic discoidal flint knife has also been found, are presumably either pre- or post-transgression (Truckell 1963, 56). A so-called 'Bann point' from immediately south of Annan (NY 198 698) is an unusual find (Coles 1965), but would seem as likely to be an Upper Palaeolithic tanged point as an Irish-type mesolithic artefact. The absence of Late Mesolithic finds from the inner Solway need not be regarded as surprising, in view of Jardine's description of the area during the main transgression as 'a coastal marsh penetrated only for short periods by the distal, brackish waters of flood tides' (1980, 10). However rich the ecological potential of such an environment, it may simply have failed to provide suitable dry land settlement niches.

The terraces of the R Annan thus furnish the only location in the Region with which a mesolithic industry is associated. The work of W.F. Cormack is largely responsible for this group of finds, as also for those from the Nith Estuary and for the Wigtownshire material (VI:ii). Blades have been found at Blacketlees (NY 190 687), just north of Annan, and more considerable collections come from Brocklerigg (NY 145 733) and Dalton Hook (NY 115 763), west of the junction of the R Annan and the Water of Milk (DES 1964, 256; 1966, 21, 23). Cormack has commented (1970, 78) on the variety of raw
materials used at these Annandale sites, not only local chalcedonies and agates, 'but fairly massive red and blue-green cherts (from the Girvan district?), pitchstone in small quantity, a little poor flint, but much first quality flint which must have been imported from some distance'.

V:iii Settlement structures in the Borders Region

Recurrent uncertainties over the probable form of upland neolithic settlement sites has precluded the identification of any such structures in the Border hills. It is very possible that any settlements here have left no visible structural traces. Excavation of three Iron Age enclosures in North Tynedale, prior to construction of the Kielder Reservoir dam, obtained indications of earlier occupation at two of these sites (Jobey 1977; 1978(b)) in the form of lithic assemblages, including mesolithic, neolithic and bronze age facies, and pits pre-dating the enclosures. Two pits at each site contained some struck flint, and one pit, at Kennel Hall Knowe (NY 667 898) also contained abraded sherds of beaker. It seems quite possible that evidence of
neolithic settlement will often be no more substantial than this.

A row of circular pits up to 3m in depth leading away from the stone circle on Ninestone Rig was once suggested to be possible pit dwellings (Snadden 1923, 23). The area is now forested, but in 1960 the Ordnance Survey (NY 59NW 8: JLD) dismissed the pits as being the product of 'natural subsidence in mossy ground'.

There exists, however, one lowland site which must be regarded as a possible candidate for neolithic status. At Kirkconnel, at 75m OD beside the Kirtle Water (NY 250 755), excavation of a low internally ditched mound found that within the area enclosed by this feature was a series of postholes which the excavator interpreted as outlining the ground plan of a Dark Age timber hall (Clough and Laing 1969). The subsoil features, which, as Reynolds has commented (1980, 45), constituted 'a curious collection of post settings of irregular shape both in outline and profile', defined a building measuring at least c 17m SW-NE by 5.5m. The four pits around the SW end of the building were relatively massive, up to 0.36m in depth, capped with stony spreads; the remainder were smaller and cleaner. The NE end of the building, cut away by the ditch, was open, so that its overall, original length is unknown.

The circumstances of preservation of this structure were unusual. The ditch which enclosed it on three
sides was no more than a shallow scoop, 2.4m wide, perhaps a scrape to gather material for the outer bank, 1.8m wide, 0.6m in maximum height, which merged into ground level on the north. To the south of the site lay irregular heaps of disturbed gravel. Glazed pottery under the bank showed it to be no earlier than the 17th century in date. The excavator's interpretation of the bank as a 'pillow mound', designed to preserve rabbits, is without local parallel, and another possibility would relate it to sheep handling activities which appear to have taken place within its arms. Whatever its function, construction of the bank seems to have involved stripping the enclosed area, thus removing surviving occupation levels, while the NE segment of the ditch, and later pits dug at this end of the enclosure, destroyed evidence for postholes in this area. Spoil heaps to the south, probably also of soil stripped from the enclosed area, contained a spindle whorl, glass, stoneware and a silver button mount dated to 1864.

Laing's suggestion of a Dark Age date for the hall rested on the association of the period with timber buildings, on one glass bead of 6th–7th century AD type from the surface of the natural sand near a large posthole at the SW end, and an iron object from the soil dumps, and perhaps a knife, possibly of similar date. The local context of post-built Dark Age buildings has been increased by excavations at Hoddom on the R Annan,
some 10km to the west, where several such structures were found, the best preserved measuring 13.5m x 6.75m (Lowe 1991). Neolithic parallels do, however, also exist as at Lismore Fields, near Buxton (Garton 1987) (and see Biggar Common III:iii). One sherd of pottery came from a posthole in the NE part of the Kirkconnel structure, a body sherd of coarse, hand-made pottery, friable, and with medium grits, certainly pre-medieval, but not more closely dateable. One small worked flint was recovered from the soil dumps.

If this site is to be interpreted as a neolithic hall, there remains a question as to why it was so neatly enclosed by a modern ditch and bank, which only cut across one end of the structure. The same problem would of course, arise if the hall were of Dark Age date, and the role of coincidence cannot be entirely ignored. A tentative explanation might suppose that the hall had originally been on a levelled platform, defined by a bank surviving along the NW side. The site would thus have been adaptable to later purposes, leading the sheep farmers to scoop up soil both to add to the bank on the NW, and to create two more sharply defined mounds at right angles to this. The only excavated bank sections lie across the short mound at the SW end of the building. No firm conclusions can be drawn on this site, but the riverside position would fall acceptably into neolithic patterns of site preference.
The possibility of neolithic enclosures existing in the area is given emphasis by the case of the palisaded enclosure with grooved ware at Beckton, Lockerbie, in Annandale (see VI:iii). There are, however, no artefactual associations or other indications to suggest a neolithic date for any of the enclosed sites in the present area.

The hilltop at Burnswark, a prominent landmark from a wide area, must suggest itself as a likely situation for a neolithic hilltop enclosure. Excavation by Jobey (1978(a)) showed that the apparent cross ridge divisions of the hill fort post-dated Romano-British occupation there. A length of palisade trench was found over a distance of c 17m along the SE side of the NE part of the summit, fading away in both directions, probably as a result of later surface quarrying for the hill fort rampart. The palisade remains undated, but there is no reason to suppose that it pre-dated the first millennium bc. One polished stone axe fragment was recovered near a round house on the south-central part of the fort. It had been re-used, perhaps as a pestle, and cannot be associated with neolithic occupation on the hilltop. Ten pieces of flint were recovered in excavation, including a plano convex knife and other artefacts. The quantity is not such as to suggest concentrated occupation debris.
Apart from the unidentifiable body sherd from Kirkconnel, mentioned in the last section, no neolithic pottery, other than beaker, is known from within the area presently defined. Finds from the Lockerbie area, at Kirkburn and Beckton, are discussed in the Nithsdale Region, VI.

A wooden bowl from Tinnis Hill, near Windy Edge long cairn, described as a 'roughout in alder', is suggested in the Hawick Museum Catalogue to be possibly neolithic (HAKMG 4346). Note should be taken, however, of the date of $1685 \pm 70$ BP (OXA 2414) obtained on a bowl from Dervaird Moss, and, equally, previously regarded as a possible neolithic artefact (Barber 1982; Archaeometry 33 1991, 128-9).

Fig. V:i Kirkconnel, excavated features after Clough and Laing 1969
No systematic field walking has taken place in the Borders Region, as presently defined, apart from the work of Mr. Forsyth, near Twiglees, in Eskdale, whose collection, which included microliths, has been classified as mesolithic (see V:ii). The finds came primarily from forestry drainage ditches, and cannot be regarded as constituting a unitary assemblage; in particular, the pitchstone blades and cores should not be assumed to be necessarily mesolithic, and may well derive from the Neolithic.

Opportunities have, perhaps, been missed in the failure to establish field walking programmes to accompany the spread of forestry over much of this Region (cf Biggar Gap, III:ii). Some brief references to earlier finds from the area suggest that material should be present. For example, Hyslop and Hyslop in 'Langholm as it was' (1912) tell of 'flints, arrowheads and stone knives' found 'in considerable quantities' near Camp Knowes, that is Fiddeleton (NY 389 960) in Ewesdale (p.59), and of a flint spearhead found by a workman making a drain near Kitty's Cairn west of Langholm at c NY 28 83 (p.57). Also from near Langholm comes a recent find of a scraper or fabricator, 127mm in length, of high quality, mottled grey flint from Portholm Farm, beside the R Esk (NY 35 87) now in the NMS (AA 297), and a discoidal
polished knife of brown, imported flint, 99 x 71mm across, found on the N bank of the Tarras Water, a tributary of the Esk at c NY 380 812 (Fell 1970). Further up Eskdale at Eskdalemuir (NY 25 97) Truckell reports the finding of two large nodules of possibly East Anglian, imported flint (1963, 57).

The reporting of these finer pieces of probably Late Neolithic flintwork must suggest that a quantity of less striking material is passed by, unnoticed. Jobey's excavation of three Iron Age enclosures in Upper Tynedale recovered lithic material from two sites. At Belling Law, on a spur between the R North Tyne and the Pot Burn, at 160m OD (NY 686 882) four rounded scrapers, suggested to be of late Neolithic or Early Bronze Age type were found, besides twenty three other pieces of flint and chert (Jobey 1977). At Kennel Hall Knowe, on a knoll above the river at 150m OD (NY 667 898), 168 pieces of flaked stone were recovered, including a poorly made leaf arrowhead, a fine plano convex knife, other knives, scrapers, burins and awls, and a large nodule of black flint, with cortex, probably from a beach (Jobey 1978(b)). This second site is c 4km SE of a long cairn, the Devil's Lapful, higher up the valley, and its discovery helps to bridge the gap between lithic recovery and ritual site distributions.

Levels of artefact recovery from the Solway plain are little better than those in the Border uplands.
Contributory factors may be the high percentage of grassland associated with livestock farming, together with a depth of soil on alluvial floodplains masking earlier deposits. Nonetheless, the record is thin. From Gretna Green comes a lozenge shaped arrowhead, 3\(\frac{1}{2}\)" (89mm) in length, perhaps better described as a spearhead (NMS: AD 544), which may be compared to finds from further west, in Nithsdale and the Stewartry (VI:vi). At Redkirk Point, near the mouth of the Kirtle Water, half of a finely worked plano convex flint knife has been picked up (DES 1964, 26), besides several cores of chert and pitchstone (Truckell 1963, 56-7). Beside the Kirtle Water, 4km SE of the Broadlea henge, at Robgill (NY 24 71), an arrowhead, a scraper and a 3\(\frac{1}{2}\)" flint knife are said to have been found in the 19th century (Anderson and Black 1888, 389). Hundreds of flints were said to have been picked up on the holm of St. Mungo's Glebe (NY 12 75) beside the R Annan before 1845, but although the account suggests that these had been brought there for manufacturing into arrowheads (NSA IV, 208), the location on the river terrace suggests a possible mesolithic context (cf. Dalton Hook, NY 115 763). Excavations on the summit of Burnswark Hill (NY 186 787) in 1898 produced a flint borer and another chip of flint (Christison, Barbour and Anderson 1899, 244-5), while Jobey's further excavations in the 1960s and 1970s recovered ten pieces of flint, said to be 'broadly
neolithic or bronze age in date'. These included a core, a plano convex knife with ground dorsal ridge and fragments of a horse shoe scraper and of a knife (Jobey 1978(a), 96).

It may be concluded that the potential for lithic recovery in the Borders Region has not been fully realised. Constraints set by natural factors have been reinforced by a shortage of fieldwork in the area. It is possible that the use of chert and other local stone has produced crude workmanship and that artefacts have simply not been widely recognised by farmworkers and others.

V:vi Stone and flint axeheads in the Borders Region

Records of twenty three axes have been collected from the Region as defined, giving a density of one axe to c13.0km² of improved land (300km²). The density is very comparable to that in Nithsdale Region (1 to 15km²) and identical to that of the Lothians (1 to 13km²), the figures for the two Solway Regions being surprisingly low in view of the proximity of the Cumbrian sources. Transport would, however, have been easier in relation to the western Solway coasts, where tidal problems are less severe than in the eastern Solway.
Only one of the twenty three axes is of flint, a specimen found at the hill fort of Castle O'er in Eskdale, at 260m OD (NY 241 928; Dfs. Mus. 1969/175). Seven axes have been thin sectioned for petrographic analysis (Ritchie and Scott 1989), five of these being of Group VI stone. One sectioned axe (DMF 9) from Newfield, Ecclefechan (NY 176 768) on the south side of Burnswark Hill, described in the Dumfries Museum Catalogue as being of felspathic grit (D 1934-6), did not derive from a recognised source. Another axe from Blackburn Bridge, Watcarrick (NY 247 962), 3km north of Castle O'er, at 190m OD, was tentatively assigned to the South Welsh Group XIII (DMF 8). Distribution of implements of this spotted dolerite, the 'bluestone' of the Stonehenge horseshoe, has been discussed by Thorpe et al (1991), and their map (Fig. 3) shows the Watcarrick axe to be a very isolated find, the only specimen north of Anglesey. Even if the raw material were confirmed, however, Thorpe et al consider it possible that most or all of the artefacts of this stone were made from glacial erratics (ibid p.114).

Besides the five confirmed Group VI axes, seven have been described on macroscopic examination as being probably of the same material, assigning over 50% of the total of twenty three finds to this source. Their distribution is closely linked to the R Annan (see Map V:2). Six come from near the estuary and three from low lying locations near the Annan, Mein or Kirtle Waters.
Three are from relatively upland locations; DMF 16 from Carruthers Farm (NY 253 807) at 170m OD near the head of the Kirtle Water; one from excavations on Burnswark Hill at c 300m OD (Jobey 1978(a), 94); and an axe in private hands from Heithat Farm (NY 192 880), at a similar altitude, near the Corrie Water, a tributary of the Water of Milk. Three of the Group VI axes are very large specimens; DMF 21 from Milnfield near the mouth of the Annan measures 255mm (10") in length; DMF 16 from Lands on the Mein Water is 230mm (9.1") long; and a find from the river bank at the Annan estuary (Dfs. Mus. 1969/43) is 195mm (7.7") in length. There is also an 8" (203mm) axe of unknown type from NY 2695 7051 on the Cowe Estate, beside the Kirtle Water (NY 27SE 11). Another Group VI find from near the mouth of the Annan at Beckfoot (DMF 2) is a rough out, its butt missing, but still measuring 5 3/8" (149mm). The remaining Group VI axes with published dimensions measure from 120mm to 149mm (4.7" - 5.9"). The average length for the whole set in 178mm (7.0"), which may be compared with four axes from Liddesdale, of unknown stone, averaging only 112mm (4.4") in length.

Axes which can confidently be assigned to sources other than Cumbrian show a very definitely more inland distribution than the Group VI set. They include three axes mentioned above: one of felspathic grit from Newfield, Ecclefechan, one of flint and one of ?Group XIII material from Eskdale. To these may be added another
Eskdale axe from Langholm, described by Corrie (Notebook 2) as being beautifully polished and of a very black material. The largest of the Liddesdale axes, 149mm (5.9") in length, is certainly not of tuff, being described in the Hawick Museum Catalogue as being black with brown and white spots (HAKMG 4117). Six axes are not described in such terms as to allow for classification.

There are no associated finds with any of the axes, and none appear to derive from settlement sites (see V:iii above on Burnswark Hill). The distribution shows some overlap with ritual sites. In particular, Liddesdale, where the only long cairns in the Region are located, has four axe finds, one from Newcastleton, (Hunterian B 1951-1558), two from unspecified locations in Liddesdale (HAKMG 4117; 4140), and one from the upper end of the valley, at Saughtree (NMS: AF 292), a farm c 4km east of the Ninestone Rig stone circle. The ?Group XIII axe from Watcarrick was found below 1.2m of peat beside a burn directly across the R White Esk from the Girdle Stanes stone circle. The large Group VI axe from Lands is from a farm directly across the Mein Water from Broadlea henge. The very large find from the Annan estuary was found protruding from the river bank, perhaps having been deposited in the river (Dfs. Mus. 1969/43). The small, possibly Group VI broken axe from Burnswark Hill cannot be regarded as an instance of original deposition there in view of the evidence for its later re-use.
As already observed (V: i) only two long cairns are known in the Scottish border hills, Windy Edge and Lang Knowe, 10km apart, on opposite sides of Liddesdale. 4km south of Lang Knowe, across the Kershope Burn, the Currick, a long cairn on the English side of the Border, is so close a neighbour that it has also been planned and included in the Catalogue of Sites (V: 3). A search was made for a cairn on Marven's Pike (NY 571 874), 4km east of Lang Knowe, and just across the Border, with no result, and there seems no reason to include this location as even a possible site of a long cairn on the basis of the very tenuous evidence quoted by Masters (1984, 67). 4km south east of the Currick, however, Tom Clare reported a long cairn on Lamb Crag in 1972 (NY 571 808), an area concerning which a record exists by Miss Hodgson of the excavation of one of two long cairns, with the added, brief comment, 'cremation trench' (Masters 1984, 66-7). The area is now forested, but the site would seem reasonably well authenticated, and is included on the distribution map (V: 2), although the absence of detail precludes further comment. Lamb Crag, the Currick and Lang Knowe thus form a cluster of long cairns, at 4km intervals, around the Kershope Burn, and the Scottish site cannot be assessed without a consideration of its English neighbours.
This group of three must, in turn, be regarded as being part of a larger Borders set, including Windy Edge 10km to the west and the Devil's Lapful in North Tynedale, 13km to the NE of Lang Knowe (NY 642 929). Masters' valuable gazetteer of the long cairns of northern England lists two further sites which he did not visit 15-16km SE of the Devil's Lapful: Med's Lapful of Stones at 300m OD (NY 6381 7833) and Birks, at 150m OD (NY 781 841) (1984, 64, 67). The distribution then extends 18km NE of the Devil's Lapful to Redesdale, where it includes Bellshiel Law at NT 813 011 and perhaps Dour Hill, 2km to the WNW at NT 792 021, obscured by bracken when visited by Masters (ibid 54-7, 65). Another possible Redesdale record at Spithope (NT 764 035) is dismissed by Masters (p.68) as 'unpromising'. Redesdale may be regarded as the north east limit of the Borders Group, although a small long cairn is known at Dod Hill on the eastern side of the Cheviots, 25km further to the NE (NT 987 206), and, in the Tweed Basin, the long cairn at Caverton Hillhead (IV:2) lies 27km to the north. To south and west the Borders Group is well distanced from its nearest neighbours, the 100m long Trainford Brow, over 50km to the south, and Stiddrig (VI:8) over 40km to the west. The group under consideration thus consists not only of the three sites included in the Catalogue, but also of about six further sites. Two of these cairns have published plans and descriptions by Masters (1984), and Bellshiel Law also
has an account of an excavation, with published plan (Newbiggin 1936). The following five sites can thus be used as the basis for comparison:

<table>
<thead>
<tr>
<th>Site</th>
<th>Length (m)</th>
<th>Max. Breadth (m)</th>
<th>Max. ht. (m)</th>
<th>Altitude (m OD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windy Edge</td>
<td>76</td>
<td>11.5</td>
<td>0.9</td>
<td>300</td>
</tr>
<tr>
<td>Lang Knowe</td>
<td>53</td>
<td>12.5</td>
<td>1.8</td>
<td>270</td>
</tr>
<tr>
<td>The Currick</td>
<td>44</td>
<td>21</td>
<td>2.0</td>
<td>290</td>
</tr>
<tr>
<td>Devil's Lapful</td>
<td>58</td>
<td>14</td>
<td>2.0</td>
<td>305</td>
</tr>
<tr>
<td>Bellshiel Law</td>
<td>109</td>
<td>18</td>
<td>1.22</td>
<td>310</td>
</tr>
</tbody>
</table>

All five sites lie at the upper limits for altitude in the study area, and all are above average in length. The Currick stands out as being the most anomalous, being both the shortest and the broadest of the cairns. Only 36% of the total set in the overall study area have a breadth/length ratio over 1:4, and the other four cairns here fall into this category. The Currick, at 1:2.1 has the same ratio as that of the slightly smaller Capenoch in upper Nithsdale, and it is close to the figure for other Nithsdale cairns, Fleuchlarg (1:1.8), and Laggan Park (1:1.7). Morphologically, then, the Currick may be grouped with the Nithsdale sites; its impressive bulk at the high, broad end is very reminiscent of that of Capenoch, Fleuchlarg and Cairn Avel.

The remainder of the set are noteworthy for their
long, narrow proportions. If the breadth of the broader heads of Bellshiel Law and Lang Knowe is ignored, the breadth: length ratios in relation to their narrow bodies (11m and 7m respectively) are 1: 9.9 and 1: 7.6. The high ratios of the Borders cairns are not simply a function of their exceptional length, but reflects these very narrow bodies. The Devil's Lapful, maintaining a 14m breadth along its entire length, is the broadest of the set; the cairn is similar in size and shape to Harlaw Muir (III:6), but more impressive, with its SW end rising to 2m in height. Near to Harlaw Muir, Easton is a very narrow long cairn, perhaps attempting to achieve the same linear effect with lesser resources; the same suggestion may apply to the narrow Borders cairns.

The original function of these long cairns, and the activity areas that they enclose are not well understood, but appear to be various. The body of Bellshiel Law, trenched in 1933, seems to have been constructed of two parallel banks, c 3m apart, the centre infilled with loose stone (Newbiggin 1936). The same format was found in cuttings both near the E end and at a medial point, 52-55m along the body of the cairn. A single slab protruded from the cairn between these two cuttings, just over 21m from the E end; it measured 0.48m x 0.16m and was visible for 1.27m of its height, leaning back onto the mound, its long axis parallel to that of the cairn; a hollow occurs on Newbiggin's contour plan of the cairn at this point, and
it seems possible that the slab was the backstone of a robbed out lateral chamber, entered from the north. 88m of long narrow cairn stretch to the west of this feature, displaying no evidence of structures despite numerous robbing hollows. Whether or not it contained chambers, it seems that the main function of the cairn was to furnish a long mound, its extent laid out in advance of infill by defining banks, thus fulfilling a recurrent theme of interest in elongated monuments during the Neolithic.

The Devil's Lapful, less long, but broader and higher than Bellshiel Law, could represent an equal amount of stone and of labour. Its 58m length is still large and to this can be added the effect of the raised SW end presenting an impression of bulk on approach from that direction. Here there is no evidence for structures, despite extensive robbing, especially at the tail end of the cairn. The same absence of visible chambers recurs in the Dumfriesshire cairns, which likewise make their effect through their bulk: Capenoch, Fleuchlarg, Stiddrig and, in the Stewartry, Cairn Avel. To this set may be added the Currick, again with no evidence for chambers. Excavation at Slewcairn and Lochhill discovered a variety of stone and timber structures, including orthostatic and post-built facades, invisible previously under blocking. These two cairns are, however, smaller than those mentioned above, and, given their coastal location in contrast to that of the inland set, it should not be presumed that their
structural layout would be replicated in the more massive monuments.

Lang Knowe again combines attributes, a high, oval head performing a different function from that of a long narrow tail. The chronological sequence involved is unknown. A visible cist, or remains of a chamber, sits at the junction of the two components, and could originally have been an axial, SSE facing chamber in an original short mound. The record suggests, however, that structural traces in the north part of the tail of the cairn, which stretches to the south, are the remains of chambers, possibly including a segmented lateral chamber. This tail, then, is not a mere display feature, but has served to encase chambers, in the same way as do the long narrow cairns of Perthshire, Kindrochat and Clach na Tiompan. It may be that it is the oval head which is the later addition, giving bulk to what would otherwise have been an exceptionally narrow cairn and oval head occurs at Easton (III:3), here without chambers, but posing the same problems of sequence.

Windy Edge, in contrast to all the other cairns in the group, appears to have contained two axial chambers, one at either end. That at the NNW end is sufficiently well preserved to be identifiable as a multi-segmented chamber of Clyde type. Again a chronological sequence is likely to be involved here, perhaps with the construction of the more complex north chamber superseding an original, simpler
southern one. In this instance the centre of the cairn is totally robbed out, and it is possible that the two cairns were always separate entities. Even within this interpretation, however, a narrow tail of cairn material stretched for 30m behind the N chamber, and there is no question but that a long mound has been created here.

It must be concluded that while this group of cairns employed a wide variety of types of structural expression, all shared in a fundamental emphasis on the importance of length. To achieve the appropriate effect the builders were sometimes content to set up narrow bands of stone, probably of no great height. In other cases importance was added to the 'proximal' end of the cairn by added height, whether as an adjunct to a parallel sided structure, as as the Devil's Lapful, or a trapezoidal one, as at the Currick. At Lang Knowe either the long tail was added to an existing oval cairn, or the requisite bulk may have been achieved by the addition of a high, oval 'head'. At Windy Edge a facade was built; at Bellshiel Law, and perhaps at other sites, a kerb of biggish stones was added. In every case, however, the actual length of the cairn is in the upper range for such sites, and it was this factor which was evidently an important criterion in the eyes of the builders.

In locational terms this is a strongly unified group. All the cairns are in the uplands, all on hill ridges or slopes with long views down the valleys below, the western cairns all having views of the Solway Firth. Forestry
impedes assessment of their environmental and prehistoric contexts, and in no case has evidence been obtained for a setting of early settlement and land use. Nonetheless, traces of agriculture can be found at similar altitudes in the Cheviots (Topping 1989), and the cairns need not be regarded as being outwith settlement limits. The sites in the west, however, are in peaty ground, which must have been vulnerable to ecological degeneration, perhaps from as early as the Neolithic. Through time they may thus have been transformed from being central places for settlement to becoming remote locations for ritual activities. Such a development would be assisted by the impressive appearance of these large sites, which could continue to hold their place in local imagination. The possible construction of a stone circle on Windy Edge may be an aspect of this transformation. Lang Knowe and the Currick are both sited near to the route of the 'Maiden Way', leading up Liddesdale into Scotland (Maughan 1854) while Bellshiel Law is near Dere Street, which heads on over the Border to Woden Law to set its course on a series of small stone settings above the Kale Water (Table IV:3:9). The Mutiny Stones in the Lammermuirs is likewise beside an ancient trackway over the hills. It may be that the routes followed by these old roads followed trackways trodden out in still more ancient, prehistoric times by the feet of those who travelled to the hills to visit these extraordinary sites.

A considerable stretch of the Region under
consideration, from the Esk to the Water of Milk, contains no recognised neolithic funerary monuments. Whether this situation represents a prehistoric reality, the effect of later destruction, or a modern failure to recognise monuments perhaps of very different character from the above, remains unclear. There has certainly been widespread destruction of cairns and barrows, and the occasional records of such events (e.g. NSA IV, 198, re two large cairns and several tumuli in Tundergarth parish) must under-represent the total concerned. The records usually lack details on form or structure, and such information as is conveyed is unreliable. Hyslop and Hyslop (1912, 62) mention an 'oblong mound at Rashiel, on White Hill (NY 38 87), but recent RCAHMS survey (1981(a)) notes nothing in the area. Complex sites, such as King Schaw's Grave (NY 259 932) revealing, when examined in 1828 (RCAHMS 1980(b) 7, no.77) more than one cist, stone settings, and fragmentary bones strewn about, must have involved sequences of use no longer recoverable from the available accounts. Mention may, however, be made of the 24m diameter cairn on the conspicuous summit of Burnswark Hill which, when excavated (Christison, Barbour and Anderson 1899), was found to consist of layers of stone over a clay core covering a hollow in the rock surface. An upright slab, 1.2m long, five other scattered stones and some broken bone were assumed to represent the remains of a disturbed cist and inhumation originally set into the rock, but were
perhaps a token deposit of the same kind as found in pits at neolithic monuments, such as Cairnpapple.

There is also a large, flat topped conical mound, 40m in diameter at base by 6m in height, to the east of Blackyett at NY 2527 7108 beside the Kirtle Water at 65m OD (NY 27SE 10). The mound would fit into John Linge’s category of possible flat topped barrows in North Ayrshire (1987), but, as discussed in relation to that area, there seems no present reason to suppose such mounds to be neolithic.

Finally, it may be noted that RCAHMS survey in 1992-1993 has picked up two long narrow mounds, terminating in round cairns, near Eskdalemuir (Inf: A. Wardell, S. Halliday. This information was received at too late a date to check possible identification of the sites as bank barrows).

V:vi RituaI enclosures in the Borders Region

The single henge in the Region under discussion is a classic Class II site at Broadlea, its broad, banana shaped ditch segments well defined on a series of aerial photographs. Its location on a terrace, beside a river, with higher hills all around, and its NW - SE alignment, all accord with regularly recurrent patterns for henges.
Yet this extremely orthodox monument lies a full 50km from its nearest known Class II neighbours, with only an unusual small Class I monument 26km to the west, at a nearer distance. Its appearance here casts interesting light on the flow of ideas between communities, or between specific segments of population. It may be valid to suppose that communication was facilitated by the movement of axes from Cumbria up Annandale, although the numbers recovered from inland locations are not high. A massive Cumbrian axe was, however, recovered from the farm of Lands, directly across the Mein Water from Broadlea, and others come from around the Annan estuary.

Apart from the axes, evidence for the existence of a local community is confined to a limited array of material. There is a small quantity of flintwork recovered locally, including finds from Burnswark Hill, 5km to the NW; a timber structure which could possibly be of neolithic date, 3.5km to the east, at Kirkconnel; and a variety of pottery finds from two interesting sites near Lockerbie, 12km to the WNW. These last, which are discussed under Nithsdale, Region VI, include a large vessel of grooved ware from a palisaded site at Beckton and other more recent grooved ware finds.

The size and scale of the Broadlea henge compare well with other such sites in southern Scotland. Its internal diameter at 40 - 45m coincides closely with Cairnpapple, at 44 x 38m. Its broad ditch, as revealed on aerial
photographs, would appear to resemble that at the smaller North Mains (6 - 11m x 2.2 - 3.0m in depth), in a similar river terrace situation, rather than Cairnpapple, where subsoil problems on a rocky hill summit limited the ditch size to 3.6 x 1.2m. Similar difficulties on the hillside at Overhowden restricted this henge ditch to 3.7 x 1.2m. Nonetheless, it is Overhowden which produced a small gully on the outer edge of the ditch, matching the position of an external palisade line at Broadlea. It may be added that the importance of the henge is perhaps demonstrated by its location within a small area of good quality agricultural land, on a well drained fluvio-glacial terrace, suggesting that there was no great shortage of good quality cleared land available.

A suspected henge beside the R Esk at Overrig (NY 245 939) has been proven on excavation to be an Iron Age site (Edinburgh University Department of Archaeology, 31st Annual Report, 1984-1985, 19-22).

Stone circles appear to have been a far commoner site type in the Region than henges. Table V:1 lists five sites which survive in reasonably recognisable form, while another six are included on the basis of early records and, in some cases, surviving stones. References simply to 'Druidical temples', without mention of standing stones (e.g. Stat Acct XIII, 273), have been omitted. A stone circle on Burgh Hill (Table IV:3:3) is probably best seen as another member of this Borders set, being only 10km north of Ninestone Rig in Liddesdale.
The surviving sites are largely in upland areas, but records of destroyed circles at the Lochmaben Stane, Woodhead and Broathill (nos. 7, 9 and 11) suggest that destruction in the lowlands has been heavy. Even at 300m on Windy Edge the greater part of a stone circle has apparently been completely removed, and a destroyed site recorded at 120m OD on Westerker Mains would have stood in an area of rough grazing. Surviving circles may be wholly unrepresentative of an original distribution.

The sites vary greatly in size and character. The largest circle, at Whitcastles, 56m in diameter, consists of the largest stones, and the fact that these are all prostrate suggests that, as at Cultoon, Islay (MacKie 1981) and, perhaps also at Wildshaw Burn (III:j) ambition outstripped achievement and the stones were never erected. The reported circle beside the Solway at Graitney Mains, represented by the surviving Lochmaben Stone, may have been nearly as large, and the similarity of this size with that of the henge at Broadlea suggests that these sites played a comparable social role. The remainder of the stones at Graitney were, however, evidently small and the labour involved in their erection need not have been great. Two more of the circles were nearly as large. The record of stones at Windy Edge, perhaps not wholly reliable, indicate a circle 41m in diameter. The location of this site beside the long cairn suggests a long period during which the spot acted as a ritual centre. The Girdle Stanes, beside the
R North Esk, form nearly as large a circle, again part of a 'ritual complex', with the Loupin Stane circle 540m to the north east, possibly linked by an avenue of stones. The river may have facilitated travel to the site, a pilgrimage which appears to have continued into the Iron Age when a ritual site was constructed in a natural amphitheatre at Overrig, 2.5km to the south (see above).

All the other stone circles are of smaller dimensions, although still large enough for communal functions. Seven Brethren, of small stones, and c 20m in diameter, is only 5km south of the abandoned site at Whitcastles, raising questions as to contemporaneity or sequence. Was the larger circle intended as the cumulation of a progression towards monumentality which overreached itself? Or was it the earlier monument, left uncompleted as ritual requirements changed? The stones at the Seven Brethren are graded in size towards the south west, an alignment which is also followed at the Loupin Stanes, Ninestone Rig, and Burgh Hill, all of which have two large stones on the south west. The same focus recurs at a variety of other site types, Clava Cairns, Ring Cairns, Recumbent Stone Circles and Four Posters, while the timber circle at Balfarg, dated to the last quarter of the third millennium bc was graded in size toward a portal consisting of a pair of posts on the south west (Mercer 1981(a)). The chronological implications are discussed in Chapter 9. It may in the present context be observed that at stone circles in the
western Borders the interest in the south west point of the compass was strong. It can be added that the Lochmaben Stone is at the SW end of a terrace above the raised beach, so that any circle of which it was a member must have set this large boulder within its southwestern arc.

V:ix  Cup-and-ring marks in the Borders Region

No cup-and-ring marks, either fixed or portable, are known within this region. The door sill into Hollows Tower, now known as Gilnockie Tower (NY 3382 785), however, carries incised decorative motifs, including three spirals and a triple ring, badly worn (RCAHMS 1920, 26-7, no.43; 1981(a), 9, no.21; Morris 1981, 70, DFR 1). Although there are no cup marks on the stone, the designs appear to lie within rock art tradition, having passage grave affinities. The Dumfriesshire Inventory (RCAHMS 1920, p.6) compared this stone to the spiral stone from Eday, Orkney. Hollows Tower is beside the R Esk, north of Canonbie, c 4km north of the junction of the Esk and Liddel Waters.
V:x Beakers in the Borders Region

The only beaker from the region as presently defined is a single cord-ornamented sherd from the sand dunes at Newbie, just west of the Annan Estuary (Ritchie 1970, 141). AOC beaker is, of course, commonly associated with sand dune sites, such as Glenluce. This isolated find should, perhaps, however, be seen in the context of recovery of AOC and other beaker types from pits at a ritual site at Kirkburn, near Lockerbie, in Annandale (VI:xi).

Excavation at Kennel Hall Knowe, North Tynedale (NY 667 898), c 4km SE of the long cairn the Devil's Lapful, recovered eleven small and abraded sherds, probably from a single beaker, in a shallow pit filled with earth and stones. The sherds were decorated with a find toothed stamp in triangle and chevron patterns between parallel groups of horizontal lines. One flint core was found in the same pit, and a sizeable assemblage of flaked stone was recovered elsewhere on the site (Jobey 1978(b)).

Mention might also be made in this context of a jet slider, highly polished outside, but with the opening unfinished, found 1.2m - 1.5m deep in peat beside the Glinzier Burn, near Canonbie in Lower Eskdale, a find with possible beaker connotations (McInnes 1968, 143).
The Borders region under consideration consists of the western end only of a range of hills which, over their full stretch, carry a group of elongated cairns. On the lower hills and in the valleys leading down to the Solway plain is a group of stone circles, varying in shape and size, but, in several cases, demonstrating an orientation towards the south west. The original distribution probably extended into the Solway plain, where a classic Class II henge survives as a cropmark.

Other evidence for a neolithic presence comprises a possible timber hall at Kirconnel, a scatter of flintwork including some high quality pieces, and an axehead distribution, dominated by Group VI products, and including several large axes. As in the Mesolithic, the Annan continues to provide a central focus, both in terms of the presence of a henge and in artefact recovery. This material should probably be linked to sites and finds around Lockerbie, at the junction of the Dryfe Water and the Annan, which have been treated as part of Nithsdale Region (VI).
Table V: Stone Circles in the Borders Region

These sites are all described in several sources, such as Burl (1976; 1979) and Thom, Thom and Burl (1980), and the descriptions below are based on the references quoted for each site, not new data. Account should also be taken of an egg-shaped ring at Burgh Hill (Table IV: 3: 3), only 10km N of Ninestone Rig, but included in the Tweed Basin Region IV.

Scheduled monuments are marked *

1. Whitcastles * NY 28NW 4 NY 2240 8806
   9 massive granite blocks, up to 2.2m in length, lie prostrate along the circumference of a ring, possibly a flattened circle, measuring c 56m in diameter (RCAHMS 1920, 113, no.307; Thom, Thom and Burl 1980, 300-1). The OS questioned whether the stones had ever been erected (cf. Cultoon, Islay - MacKie 1981; Wildshaw Burn, Lanarkshire - III:j). The site is on a SW facing hillside now forested.

2. The Girdlestanes * NY 29NE 13 NY 2535 9615
   11 fallen and 11 upright stones, up to 1.8m in height, are set along the inner edge of a bank probably a plantation boundary. They describe part of a circle c 39m in diameter, its W arc fallen into the R White Esk. An avenue of stones is said to have linked this site to the Loupin Stanes (no.4), 570m to the NE (Hyslop and Hyslop 1912, 42; RCAHMS 1980(b), 8, no.11; Thom, Thom and Burl 1980, 298-9).

3. Seven Brethren, Whiteholm Rig NY 28SW 3 NY 2171 8269
   7 small stones, 0.6m in maximum height form a circle c 20m in diameter; an eighth lies outside the circle on the N (Thom, Thom and Burl 1980, 292-3). The stones are graded in height to the SW (Burl 1976, 210). Bones are said to have been found among the stones (NSA IV, 198). The site is on a north facing terrace, 350m S of the Water of Milk.

4. The Loupin Stanes * NY 29NE 11 NY 22570 9663
   12 stones set in a low bank up to 3m in breadth describe an oval, or flattened circle, measuring 10.4 x 9.5m. 10 of the stones are low granite boulders, and two tall stones, 1.4m in height, are on the SW arc. Boulders to the SE have been suggested to represent a second circle, but may be merely glacial erratics (RCAHMS 1980(b), 8, no.12; Thom, Thom and Burl 1980, 297). The site is beside the R White Esk, 570m NE of the Girdle Stanes (no.2).
5. Ninestone Rig * NY 59NW 6 NY 5180 9731

This little circle, or oval, c 7m in diameter, consists of 8 or 9 stones, one fallen. The stones are small, apart from two at the SW, 1.3m and 1.7m in height (RCAHMS 1956 i, 95, no.113; Thom, Thom and Burl 1980, 294-5). The site is on a SW facing hillside, now forested.

6. Kirkhill * NY 19NW 12 NY 1396 9592

Only 2 of 7 granite blocks, up to 0.46m in height, remain in situ, suggesting the outline of a circle c 11m in diameter (Thom, Thom and Burl 1980, 294-5). Two smaller circles are said to have formerly stood nearby (NSA IV, 142). The site is on a W facing slope beside a small stream.

7. The Lochmaben Stone, * Graitney NY 36NW 25 NY 3123 6600

A large granite erratic 2.9m high and 1.8m across (the Lochmaben, or Clochmaben Stane) and a small granite boulder 24m to the NNE, are all that remain of this circle. 'Four or five great stones' stood here in the early 18th century (J. Black in Macfarlane 1906 I, 385), but by 1858 only 2 of a reputed 9 stones remained (ONB 22, 1858, 73). In the Statistical Account the ring was said to be an oval, enclosing about half an acre, composed of one large and other smaller stones (Stat Acct IX, 528). This suggests a diameter of just under 50m. In 1982 the large stone fell, and excavation of the stone hole recovered charcoal from a layer of grey, sandy clay sealed under packing stones, which gave a date of 2525 ± 85 bc - GU 1591 (Crone 1983). Resistivity survey recorded no archaeological features but this is unsurprising in view of the reported small size of the stones (cf. Mercer 1981(a), 160).

8. Windy Edge, Tinnis Hill NY 48SW 7 NY 430 838

Two leaning stones 39m apart, 1.8m and 1.3m in height stood E of the SE end of the long cairns on Windy Edge in 1981 (RCAHMS 1981(a)). By 1990 the N stone, only 29m from the end of the cairn, was prostrate. In 1795 6 stones were observed here, leaning or prostrate, forming a circle 45 yards (41m) in diameter (Stat Acct XVI, 85). The site is on a ridge, now forested, but previously with distant views to SW and NE.

9. Three Piked Stane, Woodhead NY 26NW 1 NY 2170 6787

Two granite boulders 3.5m apart, the tallest 0.9m high, were noted by the RCAHMS (1920, 3, no.5) as the probable remains of a stone circle already removed by 1792 (Stat Acct II, 24).
10. Westerker Mains (destroyed) NY 29SE 40 NY 29 91 c 120m OD
'Several large whin or moor stones ... evidently the remains of a Druidical temple' are said to have stood between the Esk and the Megget Water (Stat Acct XI, 515). No trace of this site remains (RCAHMS 1980(b), 8, no.13).

11. Broathill, Beltonmont (destroyed) c NY 26 69 c 50 -60m OD
A 1772 estate map of Beltonmont marks the remains of a 'Druid temple' comprising 'eighteen stones standing and lying' on open ground to the E of Broathill farm. The site is also mentioned in the Stat Acct (XIII, 273). No trace of the site has been found in recent survey of Kirkpatrick Fleming parish (Inf: R. Mercer).
Map V:1 Axeheads in the Borders Region

- Probable Group VI axes
- Other axes
Map V:3 Stone circles in the Borders Region

See Table V:1
VI THE NITHSDALE REGION
VI The Nithsdale Region
(Nithsdale, Upper Annandale and the Glenkens)

VI:i Physical setting and environment in
the Nithsdale Region

The R Nith ranks as a significant feature in southwest Scotland in at least three separate ways. First, it is a dividing line, the traditional boundary between the Selgoveae and the Novantae and between Dumfriesshire and Galloway, marking the transition between the acid grasslands of the Southern Uplands to the east and the thinner soils and heather moorlands to the west. Secondly, it is a routeway, rising to the north of the Southern Upland Fault and flowing to the Solway, thus giving access from the latter coastlands to the Ayrshire plains or, across the Crawick Moss and other passes through the hills, to Upper Clydesdale. Thirdly, Nithsdale constitutes an attractive area for settlement and agriculture in its own right, an aspect which must have had a direct influence on the extent of neolithic occupation.

The Lower Palaeozoic rocks which form the basis of so much of the Southern Uplands were overlain in the south west by New Red Sandstones of Permian age. Much of the sandstone cover has been subsequently eroded, but survives in Lower Nithsdale, the Thornhill basin of
Middle Nithsdale, the Lochmaben Basin to the east, and in Upper Annandale. The shared geology of Nithsdale and Upper Annandale gives them an affinity which makes it natural to include both areas in one Region, despite the ensuing uneasy separation of Upper and Lower Annandale. The Solway plain, including the lower Annan, is treated in Region V, the Borders, together with the uplands of Eskdale, Ewesdale and Liddesdale.

To the west of Nithsdale, the main part of the Stewartry consist of Silurian and Ordovician greywackes and shales ringed by a series of granite intrusions, Cairnsmore of Fleet, the Rhinns of Kells and Cairnsmore of Carsphairn to the west and north, the Dalbeattie hills and Criffel to the south east. The valley of the Water of Ken, the Glenkens, provides a corridor of alluvial soil, which opens out into the fluvio-glacial clayey drifts of the Castle Douglas basin around the Rivers Dee and Urr. The apparent absence of neolithic monuments throughout this part of the Stewartry makes it convenient to treat the area in the same Region as Nithsdale and Annandale.

Region VI is thus set among high hill ranges, granite massifs to the west and south, the Lowther and Queensberry Hills and the Moffat uplands to the north, with the Eskdale hills delimiting the eastern side of Annandale. The northern part of the Region is largely upland, with narrow valleys providing the most
favourable areas for settlement. In the west the valleys of the Water of Deugh and the Black Water of Dee lie among high hills, but join the Water of Ken in the fertile valley of the Glenkens. The tributaries of the Nith, the Scar and Shinnel Waters are steep sided, but the valley of the Cairn Water is rather more open. Nithsdale itself includes the agricultural areas of the Sanquhar basin with Carboniferous rocks, and the Permian Thornhill and Lower Nithsdale basins. The Water of Ae, the Kinnel Water and the Dryfe Water all lie in narrow upland valleys before they enter the Lochmaben basin near Lockerbie in a broad, open stretch of agricultural land. South of Lockerbie is a large area of raised bog in the Lochar Moss, but on either side of the Nith a band of Carboniferous limestone fringes the estuary, and to the south east of the granite mass of Criffel lies a broad strip of gently shelving agricultural land.

The Stewartry coast is in general rocky with low cliffs, and opportunities for coastal exploitation are limited to the estuaries of the Fleet, the Dee and the Urr. Expanses of tidal flats at these river mouths must be a product of marine regression as the sea left inlets reaching inland beyond Gatehouse and Kirkcudbright and up to Dalbeattie. Marine fluctuations in the Solway have been studied by Jardine (Jardine and Morrison 1976; Jardine 1980), with detailed analysis of the coastline around the Nith Estuary. This work shows the
importance of local geomorphology in directing the nature and pace of coastal change. Regression was underway in the Solway by the mid-fourth millennium bc, yet on the shelving shoreline around Southerness Point the sea was still 1 - 2 km inland of its present line at 3000 bc. In contrast, the embayment which now forms Lochar Moss was cut off from the sea by gravel bars by 4695 ± 120 bc (Q - 638) to become a lagoonal environment within which fen and bog gradually developed, and which still contained areas of open water into the second millennium bc. Gravel bars built up at different times across inlets on the west side of the Nith Estuary. A small sea bay between Carsethorn and Kirkbean, north of Southerness Point, was developing brackish water conditions during marine transgression; a little to the north a considerable sea basin around the present New Abbey Pow received inflow from several large gravel depositing watercourses, but did not build up bars across its mouth until the end of the transgression period. Further north still the gently sloping coast line now occupied by Kirkconnel Flow was open to the invading sea, which penetrated up the flats of the Pow Burn and the Cargen Pow leaving sandy islands of dry land. These carse lands, now drained by modern ditches, but with older river beds meandering through the flats, must have remained as wetlands long after marine regression. The same must be true of much of the lower Nith valley, where the river is now confined to its present course by embankments.
Pollen studies in eastern Dumfriesshire have been discussed in relation to the Borders Region. In the Galloway Hills, on the north western edge of the present Region, work by Birks (1972; 1975) and Jones et al (1989) have established some agreement on vegetation sequence. The tree line was clearly near the summits at the time of maximum forest expansion, but the density of arboreal pollen never matched that of the Borders Hills, probably owing to the more broken terrain in Galloway. Clearance is episodic before the Elm Decline, when it can be associated with the establishment of pasture and open ground. Major reduction in tree cover, accompanied by lake inwash, erosion and the onset of blanket bog formation, has been dated by Jones et al to the final quarter of the third millennium.

The climate of Dumfriesshire and the Stewartry falls into the warm wet category of Atlantic type, although less exposed to the prevailing south west winds than the west coast. It is considerably wetter here than in the eastern Borders, with rainfall of over 1000mm p.a. even on the coasts. With altitude, precipitation increases and temperature falls sharply, setting limitations on the upland areas. In much of the lowlands, however, the growing season is long, at 245 - 260 days p.a., making it an excellent livestock farming area, traditionally specialising in dairying. Cereals are grown successfully in Nithsdale and the Castle Douglas
The extent of forestry on the hills has been increasing rapidly, and enormous areas of both the Stewartry and the Dumfriesshire hills are now mature forests.

Mention should be made of the superior quality of the Dumfriesshire sandstones as building stone, although there is little evidence for their use during the Neolithic. Chert occurs in beds in the Lead Hills Black Shales from Shinnelhead to the Border, from Stroanpatrick to High Bridge of Ken and in the upper Deugh valley (Wickham Jones and Collins 1978, 16, no.34). Beach pebble flint is available around the Solway coasts.

VI:ii The Mesolithic of the Nithsdale Region

Evidence for mesolithic activity in this Region has been recovered chiefly in two distinct environments, one coastal and the other upland, but aquatic. Coastal lithic finds come primarily from near the Nith Estuary, in particular in association with the shorelines of the old raised beaches around Southerness Point, but with occasional finds nearer the mouth of the river, and
from Dumfries town at the head of the former estuary (DES 1963, 26; 1965, 25-6; 1966, 32; 1967, 32; 1968, 24; 1973, 30; 1974, 41; 1975, 58; 11976, 71; 1989, 12). A. Morrison has suggested (1982, 3) that a group of finds, including microliths, from a gravelly ridge at 10m OD on the old raised beach at Tallowquhairn (NX 997 583) could be post-transgression, but the situation is very much at upper sea level limits, perhaps on the storm beach, and it would seem unnecessary to suppose a date later than those of other maximum transgression sites, such as Barsalloch in Wigtownshire. The collector of the Tallowquhairn material, W.F. Cormack, compared some pieces to the Wigtownshire assemblages, but drew attention to the higher proportion of microliths at Tallowquhairn, giving this industry a 'Tweed Valley appearance'. He noted also the greater variety of materials being used at the east Solway sites in general, including chert and amythyst (DES 1965, 26; Cormack 1970, 78).

There is an almost total absence of mesolithic artefacts recorded from the coast between Southerness Point and the Fleet estuary, 40km to the west. Coles discusses a group of c 40 flints from the Mote of Mark (NX 845 540) at the mouth of the R Urr (1964, 94-7), although Macdonald and Laing (1975, 149) suggest that this assemblage, which included microliths, could have been an artefact of Early Christian use of the site. The absence of coastal material could relate to a shortage
of ploughed fields and of field walkers in the Stewartry. While the rocky coastline may have been unsuitable for settlement, the estuaries provide ecological opportunity. It is on the Dee estuary, at Cumstoun (NX 68 53), at the meeting of the Dee and the Tarff Waters at the head of maximum transgression limits, that a biserial barbed point of red deer antler was picked up in 1895 from the bed of the river. The dark colour of the piece need not suggest greater antiquity than the biserial antler point from Shewalton Sands, dated to 3890 ± 80 bc, as it may relate to its having lain in peat (Morrison 1982, 3). It was a uniserial bone point from Druimvargie, near Oban, that gave an earlier date of 4740 ± 80 bc (Bonsall and Smith 1989).

It is possible that the fourth millennium use of bone points for river fishing reflects the development of specialised water-based economies in the late mesolithic, as discussed by Finlayson (1990(b)). Some of the evidence for this thesis comes from the inland river systems of the Water of Ken and the lochs of upland Galloway. Edwards, Ansell and Carter (1983) have summarised the results of lithic collection in this area, which includes finds from around Lochs Doon, Clatteringshaws, Grannoch and Dee at 180 - 220m OD and from the alluvial soils of the river terraces of the Water of Ken over a 20km stretch from 50m OD on Loch Ken to 210m OD at Craigengillan Bridge. These collections are
largely the work of Michael Ansell, fieldwalking ploughed land on the river terraces, collecting from molehills in unploughed pasture, and examining eroded loch shores at times of low water. So much of the landscape of upland Galloway is either peat covered or under forestry or unimproved grassland, that it is highly probable that in many areas similar material remains undetected. It should not be assumed that the Water of Ken offered a unique opportunity to the Mesolithic either in environmental terms or as a routeway to the upland lochs. Odd finds may be noted from elsewhere in the Region:—'blades, flakes and debitage' from Moniaive (NX 779 909) at 100m OD beside the Castelfairn Water (DES 1983, 5); 'a mesolithic core' on a hillslope at Bogrie (NX 816 849), 5km to the SE of Moniaive at 140m OD (DES 1974, 29); a 'pyramidal core' from the north shore of Lochruddon Loch (NX 898 737) at 90m OD (DES 1968, 28).

Finds of flint and chert from the site of what appears to have been a ploughed down burnt mound beside a stream at 100m OD on Killymingan Hill, Kirkgunzeon (NX 846 666) were thought sufficiently diagnostic to suggest a mesolithic date for activity on the site (DES 1984, 6).

'Worked flint of 'microlithic' type', reported from excavations at Lochmaben Castle on the edge of the loch (NY 088 811), was considered by the excavators to have been a medieval tool kit, although they admitted that it was 'in keeping with other (mesolithic) microliths
from the region' (Macdonald and Laing 1975, 149). 'A small group of chert and flint implements of Inland Mesolithic type' from Shillahill (NY 108 808) at 40m OD on the E side of the Annan (DES 1968, 18) may be regarded as representing the inland extent of the distribution on the river terraces of the lower Annan (see V:ii), although it is also possible that these finds, like those from nearby Kirkburn and Beckton (VI:vi), belong to a later period.

In 1993 there is information on mesolithic flints being found incorporated into a burnt mound at Johnstone bridge (NY 09SE) (Inf: GUARD). It is clear that opportunities for recovery have largely defined the supposed areas of mesolithic occupation.

In the uplands pollen studies by Birks (1975) detected clearance associated with charcoal in the sixth millennium in the Galloway Hills. Recent work of lithic collection from sites beside the Water of Ken and from several lochs in the Galloway Hills has established evidence for considerable mesolithic activity in this area (Edwards et al 1983). One mesolithic settlement site on Loch Doon has been excavated, and although the loch drains north west to the Firth of Clyde results may suitably be considered in the present section as concerning one of the Galloway Hills' sites. Lithic material from the site is being studied by Bill Finlayson in conjunction with an assemblage from Smittons on the Water of Ken, 15km to the south east.
Excavation at Starr (NX 483 939) (Affleck 1986) showed evidence for a succession of small scale occupations on waterside ridges. Pits, gullies and stakeholes suggested the presence of lightweight structures similar to those at Low Clone (Cormack and Coles 1968). Finlayson's discussion of the associated lithic industry makes interesting comparisons with the assemblage from the riverside site of Smittons (Finlayson 1990(a); 1990(b)). Chert, which was the main material used at both sites, could have been obtained locally (Wickham Jones and Collins 1978, 16). At Smittons chert constituted 73% of the assemblage, but at Starr, where it contributed 56%, the earliest levels proved to have used only 44% of this material. Flint was brought in to both sites ready knapped, presumably from the coast, but whereas at Smittons flint was treated identically with chert, at Starr a higher use rate for flint suggests that despite (or perhaps because of) its greater abundance here, it was the more highly valued material. Starr is closer to the Firth of Clyde (30km) than Smittons to the Solway Firth (40km), and the presence of mesolithic assemblages on the former coast, including finds from Doonfoot at the mouth of the river, may suggest that annual routines exploiting different environments were better established in this direction. Yet finds along the Water of Ken valley as far south as Loch Ken show use of this river as a routeway, whereas the steeper valley of the R Doon is without such evidence.
There is also some suggestion that the occupants of the Smittons site may have been the more mobile population. Finlayson notes the use here of microliths as projectile points, suggesting hunting, whereas there was no such evidence at Starr. The site at Smittons has produced two radiocarbon determinations: - 4310 ± 80 BC and 3520 ± 80 BC. These dates certainly show overlap with the coastal mesolithic, and could support theories of annual foraging routines from coast to hills (see Zvelebil 1986; Hughes 1988), but it is unfortunate that no such occupation has been discovered at the mouth of the Dee, except in the form of the single barbed point from Cumstoun. The sequence of decreasing use of flint at the undated site at Starr also might suggest an increased sedentism in the later mesolithic and a reduction in annual foraging routines. It would seem that at present it must be concluded that the upland Galloway sites provide some evidence for a later mesolithic presence following a variety of subsistence practices, both water based and involving hunting, and that it is possible that this period saw the inland population becoming less dependent on a use of coastal resources. Further information and dates from the lochside sites would be welcome.
VI:iii Neolithic settlement evidence in the Nithsdale Region

a) Structures

An excavated timber hall at Kirkconnel (NY 250 755), 17m by 5.5m, which could possibly be of neolithic date, has been assigned to Region V, the Borders (V:iii).

Traces of a neolithic structure on the summit of a low hill at Kirkburn near Lockerbie (NY 1301 8312), were uncovered during excavation of a Bronze Age cemetery (Cormack 1963(a)). No evidence for burial was associated with the neolithic features, and it seems possible that ritual and burial use of the hilltop developed out of original domestic occupation. Two straight lengths of stone packed trench, 4m and 2m long and up to 0.2m in depth, not quite at right angles to each other, together with a shallow, elongated pit continuing the line of the west trench to the north, defined the west and north sides of an area measuring c 7m x 6m (fig.VI:i). Erosion of the hill top had truncated the depth of the features, and the west trench faded out gradually to the south. The remains of carbonised wood among the packing stones displayed a vertical grain, and several stakeholes were identified. The size of the structure is comparable to that of the trench-defined Fengate house, 8.5m x 7m overall (Pryor 1982, fig.4). Five pits with neolithic pottery lay outside the enclosure (see below, Pits). An oval pit
Fig. VI:i Kirkburn, excavated features from Cormack 1963
within the defined space measuring 2.7m x 1.4m x 0.6m in maximum depth was tightly packed with stones and dark earth, in which sherds of beaker or food vessel type and some cremated bone were found. The site is further discussed below (VI:viii) in relation to funerary activity.

Excavation in 1992 by GUARD of an area in which grooved ware sherds had been picked up on the surface on Beckton Farm, near Lockerbie (NY 1305 8294), has recovered traces of structures perhaps associated with the pottery. Three areas, c 4m in diameter, defined by clay spreads, appeared to represent the floors of circular huts; post holes were associated with all three features, one of which was also defined by a shallow pennanular ring ditch. Two four post structures, 4 - 5m across, consisting of substantial post holes, lay to either side of one floor. Radiocarbon dates are awaited (DES 1992, 19-20); Inf: T. Pollard, GUARD, 23rd Oct. 1992).

Upland neolithic domestic dwellings cannot, at present, be identified, although, as discussed in relation to the Biggar Gap Region (III:iii), it is entirely possible that the frequent unenclosed hut circle of the Scottish uplands may represent a late stage in long term occupation of particular sites. A hut circle and small cairn are recorded 500m north east of Slewcairn long cairn, but the site type is relatively rare on
the Nithsdale and Annandale hills. Some structures listed as hut circles in the early Inventories, for example, on the Keir Hills (RCAHMS 1920, 119-120, no.328), have been re-identified as robbed and hollowed out small cairns by the Ordnance Survey (NX 88NE 1). On the other hand ring sites identified by Scott Elliot and Rae (1967) as ring cairns, or 'enclosed cremation cemeteries', could be re-interpreted as hut circles. It may, however, be noted that detailed survey of 215 ha of moorland to the north of Stidriggs long cairn by Glasgow University Field Archaeology students (Masters (ed) 1978) identified 398 separate archaeological features, the vast majority small cairns, and no hut circles. The site type may be genuinely rare in this Region, its place, perhaps, taken by timber round houses which leave no trace in peatlands. This type of country has lesser survival potential than the grasslands of the Cheviots, and a different use of hill slopes may have eliminated the platforming of the Border hills. One ring enclosure, 100m south of Stidriggs cairn, listed as a hut circle in 1920 (RCAHMS 1920, 144, no.146), had no clear entrance and was described as a ring cairn by Scott Elliot and Rae (1967, 109, no.13) and by the Glasgow survey (Masters (ed) 1978, no.398). In 1988 the site was found to be too damaged by forestry ploughing for further assessment (see VI:8 Prehistoric landscape). One possibility in relation to such sites is that domestic dwellings have
been re-used for funerary deposition, but such speculation cannot be used as a substitute for the identification of settlement. It can, however, be suggested that groups of small cairns may give a general indication of prehistoric activity, and thus of the location of early settlement.

b) Pits

An alternative indication of settlement should be available in the form of pits containing recognisably neolithic artefacts, but the discovery of these is inevitably rare in upland conditions. The Kirkburn pits (Cormack 1963(a)) would appear to have the characteristics of neolithic domestic pits. Five pits to the north and east of the trenches discussed above contained sherds of western neolithic type. These varied in size from 0.15m diameter by 0.08m deep to 0.60m x 0.30m deep. They contained greasy black soil, ash, hazelnut shells, flint flakes and pottery sherds. One pit also contained blackened and splintered stones, and the largest pit contained a layer of flattish stones halfway down its filling. This last feature is the only suggestion of ordered deposition in these pits. In contrast, a depression measuring 1.2m x 0.76m by 0.30m in depth had its lowest levels refilled with clean subsoil in which were found splinters of calcined bone, flints, sherds of beaker, two grooved ware sherds and one
small abraded fragment identified on the basis of its fabric as western neolithic. This pit would appear to represent a later neolithic or beaker use of the site for ritual deposition.

Ritual activity has also been suggested in relation to two pits, one of them stone-lined, containing grooved ware sherds and burnt bone, found near to possible settlement evidence at Beckton (NY 130 824) (DES 1992, 20). The site is immediately north west of an enclosure in which a pit containing a grooved ware vessel was found in 1963 (Cormack 1963, b), and the implications of this deposit are discussed below (Enclosures).

An excavated pit at Townfoot, Glencaple (NY 003 683) must be discussed as a Late Neolithic artefact on the basis of its radiocarbon date of 1980 ± 90 bc Gak 1244. The pit, measuring 3.7m x 1.5m and up to 0.46m in depth, was packed with wood mixed with red sandstone chips c 4-5cm long. Similar chips surrounded the pit on the south and west sides penetrating 14cm into the subsoil in what the excavator described as a 'heavily metalled track' (Scott Elliot 1972). Many of the chips were burnt. The site would appear to have been the ploughed down remains of a burnt mound, its dating closely comparable to that from such structures on Arran, for example Machrie North Mound 9 - 1910 ± 65 bc GU 1567 (Barber and Lehane 1990). It was, however, c 56m from the nearest stream, and the discovery in an excavation trench under 1m broad of
five post holes and a possible wall footing c 3m to the south of the pit may suggest that some more complex activity was taking place than the simple boiling of water as accomplished at most of the southern Scottish burnt mounds. As Barber points out (1990) burnt mound material is commonly found on settlement sites, and is itself no more than a by-product of cooking.

A pit on Bran Rig (NX 992 958) in the Queensberry foothills at 280m OD near the upper Water of Ae was listed by Truckell (DES 1964, 27) as the source of a find of a flint scraper and other flakes, but no further details are known.

c) Enclosures

Analogy with the location of causewayed enclosures in southern Britain creates expectations of finding early neolithic enclosures on prominent hilltops, even if the means of enclosure in the north may be by rampart, as at Carn Brea (Mercer 1981(b)) rather than causewayed ditches. On this basis attention has been drawn to the artefactual and funerary associations of Burnswark Hill, overlooking Annandale, in a discussion of enclosures in the Borders Region (V:iii). In the present Region, however, comparable associations with prominent hilltop summits appear to be lacking; indeed major hilltop enclosures (or 'oppida') are rare to the west of the Nith, where smaller sites of the Atlantic 'castle complex' are more common (Feachem 1966).
Mention may, however, be made of the recovery of a hoard of thirteen Middle Bronze Age rapiers from the deepest part of the ditch of a circular earthwork just below the brow of Drumcoltran Hill, on the summit of which a large cairn, possibly chambered, once stood (C:11; Coles 1964, 152). The site, at NX 8642 6963, is regarded as an unusual one for an Iron Age enclosure (e.g. RCAHMS Marginal Lands Survey 1954, no.280, visited 1951), but equally cannot be matched in its use of the steep hill slope in the neolithic repertoire.

More modest sites have produced some instances of possibly neolithic artefact associations. There is a report of flint arrowheads, chipped flints and bronze spearheads being found about fifty years before 1893 at MacNaughton's Fort (NX 8735 7786), a circular enclosure at 110m OD on the lower slopes of Skeoch Hill (260m OD) above a small glen leading to the Old Water, a tributary of the Cluden (Coles 1893, 112). Excavation in the 1960s confirmed the Iron Age date of the palisade within the revetted rampart, but the find of a flint knife from the interior gives some support to the earlier story (Scott Elliot, Simpson and Coles 1966). At Castle Hill, Duncow (NX 9748 8427) the natural scarp of a promontory ridge is cut off by an earthwork, the summit at 84m OD, above a small stream on the east side of the Nith valley. In the early 19th century an arrowhead was found on the fort (Dobie 1958, 100, 109), at the foot of which, across
the stream to the SW, is a small standing stone, on the same alignment as the Gallaberry cursus, over 1km distant. A triple ditched earthwork at Dryfesdalegate (NY 1168 8244), consists of an elevated promontory at 60m OD directly above the flood plain of the Dryfe Water near its junction with the Annan. When the defences were sectioned in 1967 a group of flint blades and chips of neolithic type were found (DES 1967, 23). This last site is closely allied to the well known neolithic choice of situations on a riverside promontory, both at causewayed enclosures, and at Late Neolithic Meldon Bridge (III:b). Promontory enclosures should produce cropmark evidence, but the use of such locations in later periods also means that neolithic sites can only be recognised if some distinctive construction method is used.

1.6km north of Dryfesdalegate, on the opposite side of the Dryfe Water at Dryfeholm (NY 113 841), cropmarks show a pit alignment running straight for c 100m from north to south to cut off the east side of a low promontory with a small stream to the west. The pits are an unusual, elongated shape, blurring into one another. It seems possible that they are a neolithic feature enclosing an area of c 70m x 50m, in a locality in which there is ample other evidence for neolithic activity.

A small promontory enclosure also occurs beside the SW end of the possible cursus at West Gallaberry (VI:a). The ditch here, however, while incomplete on available
photographs, is not certainly causewayed. The enclosure, measuring c 60m x 50m, could, of course, be closer in time to the palisaded homestead or to the Roman temporary camp in the same field than to the cursus, (St. Joseph 1952). The section dug across the ditch did, however, show a very acceptably neolithic outline, and the question must remain open.

Equally, spatial contiguity does not demonstrate contemporaneity between the lesser cursus, Holywood, and the cropmark of a subrectangular palisaded enclosure measuring c 40m x 30m linked to it by a narrow fence line across the 50m separation distance (VI: L). The slightly bowed shape of the enclosure is almost identical to that of a similar sized ditched cropmark enclosure at Bowhouse, north west of Caerlaverock Castle, at NY 0235 6579; again a ditch or fence line extends from the north west corner of this enclosure, which is crossed by an irregular alignment of large pits (see VI: ix; fig.VI: iv).

Identification of neolithic enclosures clearly lacks a basis of comparanda at present. This lack of information on site types is illustrated by evidence from an oval palisade enclosure at Beckton (NY 1294 8225), near the more recently excavated structures with possible grooved ware associations, mentioned above. The site was briefly revealed in 1962 when a low hill was being bulldozed away for road metal, and a plan of the
50m enclosure, subdivided by an internal palisade line, was made by W.F. Cormack, who also investigated the features (1963(b)). Against the inner side of the inner palisade a pit was found containing pieces of grooved ware from a large vessel (c 38cm across the rim). Although the published plan shows the inner palisade joining up with the outer, the original excavation plan, now in the NMRS (DC 11107) shows it continuing as a dotted line across the staggered entrance on the SE side of the enclosure, crossing the outer palisade twice. The inner line is noticeably more sinuous than the outer, and it seems likely that it belongs to a different, and presumably earlier enclosure, perhaps of sub-rectangular, 30m diameter form, on the SW side of the summit overlooking the Kirk Burn. Traces of occupation were most evident within this inner area. A patch of carbon and splintered stone lay at the main enclosure entrance, and NW of this were shallow scoops from which unclassified body sherds were recovered. Other slight depressions lay on the summit, one containing two more sherds and three flint flakes, the other traces of calcined bone. Three 'cooking pits' 0.6m across by 0.6m deep, full of wood ash and fire cracked stones, lay outside the inner enclosure on the NE shoulder of the hill. Interpretation of these eroded remains must be speculative. Grooved ware is found more often in pits than in any other situation (Manby 1974), and is
generally involved in practices of ritual deposition. In the present case, however, the association between pit, palisaded enclosure and burnt refuse suggests a domestic context. The enclosure certainly emphasises deficiencies in present knowledge of the nature of neolithic enclosures in the north.

VI:iv Neolithic agriculture in the Nithsdale Region

Pollen studies in the Galloway Hills have suggested that evidence for anthropogenic interference with the vegetation intensifies at the time of the Elm Decline, although still small scale and episodic in character (Birks 1972). In the final quarter of the millennium a more effective onslaught was made on these upland forests, leading to a sharp reduction in tree cover and the onset of hillwash and erosion (Jones et al 1989).

The situation of most of the long cairns, on or near, the Keir Hills, on the edge of Criffel, and in the moorlands of Annandale, argues an early neolithic interest in upland country. Small cairns occur near several of the long cairns suggesting agriculture, while others, such as Fleuchlarg and Lochhill, are in enclosed fields where more recent agriculture has removed
earlier evidence. Several discrete groups of cairns have been recorded on the slopes of Slewcairn Hill, all at lower levels than the long cairn, apart from a group on the valley side 200m to the north. At Laggan Park, again, the cairn groups are recorded at lower levels, although preservation conditions on the hill ridge above must be superior. Cairn Avel is situated at the junction of enclosed fields and hill grazings, but while improvement has undoubtedly removed most prehistoric evidence from lower ground, one small group of small cairns survives 150m NW of the long cairn on the lower slopes.

Evidence in the area to the north of Stidriggs long cairn has been considered in a report on survey carried out by Glasgow University (Masters (ed) 1978). There are large numbers of small cairns on these heather covered hill sides, although they appear to avoid the immediate vicinity of the long cairn. The ridge to the south of the monument also carries a large number of small cairns reaching to within 50m of the site, but remaining out of view, over the horizon. In the area surveyed two broad types of land use were noted, the earlier, represented by small cairns, lynchets and stony banks, being attributed to the later prehistoric period or the first millennium AD, while the later, with stone walled enclosures, rig cultivation and field banks, was held to be medieval or post-medieval. However, further distinctions with possible chronological implications can be drawn. The
usual spacing between small cairns was said to be 10 - 30m, but variations also occurred. In some areas linear arrangements of cairns were associated with lynchets and banks, while elsewhere, as for example on the plateau of Meikle Hill, 700m N of the long cairn, there were more agglomerate groupings. The build up of lynchets and linear arrangements might be suggested to be a later development, perhaps involving a reworking of areas which earlier clearance had left littered with the 'agglomerated' cairns. It is interesting to note that burnt mounds have been observed in the valley below Meikle Hill (NY 09 15-18), and it seems that different phases of use, withdrawal and re-use of the landscape are likely to have occurred, the burnt mounds being, perhaps, an early equivalent of the shieling huts which lie only 200m from the long cairn. The Survey Report remarks on the inherent fertility of the Brown Forest Soils of the better drained hill slopes in the area, and, despite its apparent bleakness today, it would seem, from the quantity of archaeological features recorded, to have been regarded once as worth the effort of clearing. While it is not possible to assign any particular segment of the remains to the Neolithic, it may be concluded that the land around the long cairn was in use from an early period which the very presence of the cairn must itself suggest to have included the neolithic.

If the above conclusion verges on circularity,
this may be counter-balanced by acknowledgment of the fact that small cairns occur widely in the Dumfriesshire and Stewartry hills with no neolithic associations, either funerary or artefactual. This is an aspect of the wider problem of the distribution of monuments and is discussed in Chapter 10.

As observed above there is a tendency for long cairns to be located on higher ground than the small cairns, suggesting a peripherality for the former which must reduce the applicability of site catchment analysis. In addition, as ritual monuments, the long cairns may have appealed to widespread populations rather than single areas of settlement. The clustering of three long cairns and a possible barrow around the Keir Hills does, however, suggest territorial appropriation, and this grouping may be considered from the point of view of land use potential.

In terms of modern concepts of land capability these cairns do not occupy the obvious locations. Good Class 3 agricultural land, the best category to be found in Dumfries and Galloway, lies adjacent to the east side of the Keir hills, in the Thornhill basin. The cairns, on the other hand, are situated on the north and south west sides of the range, overlooking the narrow glen of the Shinnel Water and the broader valley of the Cain Water, with, at best, Class 4 land subject to moderately severe limitations on agricultural use. The cropmark site at
Barndennoch is on Class 3 land, but has chosen the point where the river valley contracts between hills and the strip of good land is at its narrowest, rather than a siting on the broader basins to north and south. It must, however, be added that while the greywackes and shales of the Keir Hills have developed peat cover over their summits, the slopes carry Brown Forest Soils with some gleying in the upper levels but freely drained below. The potential for agricultural use is certainly present, and indeed Fleuchlarg cairn is situated in agricultural fields, while the site at Laggan Park is directly above a deserted farmstead in a field of improved grassland subject to earlier cultivation. The locational priority may have been one of ensuring access to a variety of ecological zones, whether from an elevated or a low lying position. The dispersal of the sites around the hills would be an appropriate strategy if all the communities involved wished to retain access to 'common grazings' on the central plateau, on which, it appears, small cairns do not occur.

An important item of economic evidence, recently recovered is a bow of yew wood found in a bog known as Rotten Bottom above Moffatdale, and dated to 3090 ± 100 bc OxA 3540. This site, at c 600m OD, is well away from other neolithic evidence, such as axes from near Moffat, 10km to the SW, at c 200m OD, and must suggest a wide ranging use of the uplands for hunting at the time. The
distances involved may, indeed, throw some doubt on the reality of the concept of settled agriculture as a way of life in the earliest neolithic period.

VI:v Neolithic pottery in the Nithsdale Region

Apart from the as yet unpublished finds from the excavated long cairns at Lochhill and Slewcairn, the pottery finds of this Region are all from the Lockerbie area at the junction of the Dryfe Water and the R Annan. The contrast between this distribution and that of the monuments, including cropmark sites, in Nithsdale casts a sobering light on the inadequacy of either class of evidence as a guide to the location of centres of neolithic activity.

Pottery finds from the two long cairns are enumerated in the Catalogue entries for the sites. Apart from beaker, the material from Lochhill was all undecorated, and the mention of simple rims and of some carinated sherds suggests that it can be set within a Grimston-Lyles Hill tradition. Burl has described the Lochhill pottery as 'Grimston ware similar to the Boghead sherds' (1984, 57), but there is no suggestion that the Lochhill material carried the fluting of the Boghead of
Fochabers finds, and the comparison may be intended to be no more than a statement of shared tradition, as Henshall more cautiously comments (ibid, p. 61). The finds came from a disturbed context, but apparently had been thrown out of the little chamber, or orthostatic porch central to, and between, the two successive facades.

At Slewcairn apparently similar pottery was found on a slab platform at the S end of the chamber and in the forecourt against the centre of the facade. This latter deposit was badly damaged and reduced to tiny fragments. In the forecourt, and in a hollow beside the cairn kerb, decorated sherds were also found, also in very small pieces. The absence of decorated pottery from the rear platform, sealed under cairn material as soon as the cairn was constructed, is in accord with a supposed later date for the decorated ware. The forecourt blocking, sealing a few decorated sherds together with the plain ware may have been added at the same time as a slab revetment was set up against the original boulder kerb, postdating the first kerb by a sufficient period of time for black soil to have accumulated against it.

Pits and trenches at Kirkburn contained a small assemblage of undecorated neolithic wares, including some rim sherds. The rims are of a simple rolled over form which would be at home among Grimston wares, but no vessel forms were reconstructable and no evidence for carination was present. A larger pit (51), which also
contained beaker, produced two small sherds of fairly soft brown paste decorated with the horizontal grooves of grooved ware (Cormack 1963(a)).

The circumstances of recovery of a large portion of a grooved ware pot from a palisaded enclosure at Beckton, 800m south of the Kirkburn pits, are described above (VI:iii). The pot, now in Dumfries Museum, measures 15" (380mm) in diameter at the rim, 9½" (230mm) in surviving height, its base missing, and ½" (13mm) in thickness. There is internal decoration below the rim of two parallel grooves. External decoration consists of a row of circular impressions, shallow grooves, and finger and thumb impressions (Cormack 1963(b), 114).

300m to the north of the Beckton enclosure excavation by GUARD has discovered two pits containing large sherds of fine grooved ware. One pit was stone lined and deliberate deposition appears to have been involved here (DES 1992,20)
VI:vi Lithic finds from the Nithsdale Region

No attempt has been made to enumerate lithic material in the museums in Dumfries and Kirkcudbright, where the majority of finds from the Region are housed. It is, however, clear that lithic material is reasonably common in some districts, but that recovery is limited by the small extent of cultivation, and there are no detailed records of field walking comparable to those from the Tweed Basin.

Map VI:1, based on published sources, shows the findspots of arrowheads, excluding barbed and tanged examples, together with the location of other collections likely to have been neolithic. Several arrowhead finds were listed by Corrie (1928), as also were two flint 'spearheads' from near the Dee estuary, at Borness and Ardendee. These large implements appear to be a local speciality. A 3½" flint spearhead from Gretna Green is mentioned in the Border Region (V:v); a spearhead or large arrowhead of flint from Lochar Moss, measuring 3½" x 2" (92 x 51mm) is in the NMS (AB 982), a record exists of a 'leaf shaped knife of cherty flint' from Kirkmichael, on the Water of Ae, measuring 3½" x 1½" (92 x 26mm) (Anderson and Black 1888). These implements, or the flint to make them, seem likely to have been imported from northern Ireland, where flint 'javelin heads' are a characteristic neolithic find with court
tomb associations, particularly in Antrim and the Bann Valley (Collins 1981). Truckell, however, noted a find of 'possibly East Anglian imported flint' from the Nith Estuary (1963, 57).

The map also marks lithic collections deemed likely to be neolithic, largely on the basis of a list of such findspots given by Truckell (ibid). A.E. Truckell was for many years Curator of Dumfries Museum, which partly accounts for a distribution bias towards the Dumfries area. The locations, include Holywood, Newbridge, and Summerville and Terregles Street in Dumfries town, coinciding closely with the distribution of cropmark monuments in this area (Holywood I and 2; Curriestanes VI:b,c and d). In the NMS there is also a collection of arrowheads of leaf shaped, barbed and tanged and in one case hollow based form, besides the spearhead mentioned above, from Lochar Moss, to the east of Dumfries.

The map shows groups of finds from the Lockerbie area, mostly relating to field walking and excavation by W.F. Cormack, supplemented by recent work in the area in advance of road construction by GUARD. Finds include a petit tranchet derivative type arrowhead from near the Kirkburn enclosure (DES 1965, 17). Neolithic type blades and chips were also found on excavation of a seemingly Iron Age earthwork at Dryfesdalegate (NY 1168 8244) in 1967 (DES 1967, 23). Note many be taken of another Annandale location, 5km south of Lockerbie, St.
Mungo's Glebe (NY 12 75) where hundreds of flints were said to have been found on ploughing before 1845, and it was commented that the material had evidently been brought there for manufacturing into arrowheads (NSA IV, 208). The location, on the 'holm' of the river, suggests mesolithic river terrace occupation, but clearly Annandale was also the scene of much neolithic activity.

The only lithic finds from excavation at Lochhill long cairn were some flint and chert chips from among cairn material. At Slewcairn, on the other hand, flakes, scrapers, knives and three leaf shaped arrowheads were found below or just beyond the forecourt blocking, while deposition in the mortuary structure included two flint knives and a leaf shaped arrowhead.

The find of a discoidal flint knife, from the edge of Milton Loch, Kirkcudbright (PSAS XCV, 1911-12, 181) should also be mentioned; a leaf shaped arrowhead comes from the same area (NMS:AD 1542). Corrie mentions arrowheads and other flints coming from Lairdlaugh, to the west of Auchenreoch Loch, 4km west of Milton Loch (1928, 279). Arrowheads of flint and flint chips are said to have been found in MacNaughton's Fort (NX 873 778) in c 1840 (RCAHMS 1914, 169, no.319).

Several lithic finds, including arrowheads, come from inland locations. These are, however, mostly valley based, unlike the recent find of a bow from Rotton Bottom,
above Moffatdale (see VI:iv, above). Mention may be made of the find of a large Late Neolithic type cannel coal bead from Watch Hill, Loch Skeen (NS 18 16), which reaches to 605m OD, c 4km NE of Rotton Bottom (NMS FN 16).

VI:vii Neolithic axeheads from the Nithsdale Region

Nearly 120 axes are mapped in the region defined (Map VI:3), giving a density of one axe per c 15km² of improved land (c 1800km²). The density is rather lower than that in the Lothians, which may be attributable to the lower proportion of arable in the south west. Nonetheless, the proximity of the area to the Cumbrian sources and the numbers of neolithic monuments in Nithsdale itself might have led to expectations of higher numbers of finds. The density is much lower than that in the Tweed Basin, (one per 7.0km²) or the Biggar Gap Region (one per 4.0km²), although higher than the Firth of Clyde (one per 20km²). Numbers have, besides, been inflated by the inclusion of many lost axes, some listed by J.M. Corrie (1928) and others recorded as having been displayed at meetings of the Dumfries and Galloway Natural History and Antiquarian Society in the late 19th century. Some of these latter records may be of doubtful reliability;
items displayed as 'celts' may have been axe hammers, whetstones or simply unusual or utilised natural pebbles.

The main areas of distribution are two fold: first the vicinity of Kirkcudbright at the mouth of the Dee with a small inland group in the Glenkens; secondly Nithsdale, including the tributary valleys of the upper Cairn and Shinnel Waters, and a small group around Tinwald to the east of the main valley. Beyond these areas there is a thin scatter of finds across the eastern Stewartry and in Annandale.

The majority of the surviving axes were examined by James Williams (1970) who commented on the overwhelming proportions of Group VI products. P.R. Ritchie accepts the general validity of visual inspection in this instance (pers comm). One axe, a 4½" (111mm) specimen from Torrs Muir, SE of Kirkcudbright (NX 684 467) has been described as being of flint (Anderson and Black 1888, 398), but this item may in fact be one from the same farm assigned to Group VI by Williams (Kirkcud. Museum 1405). Similarly, an 1863 description of a 'flint celt' found in a cairn in the parish of Keir (TDGNHAS 1862-3, 48) may refer to a sectioned axe from Barndennoch (DMF 18), actually of riebeckite felsite. A New Statistical Account report of a find of 'flint hatchets lying several feet below the surface of the ground' on the farm of Milton, immediately east of Torrs Muir, cannot be
regarded as reliable as regards the material (NSA IV, 23-4). There are thus no confirmed finds of flint axes from the Region. One fine Class Ia jadeite axe, the widest on record, was found in the late 18th century on the Mains of Southwick Estate near Southerness Point, apparently deposited in a crevice in a rock, and found when the rock was blown up in the course of land clearance (Smith 1963, 166, no.53). Sir John Evans (1897, 108), suggested that this might have been a 'dolmen', but this interpretation seems unnecessary (C:12). A jadeite axe listed as coming from Castle Douglas has been re-assigned to Douglas Castle in the Biggar Gap Region (III:vii).

Thirty nine axes have been thin sectioned, and thirty three of these were of Group VI rock, with two more of ?Group VI origin (Ritchie and Scott 1989). Although this proportion may be weighted by deliberate selection of specimens to test the extent of exploitation of the Cumbrian sources, there can be no doubt that the great majority of axes from the Region were indeed of such stone. A further eighteen axes have been ascribed to Group VI on the basis of visual inspection, either by Williams, or by A.E. Truckell on behalf of Dumfries Museum. Earlier descriptions frequently employ the terms 'greenstone', 'claystone' or 'felstone', likely to refer to the same stone. Four of the Group VI axes were rough outs, one from Lochar Moss, east of the Nith (DMF 2) and two giants from the west side of the Nith, one
from Terregles (KRK 2), 202mm in length, and a 312mm axe from Roadside Smithy (DES 1977, 41); a possible Group VI rough out from Tynron Kirk, inland, on the Shinnel Water, measured only 160mm in length (Dfs. Mus. 1969-96).

Sectioning also identified one axe as being of Antrim porcellanite (KRK 5). This 3¼" (95mm) find came from Kirklandhill, near Kirkpatrick Durham, on the R Urr, in an area with few neolithic finds. Another axe, from Barndennoch on the Nith (DMF 18) was of riebeckite felsite, probably of Shetland origin (R. Ritchie, pers comm). This axe, which may have come from a cairn, is discussed in relation to a cropmark site on Barndennoch (VI:10).

One sectioned axe from Dunreggan, near Moniaive, on the Cairn Water (NX 784 912) was of greywacke (DMF 11), and another inland find from Conrick in Upper Nithsdale (NS 788 117) is said to be of the same stone (Williams 1970, 115). A piece of an axe from Kirkburn, Lockerbie (NY 137 830) is also described as being of greywacke (Dfs. Mus. 1961-80). Such stone is presumably of local origin, and it is perhaps significant that use was made of it in inland locations, outwith immediate contact with Cumbria. An axe from Argrennan, Kirkcudbright was said to be of granite (NSA IV, 88), and one from Borness, in the same area, of basalt (Anderson and Black 1888, 398); another, from St. Connell's chapel, west of Tynron (NX 754 950) was of a 'hard, black stone' (TDGNHAS 20
1938 203). Whatever their actual material, these axes can fairly confidently be excluded from the Group VI category. Other specimens are described as being of sandstone, or gritty sandstone, and in one case red sandstone, a material which would seem unsuitable for a functional tool. One of the sectioned axes, from Tinwald (DMF 10), was not assigned to any group, but the Dumfries Museum Catalogue describes it as being of quartz dolerite (Dfs. Mus. 1934-26).

Measurements of seventy axes have been recorded. Half of these are under 6" (150mm) in length, with a peak at c 4½", between 110mm and 120mm. There is a lesser peak of axes measuring 8-9" (210-230mm) and a scatter of finds in sizes in excess of this reach up to 370mm. Table VI:1 lists the seventeen or eighteen axes over 7½" (190mm) in length, a group which is again dominated by Group VI products, although also including the undoubtedly prestige artefacts of jadeite and of riebeckite felsite. Distribution of these large specimens follows much the same patterns as for the generality of axes, with finds from both east and west of the region, inland and coastal locations, and including a scatter in the eastern Stewartry where few finds have been made.

The extent to which axe distribution can be related either to settlement or to ritual activity remains debateable. Recovery of axes is certainly an indication of the presence of axe using people, but disparities
in density suggest a lack of equivalence between axe distributions and population numbers. The only finds from the Lochmaben Basin in central Annandale are two broken axe pieces from the fields (Dfs Mus: 1961/80; 1967/581) and a probable axe flake from excavation at Kirkburn, yet the same area has produced several flint scatters and arrowheads and some exceptionally interesting excavated sites. In contrast, around the mouth of the Dee, where neither funerary monuments nor excavated evidence for the neolithic are known, c twenty three axes have been recorded within c 150km². Use of the Dee Estuary for axe importation is probably a major
factor in these numbers, although this does not in itself explain processes of deposition and recovery. High losses could arise where ease of replacement placed a low value on the commodity; alternatively, the high value of the items in the local, axe-importing community could lead to the adoption of practices of ritual deposition, again giving good recovery levels. Around the lower Nith, where importation is again likely to be a factor, about seventeen axes have been recovered within a similar 150km² area. In this district, however, there is also ample evidence for ritual activity, and the record of association between axes and ritual must be examined for relevance.

As far as direct associations with ritual monuments are concerned, few examples can be quoted. 'A flint celt found last year along with some bones in a cairn in the parish of Keir' (TDGNHAS 1862-3, 48) may be the axe of riebeckite felsite from Barndennoch, as no other axe provenance from Dr. Grierson's Museum would appear to fit its location: there is thus a possibility of association with a cropmark long barrow on Barndennoch (VI:10). A lost axe referred to by Corrie (1928, no.44) as having been found when a cairn at Tinker's Loup, Dalry was being removed, furnishes a second such link, but the location here cannot be identified. The possible axe flake from a depression at Kirkburn ritual site had been remade into a scraper and, even if ritually deposited, is perhaps unlikely to have retained significance as an axe (Cormack
1963(a)). A large axe from Barhill (DMF 27) and a small one from Mabie's Moss (TDGNHAS 5, 1886-7, 76) may have direct connections with the long cairn at Capenoch Moor and the possible henge at Pict's Knowe respectively.

There is, on the other hand, considerable evidence from Nithsdale in particular for axe deposition in circumstances which seem entirely likely to have involved a ritual aspect. Two types of location are involved in this activity, wet sites and rocky places. In relation to the former, Corrie's Notebook (No.2) records two instances of the recovery of stone axes from the Nith, besides one from Castle Loch, Sanquhar. Another axe is said to have been found in the bank of the R Nith opposite Lincluden (NX 97NE 34); there is a probable Group VI axe from the bed of the Kinnell at Kinnelmill (DMF 31), and a record of a 'flat axehead', without further description, from the shingle above Cluden Mill, between the Fourmerkland and Holywood cursus related sites (TDGNHAS 22 1938-40, 134). There are also axes from mosses, very probably originally watery locations. One Group VI find from Cowhill Moss (DMF 15) is located c 2km north of the Holywood North cursus. Another find from Whitehill, Kirkmahoe, on the opposite side of the Nith, was said to have been near bog oaks (TDGNHAS 3 1880-3, 2).

Another interesting group of ritually deposed axes comes from associations with striking rock formations. The finding of a jadeite axe in a 'hollow' in a rock has already been mentioned. A large Group VI axe comes
from a rock shelter called the Pulpit Rock in an inaccessible location in Maidenbower Craggs, south east of Dumfries (DMF 3). The NSA records the finding of several axes, now lost, near the 'Sillar Stane', a large glacial erratic poised at the head of a small glen with waterfall on the hill above Barndennoch cropmark site (NSA IV, 467). It would appear that in Nithsdale axes carried a special significance as appropriate items for ritual deposition.

As at the Sillar Stane, some instances of probable formal deposition involve sets of axes. A group of three 'Cumbrian Clubs', from 6½" (159mm) to 8½" (226mm) in length, and of differing shapes, was found when drains were being dug on Bogue Knowe, 2.5km south of Slewcairn. Another set of three axes were apparently also found together at Twynholm, near Kirkcudbright, 'in the bottom of an ancient circular moat' (AF 66, 139, 140). Two of these axes were of Group VI material, but one was of unknown stone, variously described in early records as 'serpentine' and as 'syenite'. There is also a record, mentioned above, of 'flint hatchets' found on the farm of Milton like the Twynholm find not far from the Dee Estuary. It may be that among the many poorly recorded finds from the Kirkcudbright area there is, as in Nithsdale, a high proportion of ritually deposited items. Axe deposition may then have figured as an important alternative form of ritual activity in some areas.
Nine sites in this Region have been catalogued as acceptable Category A or B neolithic cairns or barrows, while a tenth site, an oval mound at Greenlaw, Castle Douglas, is classed as Category C, a possible but doubtful long cairn. Two of the nine acceptable sites are cropmark features only (Category B), leaving seven Category A long cairns to consider, all visible monuments apart from Lochhill, which has been totally removed by excavation. The two excavated sites, Lochhill and Slewcairn, both proved to have had complex histories of use before the sealing cairn was added, but it cannot be assumed that similar sequences applied at the other sites, which display significant morphological and locational differences from the excavated pair. Lochhill and Slewcairn, less than 6km apart, are the only near-coastal sites, adjacent to areas of mesolithic coastal activity likely to have continued into the fourth millennium, although Cairn Avel is also near to mesolithic occupation sites on the Water of Ken, which, at Smittons, have been dated to the mid fourth millennium (see above). Although all the cairns are trapezoidal, the excavated sites were the smallest at 25m in length as against 31m to 44m, with a maximum height of 1.7m compared with the generally 3m heights of the inland cairns. All these large cairns, apart from Stidriggs, are situated
with their broad, high ends above a slope so as to achieve maximum effect, and all except Cairn Avel display some evidence for internal revetment, designed to maintain their high profiles. Between this inland set and Lochhill and Slewcairn is interposed a group of cursus-related monuments in Lower Nithsdale. It seems appropriate to regard the two long cairn groupings as morphologically and spatially distinct, rather than as variations on a single theme.

Locational factors regarding the distribution of the cairns are touched on in the section on the evidence for neolithic agriculture in the Region (VI:iv). In overall distributional terms the contrast between the clustering of three sites together with the cropmark long barrow, around the Ken Hills and the extreme isolation of comparable monuments, Cairn Avel and Stidriggs, is of interest. A further factor in this equation must be the occurrence of examples of morphologically similar cairns within other distribution clusters. The Currick in the Borders Region (V:3) is a broad, high trapezoidal cairn in an area where long, low narrow cairns are the norm. Cairn na Gath (WIG 5) is a near duplicate of Capenoch appearing in the Luce Valley where multi-chambered cairns are more usual. Drumwhirn (KRK:9) seems to have been another such trapezoidal cairn among the chambered cairns of the Cree estuary. Thus this particular type of cairn is found in one cluster in a core area around

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the Keir Hills, and as isolated examples in other areas. A 'budding off' process of settlement expansion could explain the appearance of Cairn Avel in a particularly attractive fluvio-glacial valley 30km west of the Keir Hills, although the location of Stidriggs, 20km north east of the main group, appears in no way such an obvious settlement choice. The occurrence of Keir Hills type cairns within the distribution areas of other cairn types seems unlikely to relate to actual settlement shift, and is more probably related to local social process and perhaps the desire to express difference by adoption of 'foreign' monument forms.

Any such analysis must, however, recognise the certain incompleteness of the site record. Laggan Park, in an area littered with heaps of field clearance stone, was only recognised in 1991-2. The robbed out tails of Capenoch and Cairn Avel illustrate the hunger for stone of local dyke builders, and the effectiveness of such distruction. Similar depredation may have reduced cairns at Gledbrae (C:10), Greenlaw (VI:4) and Kirkpatrick Durham (C:9) beyond recognition. These last sites may be related to Linge's class of flat topped oval mounds in North Ayrshire (see Table I:3).

There are records of other oval mounds in the Region, such as that at Dryfeholm, near Lockerbie (NY 1085 8362), now ploughed out (C:13). Other mounds have been described as mottes, as occurred at Greenlaw. There
are however, many drumlinoid features in the Region, especially in the Castle Douglas basin, and many of the so-called 'mottes' are clearly natural features (e.g.: Ernespie Motte at NX 7818 6296; Kirkpatrick Irongray motte at NX 9217 7917). The existence of these natural mounds as common aspects of the landscape must tend to reduce the account taken of such features, and it is likely that other sites have been ploughed out without record. The removal without surviving trace of what may have been a chambered cairn on Camp Hill, Drumcoltran (NX 8656 6961) is a warning of how complete such destruction could be (C:11).

Nonetheless, while the surviving distribution of funerary sites must be accepted as being incomplete, the tendency of these sites to cluster does suggest that the remaining material offers some approximation to an original prehistoric reality. In certain areas different attitudes to ceremonial prevailed: in Lower Nithsdale, cursus monuments were constructed; around the Dee estuary small stone circles were erected and rocks were inscribed with cup-and-ring marks; elsewhere, natural features may have provided the foci for ritual activity. Not all neolithic peoples felt the need for long or chambered cairns, and the absence of such sites from some districts is quite likely to be a true representation of an original situation.

Further light on the problems of variability of
monument form comes from the results of excavation at Lochhill and Slewcairn. At both these sites preliminary activity took the form of the digging of three large pits in which were set timber uprights. At Slewcairn at least it seems clear that large split timbers in the two end pits had rotted away before the deposition of human remains and flint items in a rectangular mortuary structure. It is this secondary phase which at Lochhill is dated to 3210 ± 105 bc, and which can probably be associated with very different structural features at each site - a timber facade and slab built porch at Lochhill, a set of orthostats and a stone pavement at Slewcairn. In both cases these features can be associated with the deposition of plain, Grimston style bowls. Construction of chambers, axial at Lochhill, lateral and with an approach passage at Slewcairn, was a later stage yet, post-dating the firing of the timber features, but probably associated with the addition of the long cairn.

The two- or three-post structure, perhaps, as Scott suggests (1992), exposure platforms, are a primary feature at many sites, from Fussell's Lodge and Wayland's Smithy in the south to Dalladies and Pitnacree in eastern and central Scotland. Later developments at these sites are widely various and there is clearly no reason to suppose that long cairns represent the final outcome at all such sites. The construction sequences were
influenced by two major requirements: the satisfaction of evolving ritual needs, and the pressure to respond to the development of new preferences in monument forms. It is thus no simple matter to identify alternative sites to long cairns. Functions varied over time, and quite different site types may have provided the required facilities at different periods.

The three pits which are such a recurrent feature at early neolithic monuments may have fulfilled their functions and been abandoned without any identifiable marker, such as a covering cairn, being left at the site. If such pits existed under the barrows at Barndennoch and Redbank the aerial photographs available are not sufficiently detailed to reveal them, although there is a possible elongated feature between the south-east ends of the Redbank ditches. None of the pits at Kirkburn appear to be of comparable type (Cormack 1963(a)), although it is possible that the neolithic features represent an alternative form of ritual. The structural trenches appear to enclose a large pit, 2.7m x 1.4m x 0.6m in maximum depth, which could have been a neolithic cremation pit, although in the upper layers sherds possibly of beaker or food vessel were mixed with the stone packing. Funerary deposition in pits is a very probable alternative form of neolithic ritual activity, unlikely to be identified as such when unaccompanied by neolithic artefacts. A possible location for such a
pit could be the central feature, marked by two standing stones, at Park of Tongland stone setting (Table VI:2:5), or indeed, beside any of the solitary standing stones in the Region, including those within Centre Stone Circles (VI:ix(c)). At Dinwoodiegreen in Annandale (NY 107 883) a cemetery of cinerary urns was found beside cobbled areas and other pits, one of which, measuring 1.5m x 0.8m, contained the possible remains of a plank sealed below small stones (Hodgson and Cormack 1975). Again, the features are not identifiably neolithic, but, as at Kirkburn, the cremation cemetery may have been focussing on a site of earlier ritual interest.

It is also possible that small cairns may have been used for neolithic funerary deposition. At Auchenfad (NX 950 682), 3.5km north west of Lochhill, where forestry ploughing revealed a group of circular and oval cairns, some kerbed, excavation of one of these recovered a little cremated bone and a so-called 'dummy' imperforate axe (DES 1966, 29; 1967, 29: J. Williams). It is quite common to find small long mounds in such small cairnfields. For example, on Lonnachie Rig (NY 024 994), 2km WNW of Stidriggs, Scott Elliot and Rae noted among the small cairns one measuring 11.0m x 3.6m x 0.7m in height and another 8.2m x 2.7m (1967, 107, no.9). The authors comment: 'Neither of these is oblong, the sides appear to be straight. They look like miniature long cairns.' Mounds of this size would, in fact, be large enough to
conceal a mortuary structure, although it must be presumed that they were not functioning as ritual centres.

Such a role may, however, have been fulfilled by other locations. Note has already been taken of the use of notable natural features for axe deposition (VI:vii). In the following section (VI:ix) the evidence for ritual enclosures, including stone circles, will be discussed. The question of the function of cup-and-ring marks (VI:x) may also be of relevance.

The two ditched sites, Barndennoch and Redbank, are also of importance in showing the general flexibility of the approach to monument building. Both sites occur in cairn building areas, Barndennoch as part of the Keir Hills group, and Redbank, like Lochhill and Slewcairn, on a flank of Criffel. Apart from the use of ditches the two sites cannot be related in any way. Barndennoch, if a long barrow, is relatively small, and might be supposed to fit early into the neolithic sequence, perhaps predating the construction of the massive trapezoidal stone cairns. Redbank has been suggested as a bank barrow, thus likely to belong to the second quarter of the third millennium (cf. Maiden Castle: Sharples 1990), postdating the mortuary structures and initial cairn construction at the neighbouring sites. Both, however, may be linked to the occurrence of elongated, ditched monuments of cursus type in the Dumfries area, and may
be taken as an example of the longevity of local traditions in building techniques. The fact that Lochhill and Slewcairn were not built up into more massive monuments, like the cairns in the Keir Hills, may show that on the Lower Nith the ditch building option became the preferred style, producing, as discussed below (VI.ix(a)) a remarkable group of cursus type monuments around Dumfries.

VI.ix Ritual enclosures in The Nithsdale Region

Some evidence for enclosures in this Region has already been mentioned under the heading of settlement (VI:iii), although the distinction between settlement and ritual is not clear cut, particularly in the case of early neolithic enclosures of hilltop or promontory type. The same uncertainty must attach to the role of the palisaded enclosure at Beckton associated with grooved ware deposition in a pit. The present section, however, is confined to a discussion of three types of site: cursus and cursus related enclosures, including elongated, pit-defined sites; henges; and stone circles.
a) Cursus related enclosures

The Catalogue includes five enclosures of possible cursus type (VI:a-e), one of which, Holywood 2, may consist of two chronologically separate monuments, one ditched, one pit-defined, on the same site. A pair of ditches extending over 150m at Redbank has been listed with funerary sites as a possible bank barrow (VI:4). A narrow double pit alignment at Dalswinton Mains (VI:f) resembles an avenue rather than an enclosure, perhaps related to two adjacent ring ditches, one of which may be classifiable as a henge. In 1992, however, aerial photographs revealed another complex of pit alignments to the north west of Holm farmhouse at NX 959 802 c 1km east of Holywood 2. It seems clear that at the head of the former estuary of the Nith, on the north and west sides of the town of Dumfries, there has existed a remarkable distribution of linear monuments exhibiting close spatial interrelationships; it is also the case that the sites concerned display a remarkable morphological individuality (see Fig VI:iii).

The sites occur in a 7km stretch of the Lower Nith on fluvio-glacial terraces beside the Nith, Cluden and Cargen Waters. The close spatial clustering could in part be attributable to the cropmark potential of the particular soil conditions on these gravel terraces, perhaps unusually sensitive to drought conditions. The features at West Gallaberry, Fourmerkland and Dalswinton
Fig. VI:iii Monuments in the Dumfries area

a West Gallaberry
b Holywood 1
c Holywood 2
d Curriestanes
e Fourmerkiand
f Dalswinton Mains
g Pict's Knowe
h Twelve Apostles
i Easthill
j Greystone
k Holm

Cluden

Nith

Cairn/
Ring-ditch

--- 10 m

--- 50 m

--- --- 2km

--- --- 50M

--- --- --- --- 429
Mains were all recorded in the course of repeated photography of overlying or adjacent Roman camps, and the neolithic pits and ditches were consistently more elusive than the Roman ditches; the cropmarks on Holm were observed on a return visit to the Holywood complex. The two Holywood enclosures are particularly noticeable, presumably consisting of broad ditches, and are even observable on RAF vertical photographs as parchmarks. Again, however, it was only careful attention to the sites over successive seasons that allowed additional features - ring ditches, pits and palisades - to be made out. Clearly a cursus, particularly a pitted cursus, will easily elude record where such recurrent observation has not been practised.

This probability is re-inforced by the difficulties that attach to determining whether paired ditches derive from a cursus or from some more recent feature, such as a trackway. At Whinnyrig, near Gretna, for example, a pair of ditches open onto an enclosure, and have presumably acted as a droveway (RCAHMS 1981(a), 15, no.67). Equally, right-angled ditches, such as those at Cavers, near Kirkbean (NX 95WE 20) are more likely to be segments of field boundaries than a cursus terminal. A pair of ditches at Shillahill, on the east side of the Annan, near Lockerbie seems a more hopeful feature, visible over a length of c 200m on the level terrace just above the river, running east to west (NY 18SW 55). To the north are
a set of rather confused cropmark features, while 300m to the south east are two ring ditches; the grooved ware sites at Beckton are 2km to the north east. As, however, no terminal is visible, and the length is not such as to rule out the possibility of a track or field drains, the site cannot be classified as a cursus.

Nonetheless, while it must be acknowledged that the cursus group was not necessarily always as isolated as it presently appears to be, there can be no denying the presence of a set of sites around Dumfries, comparable, in their dispersed clustering, to the distribution of henges in the Milfield Basin. In addition, there is a suggestion of direct articulation across the set, in that the West Gallaberry ditches are aligned onto the north end of the Holywood 2 enclosure, 3km distant across the broad flood plain of the R Nith, while the south end of this second enclosure, angled slightly differently from the north end, is aligned to the south west, across the north end of Holywood 1 and the Twelve Apostles to a stone circle at Easthill, 7km distant.

Before, however, accepting that some grand overall design has directed the layout of the monuments, attention must be paid to the second main characteristic of the sites, their extreme individuality. This aspect is well illustrated by the outline of the Curriestanes enclosure, its bowed sides resembling more the ditches of a long barrow than an enclosure of these dimensions
(360m in length). The use of pits in the definition of the inner enclosure at Holywood 2 and at Fourmerkland introduces another variation, its origins presumably in eastern Scotland where pitted enclosures appear to replace the ditched version of the cursus. The terminals of these two pitted enclosures are quite different, one rounded and one squared, just as the terminals of the ditched Holywood enclosures, apparently articulating so closely with one another, differ. These latter sites are on different alignments and do not follow the same preferences in situation. Holywood 2 crosses a promontory ridge transversely, but is on high ground and would achieve prominence from the north west, outwith the enclosed area. Holywood 1 lies along the side of a ridge, failing to occupy the skyline longitudinally, although its south end is raised above a low boggy area which it could dominate. The Gallaberry ditches are on very level ground, and again could only appear impressive where the south west end apparently terminates above a stream. Fourmerkland lies along the summit of a ridge, visible from either side, while Curriestanes is another level ground site, only prominent if approached from the Cargen Water to the west.

It is possible that rather than attempting to perceive patterns of large scale landscape organisation in the disposition of the monuments, the variability both of morphology and in locational terms should be envisaged
as a chronological succession. The two coincident enclosures at Holywood 2 appear to represent just such a succession, being unlikely to have functioned simultaneously. The internal, pit defined enclosure blocks the north west entrance through the ditches, and may be suggested to have been the earlier monument, although its position must still have been apparent when the ditches were dug. Upcast from the ditches may have sealed the line of pits as effectively as a long cairn sealed a mortuary structure and associated features. The likely chronological position of these monuments is considered in Chapter 9, but the set seems likely to bear some relationship to the east of Scotland, where pit defined cursus-type enclosures are known, but undated, and where shorter rectangular mortuary structures, Douglassmuir and Inchtuthil, have dates at the beginning of the third millennium bc (DES 1980, 35: Barclay and Maxwell 1991). If, however, an early origin is postulated for the pitted monuments, this would distance them from the grooved ware associations of the Milfield Basin alignments (Harding 1981), to which the Dalswinton Mains 'avenue' bears some resemblance. Pitted alignments at Holm include some narrow ditch pairs, again suggestive of the Milfield Basin, and it would seem unlikely that this complex is of a very different period from the Holywood and Fourmerkland pitted enclosures. It is, however, possible that local traditions of
monument types should have continued to be preferred over long periods of time.

There is one further pit alignment near the Nith Estuary to add to the above series. At Bowhouse, near Caerlaverock Castle, on the east side of the estuary an erratic, irregular alignment of large pits runs for nearly 300m from NY 0210 6571 to 0240 6577 (NY 06NW 9) (Fig. VI:iv). The series coincides with a subrectangular ditched enclosure, and a cluster of pits occupy the south half of the enclosure; the alignment roughly articulates with the east-west entrances of the enclosure, but the role of coincidence cannot be ruled out here. The feature does not resemble the pitted field systems occurring in south eastern Scotland in later prehistory (e.g. Eskbank: Barber 1985), and may, rather, be related to the pit alignments of cursus type. Irregular pitted alignments of unknown date and function can be found as cropmarks in other areas, for example, at Loanleven, Perth (NO 05 25), where a 250m long stretch of irregularly scattered pits passes 100m to the north of an enclosed bronze age cist cemetery (Russel White et al 1992, 302, fig.8).

In summary, while the cursus enclosures of the Nith Estuary give some impression of land organisation and planned overall design, acceptance of such an interpretation should be tempered by appreciation of the possible extended chronology of the series and the
development within localities of preferred monument types and variations on those types. There can be no doubt, however, that the scale of monument construction in this area is unusually impressive, and in conclusion some mention may be made of the factors which may have influenced the location of the set around the lower Nith and its tributaries.

First, there is the role of the Nith valley as a routeway, leading from the Solway to the north and north west (see VI:1), and providing a passage for the dissemination of information across cultural regions. More specifically there is the direct part played by the Nith Estuary in the handling of Group VI axes, as is shown by the recovery of large rough outs from the area; the distribution of axe finds in Upper Nithsdale and Upper Clydesdale is evidence for the onward movement of these products towards the inland enclaves of the Biggar Gap Region. This aspect is further emphasised by examples of ritual deposition of axes in Nithsdale (VI:vii). Finally the direct importance of the economic resources of the Nith Estuary should not be overlooked. The terraces occupied by the enclosures are themselves a first class agricultural location with light, well-drained soils of high fertility. The water meadows beside the rivers would have offered excellent summer grazing for livestock during the period when the crops were growing, and, where not actually flooded, valuable winter
Fig. VI:iv Bowhouse, cropmark features, from aerial photography
browse as well. The wetlands themselves and the flooded haughlands would have been important in their provision of wild resources, game, fish, wildfowl, edible weeds and useful products such as reeds.

b) Henges

Although the classic Class II henge at Broadlea has been included in the Borders Region, the habitually dispersed distribution of such sites (cf. Cairnpapple II:b; Overhowden IV:a) makes it appropriate to regard this henge as a central site for all of Annandale. Thus, despite being 12km to the north, the grooved ware sites at Beckton may be seen to provide part of the social context for the Broadlea henge.

No henge of comparable size (40 - 45m internally) has been identified further to the west, although a Class I henge recognised in Pict's Knowe near the mouth of the Nith is c 22m in internal diameter. The problems of classification of this site help to illustrate some of the general difficulties of henge identification. Some cropmark ring ditches could be henge-related. Harding and Lee (1987) consider examples, such as the 15m double entrance ring ditch at Woodside (NX 9752 6871), but dismiss them as 'unlikely to be henge related'. This judgement must generally be accepted, since ring ditches of these dimensions are likely more usually to be settlement sites. The somewhat similar, double
entrance ring ditch at Dalswinton Mains, however, with a
diameter of c 16m x 12m, is lent plausibility by its proximity to a double pit alignment. The conjunction is
reminiscent of that at Milfield North, where a 15m diameter henge is passed by a double pit alignment producing grooved ware and an early second millennium
date (Harding 1981). It may be that the Nithsdale group of cursus enclosures was succeeded by a cluster of small henges and hengiform enclosures. Another possible candidate for such a role could be a very small (c 8m) ring
ditch, in two segments, with central feature, at Holm (NX 9617 8010) near the recorded site of a circle of nine stones (Table VI: 2: 14). The role of larger ceremonial enclosure may have been filled here by the stone circle, the Twelve Apostles (VI: h), c 88m in diameter, adjacent to the two Holywood cursus enclosures (see below).

Henges are not common in the west of Scotland, although the Class II henge at Ballymeanoch, Argyll, converted into a funerary site, offers a close comparison to Pict's Knowe in terms of its size, in its location in a flat valley bottom, and in its proximity to a major ritual centre. Other possible small henges in Ayrshire are discussed under Region I. 'Lithicisation' may be supposed to be a factor here, the place of henges being taken in the rockier landscapes of the west by stone circles. The distribution of stone circles in the Stewartry District, where no henges have been identified, is discussed below.
c) Stone Circles

Table VI: 2 lists the stone circles surviving, or for which records exist, in the present Region, and their distribution is shown on Map VI: 5. This site type incurs a major problem in the wealth of non-specific records that can be amassed for 'stone circles' which, it may be surmised, concern very various site types. F.R. Coles encountered the same problem in attempting to enumerate stone circles in the Stewartry, and was forced to conclude that 'there is scarcely one instance in the county bounded by the Nith and the Cree of a stone circle which at least may not have been the base stones of a cairn' (1895, 302). The 'Druid Temple' had evidently acquired such a hold over the imagination of local antiquaries that the temptation was always present to elevate other site types, whether cairn remains, settlements, or scatters of natural boulders, into such monuments. The delusion was only encouraged by the nature of local stone circles themselves, few of which seem to have entailed the erection of tall, upright pillar stones.

Only five sites in Table VI: 2 survive in such condition as to give any reasonable impression of their original appearance. Of these, two are tiny settings, two are larger arrangements of boulders, and one is the 88m diameter circle, the Twelve Apostles (VI:h). The smallest of these sites is the 'Four Poster' at Park

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of Tongland, recently excavated by Rod McCullagh (1987). Two of the stones at this site were found to stand in cairn material which sealed second millennium burials, and thus to post-date the present period of interest. Two stones, however, had been erected c 7m apart beside a central robbed out pit whose date and function is unknown, so it is possible that activity of a funerary nature began here during the Neolithic, although the site is not a neolithic stone circle.

The 0.8m diameter ring of tiny stones at Lairdmannoch is a characteristic member of a local group of Centre Stone Circles, closely matching, for example, the 10.7 x 8.8m diameter circle at Cauldside (NX 517 560). While it would not seem that Coles was correct in supposing such sites to be the remains of robbed out cairns, it would not be surprising if their role was essentially funerary and their date second millennium. The 16.8 x 14.6m diameter circle at Glenquicken (NX 509 582) has a low cairn around its tall centre stone. It may be mentioned also that a 2.6m tall standing stone on Dalarran Holm, near Dalry at NX 6389 7916 can be seen on aerial photographs to stand on the E side of a ring ditch, perhaps fulfilling the same type of function. Two other sites in the Glenkens may be other examples of the genre, Loch Stroan and Stroangassel, both doubtful records but suggested to constitute rather larger Centre Stone Circles. There is also a record of a centre stone at Easthill, although
the larger boulders of this circle suggest a rather different type of site. There are early records from Keir and Morton churches which may extend the distribution into Nithsdale. A very similar site on Kingside Hill in the Lammermuirs (Table IV:3:8c) may also be noted.

Two partially surviving sites, Holm of Daltallochan and Easthill share some characteristics, although the former lies far inland on a valley floor, while the latter, near the Nith Estuary, is on a hilltop. Both are composed of rough boulders, are between 20 and 25m in diameter and utilise natural features in their location; both have wide views which at Daltallochan include a series of large local cairns, one of which is the long Cairn Avel, and standing stones. At Easthill, not only does the view take in the cursus sites of the Nith Estuary, but Holywood 2 is aligned onto the circle itself. On a clear day the 7km distance between the sites would not be excessive for laying out such a siting. It may be suggested that in both these instances stones are being used to designate and enhance special places, rather than being imposed onto a landscape as artificial erections.

The final surviving site is the Twelve Apostles, an unusually large circle with a maximum diameter of 88m. It consists of massive boulders, some of which, at least, could have been glacial erratics, although it has been suggested that others must have been brought from a
Burl compares the large diameter of the site with that of Long Meg and her Daughters in Cumbria (109m x 93m) and suggests large open rings to be characteristic of north west Britain (1976). In the Borders Region Whitcastles is 56m in diameter, and the circle at the Lochmaben Stane was said to cover half an acre (c 50m diameter). The setting at Holywood, however, is clearly designed to give definition to a hollow existing between low natural ridges, the effect being somewhat like that of a henge, with a depressed area surrounded by banks. The interior would be very large for a northern henge, twice as large, for example, as Broadlea, although close to the 85m diameter Balfarg. It must besides be appropriate to expect large monuments in areas with a history of ritual activity, such as Holywood and Balfarg, rather than in the more isolated locations. The Twelve Apostles are clearly deliberately distanced from the Holywood cursus enclosures, across two low ridges and physically separated from them by a small stream valley. The chronological relationship would be of the utmost interest.

Little can be said of the character of the remainder of the stone circles, apart from noting that the few suggested diameters, at Drummore, Loch Stroan, Stroangassel and Little Balmore, are all close to those of Holm of Daltallochan and Easthill. The distribution
is generally valley based, with only Easthill occupying a summit position (150m OD) apart from the doubtful site at Stroangassell (210m OD). The cluster of sites around the mouth of the Dee coincide with the distribution of cup-and-ring marks here (VI:x). Nithsdale also has a number of sites, not all of which are well authenticated. The absence of sites in Annandale is of interest, presenting a contrast not only with Nithsdale, but with the river valleys to the east, the Water of Milk, the Esk and the Liddel (V:viii). If stone circles are acting as an alternative to henges, it may be that the existence of Broadlea henge in Annandale obviated the need for stone circles here.

Finally, the Communion Stones on Skeoch Hill (NS 860 790) appear to be a recent setting, not earthfast stone rows, and Thom's observation that they are spaced 2my apart must be fortuitous (Thom, Thom and Burl 1990, i, 215). (Site visited June 1991).
VI:x Cup-and-ring marks in the Nithsdale Region

Ronald Morris' 'Prehistoric Rock Art of Galloway and the Isle of Man' (1979) gives fifty separate entries for cup-and-ring mark sites to the east of the R Fleet within the present Region. Mapping these on a regional scale would not be a useful exercise, since the sites cluster almost exclusively around the mouth of the R Dee. The largest number are to the east and south east of Kirkcudbright town, with another group on the opposite, west side of the estuary. Environmentally this is very similar country to that in the Machars of Wigtownshire where another large group of sites occurs. it is close to the sea and heavily eroded by glaciation so that rock is never far from the surface. Both rock outcrop and loose boulders have been used for carving, which includes all the usual variations, besides an exceptional baroque rock surface at High Banks covered with close set cup marks (NX 709 489). One example penetrates as far inland as Nether Linkens (NX 750 546), 7½km NE of Kirkcudbright. The only other inland carvings are highly atypical, undeveloped examples: shallow rings without cups at Duchrae, Dalry (NX 662 837) and deep cups with single, close set rings at Lamford, Carsphairn (NX 551 988). The complete absence of such markings in the Stewartry east of Castle Douglas and in Nithsdale and Annandale continues east into the Borders Region. Cup-and-ring
markings are clearly a localised phenomenon and there
must be a temptation to ascribe their appearance to the
work of a very small number of craftsmen. Nonetheless
they constitute a form of marking the landscape, and it
may be observed that their distribution here, as in the
Machars, is entirely distinct from that of funerary
monuments, in contrast to the position around Cairnholly.
The Dee estuary has, however, produced a dense
distribution of neolithic axeheads and a scatter of
records of stone circles, including three possible
sites, Drummore, Little Balmae and Bombie, within the
area most profusely endowed with carvings.

VI:xi  Beakers in the Nithsdale Region

Beakers are recorded from eight sites in the Region
under discussion, not a large number for the size of the
area. The findspots are widely scattered, suggesting
that the low recovery rate may be a function of the small
number of excavations in the Region. Yates note (1984, 5)
that 'only ten cairns in Dumfries and Galloway have been
evacuated to even the most rudimentary archaeological
standards', and it seems certain that better records of
excavation would have greatly increased the numbers of
beakers recorded.
Of the eight findspots, two are from cists in cairns (one with doubtful sherds only), two from unmounded cists, two are casual finds, while two relate to sites with a neolithic ancestry. One of these latter is the long cairn at Lochhill, which had a deposit of sherds of a Step 5 beaker along its spine. The deposit must long post date active use of the site at which the only other finds were early neolithic pottery sherds, and the continuity of respect is then of interest. The second 'neolithic' site has as long a period of use, apparently of increasing rather than diminishing intensity in the second millennium. This is Kirkburn, from which a number of beaker sherds were recovered in pits apparently of a ritual nature, although with very little evidence of burial, later to become the primary function of the site. These included a large number of sherds of AOC beaker. For example, twenty nine such sherds came from pit 16, some of them apparently lining the neatly made, circular pit, 0.6m in diameter, which otherwise contained a black, greasy filling with carbon. A smaller number of sherds were of other decorative types, combed, incised or with finger nail impressions (Longworth in Cormack 1963(a), 122-3). AOC rarely appears with burials in the study area, and its commonest findspot is in sand dune sites, suggesting domestic settlement. One sherd of AOC beaker comes from the Newby sand hills near the mouth of the Annan.
VI:xii Regional Summary

Although the area included in the present Region is large and admittedly varied (VI:i), it is nonetheless remarkable what a variety of site types it contains and in what a number of distinct groupings. While this situation would seem to have great potential for the illumination of the nature and scale of neolithic social organisation, the many paradoxes of the distributions remain puzzling.

Lithic material and stone axeheads have been recovered throughout the lowlands, suggesting widespread neolithic activity here. A density of axeheads from Nithsdale shows good coincidence with a group of cursus monuments, while funerary monuments could be interpreted as being peripheral to the settlement suggested by the axes. An even greater density of axeheads from the Dee Estuary lacks accompanying funerary cairns, although cup-and-ring marks and stone circles both coincide well with the artefacts. Overall it is probably true to consider the distributions of axes and of funerary monuments as nearly exclusive (Ritchie 1987).

Two sets of long cairns can be distinguished. At the mouth of the Nith, near Criffel, are two small excavated long cairns, joined by a possible bank barrow. Inland, four sites, including one possible long barrow, cluster around the Keir Hills, with similar sites occurring
singly to both east and west. This inland group consists of broad, high trapezoidal cairns, their height maintained by internal revetment walls. The coastal lowlands of the Stewartry may be characterised by an absence of funerary monuments, although whether this is the result of an original reality or of effective destruction must be open to doubt. A site at Greenlaw is included in the Catalogue as an illustration of the difficulties of identification.

Cursus enclosures occur in a single cluster in Lower Nithsdale, although, again, other sites may have been overlooked. The Nithsdale examples are very various. Cup-and-ring marks evidence the same pattern of clustering in this case around the Lower Dee. Stone circles have left a confused record making assessment difficult, although the number of destroyed sites is itself illuminating. The distribution appears to be valley based and perhaps complementary to that of henges. Many of the smaller stone circles may represent second millennium burial activity.

Annandale has produced distinctive patterns of its own, of particular interest. Despite the total absence of surviving funerary monuments or of stone circles the valley has the highest rate of lithic recovery in the Region and the only finds of neolithic pottery apart from those produced from excavations of long cairns. The recovery of axe heads, on the other hand, is very low.
A remarkable group of sites of actual or potential neolithic interest has emerged near Lockerbie, where the Dryfe Water and the Kirk Burn join the Annan, and these are shown on Fig.VI:v. Excavated material includes Western neolithic ware and grooved ware, and sites range from pits to a palisaded enclosure and possible domestic structures. Neolithic flints have been collected in several localities and were found in excavation of a triple ditched promontory enclosure. Cropmark sites include a possible cursus, ring ditches, a pitted line perhaps defining a promontory enclosure and other pits. The record of a large oval tumulus at Dryfeholm, on the terraces beside the Annan, has been detailed in the Catalogue of possible long cairn sites (C:13). This would appear to be the area of richest potential in the Region, despite the absence of upstanding monuments, and results of current excavations at Beckton are awaited with the greatest interest.
**KEY**

1. Kirkburn cremation cemetery
2. Beckton enclosure, with grooved ware
3. Beckton structures, with grooved ware
4. Shillahill, possible cursus
5. Shillahill, ring ditches
6. Dryfeholm barrow (D:13)
7. Dryfeholm pit alignment
8. Applegarthtown cropmark pits
9. Dryfesdalegate promontory fort, with flints
### Table VI: Axes from the Nithsdale Region

<table>
<thead>
<tr>
<th>No.</th>
<th>Location</th>
<th>Date</th>
<th>Length (mm)</th>
<th>Museum</th>
<th>Catalogue</th>
<th>Findspot</th>
</tr>
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<tr>
<td>1</td>
<td>East Tinwald</td>
<td>D 1946-7</td>
<td>370</td>
<td>DMF</td>
<td>14</td>
<td>NY 04 81</td>
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<td>2</td>
<td>Bellfield</td>
<td>D 1935-1</td>
<td>330</td>
<td>DMF</td>
<td>13</td>
<td>NX 94 87</td>
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<tr>
<td>3</td>
<td>Roadside Smithy</td>
<td>D 1977-56</td>
<td>312</td>
<td>DMF</td>
<td>?</td>
<td>NX 981 638</td>
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<td>4</td>
<td>Todstone, Dalry</td>
<td>D 1949-8</td>
<td>292</td>
<td>DMF</td>
<td>6</td>
<td>NX 61 85</td>
</tr>
<tr>
<td>5</td>
<td>Lockwoodmaim</td>
<td>Hunterian B 1914-150</td>
<td>290</td>
<td>DMF</td>
<td>?</td>
<td>NY 09 96</td>
</tr>
<tr>
<td>6</td>
<td>Irlandton</td>
<td>Corrie 1928, no. 29</td>
<td>280</td>
<td>Gp VI</td>
<td>Nov</td>
<td>NX 64 56</td>
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<td>7</td>
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<td>Corrie 1928, no. 24</td>
<td>229</td>
<td>Gp VI</td>
<td>2</td>
<td>NX 70 47</td>
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<td>Bennan</td>
<td>T15GNHAS 3 1880, 83, 4</td>
<td>229</td>
<td>Gp VI</td>
<td>2</td>
<td>NX 78 94</td>
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<td>K 1035</td>
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<td>sandstone</td>
<td>2</td>
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<td>Bogue Knowe</td>
<td>NMS AF 503</td>
<td>226</td>
<td>DMF</td>
<td>16</td>
<td>NX 90 59</td>
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<td>11</td>
<td>Mains of Southwick</td>
<td>Smith 1963, 166, no. 53</td>
<td>226</td>
<td>Smith</td>
<td>166</td>
<td>NX 93 57</td>
</tr>
<tr>
<td>12</td>
<td>Dalbeattie</td>
<td>D 1965-91</td>
<td>206</td>
<td>KRK</td>
<td>8</td>
<td>NX 83 61</td>
</tr>
<tr>
<td>13</td>
<td>Pulpit Rock, Maidenbower Crags</td>
<td>D 1934-11</td>
<td>205</td>
<td>DMF</td>
<td>3</td>
<td>NX 991 744</td>
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<td>'Cairnsmore', Terregles</td>
<td>D 1964-154</td>
<td>202</td>
<td>KRK</td>
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<td>D 1965-93</td>
<td>200</td>
<td>KRK</td>
<td>15</td>
<td>NX 91 81</td>
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<td>Fairies Well, Tongland</td>
<td>NMS: AF 28</td>
<td>197</td>
<td>KRK</td>
<td>9</td>
<td>NX 6696 5692</td>
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</tbody>
</table>

**Notes:**
- NGR is given to six figures only where an actual findspot has been identified.
- DMF and KRK preface numbers given to axes sectioned by Ritchie and Scott (1989).
- D = Dumfries Museum
- K = Stewartry Museum
- L = Length
- Information is from museum catalogues and quoted sources.
17. Barndennoch  D 1965-92  NX 89 88
   L 195mm  DMF 18  Riebeckite felsite
   Probably: TDGNHAS 1862-3, 48 - a flint celt
   found last year along with some bones in the
   parish of Keir

18. Lochrutton  Corrie 1928 no.54  NX 89 73
   L 191mm  greenstone

19  ? Wellstrand, Sanquhar  Brown 1891 37  NS 75 11
   L 279mm  'A claystone celt in Mr. Wilson's
   collection'.
   This may be  D 1967/598/22  Damaged axe
   or whetstone in fine sandstone from Sanquhar.
   Presently 200mm long, 45-65mm x 30mm thick.
   Both ends square, (but see also no.7).

Table VI:2  Stone Circles in Nithsdale and
the Stewartry

A. Partially surviving circles

1. Twelve Apostles, Holywood  30m OD  NX 9470 7940
   See Catalogue VI:h

2. Holm of Daltallochan  180m OD  NX 5528 9422
   This ring of 13 large boulders is on the edge of the
   flood plain between Carsphairn Lane and the Water of Deugh.
   The stones are set around the sides of a low knoll, defining
   its platform summit with an oval measuring 25m NE - SW by
   20m. At the SW end, where the knoll drops to a low saddle,
   two stones are recessed into the oval to form an arc of 4
   stones c 10m across. If these stones are in their original
   position, the intention could have been to create a kind of
   forecourt. The largest boulders are those to the NE,
   opposite the arc, and to the S, at one end of it. The knoll
   is a natural glacial feature, and some doubt has been
   expressed as to whether the setting is classifiable as a
   'stone circle' (Burl in Thom, Thom and Burl 1980, 276). It
   is beside a prominent conical glacial knoll, and c100m to
   the east there is a standing stone 1.2m in height. There are
   clear views from the site to Cairn Avel, nearly 2km to the
   south, Lagwine cairn, 800m to the east, and the site of a
   large demolished cairn, 500m to the north.

3. Easthill  150m OD  NX 9193 7388
   This setting of 8 small boulders occupies a terrace on
   the NE end of the summit of East Hill (190m OD) with distant
   views to the north east over the Holywood complex. The
   situation, in a hollow, is unobtrusive, but the stones are
   set around a low, rocky platform of raised ground (cf.
Holm of Daltallochan). The site appears to have been considerably disturbed especially on the SE side, perhaps the result of minor excavations in the 19th century, mentioned by Coles (1895, 309-310). The ONB notes the removal of a stone from the centre of the circle some years previously (Bk 70, p.46). The outline of the original circle is no longer clearly identifiable, but Burl suggests a diameter of 24.7m x 23.8m (Thom, Thom and Burl 1980, 276-7).

4. Lairdmannoch 120m OD NX 6629 6143

A granite block 1.6m long lies at the centre of a ring of very small heather covered stones 6.5m in diameter. The site is among a group of cairns in moorland beside Loch Mannoch, 7km north of Twynholm. It is a Centre Stone Circle, of the same type as Glenquicken and Claughreid, 15km to the west. Thom, Thom and Burl 1980, 282-3.

5. Park of Tongland 91m OD NX 6996 5609

This supposed Four Poster was excavated in 1987 after one of the three remaining stones, all c lm in height, had fallen (McCullagh 1987). The setting was shown to be associated with a crude oval ring of cairn material, probably the remains of a robbed 10m cairn, overlying a cemetery of cremation burials accompanied by two cinerary urns and an incense cup. Two stones had been erected c 7m apart and one of them had broken before the addition of cairn material. The north and south stones were set into the body of the cairn; the north stone is known to have been re-erected between 1895 and 1911 (RCAHMS 1914, 260, no.445). The site is inconspicuous in a broken, rocky landscape, but has broad views to the south, and south west down the valley of the R Dee.

B. Recorded sites

6. Drummore 100m OD NX 6884 4597

Four small stones survive, probably displaced, from a circle, said to have consisted of 9 stones before its destruction in 1867. Coles identified six stone sockets, giving an original diameter of 22m, and observed that massive stones lay to the south of the site (1895, 304). The RCAHMS suggested a diameter of 24m - 27m (1914, 124, no.237). NX 64NE 6

7. Ernespie 70m OD NX 7747 6321

By 1891 two stones were all that were left of a setting of three shown on the 1st ed 6-inch OS map (Coles 1895, 303). The two survive, c 1.4m in height and 2.1m apart (NX 76SE 15). The site is probably that described in 1844 as 'an imperfect circle of upright stones' on the farm of Torrs (NX 777 616) (NSA IV, 153).
8. Greystone, Dumfries 15m OD NX 9797 7690

In March 1887 an incense cup, pieces of bone, and charcoal were found beside a stone known as the Grey Stone on the edge of Dumfries. The published account gives details of the then whereabouts of other stones, recollected locally to have formed a circle on the knoll (J. Wilson 1887). Three stones were said to have been built into house foundations, and a fourth into a wall, whilst a fifth stone still lay at the field gate. The following month pieces of bone were found beside it (NX 97NE 25).

9. Loch Stroan 80m OD NX 640 709

This reported circle lay in an area now forested, but which can still be seen to be exceptionally boulder strewn. It was visited in 1938 by R.C. Reid and others, when a plan was made of the site (Reid 1940). Reid comments on the difficulty of finding and recognising the circle in the stony ground, but the plan shows a regular ring of 19 stones, measuring 20m E-W by 19m, around a large central boulder 2.2m in length. Some of the stones were only found by probing. Although it is possible that the site consists of glacial detritus around an erratic boulder, the regularity of the plan and its proximity to other Centre Stone Circles (Lairdmannoch is less than 10km to the south) must encourage acceptance.

10. Stroangassel 210m OD NX 589 869

Burl lists a 22.1m diameter Centre Stone Circle with possible concentric ring at the above NGR as 'ruined but recognisable' on the basis of private information (Burl 1976, 36). A visit to this rocky and boulder strewn hilltop in 1990 failed to identify the site, but it is possible that a combination of tiny stones and erratic boulders, as at Lairdmannoch, escaped identification.

11. Kirkgunzeon Manse 50m OD NX 8657 6668

In 1895 F.R. Coles listed a stone circle, said to have existed near the manse at Kirkgunzeon as 'wholly destroyed' (p.302). Nonetheless, the site was pointed out to the OS in 1969 by the oldest inhabitant of the village. A slight mound c 4.0m in diameter by 0.3m high was visible, said to have been at the centre of the circle. NX 86NE 7.

12. Little Balmae c 30m OD c NX 691 447

F.R. Coles listed a partially destroyed stone circle to the south east of Little Balmae consisting of five large granite boulders still in situ and hollows indicating the sites of five others. The circle would have been 27m in diameter with a slight mound in the centre (Coles 1895, 304). By 1914 the site could not be traced (RCAHMS 1914, p.124, Note).
13. Kirkbog, Templand Mains 50m OD NX 8778 9396
One stone, 1.3m high, standing at this spot is said to be the remains of a stone circle. R.M.F. Watson (1901, 50-1) quotes the Scots Magazine of 1806 (68, p.504) for a record of two stones being still erect at that time. NX 89SE 3.

14. Holm c 20m OD c NX 96 80
A 'Druidical temple' consisting of 9 large stones is said to have been removed from a 'small eminence' on the lands of Holm, within a mile of the Twelve Apostles and 300 yards from the R Nith less than 50 years before 1845 (NSA IV, 559). Aerial photographs reveal a complex of pit alignments, some double, and two small penannular ring ditches 100m NE of Holm farmhouse, while 200m to the S of the farmhouse is another small segmented ring ditch at NX 9617 8019 with traces of more linear settings to the W (NX 98SE 81; Inf: M. Brown 8 March 1993).

15. Keir Church 50m OD c NX 859 932
A stone called the Grey Stone, 1.8m in height, is said to have stood on the SE side of Keir parish church, near the Scar Water, 'surrounded by three or four flat ones', before 1836. NSA IV, 467.

16. Morton Church 110m OD c NX 890 969
A 'cross or column' is said to have stood a little to the west of Morton church before 1845 'surrounded by a circle of coarse blocks of stone at equal and regular distances. This 'Druidical fane' had been removed in the course of improvement. NSA IV, 96.

C. 'Druidical Temples'
The following records are unspecific and may relate to cairns, ring banks etc. rather than stone circles.

17. Airdrie c NX 966 587
In 1795 there was a 'Druidical circle' still entire on the farm of Airdrie, at the foot of the hills rising to the west (Stat Acct XV, 132). Coles reports that the OS could find no trace of the site in 1893 (1895, 301).

18. Kirkbean c NX 97 58
A 'Druidical temple' standing beside the public road in the centre of Kirkbean parish was said in 1795 to have been lately destroyed. (Stat Acct XV, 132).

A 'Druid temple' said to have stood near the Roman camp in Bombie, was destroyed shortly before 1794 and the stones used for building a bridge over the Buckland Burn (Stat Acct XI, 24-5). Bombie Motte is at NX 7079 5018.
20. Boreland of Parton  
'On a gentle eminence at 200 yards distance' from Boreland Motte (NX 6939 7092), on the E side of Loch Ken, 'the remains of a small Druidical circle' could be seen in 1791 (Stat Acct I, 188). Coles could find no trace of this site in 1895 (p.301).

21. Rerrick Parish  
In 1794 there were said to be two Druidical temples in this parish, which lies between Kirkcudbright and Dalbeattie. Stat Acct XI, 59-60.

22. Kirkmahoe  
Several circles were mentioned in Kirkmahoe parish in the Journal of Thomas Johnstone of 1825-7. The evidence has been discussed by M.R. Dobie (1985), and it is clear that identifiable sites are not stone circles. For example, two 'Druid temples' at Knowe Buckle, Quarrelwood, are probably large round cairns (NX 958 841). One circle was said to be a little to the south east of the farm buildings and east of the road at Newlands (NX 961 851). The OS report that when this circle was destroyed fragments were used for bottoming a field track, but local recollection in 1964 could not locate the original site (NX 98NE 13).
Map VI:1 Lithic collections from the Nithsdale Region

○ Lithic collections
● Arrowhead/spearhead finds

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Map VI:2 Axeheads in the Nithsdale Region
Map VI:3 Large axeheads, over 180mm in length
Map VI:4 Neolithic monuments in the Nithsdale Region

- Long cairn
- Possible long cairn
- Crop mark (Long barrow, cursus-type, henge, etc.)
- Henge
Map VI:5  Stone circles in the Nithsdale Region

(See Table VI:2)
Map VI:6  Beakers in the Nithsdale Region