#### 6 CONCLUSIONS

Several aspects of the assemblage are of particular importance. They include the time span covered from the Pictish bronze casting period of the late-8th century through several Norse phases to the medieval period (the Pictish objects found in the lower Norse horizon indicating the possibility of continuity), and of equal importance the size of the assemblage, the multiplicity of objects of each type and their range of variation in different phases. The pins and bone combs which occur in all phases, have proved particularly informative. Also contacts, although not necessarily direct ones, are indicated between the Picts and Irish, between the Norse and Irish, and between the Norse and their home country. Finally, and this applies to the Pictish phases only, the insight given into the technology of bronze casting is of great value.

In assessing the worth of the assemblage a number of points must be borne in mind. These include the limitations of the objectives and the archaeological techniques employed in the pre-war excavations and the loss of all the bone and shell samples. The area available for study was limited by the decision to keep the buildings of the middle Norse horizon in Area II intact, and added to this, continuing coastal erosion destroyed at least part of the earlier Norse phases in Area II. The cemetery was not excavated and Area III was only partly opened. Thus only a partial view of the settlements is available.

Although with the above qualifications there remains a possibility of continuity between Pictish and Norse, the pre-Norse activity will be discussed in isolation since it flourished before the Norsemen reached Birsay and is culturally distinct.

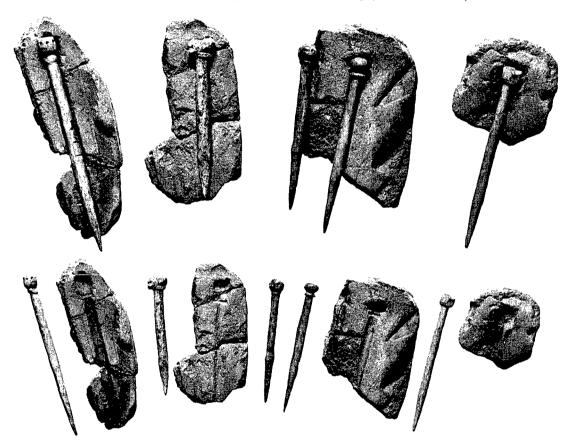
No habitations were found in the Pictish horizon. Even taking into account the Pictish dwellings found recently in and outside the Guardianship area of the Brough by Dr Hunter and Mr Morris (forthcoming), the probability of Pictish building beneath the Norse houses in Area III, the well with its surrounding paving, and the Pictish symbol stone, there is little evidence of a large Pictish community living on the Brough.

With the exception of a large number of small bone pins which include almost every type of ornamental head known from Scotland and Ireland, a few comb fragments, and an interesting small bone mount decorated with a panel of interlacing, the finds from the Pictish horizon belonged to an important bronze industry which would have served the needs of the widely scattered community which is represented by the excavated sites at Buckquoy (Ritchie 1974, 1977) and further along the cliff towards Birsay village (Morris forthcoming).

Evidence of bronze working was largely confined to Area II. Much of the bronze working debris was found amongst piles of burnt stones; lesser amounts were scattered on the basal clay, particularly around the well, much of it preserved by paving and levelling up in the Norse period. Found there and very probably connected with the manufacture of bronze objects, were two incomplete open sandstone bar moulds, many fragments of coloured glass, some fragments of sheet bronze and a bone trial piece. But the most important component of the assemblage consisted of several hundred fragments of used two-piece clay moulds and a quantity of crucibles, mostly shattered. They allow a valuable insight into the technology of bronze working on the Brough and the finding of both sides of particular moulds allows fairly close definition of the methods used.

Mr Robertson has, in his construction of experimental moulds, demonstrated how simple the techniques used at Birsay could have been. The techniques used in Scandinavia for some types of object seem to have been essentially similar. Mrs Lamm, in a discussion of bronze casting at Helgö, illustrates a mould for four pins set fanwise (Lamm 1973, 4, fig.6) which is like the Pictish multiple dress-pin moulds from Birsay. The Scandinavian moulds for elaborate brooches, however, were used

to produce more three-dimensional forms such as the square-headed brooches of Helgö with their deeply arched bows (Lamm, 1973, fig 4). This is in contrast to the Birsay moulds from which only shallow sectioned objects could be produced. Even the Birsay pin moulds referred to above conform to this rule; circulation of molten bronze in the mould was possible because of the shallowness of the matrix and the porosity of the mould fabric. Nor does the method of casting the larger objects seem to have differed; the moulds for the long pin 376 and the mount 370 were both shallow in section. The only object to test this general rule is the small finger ring mould 322 of which only one side remains and which is thus difficult to interpret. The Birsay moulds seem to follow the earlier native tradition shown in the moulds of Dinas Powys (Alcock 1963, 52), Mote of Mark (Curle 1914), Dunadd (Christison and Anderson 1905) and Clatchard Craig (Stevenson 1976).



ILL 57: Multiple pin moulds

Only one element of the bronze casting process is perhaps missing; there are no purpose made pattern models such as that from Dinas Powys (Alcock 1963, 120-2, fig 23: 2). The lead disc (509) from below the lower Norse horizon cannot have been used directly as a pattern for a two piece mould because it is in a negative form; it has been discussed in detail elsewhere (Curle 1974, Alcock 1980). Mr Stevenson has suggested (1955, 286) that bone pins may have served as models; that this was the case at Birsay is shown by the moulds with matrices into which specific bone pins can be fitted (III 57). Providing any insets or applied castings were removed, any existing brooch could have served as a pattern and the same could be said for almost any of the bronze objects. Possibly then, Birsay did not produce its own purpose made patterns, but the attempted chip carving motif on the ox scapula trial piece (267) shows that some such work was at least contemplated.

The majority of the moulds appear to have been for small, and in many cases decorative, objects of personal use: brooches, pins, finger rings and small plates which were often attached to rings for suspension. In addition more elaborate products are implied by moulds for small decorative castings. Of all these moulds the most revealing are the brooch moulds both for their variety in size and in type.

The first impression of the moulds for the penannular brooches is that they were for the production of a cheap form of jewellery. Many are in effect a simplified form of the brooches of the St Ninian's Isle hoard, having the oval cartouche with central setting, the cusp at the junction of the hoop and the terminal and, usually, a setting at the centre of each terminal. The lobed terminal typical of many of the St Ninian's Isle brooches occurs on one mould, at Birsay, 298, (it should not be forgotten that a brooch and terminal of this type were found in the lower Norse horizon; their significance will be discussed below), and it is interesting to note that, like the dragonesque head from the St Ninian's Isle hoard (No 28: Small et al 1973, 79, pl 34a), the realistic bird's head from Birsay 294, is designed for a brooch to be worn with the terminals at the top. The mould 300 for a brooch with terminals formed by a head with gaping jaws, long pointed teeth gripping an extended tongue, is also paralleled in the St Ninian's Isle hoard, but, interestingly, on a sword chape rather than a brooch (No 16: Small et al 1973, 65-7, pl 30). The insets on the St Ninian's Isle brooches were of coloured glass and varied in number from three to nine. The settings in the Birsay moulds varied in number from three to seven, and it is surely no coincidence that many fragments of coloured glass were found in close proximity to those moulds near the well. Even on those moulds from Birsay which were for brooches most similar to the St Ninian's type there are distinctive differences: apart from the fact that they would have been for bronze instead of silver, the casting was simple, the hoops were undecorated plano-convex with none of the beaded edgings or other embellishments usual on the silver brooches, and the terminals, even though similar in form, were without much of the elaborate detail. The Birsay brooch moulds varied far more in size than the brooches from St Ninian's Isle, and included types belonging to a different tradition. Without minimizing the importance of the similarity with the St Ninian's Isle types it must be noted that parallels of the various Birsay types were also found on the mainland of Scotland. Two of the Birsay moulds were for brooches with plate terminals bearing traces of interlacing, and with a ring at the junction of hoop and terminals in place of the St Ninian's Isle cusp, while a third had a terminal in the form of a small disc outlined by a plain band; these were for brooches as small as those from the island of Uist (Close Brooks and Maxwell 1974, 289-90, fig 2) and those on the brooch moulds from Dunadd (Christison and Anderson, 1905, 42, fig 35).

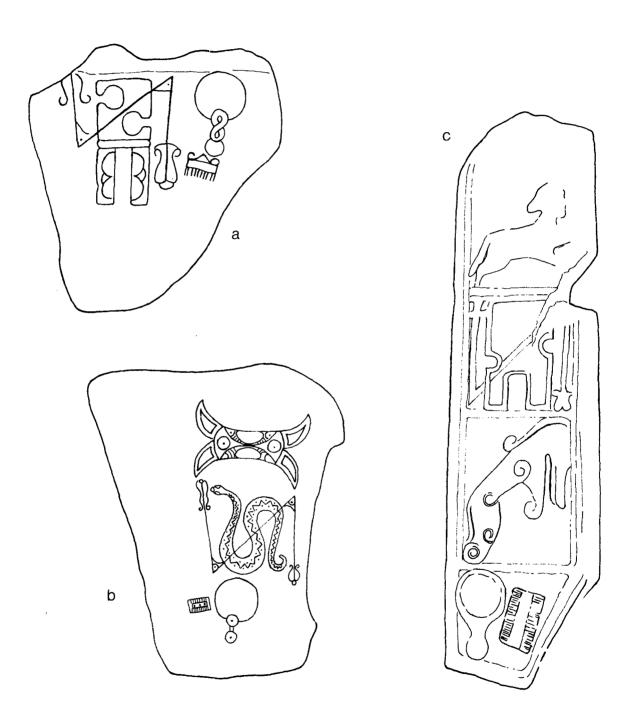
In addition more elaborate objects are indicated by the moulds for small pieces such as the bird's heads (311, 312, 313) and the small disc surrounded by pellets (314). The bird's head moulds recall those pegged onto the terminals of one brooch from Rogart. Indeed, the Rogart brooch can act as an exemplar for the use of applied castings to some of the most highly decorated insular brooches of this period; but it should be recollected that castings could be applied to other objects such as the spoon from the St Ninian's Isle hoard discussed above. Thus it cannot be assumed that the small Birsay castings were for attachment to brooches.

The chronological spread of the Pictish occupation cannot be determined with precision from the finds. By analogy with brooches from the St Ninian's Isle hoard the bronze working phase on the Brough should belong in the late 8th century. An earlier occupation is hinted at by the penannular brooch 449 of Fowler's Class F which may date to the 4th or 5th centuries AD. Phase 1a of Zone 5 which underlies the bronze working layer is not dateable by the small bone pin (47) which was the single find within it. A date for the cessation of Pictish occupation on the Brough is similarly elusive and will be discussed below when the occupation of the lower Norse horizon is considered.

Although no general view of Pictish life can be gained, links with the mainstream of Pictish culture are apparent. The mould 300 (III 14) has already been discussed in connection with the St Ninian's Isle chape; the heads forming the terminals recall porpoise heads and may give evidence of the significance of the porpoise in the Early Christian period. As has already been mentioned they are portrayed, usually in pairs, on some Class II symbol stones such as the Brodie stone near Elgin and other examples, such as the stone from Ulbster, are known. Similar representations of porpoises are also found, just recognisably on a shrine corner post from Papil and more clearly on a shrine corner post at St Ninian's Isle itself.

Another link between objects found at the Brough and Pictish symbol stones is provided by the bone combs. The link persisted through the change of comb types. High-backed combs and double-sided combs of Type A are represented on Class I Pictish symbol stones, while the Type B long double-sided combs found on the Brough exclusively in the lower Norse horizon are depicted on

Class II symbol stones (Ill 58). The high-backed comb occurs at least eight times, the double-sided Type A comb at least nine times and the double-sided comb of Type B at least four times on Pictish symbol stones between Orkney and Angus. Beside emphasising that the pre-Norse occupation on the Brough was Pictish, the possibility of linking the chronology of the Brough to Pictish symbol stones is of high importance. It should be noted, however, that those Class II symbol stones with combs of Type B cannot be considered to be amongst the earliest of the Class II stones.



ILL 58: Comb types represented on Pictish symbol stones (a) High-backed: Clyne-Milton No. 2, Sutherland (b) Short double-sided Type A: Golspie, Sutherland (c) Long double-sided Type B: the Maiden Stone, Pitcaple, Aberdeenshire (not to scale)

### PICTISH SYMBOL STONES DEPICTING COMBS

The following list of stones depicting such combs is intended to be indicative rather than comprehensive; it includes only examples illustrated by Allen and Anderson (1903) and the references are all to that work.

#### High-backed combs

Sutherland: Clyne Milton (40, fig 37), Kintradwell (44, fig 42). Elgin: Easterton of Roseisle (126, fig 130). Banff: Inveravon (153, fig 159). Aberdeenshire: Daviot (161, fig 170), Newbigging Leslie (177, fig 192), Rhynie (183, fig 198). Angus: Aberlemno (205, fig 221).

# Double-sided combs, Type A

Caithness: Sandside (29, fig 26). Sutherland: Dunrobin (42, fig 39). Invernessshire: Drumbuie (152, fig 158). Aberdeenshire: Drummies (163, fig 171).

# Double-sided combs, Type B

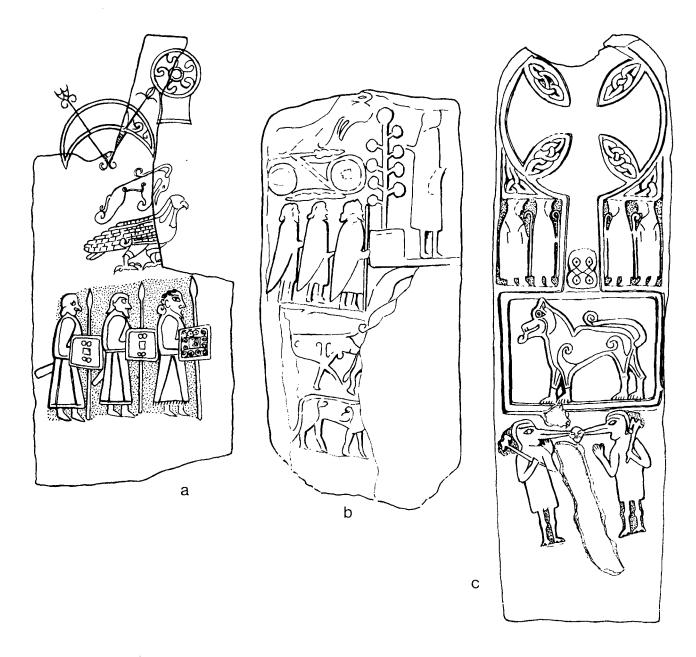
Aberdeenshire: Maiden Stone, Pitcaple (191, fig 207). Angus: Kingoldrum (226, fig 238), Kirriemuir (227, fig 239) and Monifieth (228, fig 241).

The Birsay symbol stone (III 59) is incomplete but its associations are with Class II symbol stones of a very early type. Although the back of the stone is missing, sufficient remains to show that it had straight sides. The Pictish symbols are incised; the eagle is clumsily executed: the feathers are represented by alternating rows of rectangles; but a curled feather behind the back leg is exactly like that on the elegant line drawing of the eagle on the symbol stone from the Knowe of Burrian (RCAHMS 1946, 18, fig 58). The spiral design on the disc is very similar to that on the Class I symbol stone from Dunnichen (Allen and Anderson 1903, fig 223) where it occurs with symbols including a high-backed comb. It also occurs on some hanging bowl escutcheons (Curle 1940, pl 29a). An effect of a carving in low relief is obtained by recession of a small area around the figures. The recessed area is defined to the right by the outer edges of the shield and spear of the foremost figure. Its base forms shallow steps following the feet of the figures. Elsewhere the edge of the recession follows fairly closely the outlines of the figures except above them where it extends around the lower part of the eagle's talons. The leading figure is more elaborately presented than his followers; his shield is more highly decorated and the spiral elements of its embellishment are identical to those on the disc symbol.

Taken together, these features suggest that the Birsay stone is an early member of Class II, although it is impossible to be categoric since one face of the stone is missing. It is tending towards carving in two planes which became the normal technique of many monuments in Ireland and which is that of nearly all Class II symbol stones in Scotland.

That the figures represent a theme rather than a memorial to the individuals assumed to have been buried below, as proposed by Radford (1959, 17), is suggested by a parallel on a Class II slab at Eassie, Angus where a comparable, although stylistically different, procession of three men, each with a spear, is depicted below symbols. On the Eassie stone the figures, which form one amongst other themes, are carved in low relief, and are set against a fully recessed background.

Some relationship exists between the Birsay stone and the Papil cross slab. It must be borne in mind that the Papil stone seems to have been carved at two different periods, or at least by two different hands. It is a carefully shaped monument with rounded top, the stone dressed and smoothed on one side only. The top third of the stone is filled with an equal armed cross with expanded terminals set within a circle. The almond shaped spaces between the arms which are carved with interlace in low relief have already been mentioned in comparison with the decoration on a small bone mount from the Brough (250). The shaft is narrow with spaces on either side, each filled with a pair of clerics in low relief (Curle 1940, pl 24a). This form of cross is not found on the Pictish monuments of E Scotland, but occurs incised on rocks or stone pillars, or carved in low relief on well shaped



ILL 59: Comparisons of symbol stones and their motifs (a) stone from the Brough of Birsay, Orkney (b) stone from Eassie, Angus (c) stone from Papil, Shetland (d) stone from Golspie, Sutherland (e) lion from St Mark's Gospel, Book of Durrow (f) stone from Bressay, Shetland

slabs in W Ireland (Henry 1936) and on a number of cross slabs in W Scotland. It is combined with symbols on the Raasay cross slab (Curle 1940, pl 18c) and is found on an incomplete cross slab from Cladh Bhile, Ellary in Argyll (Allen and Anderson 1903, 401, fig 418) and on a stone found on Great Cumbrae (Curle 1962, pl 14). Immediately below the cross and clerics is an incised beast set in a rectangular border. It is unmistakably the lion of St Mark of the *Book of Durrow*. The lion and cross are part of a single design, and they provide a link with the Columban tradition.

The lowest third of the Papil stone carries a theme quite obviously of a different tradition, and carved in a different hand. The two half bird, half human, figures are set slightly asquint and are



not in a frame. The long beaks of the figures appear to be pressed against a small human head; there may originally have been a body below the head, but a large flake has been detached from the area it would have occupied. They form a theme, perhaps of St Anthony being tempted in the desert by two women disguised as birds (for a discussion of such themes see Curle 1940, 83-5). The carving technique is similar to that used for the Birsay men: partial recession of the background (particularly noticeable on the Papil slab around the axe heads), the combination of incision with carving in low relief, the large eyes complete with eyebrows, the shape of the heads and the arrangement of the hair.

The Golspie slab has elements which relate it both to the Papil cross slab and the Birsay stone. It is a fully developed Class II symbol stone with one side devoted to a cross surrounded by panels of interlace and of key pattern, all in relief. The other side is pictorial and is partly incised, partly in low relief, and partly in low relief with incised detail. The whole face is covered with randomly placed decoration. The central theme consists of a figure, perhaps David, confronting a lion, all surrounded by a proliferation of symbols. Details of the dress and physiognomy of the figure are very like those of the Birsay men: the prominent eyes and nose, the cap-like hair style, and the tunic which although short rather than long has the same broad hem and diverging lines which may represent pleats. These details are also found on the newly discovered stone from Rhynie; other male figures are discussed by Shepherd and Shepherd (1978, 214-17). The lion is recognisably that of the Book

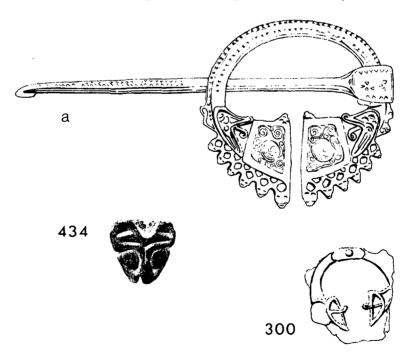
of Durrow and thus there is a link between Golspie and the upper, Irish influenced, portion of the Papil cross slab.

Golspie and Papil are thus related to each other and to the Birsay stone; but it is not here suggested that there was a direct relationship between Birsay, Papil and Golspie, but rather that the carvers had available a glossary of themes and decorations which reflected the intermingling of the E and W traditions at that time, when the first Class II symbol stones were being carved. The Irish and Pictish connections shown by the artifacts found in the bronze working level on the Brough are thus reflected in the stone.

In the ensuing discussion of the Norse levels considerable attention is given to the possibility of a continuing Pictish presence on the Brough during the early Norse period there. Given the possible link between the Birsay stone and the Papil slab it is possibly appropriate to mention the Bressay cross slab, for it is closely related to the latter. It combines a cross similar to that on the Papil stone with a debased form of the lion of the Book of Durrow. On its side is an inscription in Pictish ogham which includes the Norse word dattr and other Norse elements. The inscription may be later than the other carvings on the Bressay stone, but in its own right it shows a mingling of Pictish and Norse elements in Shetland which may thus be considered a possibility in Orkney independent of the evidence from the Brough.

The three clearly differentiated Norse horizons of Area II contain no evidence of continuity. The finds illustrate not only types of differing periods but the differing life styles of the inhabitants. The Norse buildings of the three horizons which remain differ radically one from another, from the large-scale layout in the lower Norse horizon with its elaborate drainage system and the use of dressed stones, to the rough stonework of the complex of interconnecting dwellings of the middle Norse horizon. Finally, there are the scattered outlying structures in the upper Norse horizon which were only in part built over some of the main buildings, and the rest outside the core of the earlier interconnecting dwellings which must have been abandoned with the major part of their walls still standing.

The Norse buildings of the lower Norse horizon, which covered and preserved the debris of the Pictish bronze working, do not necessarily belong to the earliest Norse settlements on the Brough. Dr Radford (1959) traced an earlier long-hall, largely eroded by cliff falls, of which only the N end remains forming the foundations of Room VII of the lower Norse horizon, and he attributed the earliest Norse farmstead in Area III, House Site C, to the 9th century.



ILL 60: (a) The penannular brooch from Hatteberg, brooch mould 300 and bronze mask 434

Only in the lower Norse horizon are there indications of an enduring local Pictish influence; but there is no evidence of continued bronze working on the Brough. The sixteen small pins found in the lower Norse horizon are in such contrast to the Norse type of dress pin that it is unlikely that they would have been adapted to Norse use; they provide the strongest argument for a continuing Pictish presence on the Brough. A tiny bronze pin with spatulate head (418) can be cited with them. Other evidence, however, is more ambiguous. The native combs have already been discussed, the implication drawn from the paucity of Norse examples in the same levels being that they were adopted by the Norsemen. The suggestion was made that they were manufactured in a native comb factory elsewhere and imported. Two of the most intriguing Pictish objects from the Norse levels are penannular brooch 452 and the terminal of another, 453, which were found on top of the paving of Room VI and Passage 1 respectively and are therefore unlikely to have been rubbish survivals; they are so close in style to the Birsay brooch mould 298 that it is probable that they were cast on the site. It cannot be known whether the brooch and terminal fragment were finally abandoned by a Pict or a Norseman, but the predilection of the Norse for such brooches cannot be ignored. It could be suggested, then, that the brooch and terminal were made before the Norsemen arrived but had continued in use. There are no examples of the mingling of Celtic and Viking art on the Brough such as might suggest the continuity of a bronze casting tradition, but the mould 300 discussed above contains a motif of a head with gaping jaw and extended tongue which occurs not only on the St Ninian's Isle chapes but also on a penannular brooch found at Hatteberg in Sunnhordland in Norway (Shetelig 1954, 118, fig 36). On the Hatteberg brooch this motif forms the beginning of an elaborate terminal which includes such Scandinavian elements as an open fringe ending in a row of tiny Borre style masks (Ill 60). A fragment representing an exact duplicate came from a hoard at Cuerdale, Cumberland (Bøe 1934, 159). That such a mixture of motifs should occur on a single brooch emphasises the fact that although on Birsay no more brooches were cast, the acquisition or manufacture, of penannular brooches remained in fashion with the Norsemen.

There are other finds from a variety of sources. For instance the globular headed pins are described as Pictish by Stevenson (1955, 292-3) but three out of four of them were found in a Norse context at Birsay. The Celtic bell is of too indeterminate a date to be discussed here. The implications of the presence of three bronze dress pins of Irish type, of which one is very similar to an example found in York, should not be neglected. The finger ring with entwined bezel is of an Anglo-Saxon type, as is the bronze disc brooch (450). It is clear therefore that the Norse of that period were obtaining goods from a number of sources so it is possible that the Pictish objects may have been acquired from neighbouring communities rather than having been used by Picts on the Brough itself. Thus the question of a continuing Pictish presence on the Brough has not been resolved, but it can be argued that contacts between the Norse and the Picts, amongst others, existed at this time. Finds from the lower Norse horizon which are indubitably of Norse manufacture are comparatively few. The most important is the seal's tooth amulet inscribed FUTHARK in runes. The others comprise three bone combs, a small bone weaving tablet, two bone otter whistles or needle cases, a pair of bronze tweezers and two spindle whorls of polished steatite. There was also a quantity of broken boat nails.

A little of the way of life of the Norse on the Brough in this period can be deduced from the finds. The general impression is of a community importing many of its needs. Spinning and weaving took place although perhaps only on a small scale. The vice or clamp, the only piece of whale bone from the lower Norse horizon, is the only industrial object. The presence of boat nails does not imply that either boat building or boat repairing took place on the Brough; with a shortage of timber the planks from any wrecked or abandoned boat would have been of value. All the nails were broken and parts were missing, implying that they had been extracted. Such timbers were probably used constructionally, for it appears that peat and not wood was the usual fuel: the ash filling up Midden c was peat ash, and so was the ash in Room VII and in the sunk fire-pit in Room VI, while the ash covering the whole floor of Room VI was part wood and part peat including both meadow peat and hill peat. Miss Donaldson (Appendix 8: 3) in her analysis of charcoal from below Room 5 mentions the lack of wood from forest trees but the abundance of the smaller local birch and hazel which would have been used in the charcoal burning process both for bronze and iron smelting.

In assessing the finds from the middle Norse horizon, it must be remembered that the central complex of interconnecting rooms was abandoned with the walls left standing and presumably all the objects of value would have been removed before the roofs fell in. Few personal or ornamental objects were found and, unlike those from the lower Norse horizon, all were known Norse types with the exception of an iron armlet encircled by narrow hoops of bronze for which no parallels have been found. Among the personal objects were a strap end of bronze with an animal head at either end which has a parallel from the Wirral Peninsula and another in the National Museum, Dublin and a bronze animal head in the Borre style. The most nearly complete of the three bone comb cases has an almost exact parallel from York, and the long bone dress pins also can be paralleled at York. There were coloured glass beads, circular and segmented, of widespread types. A small crescent-shaped bone object, highly polished and with its tips broken off presumably had some decorative purpose.

Tools and objects of utility were more abundant than in the lower Norse horizon. They included spindle whorls made of femur heads and over a dozen others of stone of which two, truncated cones in shape, were of dark green steatite. A number of large curved needles supply evidence of netting, possibly for fishing. A number of line sinkers, perforated at either end, give evidence of fishing from boats and Mr Sellar (Appendix 8: 2) mentions the occurrence of large fish bones in the lower Norse horizon below Room 5. The use of whalebone had become common. A large fragment of whale's rib shows signs of having been used as a cutting block, and a large hook and a 'line stretcher' similar to one from the Oseberg ship were also made of whalebone. Other tools were made from longbones, and a large bracket had been devised from the crown portion of an antler.

Whetstones were the most common of the objects, and were of varied type: chisel ended, haunched and also the small perforated hanging type often found in Norse graves. Iron objects were, for the most part, too corroded to be identified, but furnace bottoms and slag showed that iron working was carried out. In addition to the steatite spindle whorls mentioned above, two steatite bar moulds and fragments of steatite vessels show utilisation of that resource.

The general impression, then, from this part of the Brough, is of a relatively poor community with a strong emphasis on local crafts to supply its needs.

So little remained of the structures in the upper Norse horizon that it is surprising that valuable finds were recovered, showing a return to elegance, with Norse parallels which can be dated to the Early Medieval period of Scandinavia. They include a single-sided comb with side bars extending to form an arch and a long bronze pin with baluster shaped head which has parallels from Norway and with Gotland. A second long pin has a perforated lozenge shaped head, the perforation surrounded with threads of silver inlay. The only stone find was an open bar mould with matrices on all four sides, parallels have been quoted from blacksmiths' graves in Norway. These finds may be linked in time with the gaming board and playing piece from the church and adjacent buildings.

Finally, the medieval and post-medieval pottery fragments from the cemetery show continued use of the site, perhaps by pilgrims.

There is little evidence from which to make valid generalisations but, broadly speaking, the finds show the changing cultural links of the site. In the Pictish horizon they include Pictish and Irish elements. These, mixed with Northumbrian and Anglo-Saxon elements, continue in the lower Norse horizon, predominating over Norse objects. In the middle Norse horizon, the emphasis changes to predominantly Norse, but still with parallels in Northumbria and Ireland. Finally, in the upper Norse horizon the cultural background becomes fully Scandinavian.